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A study of problems and challenges faced by medical tourists visiting India



A study by
Indian Institute of Tourism
and Travel Management

Preface

Study of problems and challenges faced by medical tourists visiting India is the latest research report produced by Indian Institute of Tourism and Travel Management (IITTM). This is an outcome of the study commissioned by Ministry of Tourism, Government of India. Having realised the importance of the fast growing medical tourism market, it is important for India as a competing destination to get its act in place. Mantra for competition is simple 'ask the people who matters the most- the consumer'. However as a medical tourism destination, concerns of the service providers cannot be undermined. To create perceived value for the end user the entire value chain must be managed very professionally and concerns of all stake holders should be addressed.

This study presents a departure from the myths and popular beliefs about inbound medical tourism in India to 'what are the ground realities'. The report digs into the intricacies of customer satisfaction along the value chain. Given the scope of study, in this report, we examine the expectations of inbound medical tourists as they traverse the value chain. Research also examines 'what happens to their expectations' passing through each stage.

Prof. Manjula Chaudhary, *Director-IITTM*, directed this research with contributions from Dr. Monika Prakash, *Associate Professor*, and Ms. Nanita Tyagi and Mr. Ramesh Devrath, *Assistant Professors*. Team of researchers was supported by Saurabh Chawla, Yashwant Bharadwaj and Savyasahi Sharma. Team would like to thank Prof. Nimit Chowdhary at IITTM for his insight and inputs.

Distinguished experts outside of IITTM provided valuable insights and advice. In particular we would like to thank Dr. R.N. Pandey, *Additional Director General-Market Research Division* at Ministry of Tourism, Government of India. His critique and questioning came handy to fine tune the report.

We benefitted from numerous discussions with academic experts, regulators and practitioners in the field. We would like to acknowledge the head of departments and in-charges for medical tourism/ international patients in hospitals across the country who allowed us meeting and access to their customers (patients and

accomplices) besides returning some very useful ideas during interaction with them.

Our aspiration at IITTM is to provide business leaders and policy makers in Indian tourism with useful inputs to decipher some of the important trends shaping the very competitive global tourism market. We also seek to initiate a dialogue on the implications of these trends among academics, businesses and policy makers.

As with all IITTM studies this is an independent research. All care has been taken to ensure research neutrality. We also invite any discussion or comment on medical tourism to India based on this report.

Dr. Monika Prakash
Associate Professor, IITTM Gwalior

Nanita Tyagi
Assistant Professor, IITTM Delhi

Ramesh Devrath
Assistant Professor, IITTM Gwalior

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Table of contents

Preface	i
Table of contents	iii
Executive summary	vii
1 Introduction	1
2 Medical tourism value chain	13
3 Sample	19
4 Mapping expectations vs. experiences	31
5 Pre-Procedure Stage	41
6 Procedure Stage	53
7 Post Procedure Stage	61
8 Observations , recommendations and suggestions	65
9 Note on research methodology	79
Bibliography	85
Annexure	89

List of figures

Figure 1.1	Medical tourism segments
Figure 1.2	Classification of medical tourists by requirement for follow up care vs. complexity of treatment
Figure 2.1	Value chain for international patients
Figure 2.2	Medical tourism value chain
Figure 2.3	Value chain adapted for Indian medical tourism
Figure 3.1	Gender distribution in the sample
Figure 3.2	Age- wise distribution of the respondents
Figure 3.3	Source markets
Figure 3.4	Medical tourism products
Figure 3.5	Distribution of 'other' medical tourism products
Figure 3.6	Source of financial support
Figure 4.1	Expectation- experience matrix
Figure 4.2	Expectation- experience matrix explained
Figure 4.3	Expectation- experience matrix for the pre procedure stage
Figure 4.4	Expectation- experience matrix for the pre procedure stage
Figure 4.5	Expectation- experience matrix for the procedure stage
Figure 4.6	Expectation- experience matrix for the procedure stage
Figure 5.1	Major concerns of medical tourists during the pre procedure stage
Figure 5.2	Tourists' experience relative to their expectations for the pre procedure stage
Figure 5.3	Size of gap between tourists' expectations and their experiences during the pre procedure stage
Figure 6.1	Major concerns of medical tourists during the procedure stage
Figure 6.2	Tourists' experience relative to their expectations for the procedure stage
Figure 6.3	Size of gap between tourists' expectations and their experiences during the procedure stage
Figure 7.1	Relative Importance of post procedure variables

List of tables

Table 3.1	Sampling frame and sample
Table 3.2	City-wise distribution of sample (usable)
Table 3.3	Distribution of products demanded
Table 3.4	Medical tourism products vs. source markets
Table 3.5	Medical tourism products vs. age group
Table 3.6	City preferences by source markets
Table 4.1	Expectations and experience at pre procedure stage (mean value)
Table 4.2	Expectations and experience at procedure stage (mean value)
Table 5.1	Relative importance of factors of concern (expectations) at pre-procedure stage
Table 5.2	T-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant
Table 5.3	Expectations of tourists from medical tour operator
Table 5.4	T-test to evaluate if the difference between experiences and expectations of medical tour operator is significant
Table 5.5	Expectations of tourists for additional 4 factors
Table 5.6	T-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant in case of <i>Quality of Treatment</i>
Table 5.7	T-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant in case of <i>Connectivity</i>
Table 5.8	T-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant in case of <i>Cost of Treatment</i>
Table 5.9	T-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant in case of <i>Ease of Access</i>
Table 5.10	T-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant in case of <i>Ease of Purchase</i>
Table 6.1	Relative importance of factors of concern (expectations) at procedure stage
Table 6.2	T-test to evaluate if the difference between experiences and expectations of medical tourists at procedure stage is significant
Table 6.3	T-test to evaluate if the difference between experiences and expectations of medical tourists at procedure stage is significant in case of <i>Professionalism in Management of Hospital</i>
Table 6.4	T-test to evaluate if the difference between experiences and expectations of medical tourists at procedure stage is significant in

	<i>case of Competence of Staff</i>
Table 6.5	T-test to evaluate if the difference between experiences and expectations of medical tourists at procedure stage is significant in case of <i>Competence of Doctors</i>
Table 6.6	T-test to evaluate if the difference between experiences and expectations of medical tourists at procedure stage is significant in case of <i>Facilitation and Care</i>
Table 7.1	Factors of concern (expectations) at post procedure stage
Table 7.2	Top-5 variables of concern at post procedure stage

Executive Summary

Ministry of Tourism, Government of India commissioned a research project to Indian Institute of Tourism and Travel Management to study problems and challenges faced by medical tourists visiting India. The purpose of the study was to throw light on gaps between what inbound medical tourists expected and what they believe they got. Research mandated registering observations of the stakeholders. Given the key research question 'What are the major concerns of medical tourists visiting India?' key objectives of this study are:

- To map the Indian medical tourism value chain (The chain/ network of facilitators serving medical tourists may differ from country to country, hence the mapping).
- To identify the important concerns of medical tourists visiting India vis-à-vis various service providers in value chain (role of facilitators and issues of tourists).
- To identify the gaps in service (as experienced by tourists against expectations).
- To identify the bottlenecks in medical tourism industry (the weak points).
- To make recommendations to address concerns of medical tourists (on the basis of data collected).

Survey

The research did not include customers of cosmetic surgeries, wellness (spa and alternate therapies) tourism and IVF (In Vitro Fertilisation) products. Survey using a structured questionnaire was carried out in 17 cities and included 14 JCI accredited, 27 NABH accredited and 46 hospitals who had applied for NABH accreditation. Of these, responses were collected from 35 hospitals (13 JCI and 17 NABH accredited, 4 hospitals who have applied for NABH accreditation). Total number of usable responses was 503 of which 57 percent were from males. Researchers adapted the Deloitte medical value chain as the basis of discussion. Accordingly customer expectations were evaluated at pre-procedure, procedure and post-procedure stages. Inbound medical tourism is concentrated in Bangalore,

Chennai, Delhi and NCR, and Hyderabad. Mumbai appears to attract domestic medical tourists from other states.

Who comes/ how do they come?

The respondents were mainly from Africa (51%) and Middle East (35%). Most important products sought are Cardiac treatments (30%) and orthopaedic procedures (15%). Overwhelming 81 percent respondents supported their own medical treatment. Another 16 percent were supported by their governments. Around 50 percent respondents received advice about the service providers from personal (friends and relatives) source, while 29 percent were referred by doctors who treated them at home. Use of medical consultant and internet is limited among medical tourists visiting India.

Important concerns of medical tourists

At the pre procedure stage customers are primarily concerned with quality of treatment- which includes expected quality of animate and inanimate resources and procedures; connectivity- which refers to ease of physical movement between home country and destination; cost of treatment- which includes costs of other expenses besides the direct cost of medical procedure; ease of access- which relates to expediency with which medical treatment can be accessed; and, ease of purchase- other factors that facilitate purchase like insurance, terms of payment, and help to finalise the travel itinerary.

Four concerns at the procedure stage were identified. These are competence of doctors, competence of staff, professionalism in management of hospital, and facilitation and care available during this stage.

For the post procedure stage, customers expect hassle free disengagement from the procedure including clear follow up instructions and settlement of bills. Customer is also apprehensive about the post procedure monitoring and availability of medicines in home country.

Expectations vs. experiences

Mapping experience of the inbound medical tourists against their expectations for pre-procedure and procedure stage has provided important insights. At the pre-procedure stage, tourists find the overall cost of treatment more than what they had expected. On the other hand, availability of medical visa does not seem to have much impact. In fact it has been estimated that medical visa is costlier and cumbersome as compared to tourist visa. For the segment that is visiting India, the cost of medical visa hurts. Many medical tourists are, therefore, visiting India on tourist visa. Competitive advantage results from lesser waiting time for treatment, connectivity from home country and quality of clinical resources including doctors, procedures and infrastructure.

At the procedure stage, challenge comes from difficulty in case of non-medical staff to converse with non-English speaking customers. Customers are also not comfortable with the lodging and boarding arrangements for accompaniment and self. Competence of doctors and nursing staff is a source of competitive advantage. Nursing care staff is also rated as quick and responsive.

Gap analysis

There was a significant gap in expectations and experience of the customers at the pre procedure stage. The largest gap was in case of cost of treatment. While cost of medical procedure is a source of advantage, other costs are perceived as a deterrent. Quality of treatment was the most important factor followed by Ease of access. Shorter waiting time is a plus point for the Indian medical tourism.

Competence of doctors was the most important factor for the inbound medical tourists. Even the expectation- expertise gap was not significant. Tourists found skills and qualifications of the doctors beyond their expectations. Facilitation and care, competence of staff, and professionalism in the management of hospitals were other concerns of tourists during the procedure stage. The experience fell short of expectations in all these cases. The largest gap was in case of facilitation and care.

Observations and recommendations

One of the important findings is that 'mere patients' are the major segment for Indian medical tourism. The main source market is low GDP countries of Africa and Middle East. A potential market exists in the neighbourhood. As a country, policy makers must consciously decide which segment to target and position India as medical tourism destination accordingly. Deployment of resources needs to be in line with stated position.

Quality of doctors and clinical infrastructure is considered good. However, general infrastructure does not satisfy the tourists. Accreditation is not considered by the current segment of tourists. There is a need for training of non-medical staff for cross-cultural sensitivities including language skills for the targeted source markets.

Policy and administration of medical visa also does not appear to satisfy the tourists. Same calls for a relook.

While the costs of medical procedure are acceptable, there is a general perception among the current segment that other costs (especially lodging and boarding) are costlier.

Government should market medical tourism as per the chosen position. Individual service providers must locate their niche segments and market their services accordingly engaging on a long term with targeted communities. This would enable them to serve the markets more closely.

India competes mainly with Thailand and Singapore in the region. But analysis suggests that each competitor has its own USP, niche and products.

1. Introduction

The business of medical travel is promising. More than 130 countries around the world are competing for a pie of this global business. It is generally estimated that the present global medical tourism market is estimated to be approximately US\$ 40 billion with an annual growth rate of 20 percent. The International Trade Commission in Geneva says that medical tourism could grow into a US\$ 188 billion global business by 2013.

“Medical Tourism”, a term unknown until a few years ago, sounds paradoxical. Indeed, it is hard to imagine stronger polarity between two areas of social life, than that between tourism and hospitalization. Tourism, a voluntary leisure activity often perceived as a luminal reversal of everyday life (Graburn, 1977) and a time for hedonistic pleasure, free from obligations and external constraints, stands in sharp contrast to medical treatment and hospitalization. Two domains seem to be fundamentally incompatible. While tourism is associated with freedom and pleasure, hospital evokes images of constraints and sufferings. One does not visit a hospital unless one needs to. As a travel writer noted: “the dentist chair and the antiseptic smells of a hospital waiting room are synonymous with pain and a sense of helplessness. They just don’t blend with travel and vacations” (Ross, 2001). However, during the last decade, the medical travel movement has accelerated sharply. The present phase of modern medical travel is characterized by an industry approach whereby uninsured and underinsured consumers from industrialized countries seek first-class quality at developing country prices, a trend commonly referred to as medical outsourcing. At the same time, the medical travel industry is increasingly grounded in tourism.

Well developed healthcare systems and advances in technology have supported medical travel among Western countries for many years. However, medical travel in Asia is relatively new, mostly emerging in the aftermath of the Asian financial crisis in 1997. With the middle-class clientele in many countries affected by the economic downturn, private hospitals were faced with a significant drop in local business. Hospitals needed to be creative in identifying alternative sources of revenue. Their first steps- into the international patient market were facilitated by

their devalued currencies, providing an attractive combination of modern facilities and low prices.

Although primarily driven by the private sector, including hospitals and intermediary organizations such as specialized travel agencies utilizing competitive marketing initiatives, governments are increasingly contributing to the development of this industry in South Asia, South-East and East Asia. Asia represents the most potential medical tourism market in the world. According to a recent article on Hotelmarketing.com, Asia's medical tourism industry is expected to be worth at least \$4 billion by the year 2012. Currently, an estimated 1.32 million medical tourists come to Asia from all over the world, including the U.S. and Europe (actually, quite a bit of the current travel comes from within the Asian region itself) (Vequist, Valdez and Morrison, 2009). India, with its low cost advantage and emergence of several private players, represents the fastest growing Market.

Healthcare sector in India

One estimate by Pricewaterhouse Coopers projects that the Indian healthcare sector should be worth about \$40 billion by 2012. Indian Government's spend on healthcare is estimated to be 8 percent of its GDP by 2010 (Department of Tourism, 2006). Medical tourism remains the most obvious reason to be aware of Indian healthcare resources. Medical tourism is a growing sector in India. In 2008 the size of the industry was around Rs. 1,500 crores. India's medical tourism sector is expected to experience an annual growth rate of 30 percent, making it a Rs. 9,500 crore industry by 2015. Estimates of the value of medical tourism to India go as high as \$2 billion a year by 2012.

Indian Brand Equity Foundation (IBEF) suggests that the Indian healthcare sector is expected to become a US\$ 280 billion industry by 2020 with spending on health estimated to grow 14 percent annually. Healthcare has emerged as one of the most progressive and largest service sectors in India with an expected GDP spend of 8 percent by 2012 from 5.5 percent in 2009.

Many countries have adopted a proactive approach for medical tourists and are facilitating it as a revenue generating business. The Indian government has begun

to recognise the potential of tourism to Indian economy and has begun to invest in tourism infrastructure (Diekmann, 2011) .

Reasons for medical travel

There are several reasons for the increase in medical travel. First, the demographics of the developed nations are causing a significant increase in demand for health care. In Japan, the United States of America, the United Kingdom and many other European nations, the proportion of the population older than 60 years, in relation to the total population, is increasing rapidly. Similar trends are being seen in many countries across the world. At the same time, life expectancy in most countries has also increased steadily over the years; the combined result is significant strain on national health-care systems. The inability of many health-care systems to deal with the increase in demand does, in many cases, lead to compromised levels of service and decreased access through long waiting lists and high costs. This drives many individuals to seek alternatives to domestic health care.

Such alternatives can be found in the economically stratified global health-care marketplace (Turner, 2007), which offers everything from cutting-edge surgical procedures such as organ transplants to cosmetic procedures and wellness packages at a wide range of prices. As is the case in many economic sectors, outsourcing to more affordable health service provision abroad is increasing. Private health-care facilities in countries such as India, Malaysia, Philippines, Singapore and Thailand are utilizing the prevailing cost differentials, relative to countries such as Canada, the United Kingdom and the United States of America, to attract international customers who have the financial means to access medical care abroad. International accreditation and name recognition linked to quality care provision are laying to rest many of the concerns individuals may have, regarding professional competence, patient safety and quality in low-cost health care abroad. Combined with inexpensive air travel, low-cost telecommunications, digitized patient records, widespread access to information through the internet, and an increasingly sophisticated medical travel industry to manage all these processes on the patient's behalf, travelling abroad for medical treatment is an appealing alternative for uninsured or underinsured individuals.

The alternatives available through medical travel are not only within the reach of individuals in developed countries but also to the people from developing and least developed countries who have the financial means to find sophisticated and affordable medical care in neighbouring countries (UNESCAP, 2009).

Improving patient safety, medication, infection prevention and control, quality performance, and improvement and the environment of care is a primary concern for hospitals and medical facilities involved in medical tourism voluntarily seek JCI accreditation. In India Quality Council of India (QCI), an organization of Government of India has set up National Accreditation Board for Hospitals and Healthcare Providers (NABH). In a NABH accredited hospital, there is strong focus on patient rights and benefits, patient safety, control and prevention of infections in hospitals and practicing good patient care protocols like special care for vulnerable groups, critically ill patients and better and controlled clinical outcome. There are 16 JCI accredited and 63 NABH accredited healthcare providers in India. Advantages for medical tourists coming to India include reduced costs, the availability of latest medical technologies and a growing compliance on international quality standards, as well as the fact that foreigners are less likely to face language barriers in India. The Indian government is taking steps to address infrastructure issues that hinder the country's growth in medical tourism. Most estimates claim treatment costs in India start at around a tenth of the price of comparable treatment in America or Britain. The most popular treatments sought in India by medical tourists are alternative medicine, bone- marrow transplant, cardiac bypass, eye surgery and hip replacement. India is known in particular for heart surgery, hip resurfacing and other areas of advanced medicine.

Who is a medical tourist?

The medical tourism industry is still evolving. Service providers are strategising to position their products for different targeted segments. Each such segment is being labelled as medical tourist. In the earlier days of the medical tourism, the wealthy people from developing and under-developed world travelled to developed countries to avail quality medical facilities that were not available in their own countries. Rich Indians travelled to US and UK for medical treatment. Recent years have witnessed a reversal in this trend. People from developed

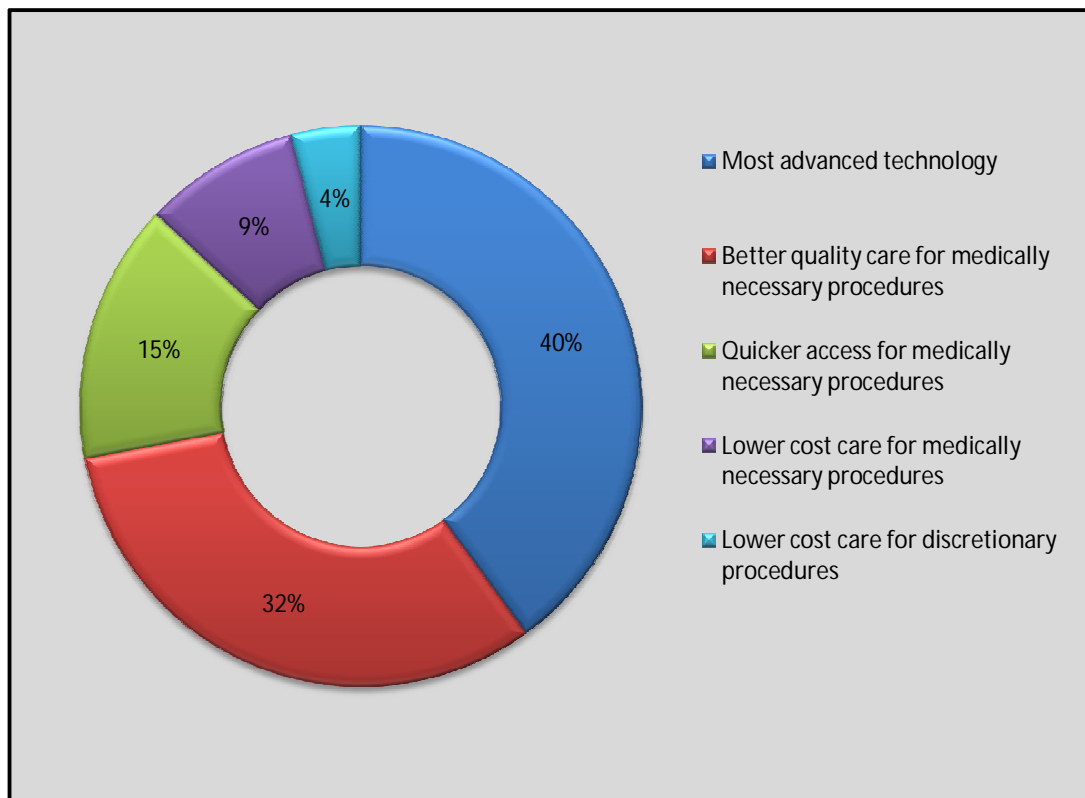
countries are travelling to developing countries offering comparable quality medical care. Reasons often cited are affordable costs and medical services available without wait or with a short wait. There is a growing demand for alternative therapies and therapies like *Yoga* and *Tai chi* that border wellness and might extend into the realms of spirituality. Further there are opportunities to combine medical treatment with leisure and vacationing.

Erik Cohen (2010) suggests a typology of medical tourists based on the extent to which medical treatments play an important role in tourists' motivations for and conduct on the trips, relative to vacationing. First is a *Mere Tourists*. This is an individual who does not make any use of medical services while vacationing in the host country. Second type is a *Medicated Tourist* who receives medical treatment for health problems incidentally occurring while in host country. *Medical Tourist Proper*, the third type, is an individual whose visit to the host country includes both tourism and medical treatment (for matters unrelated to the trip). Tourists travelling to the host country with the intention of receiving treatment while vacationing, as well as, those deciding on such treatment once in the country will fall within this category. A *Vacationing Patient* is an individual who visits the host country mainly to receive medical treatment, but makes incidental use of vacationing opportunities, especially during the convalescence period that follows the medical procedure. This is the fourth type. Finally, a *Mere Patient* visits the host country solely to receive the medical treatment, and does not make use of any vacationing opportunities.

A McKinsey (Ehrbeck, Guevara, & Mango, 2008) article suggests that though the market for medical travel has captured world's attention and imagination, it isn't as large as reported. It further mentions that most medical travellers seek high quality and faster service instead of lower cost. On the basis of quality of medical treatment, authors segment buyers into 5 discrete types. The largest segment is 40 percent of all medical travellers. They seek world's most advanced technologies. They are in search for high quality medical care 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. Second segment comprises of 32 percent market, include patients who seek better care than they could find in their home countries. They travel from

under-developed and developing countries to developed countries. In selecting the destination, these patients generally trade-off perceived quality against burdens such as costs, distance and unfamiliar culture. The third segment, about 15 percent of the market, comprises of the medical patients who want quicker access to medically necessary procedure delayed by long wait times at home for orthopaedic and cardiac complications. 9 percent of the travellers 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 services providers. The last category representing a meagre 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 specialised service providers rather than larger multi-speciality hospital (see Figure 1.1).

Figure 1.1: Medical tourism segments



Another report (UNESCAP, 2009) categorises medical travellers on similar lines into four categories. The first group includes patients from developed countries who do not have, or have inadequate, health insurance coverage. Many of these individuals come from Australia, Europe and Japan, a large number coming from the United States of America. The second group includes individuals, also primarily from developed countries such as Canada and the United Kingdom, who face long waiting lists for non-elective surgery and other critical procedures. In the United Kingdom, many individuals choose to pay for medical treatment abroad to avoid long waiting lists even though the national health-care system, in spite of being overstretched, ensures free treatment to all its citizens. The third group includes individuals looking for affordable cosmetic procedures. Many of these individuals come from Australia, Europe and Japan, with a significant number again coming from the United States of America. For example, most health insurance in the United States of America covers critical care, not cosmetic care and beauty treatments. The increased demand for surgical procedures such as facelifts, hair transplants, dental treatment and liposuction, as well as non-surgical procedures such as Botox and hair removal, and the relatively high cost of these procedures is driving many individuals to find more affordable alternatives abroad. The last segment of medical travellers includes individuals seeking quality assured- often specialized- care that is unavailable or in short supply in their own countries. A significant number comes from the Middle East. This last group also includes an increasing number of medical travellers from developing and least developed countries seeking better health-care infrastructure at affordable prices in their own neighbourhood.

Figure 1.2: Classification of medical tourists by requirement for follow-up care vs. complexity of treatment

Increasing need for follow up care ↑ ↑	Less invasive surgery for example laparoscopic procedures	More invasive/ complex for example bypass, transplant, cancer treatment
	Elective cosmetic for example lasix, cosmetic, etc.	More invasive surgery for example hip or knee replacement
	→	→
	Increasing complexity	

A Deloitte (Yap, Chen, & Nones, 2008) report segments medical tourists on the basis of complexity of medical procedure/ treatment and the extent of follow-up care needed after leaving the country where the treatment was received (See Figure 1.2).

Tourism Research and Marketing (TRAM, 2006), typology of medical tourism broadly classifies health and medical tourism into 4 categories- treatment of illness generally referred to as *medical tourism*; *enhancements* which include cosmetic surgeries; *wellness tourism* which focuses on spa and alternate therapies; and, reproduction which is increasingly called fertility or *birth tourism*. Another research (Chen, Kuo, Chung, Chang, Su, & Yang, 2010) classifies medical tourists segments on similar lines. First segment seeks low-risk procedures with high price differential and long stay after retirement; second is the segment that requires high-risk procedures with less attention to price difference. Third and last is the group of medical tourists who seek banned procedures that are not allowed legally in home countries of foreign patients, such as stem cell therapy.

It is therefore often difficult to define the market and determine the size. One, there is a large number of expatriates who have been living in India for a long time. They might hold insurance policies from the host country or might be covered by some other type of security. Many of them are earning in India and therefore pay in Rupees like any other domestic medical tourists. Many service providers tend to use a differential pricing policy for international medical tourists. Many expatriates have friends and visitors who register themselves as domestic patients. Similarly, there are many non-resident Indians (NRIs) and persons of Indian origin (PIOs) who seek medical treatment as domestic patients while on holiday back home. Further, nationals of neighbouring countries with or without relatives in India also present themselves as resident patients. Similarly there is a segment of tourists who give *ayurveda*, *yoga* and similar therapies a try for sake of excitement rather than expressively requiring a medical treatment. Can they be treated as medical tourists? Similarly a very small percent of tourists may require medical attention incidentally (Cohen's type 2). Can they be considered as medical tourists?

Further there are huge medical establishments who cater only to affluent segments of Indians from other states. Examples are select hospitals in Mumbai

who cater to *Gujratis*, *Marwaris* and *Parsis*. They are reluctant to cater to international tourists where they would have to undergo the hassle of accreditations, documentation, etc. This is large domestic medical tourists segment that is not accounted for in the definition of the market.

Competition

Thailand, Singapore, Malaysia, India and Philippines are the major destinations in the Asian medical tourism market. Thailand is more popular among Western European medical tourists for cosmetic surgery. Singapore and India specialize in complex procedures with India having a cost advantage and Singapore a technology advantage.

Global economic downturn has resulted in decline in visitors' numbers in Singapore and the same holds true for medical tourists also. The health care industry in Thailand has seen rapid growth in recent years, ahead of the country's GDP. In Thailand, medical costs are lower than in Singapore and also, it is a much more popular tourist destination. The cost of healthcare in Thailand is about five times lesser than it is in the US. The government of Singapore has formed a collaboration of industry and government representatives to create a medical hub in Singapore. The Malaysian government is aggressively promoting medical tourism. It has extended the visa period for health tourists from one month to six months. Major hospitals in Malaysia are targeting new markets such as Vietnam and Cambodia.

Taiwan provides high- quality healthcare at very competitive prices but is a slow starter. A liver transplant costs half as much in Taiwan as in Singapore. China is a key target market for Taiwanese hospitals. The government has announced a \$318 million project to help further developed countries medical services.

The Korean government is promoting the nation's growing medical tourism industry and has set a target of 100,000 foreign patients by 2012. However, Korea is considered to be a latecomer in medical tourism industry.

India is one of the lowest cost and highest quality of all medical tourism destinations. It offers low- cost cardiovascular and orthopaedic procedures, at about one- tenth the cost of similar surgeries in the US (Koncept Analytics, 2009).

Customer satisfaction

Customer satisfaction is a critical issue in the success of any business system, traditional or innovative (Ho & Wu, 1999). Customer satisfaction, a business term, is a measure of how products and services supplied by a company meet or surpass customer expectation. Customer satisfaction is the ultimate result of meeting a consumer's expectation from the performance of products. Most satisfied customers normally have the intention to re-purchase the products if product performance meets his or her expectation (Alam & Yasin, 2010).

Customer satisfaction is an abstract concept and the actual manifestation of the state of satisfaction will vary from person to person and product/service to product/service. The state of satisfaction depends on a number of psychological and physical variables which correlate with satisfaction behaviours such as return and recommend rate. The level of satisfaction can also vary depending on other factors such as other products against which the customer can compare the organization's products.

Customer satisfaction is defined as result of cognitive and effective evaluation, where some comparison standard is compared to the actually perceived performance. If the perceived performance is less than expected, customers will be dissatisfied. On the other hand if the perceived performance exceeds expectations customer will be satisfied (Kang, 2006).

Work done by Parasuraman, Zeithaml and Berry (1991) delivered SERVQUAL- an instrument which provides the basis for the measurement of customer satisfaction with a service by using the gap between the customer's expectation of performance and their perceived experience of performance. This provides the researcher with a satisfaction "gap" which is semi-quantitative in nature. Cronin and Taylor extended the disconfirmation theory by combining the "gap" described by Parasuraman, Zeithaml and Berry as two different measures (perception and expectation) into a single measurement of performance relative to expectation.

Need for study

As medical tourism becomes more attractive to many countries, there will be much more international competition and rivalry. Therefore, with medical treatment being equal across many countries, the tourists would begin to select their target destination based on other reasons. Some medical enterprises have compiled packages to make it easier for tourists who then do not need to spend so much time in researching their travel and accommodation requirements (Medical Tourism, 2005).

With the range and scope of medical procedures offered in the international marketplace, different countries offer different levels of control over their domestic medical tourism services. This can be risky and dangerous (Menck, 2005). In the worst case scenario, either post operative recovery does not go well and patients need to prolong their stay at the destination and therefore incur additional costs, or, if patients have returned home, they would have to seek further medical care and treatment in their home country. This would increase the cost of the overall treatment for their condition especially for cosmetic procedures, which are monitored less (Connell, 2007).

'Buyers beware' is currently the norm than the exception. However, competition should change this. It is therefore important to understand and address the concerns of the customers. This study therefore intends to understand the problems being faced by medical tourists visiting India. This study focuses on foreign visitors coming to India for some medical treatment in one of the JCI/ NABH accredited hospitals. This study intends to analyse the possible bottlenecks that are likely to hamper the growth of medical tourism in India and make recommendations thereof.

Given the key research question 'What are the major concerns of medical tourists visiting India?' key objectives of this study are:

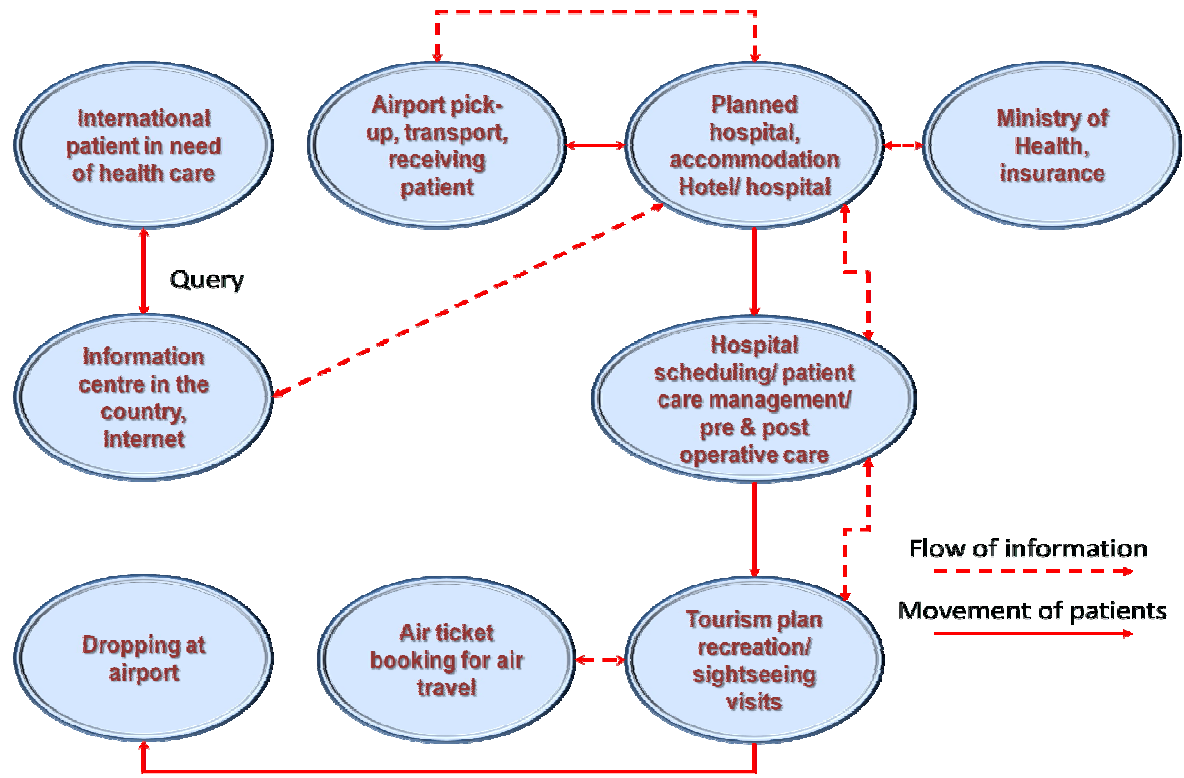
- To map the Indian medical tourism value chain (The chain/ network of facilitators serving medical tourists may differ from country to country, hence the mapping).

- To identify the important concerns of medical tourists visiting India vis-à-vis various service providers in value chain (role of facilitators and issues of tourists).
- To identify the gaps in service (as experienced by tourists against expectations).
- To identify the bottlenecks in medical tourism industry (the weak points).
- To make recommendations to address concerns of medical tourists (on the basis of data collected).

2. Medical tourism value chain

Acharyulu and Reddy (2004) conceptualised value chain for an international patient as following:

Figure 2.1: Value chain for international patients



Adapted from Acharyulu and Reddy (2004)

Medical travel operators can be broadly classified into two groups. First, there are medical service providers such as hospitals and clinics. Hospitals that actively attract international patients are not involved only in the medical procedure itself, but are, in many cases, also responsible for all patient logistics from arrival to departure. Often the hospitals' involvement starts before arrival with the processing of the visa requirements and ends only after departure with patient follow up.

The second group consists of medical travel facilitators who function like agents and associated service providers. These are often smaller companies

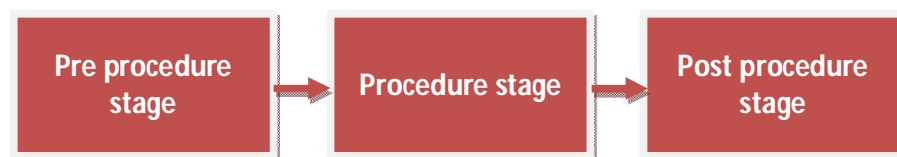
with just a few people on their payroll and most of them have spread their risk by dealing with hospitals and clinics in a number of different countries. Those medical travel agents which are dealing exclusively with hospitals of only one country or region are exposed to the same risks as the hospitals with which they work.

These facilitators offer global health-care options that will enable international patients, primarily from source countries to access international health care at fraction of the cost of domestic care or shorter wait time. By selling a type of medical value travel, they focus particularly on the self-insured patient. Some companies charge clients a flat rate commission or a percentage of the total cost of care. Others do not directly charge customers, but are paid by the hospitals to which their clients travel for treatment.

The companies typically provide experienced nurse care managers to assist patients with pre and post procedure medical issues. They also help provide resources for follow-up care upon the patient's return. Medical travel packages can include all costs associated with medical care, air and ground transportation, hotel accommodation, provision of a cell phone in the destination country for ease of communication, practical assistance from a local company representative at the health-care facility, travel arrangements for a companion, stays in nearby resorts during the post-operative recovery period and vacation to tourist destinations.

For the purpose of this study a simple medical tourism value chain is considered. It broadly comprises of three components/ stages (Keckley & Underwood, 2008) (see Figure 2.2).

Figure 2.2: Medical tourism value chain



Pre procedure stage

In this first stage the tourist is typically engaged in navigating the process and arriving at a decision to buy the procedure. A customer enters the procedure with search of relevant information from various sources. However, given the complexity many customers prefer to use services of an intermediary referred to as “medical facilitator”. Prime responsibility of the medical facilitator is to seamlessly coordinate the outbound medical tourism programme.

Medical facilitators are intermediaries that guide the use of medical tourism for patients who find using their services more convenient and expedient than organising various service providers on their own. They offer single window solutions to the customers. They have experience in the medical tourism process and are able to address any concerns or questions that patients might have. Facilitators also provide assistance with logistics and travel arrangements. Patients may even be able to get lower rates from medical facilitator than directly from clinical programmes abroad (Keckley & Underwood, 2008). A medical tour operator is an important facilitator. Literature has referred to four types of medical facilitators- Medical Travel Planners, Travel Agencies, Hotel Groups and Provider Groups.

Long before the actual medical procedure/ treatment, a customer must decide about a number of key issues, including the choice of facilitator, hospital, doctors, destination country, costs, conveniences, risks, etc. not necessarily in that order.

Pre procedure stage typically ends with patient reaching the destination.

Procedure stage

This is the key component of the medical tourism value chain. Procedure stage begins with patient reaching the destination and hospitals/ service providers offering pickup facilities followed by pre-counselling for treatment, necessary medical examinations required before the medical procedure.

Medical procedure includes preparing for the procedure, organising a doctor and para medical team, operating theatre, procedure, prosthesis, medical supplies, etc.

Post procedure stage

Post procedure stage has two important components the post operative care and follow-up care. The post operative care includes doctors' visits and monitoring for complications, recuperation in hospital and physical therapy, medical supplies, meals, post operative recuperation in destination country but outside the hospitals, etc. An important concern of medical tourist is the follow up care facilities long after they have left the country of treatment. Normally there is a tie-up between the medical service providers and doctors in the customers' country who are responsible for follow up on behalf of service provider.

After the post operative care when the tourist is fit to move around, he/ she may demand post treatment leisure as a part of the package.

Proposed medical tourism value chain

Following is the medical tourism value chain proposed for this study (Figure 2.3). This chain is adapted from Medical Tourism report produced by Deloitte Centre for Health Solutions. Based on discussions with service providers and feedback from respondents, certain changes in 'facilitator' component of the value chain were made. Only 7 percent respondents used services of independent medical tour operator. Most medical service provider hospitals have vertically integrated a facilitation department which facilitated medical tourism for 77 percent of the respondents. Remaining 16 percent were supported by their respective governments.

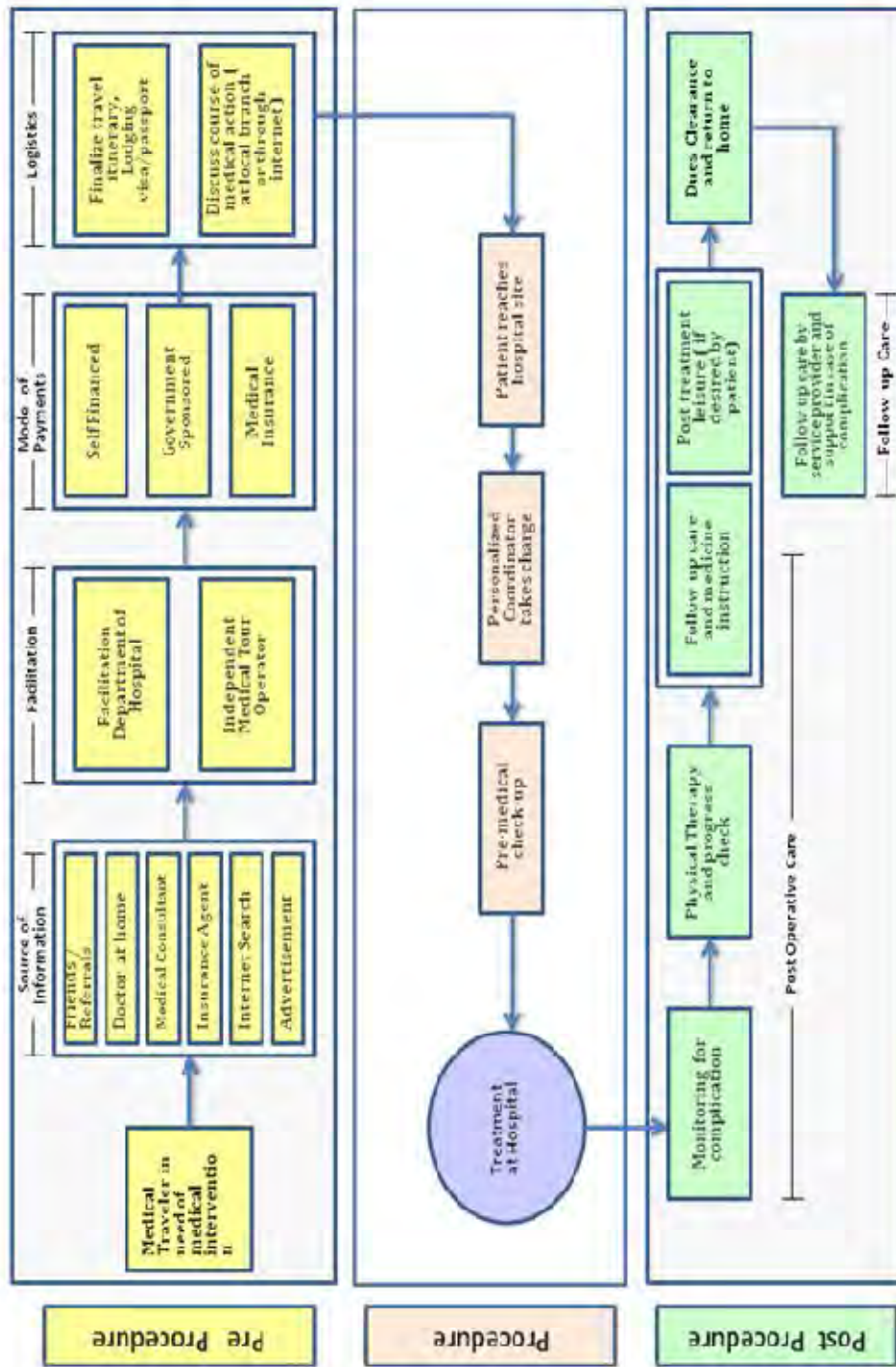
Main source of information for choosing medical facility abroad was friends and personal referrals (50%). 29 percent were referred by the doctors who they consulted at home. Only 7 percent relied on medical consultant. 2 percent were provided information by their insurance company while 4 percent searched for information on internet. Less than 1 percent relied on

information advertised by service provider. This indicates that customers rely more on referrals from friends and consulting doctor at home.

For medical tourists segments visiting India facilitation is organised by-

- Doctor and hospital referrals in home country
- Government department in home country
- Insurance company
- Medical tour operators

Figure 2.3: Value chain adapted for Indian medical tourism



3. Sample

There were 16 JCI (Joint Commission International)¹ approved and 63 NABH² (National Accreditation Board for Hospitals and Health Care Providers) approved hospitals (34 at the time of commissioning of this study). These hospitals are located in 30 cities across the country. There are another 395 hospitals that have applied for NABH accreditation³.

Study included survey of respondents at 14 JCI accredited hospitals and 27 NABH accredited hospitals. In case a hospital had both the accreditations it was counted as JCI accredited. Study team could not have access to or did not find any medical tourists undergoing treatment at 1 JCI accredited hospital and 10 NABH accredited hospitals. However, there were a few non accredited hospitals that were attracting significant number of inbound medical tourists. 46 hospitals who had applied for NABH accreditation were also approached. Responses from only 4 such hospitals were collected. A summary of sample composition is as in Table 1 below:

Table 3.1: Sampling frame and sample

<i>Nature of hospital</i>	<i>Total numbers</i>	<i>Number of hospitals approached</i>	<i>Number of cities these hospitals were located</i>	<i>Number of hospitals from where data was collected</i>	<i>Number of respondents who agreed to share responses</i>	<i>Number of usable responses</i>
JCI Accredited	16	14	09	13	319	301
NABH Accredited	63	27	14	17	211	200
Applied to NABH	395	46	6	4	6	2
Total	474	87	17⁴	35	536	503

¹ Source: <http://www.jointcommissioninternational.org/jci-accredited-organizations/> Retrieved on 15.01. 2011.

² Source: http://www.qcin.org/nabh/hospitat_acc/accredited.php Retrieved on 25.01. 2011.

³ Source: http://www.qcin.org/nabh/hospitat_acc/appli_nabh_acc.php Retrieved on 25.01. 2011.

⁴ Total after adjusting for different categories of hospitals in same city.

Research team visited 17 cities for the purpose of collecting data. City-wise distribution of sample is as in Table 2 below:

Table 3.2: City-wise distribution of sample (usable)

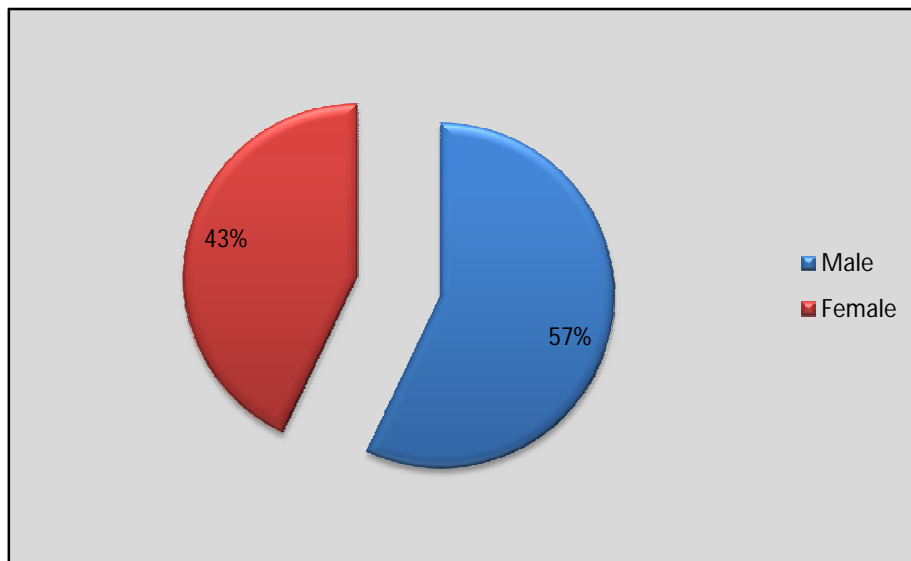
<i>City</i>	<i>JCI accredited</i>	<i>NABH accredited</i>	<i>Applied to NABH</i>	<i>Total</i>
Bengaluru	31	130	2	163
Chennai	106	38	-	144
Delhi/ NCR	71	07	-	78
Hyderabad	89	04	-	93
Kozhikode	-	02	-	02
Kochi	-	03	-	03
Kolkata	-	05	-	05
Mumbai	02	03	-	05
Palakkad	02	02	-	04
Pune	-	03	-	03
Thiruvananthapuram	03	-	-	03
<i>Total</i>	<i>301</i>	<i>200</i>	<i>2</i>	<i>503</i>

No medical tourist was available/ could be contacted at Chandigarh, Jaipur, Goa, Madurai, Vishakhapatnam, Coimbatore

Gender distribution in the sample

Sample included 57% males and 43% females.

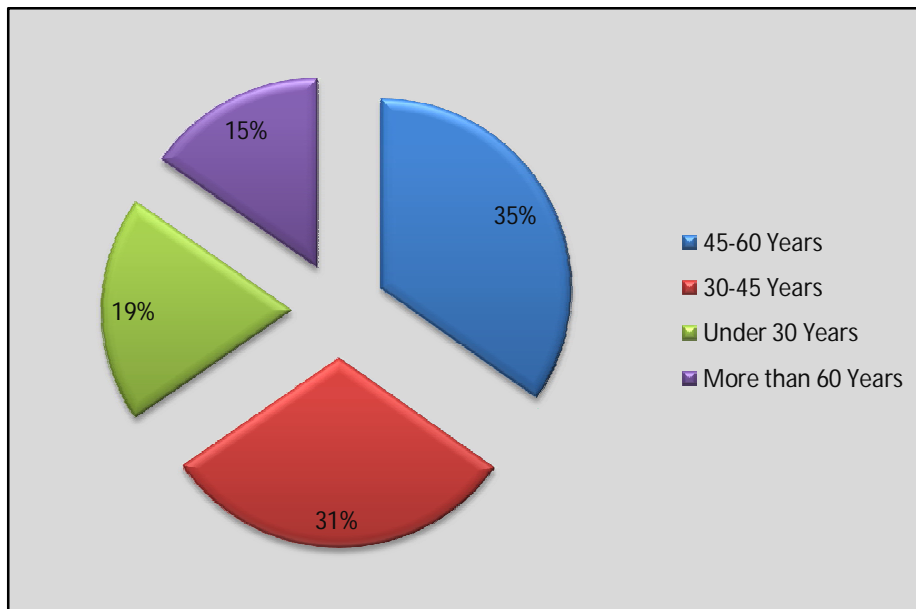
Figure 3.1: Gender distribution in the sample



Age wise distribution of the sample

Understandably it was the older people who were availing services as medical tourists. Around 35% of the respondents were in the age group of 45-60 years followed by 31% respondents in age group of 30-45 years. Another 15% respondents were older than 60 years. Around 19% respondents were less than 30 years of age.

Figure 3.2: Age-wise distribution of the respondents



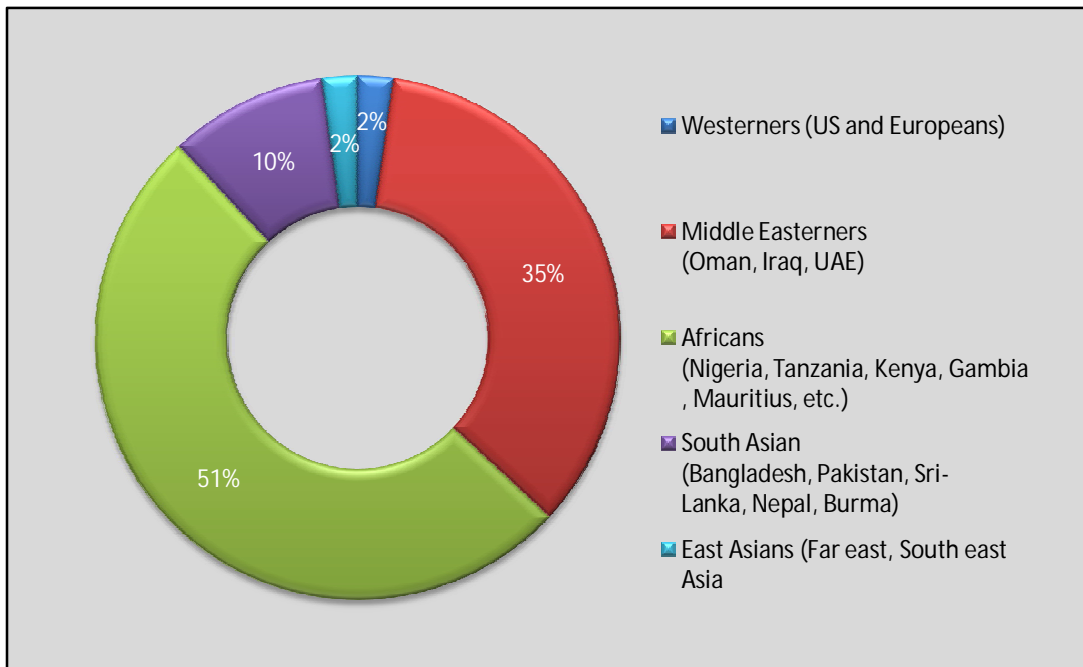
Source market

Based on preliminary discussion the source markets were divided into 5 broad regions- Westerners which included medical tourists from US and Europe; Middle-easterners which included tourists from UAE, Oman, Iraq, etc.; Africans- which included Nigerians, Tanzanians, Kenyans, Gambians, Mauritians, etc.; South Asians which included- Bangladeshi, Pakistanis, Sri Lankans, Nepalese and Burmese; East Asians which included tourists from far East (Japan) and South-east

Asian countries. Of these the major market was Africans (51%) and middle easterners (35%). South Asians (10%) are also a significant market.

It was observed that medical tourists from developed countries are not seeking medical procedures which are either available in their home country or are covered by insurance. A recent study (Alleman, Luger, Martin, Horowitz, Cram, & Reisinger, 2010) casts doubt on many of the claims made about the size of medical tourism market and conclude that the number of Americans travelling overseas for medical care with assistance from medical tourism companies is relatively small. Similarly there is growing concern in European Union to discourage health tourism and spiralling health costs (Cahill, 2011). Primarily, the medical tourists arrive from the countries like Middle East, Africa, South East Asia and South Asia where quality high end procedures are not available. Since the patient must support the cost of treatment they, therefore, they compare destinations offering comparable quality of medical procedures on cost. India has an advantage here.

Figure 3.3: Source markets



One important segment is the tourists from the neighbouring countries. Though the cost of medical procedures is almost the same at the leading healthcare providers studied, a large number of them have differential pricing for the recuperation/ ambulation stages. A large number of PIOs/ NRIs and medical tourists from South Asia being price sensitive try to register as domestic patients. They arrive on tourist or other visas (other than medical visas) and organise treatment either as 'locals' or as through local connections. It is, therefore, difficult for the service providers to differentiate and count them as medical tourists.

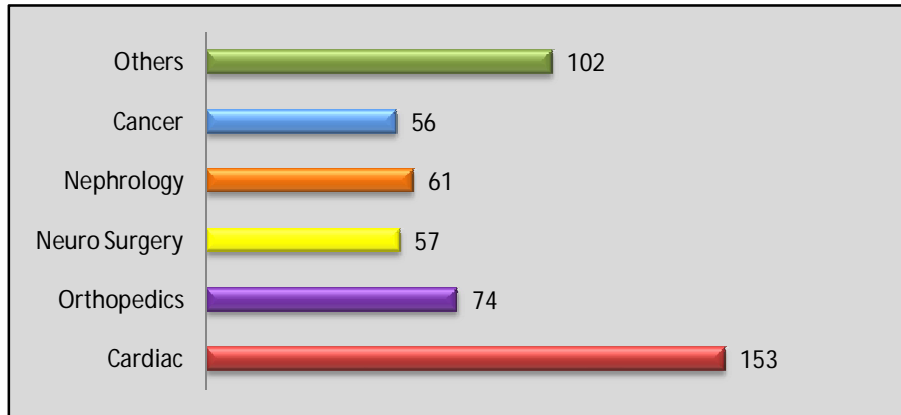
Medical tourism products

Cardiac treatment (30%) is the most popular product of Indian medical tourism. This is followed by Orthopaedics (including joint replacement) (15%), Nephrology (12%), Neuro surgery (11%) and Cancer (11%). All others account for balance (22% of product demanded). Details are given in Table 3.3/ Figure 3.4.

Table 3.3: Distribution of products demanded

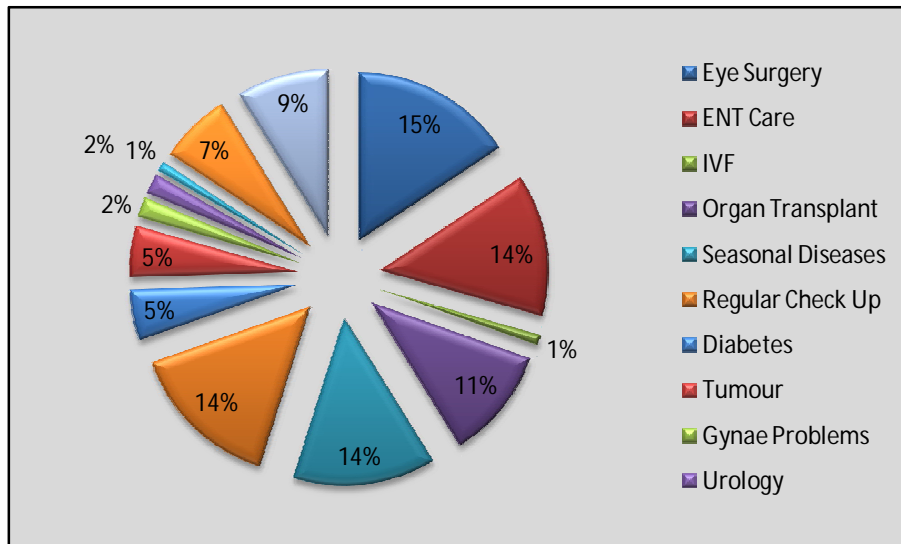
<i>Medical tourism product</i>	<i>Numbers</i>	<i>Percent (rounded)</i>
Cardiac	153	30%
Orthopaedics (including joint replacement)	74	15%
Nephrology	61	12%
Neurosurgery	57	11%
Cancer	56	11%
Eye surgery	16	3%
Regular check up	15	3%
ENT	14	3%
Seasonal disease	14	3%
Organ transplant	11	2%
Gastroenterology	9	2%
Dental	7	1%
Diabetes	5	1%
Tumour	5	1%
Gynae	2	<1%
Urology	2	<1%
Cosmetic	1	<1%
IVF	1	<1%
<i>Total</i>	<i>503</i>	

Figure 3.4: Medical tourism products



Breakup of 'others' is as in Figure 3.5. It is evident that India is particularly popular for treatment of illness category products. It is not popular for Enhancements (cosmetics and dental) and Fertility (IVF). Wellness (spa and alternate therapies) tourism products were not included as medical tourism products for this study (TRAM, 2006)⁵.

Figure 3.5: : Distribution of 'other' medical tourism products

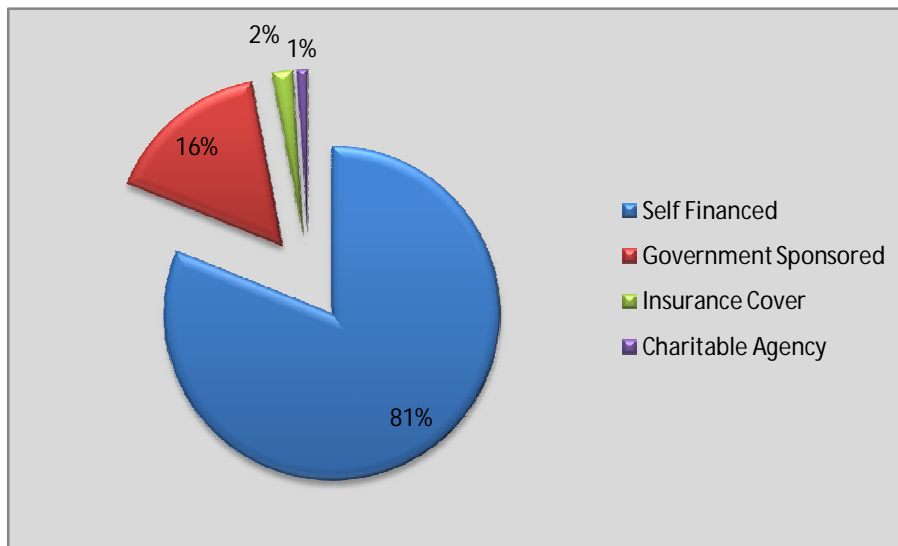


⁵ Tourism Research and Marketing(2006), typology of medical tourism which broadly classifies health and medical tourism into 4 categories- treatment of illness generally referred to as medical tourism; enhancements which include cosmetic surgeries; wellness tourism which focuses on spa and alternate therapies; and, reproduction which is increasingly called fertility or birth tourism.

Source of financial support

It clearly emerges that India is medical tourism destination for those (81%) who have to support their own medical treatment. 16 percent respondents were supported by their home governments for medical treatment. A meagre 2 percent were covered by insurance.

Figure 3.6: Source of financial support



While the popular belief is that India is attracting a lot of medical tourists from developed western countries because of competitive pricing of its medical tourism products, this research indicates a different trend. While it is true, the cost of medical procedures in India is much less than that in the developed world, India does not attract medical tourists from those countries as most of them are already insured for health. Patients prefer healthcare to be available as close to where they live and work as possible (Commission of the European Communities, 2008).

In fact it is the third world patients who are not covered by a social security/health insurance and must personally finance the treatment that is not available in their home community who then consider the costs comparable treatment elsewhere. Indian medical treatment is part of their evoked set.

Moreover, there are cases where the insurance companies offer lower premium if the insurer is willing to travel to a low cost destination for medical treatment. Also, there are cases where state finances medical treatment (e.g. countries like Iraq and Oman) and they (governments) have direct contact with the hospitals in India. 97 percent of the respondents were either supporting themselves (81%) or were sponsored by governments (16%). These tourists came from African countries, Middle East and South Asia (total 96%).

Major markets

Cross tabulating the source markets with medical tourism products (See Table 3.4) suggests that the major markets are Africans seeking cardiac care followed by Middle easterners seeking cardiac care, Africans seeking orthopaedic, nephrology, cancer and neurology treatment in that order (All more than 5%).

<i>Nature of Treatment</i>	<i>Westerners</i>		<i>Middle easterners</i>		<i>Africans</i>		<i>South Asians</i>		<i>East Asians</i>	
	<i>Nos.</i>	<i>%</i>	<i>Nos.</i>	<i>%</i>	<i>Nos.</i>	<i>%</i>	<i>Nos.</i>	<i>%</i>	<i>Nos.</i>	<i>%</i>
Cardiac	2	0.4	60	11.9	71	14.1	16	3.2	4	0.8
Orthopaedics	1	0.2	21	4.2	44	8.7	8	1.6	0	0.0
Neurosurgery	1	0.2	26	5.2	27	5.4	2	0.4	1	0.2
Nephrology	3	0.6	14	2.8	37	7.4	5	1.0	2	0.4
Cancer	0	0.0	19	3.8	27	5.4	9	1.8	1	0.2
Others	4	0.8	35	7.0	51	10.1	9	1.8	3	0.6

Cardiac care is the most important product sought by patients of all age groups. Patients in the age group 45-60 are also seeking orthopaedic treatment.

<i>Nature of Treatment</i>	<i>Under 30 Years</i>		<i>30-45 Years</i>		<i>45-60 Years</i>		<i>>60 Years</i>	
	<i>Nos.</i>	<i>%</i>	<i>Nos.</i>	<i>%</i>	<i>Nos.</i>	<i>%</i>	<i>Nos.</i>	<i>%</i>
Cardiac	33	6.6	41	8.2	44	8.7	35	7.0
Orthopaedics	9	1.8	24	4.8	30	6.0	11	2.2
Neuro Surgery	8	1.6	20	4.0	22	4.4	7	1.4
Nephrology	8	1.6	23	4.6	24	4.8	6	1.2
Cancer	11	2.2	11	2.2	27	5.4	7	1.4
Others	28	5.6	35	7.0	28	5.6	11	2.2

Some cities (Bengaluru, Chennai, Hyderabad and Delhi/ NCR) have emerged as preferred medical tourism destinations. The scope of study mandated a focus on medical tourists from outside India; researchers observed that some destinations

(like Mumbai) were targeting domestic medical tourists (those from other Indian states and visiting them for medical procedures). As a state Kerala has distributed service providers to different cities. Four cities have JCI/NABH accredited hospitals.

Table 3.6: City preferences by source markets

	<i>Westerners</i>	<i>Middle Easterners</i>	<i>Africans</i>	<i>South Asians</i>	<i>East Asians</i>	<i>Total</i>
Mumbai	0	1	3	1	0	5
Bengaluru	4	60	85	3	11	163
Chennai	3	57	56	28	0	144
Hyderabad	0	27	61	5	0	93
Delhi/NCR	3	20	44	11	0	78
Pune	0	0	3	0	0	3
Kolkata	0	3	1	1	0	5
Palakkad	0	3	1	0	0	4
Thiruvananthapuram	0	1	2	0	0	3
Kochi	0	2	1	0	0	3
Kozhikode	1	1	0	0	0	2
<i>Total</i>	<i>11</i>	<i>175</i>	<i>257</i>	<i>49</i>	<i>11</i>	<i>503</i>

Other characteristics of the sample

- Only 8.5 % customers had been treated abroad earlier. Out of these 8.2 % were treated in accredited hospitals whereas 0.3% were treated in non-accredited hospitals.
- Overwhelming 81% respondents were self financed. Only 2 % were covered by insurance. Around 16% were supported by their governments.
- Less than 16% medical tourists consult more than one hospital before finalising the service provider.

Limitations

Analysis of sample is bounded by assumptions and defined scope on one hand and constraints that restricted the respondents on the other.

1. Survey was carried out during June- August, 2010 which were summer months. Might be that medical tourists from western world were not arriving then.
2. Many hospitals, specially, those who had applied for NABH accreditation, had a policy of not allowing researchers to interact with their patients/ medical

tourists. However, in one case, the hospital collected responses (3 questionnaires) on their own while not allowing any interaction with the patients.

3. The general shared belief of service providers is that a large number of South Asians are coming but are difficult to be differentiated (Bangla speaking patients from Bangladesh; Punjabis from Pakistan, Nepalese, etc.) and are therefore less represented on the sample.
4. There was a large segment of domestic medical tourists and service provider were happy addressing this domestic demand. They have contributed through import substitution of health care services.
5. Service providers requested to avoid inquiring about the type of visa on which a tourist was visiting India for treatment.
6. Service providers for dental and cosmetic surgery did not allow access to patients as customers did not want their identities to be revealed.

End note

Customers are largely from Middle East and Africa. They are largely seeking surgical procedures. Key medical procedures demanded are cardiac, orthopaedics, cancer and tumours. Niche markets for dental and cosmetic procedures also exist. However, customers are approaching smaller yet specialised service providers who are often not accredited.

A large component of Indian market are NRIs and PIOs who cannot be differentiated and are not (statistically) considered medical tourists. Similar medical tourists from neighbouring countries especially Sri Lanka and Bangladesh are also believed to be coming in large numbers. However, given their physical appearance and language it becomes difficult for service providers to differentiate, treat and count them as foreign medical tourists.

Discussion with service providers also revealed that many hospitals, especially in metros and sub metro have corporate clients who include expatriates. These are not enumerated as foreign medical tourists. Further, relatives and visitors to these expatriates also get themselves treated under the corporate contract. These are also not distinguished as foreign medical tourists.

Customers are cost conscious and India is part of evoked set when comparisons with western countries' health care are drawn.

There exists a huge domestic medical tourists segment but the same was not within the scope of this study. Many state governments are consciously supporting this market.

4. Mapping expectations vs. experiences

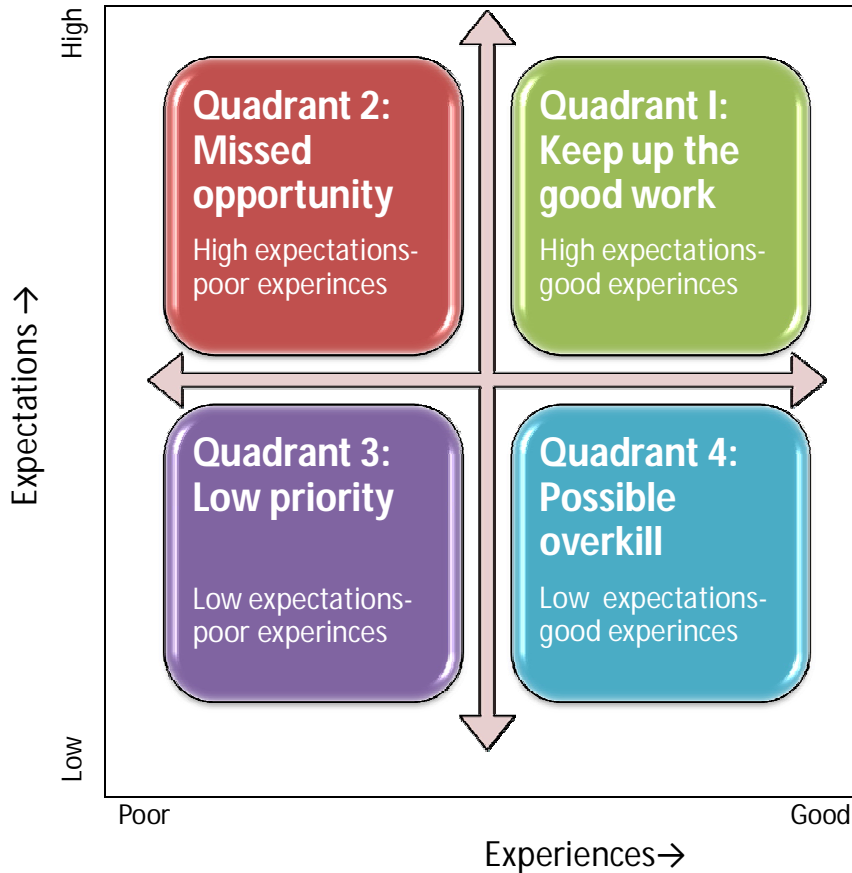
Systematic approach to mapping customer expectations helps managers to know better what aspects of a service best define its quality and can prepare the organization to take up a competitive position based upon its ability to deliver what customers demand (Cronin & Taylor, 1992). A direct measurement technique is the Importance-Performance analysis (IPA) technique which emerged from the earlier work of Martilla and James (1977). Unlike SERVPERF, the Importance- Performance technique allows simultaneous comparison of direct performance measure of service quality to the importance rating given by customers for the various quality items being evaluated. The inclusion of customer preference rating in IPA gives a better picture of customers' quality assessment of service. According to (Barsky, 1995) such relative assessments pinpoint clearly the quality aspects of product or service which contributes greatly to customer satisfaction. As a result the information derived out of importance-performance analysis (IPA) can aid the development of more focused marketing strategies (Ford, Joseph, & Joseph, 1999). This view is confirmed (Lovelock, Patterson, & Walker, 1999) who state that importance-performance analysis is a useful management tool which can help firms to redirect their scarce resources from low impact areas to high impact areas. This technique is also called Key Driver Analysis.

The importance-performance scale is based on the assumption that satisfaction is affected by both the importance of an attribute and perceived performance on the attribute. Designed for ease of transferring results into actions, the scale's end result is a graph indicating appropriate levels of action.

For the purpose of this study the researchers have deployed a variant of this technique- Expectations- Experience Matrix (EEM) (See Figure 4.1). In EEM, customers' expectations and experiences have been plotted on a grid that is divided into 4 quadrants. Each quadrant is created on the basis of the mean scores of the expectations- experience ratings. The variables are then assessed

according to its position in the quadrant on the grid. Each quadrant suggests different response from a strategy point of view.

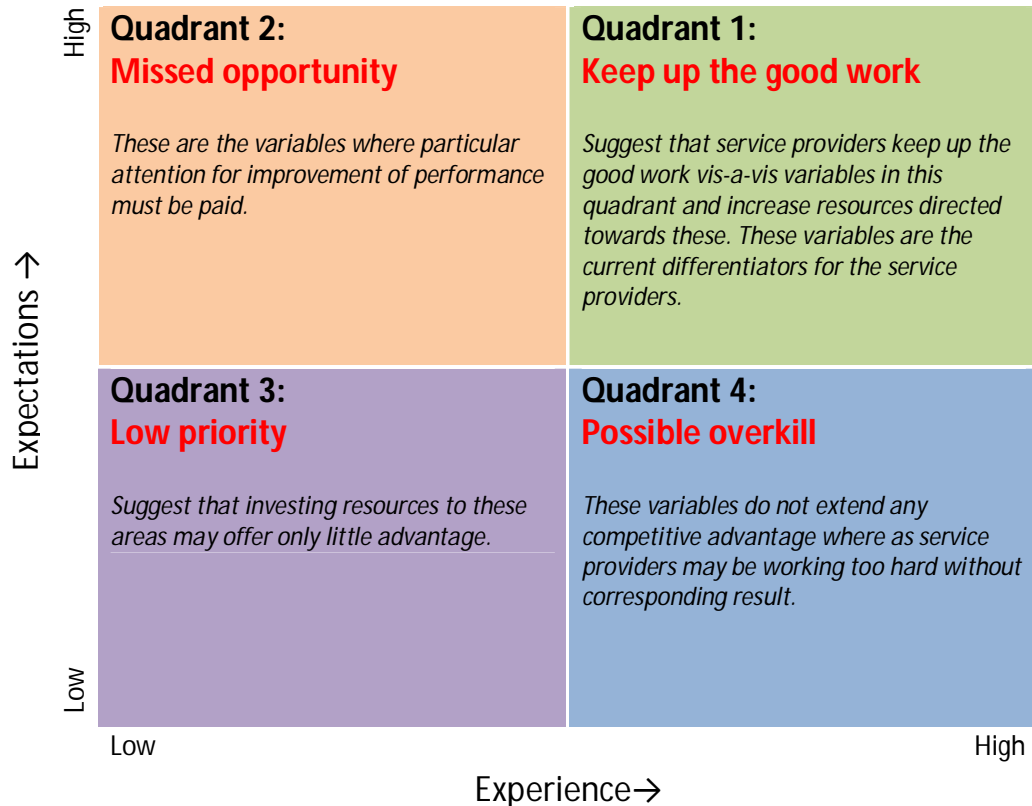
Figure 4.1 : Expectation- experience matrix



Adapted from: Martilla, J. and James, J. (1977). Importance-performance analysis. Journal of Marketing, 41 (January), 77-79.

Attributes that are rated high in expectation and high in experience score suggest that service providers *keep up the 'good' work* and increase resources directed towards these areas. In contrast, attributes having low expectation rating and a low experience rating suggest that investing resources to these areas may offer only little advantage and should therefore be on a *lower priority*. Attributes that are rated high in expectation and low in experience are the *missed opportunities* and service providers need to concentrate here and pay particular attention for improvement.

Figure 4.2 : Expectation- experience matrix explained



Quadrant I

Attributes are perceived to be very important to respondents, and at the same time, the organisation seems to have high levels of performance on these activities. The message here is To Keep up the Good Work.

Quadrant II

Attributes are perceived to be very important to respondents, but performance levels are fairly low. This sends a direct message that improvement efforts should concentrate here.

Quadrant III

Attributes are with low importance and low performance. Although performance levels may be low in this cell, managers should not be overly concerned since the attribute in this cell is not perceived to be very important. Limited resources should be expended on this low priority cell.

Quadrant IV

This cell contains attributes of low importance, but relatively high performance. The respondents are satisfied with the performance of the organizations, but managers should consider present efforts on the attributes of this cell as being over-utilized.

Sources: Adapted from (Evans & Chon, 1989); (Hemmasi, Strong, & Taylor, 1994); (Keyt, Yavas, & Riecken, 1994); (Martilla & James, 1977) and (Martin, 1995).

Lastly, attributes rated low in expectations and high in experience are areas of *possible over kill*. Providers should reconsider the level of effort (See Figure 4.2). The beauty of EEM is that it can help a business understand what its customers feel is important to it across a number of relevant variables.

Expectation- experience analysis for the pre procedure stage

For this stage the respondents' opinion on expectation and experiences for important parameters were noted (See Table 4.1).

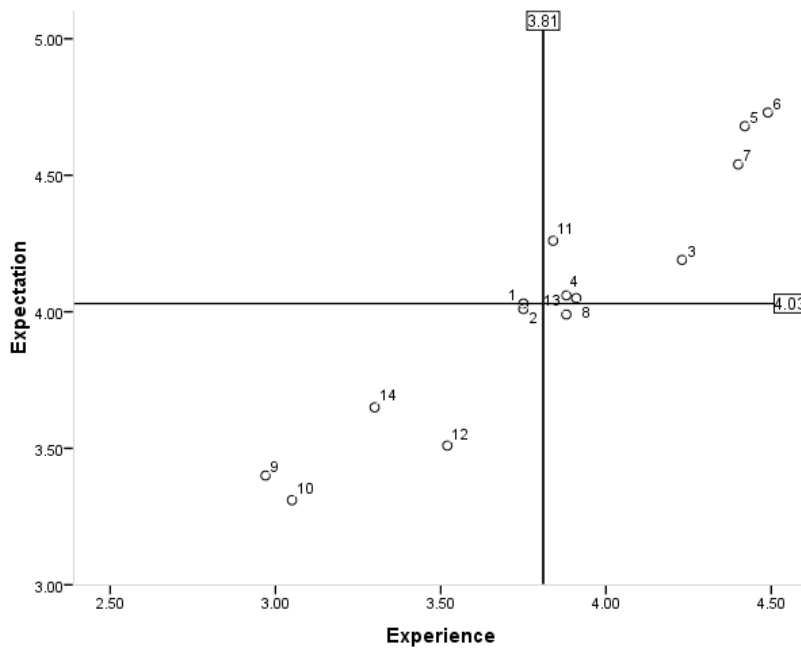
Table 4.1: Expectations and experience at pre-procedure stage (mean value)

	<i>Variables</i>	<i>Expectation</i>	<i>Experience</i>
1	Low cost of medical procedure	4.01	3.75
2	Overall cost of travel and treatment	4.03	3.75
3	Less wait time for treatment	4.19	4.23
4	Destination well connected to home country	4.06	3.88
5	Quality of medical procedure	4.68	4.42
6	Competence of doctors and paramedical staffs	4.73	4.49
7	Quality clinical infrastructure	4.54	4.40
8	Quality non clinical infrastructure	4.05	3.91
9	Availability of medical insurance	3.40	2.97
10	Affordable cost of insurance	3.31	3.05
11	Availability of visa	4.26	3.84
12	Help to finalize my travel itinerary	3.51	3.52
13	Pre-procedure documentation	3.99	3.88
14	Terms of payment	3.65	3.30
	Average	4.03	3.81

The data on the Expectation-Experience Matrix is shown in Figure 4.3. The results of the matrix can be understood in terms of quadrants as summarized in Figure 4.4.

A large number of tourists travelling to India for medical procedures are from low GDP countries. They are cost conscious and many of them support self. One important reason for choosing India is the lower cost for comparable quality. However, one of the major concerns that emerge from the EE Analysis is that they feel that while the cost of procedure is on the lower side, the overall cost of travel and treatment is hurting them. They perceive that the cost of logistics (boarding, lodging, travel) is more than what they had expected (only item in quadrant 2).

Figure 4.3: Expectation – experience matrix for the pre-procedure stage

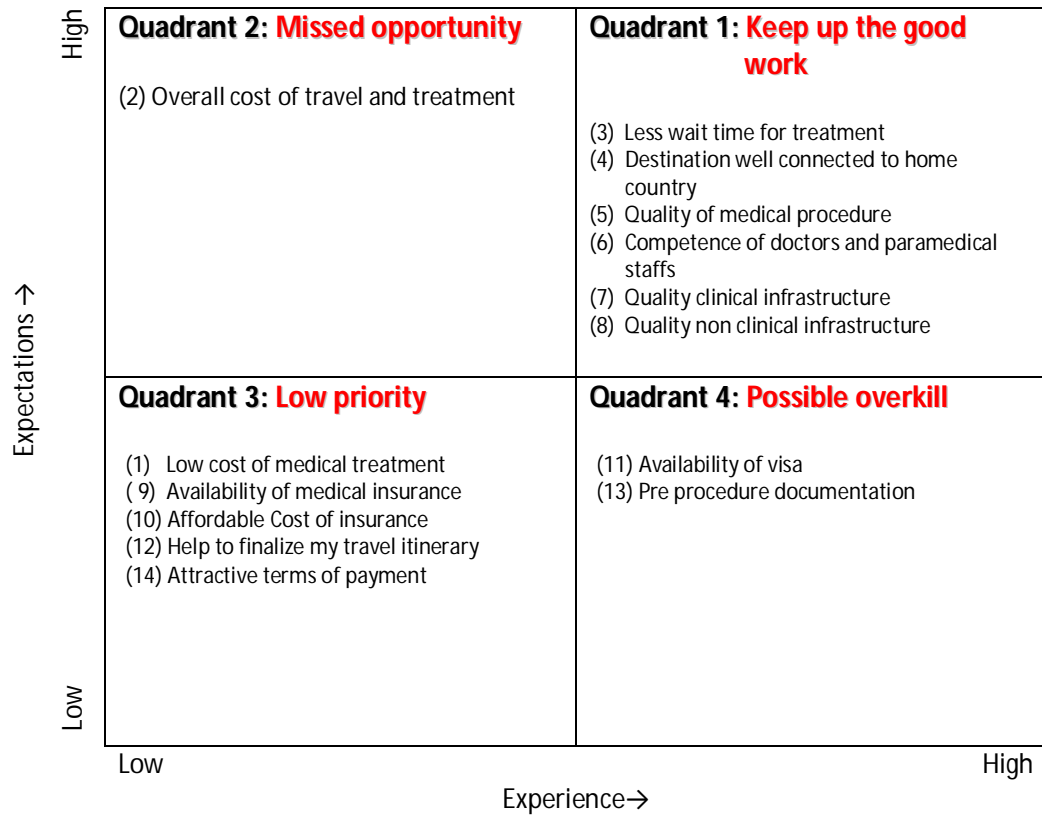


Note: The plot is generated using SPSS. Points must be read using the table (4.1)

It is not sure what kind of visa is obtained for medical treatment in India (they necessarily do not obtain a medical visa). However, the medical visa is readily. Pre procedure documentation is not a concern and is perceived to be prompt and good. This may be because 77 percent of tourists are handled by the facilitation department of the concerned hospitals while another 7 percent are handled by professional medical tour operators.

For the segment that Indian medical tourism is serving, competitive advantage emerges out of perceived quality of clinical component- competence of doctors and para-medical staff, procedure and infrastructure. Less waiting time for medical procedure is also to India's advantage. There appears to be a potential in targeting medical tourists from 6 to 8 hour haul radius from the India. Tourists are also expecting good non-clinical infrastructure India. This is a larger issue and medical tourism industry can do little about it. However, efforts must be made to target segments (like current source markets –Iran and Iraq in Middle East, South Asia, Africa, South East Asia (where recently Government of India has extended visa on arrival facility) who are comfortable with existing infrastructure facilities.

Figure 4.4 : Expectation- experience matrix for the pre procedure stage



Adapted from: Martilla, J. and James, J. (1977). Importance-performance analysis. Journal of Marketing, 41 (January), 77-79.

Note- One variable (# 2) had one of the coordinates on the grid (mean) of the matrix. In this case the point was considered to be in quadrant with values less than the mean. Conservative approach is used so that the decision makers may focus on improvement vis-à-vis this variable.

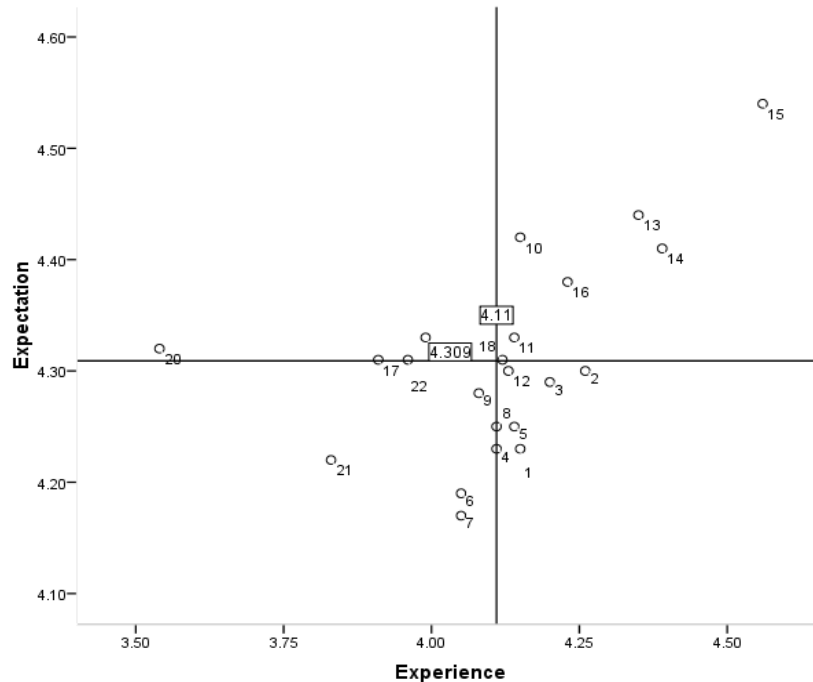
Expectation- experience analysis for the procedure stage

For this stage the respondents' opinion on expectation and experiences for important parameters were noted (See Table 4.2).

Table 4.2: Expectations and experience at procedure stage (mean value)			
	Variables	Expectation	Experience
1	Swift admission process	4.23	4.15
2	Attention to customers' needs	4.30	4.26
3	Coordination between different wards and departments	4.29	4.20
4	Enthusiastic and proactive staff	4.23	4.11
5	Pickup facility on arrival	4.25	4.14
6	Counseling at hospital on arrival	4.19	4.05
7	Assurance of confidentiality	4.17	4.05
8	Helpful and cheerful daily care staff	4.25	4.11
9	Daily care staff sensitive to customers' needs	4.28	4.08
10	Knowledgeable and skillful nursing staff	4.42	4.15
11	Quick and responsive nursing care staff	4.33	4.14
12	Nursing staff demonstrates concern	4.30	4.13
13	Doctors available when required	4.44	4.35
14	Doctors willing to share information	4.41	4.39
15	Qualified and skillful doctors	4.54	4.56
16	Linguist abilities of doctors and nurses	4.38	4.23
17	Linguist abilities of non medical staff	4.31	3.91
18	Empathetic doctors and nurses	4.31	4.12
19	Comfortable (and affordable) accommodation	4.33	3.99
20	Good and palatable food	4.32	3.54
21	Privacy	4.22	3.83
22	Proper arrangement for accomlice	4.31	3.96
	Average	4.31	4.11

The data on the expectation-experience matrix is shown in Figure 4.5. The matrix clearly brings out that medical tourists to the country do not come with high expectations that are not met. Quadrant 3 factors related to non-medical facilities can be taken extra care to create a competitive advantage. The results of the matrix are presented in quadrants as summarized in Figure 4.6.

Figure 4.5: Expectation – experience matrix for the procedure stage



Note: The plot is generated using SPSS. Points must be read using the Table 4.2 and not the location of labels on the plot.

The tourists appear to be dissatisfied with a few things- accommodation at the destination and handling of cross-cultural demands. Discussions with The respondents revealed that they did not consider accommodations worth the money spent. Medical tourists from low GDP countries found the accommodations offered as expensive. Further, they also complained about accommodation arrangement for the accomplice.

While the non-medical staff was considered knowledgeable and skilful (quadrant 1), their limitation to converse in the language of the tourists was a challenge. Some hospitals used the services of interpreters or students from the patient’s country studying in India. However, the use of interpreter was neither comfortable nor efficient. Service providers were also less concerned about the food offered to the tourists. There appears to be a need for greater sensitivity to intercultural demands of the tourists.

Figure 4.6 : Expectation- experience matrix for the procedure stage

Expectations →	High	Quadrant 2: Missed opportunity (17) Linguist ability of non medical staff (19) Comfortable (and affordable) accommodation (20) Good and palatable food (22) Arrangements for accompliance	Quadrant 1: Keep up the good work (10) Knowledgeable and skilful nursing staff (11) Quick and responsive nursing care staff (13) Doctors available when required (14) Doctors willing to share information (15) Qualified and skilful doctors (16) Linguist ability of doctors and nurses
	Low	Quadrant 3: Low priority (4) Enthusiastic and proactive staff (6) Counselling at hospital on arrival (7) Assurance of confidentiality (8) Helpful and cheerful daily care staff (9) Daily care staff sensitive to customer needs (21) Privacy	Quadrant 4: Possible overkill (1) Swift admission process (2) Attention to customers' needs (3) Coordination between different wards and departments (5) Pickup facility on arrival (12) Nursing staff demonstrate concern (18) Empathetic doctors and nurses
		Low	High

Adapted from: Martilla, J. and James, J. (1977). Importance-performance analysis. Journal of Marketing, 41 (January), 77-79.

Note- Certain variables had one of the coordinates on the grid (mean) of the matrix. In such cases (# 4, 8, 17, 18 and 22) the points were considered to be in quadrant with values less than the mean. Conservative approach is used so that the decision makers may focus on improvement vis-à-vis those variables.

Professional and privacy issues within the hospital did not appear to have ramifications for the industry. The competitive advantage seems to emerge from the competence and professionalism of doctors and para-medical staff.

Summary

Expectation- Experience Matrix suggests where to invest efforts and resources. At the pre procedure stage, inbound medical tourists were typically hurt by the fact that the overall cost of treatment (besides the cost of procedure) was much more than their expectations. Indian medical tourism draws competitive advantage from quality of procedure that includes competence of doctors and para-medical staff. Even the quality of clinical infrastructure was found to be good. One important advantage was that the wait time with Indian healthcare

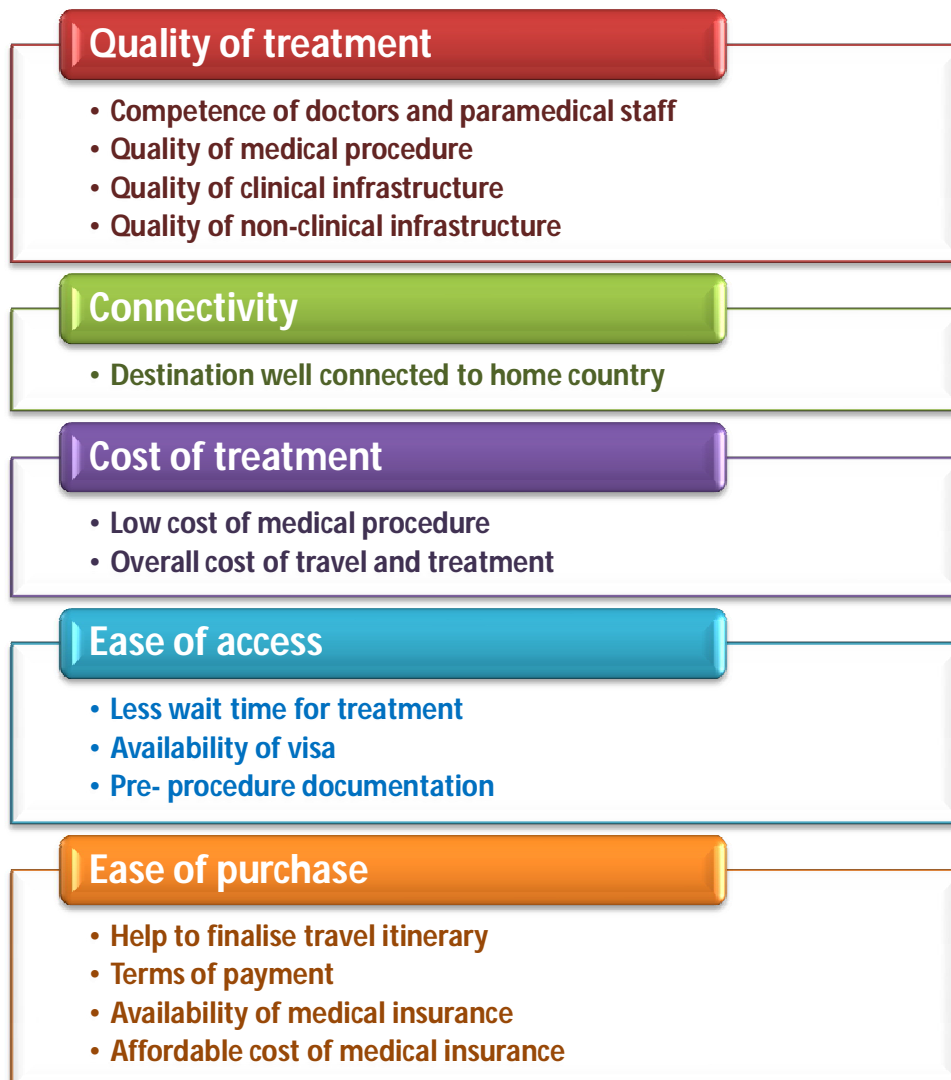
was much less. Also India receives medical tourists from countries and places that are well connected.

At the procedure stage, the respondents pointed out difficulty with language. There were large numbers of tourists from Africa and Middle East which are non-English speaking countries. Non-medical staff was not able to communicate properly. Using interpreters was neither comfortable nor efficient. There were also disappointed with lodging and boarding facilities. Strengths of Indian medical tourism at the procedure stage lies with the competence of medical and paramedical staff.

5. Pre procedure stage

The first stage of engagement is the pre-procedure stage where medical tourist feels the need, searches, identifies and finalizes the process of reaching to the destination for treatment. At this stage, the medical tourists appear to have five concerns- the quality of treatment, connectivity, the cost of treatment, the ease of access and the ease of purchase.

Figure 5.1 : Major concerns of medical tourists during the pre procedure stage



Quality of treatment refers to quality of procedure, infrastructure and staffs.

Connectivity refers to perceived ease of travel between the host and home

countries. Customers were also concerned about costs of treatment which included both the cost of procedure and other incidental costs. Ease of access refers to the perceived ease with which the patient initiates the hassle free medical tourism process, while Ease of purchase refers to variables making purchase easy like- help with finalising the itinerary, terms of payment and insurance.

Perceived relative importance of these factors¹ was measured on a 5-point scale- '5' for most important and '1' for least important. There were 503 valid responses.

Table 5.1 : Relative importance of factors of concern (expectations) at pre procedure stage

	<i>Factor</i>	<i>Mean (μ)</i>	<i>S.D. (σ)</i>
1	Quality of treatment	4.50	0.48
2	Ease of access	4.15	1.04
3	Connectivity	4.07	1.98
4	Cost of treatment	4.03	0.75
5	Ease of purchase	3.46	0.76

Note: Mean value shows perceived importance of factor on a 5 point scale. Standard Deviation (S.D.) reflects the consistency with which the respondents have rated the factor. A smaller S.D. means more consistency in response and vice versa.

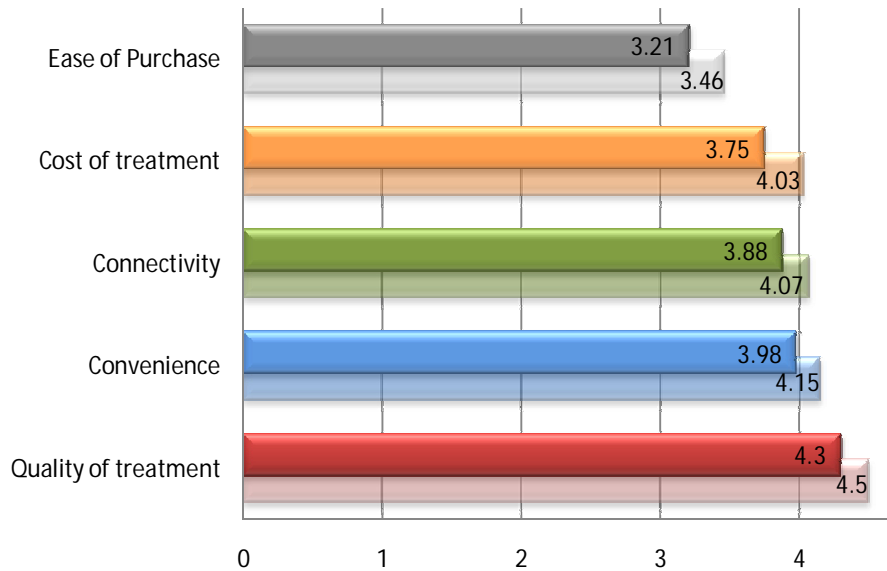
The respondents were also asked to rate their experience vis-à-vis these 5 factors and corresponding gap between 'what they expected' and 'what they got' was evaluated. In all the cases experience fell short of expectations (See Figure 5.2).

Quality of treatment was expectedly the most important concern rated so consistently by the respondents. This was followed by ease of access to treatment procedure. However, the gap in expectations and experience was the least in these cases.

The respondents felt hurt the most by the overall cost of treatment. They were also not very comfortable with the ease with which they purchase the medical (and related travel) services.

¹ 14 variables were identified at this stage. They were reduced to 5 factors using Factor Analysis.

Figure 5.2: Tourist experience relative to their expectations for the pre procedure stage



Bars in the foreground are tourists' experiences, while those in the background are their expectations for the corresponding factor

Table 5.2: T-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Quality of treatment	0.19	0.54	0.02	0.15	0.24	7.92	476	0.00
Ease of access	0.17	1.14	0.05	0.06	0.27	3.18	473	0.02
Connectivity	0.18	2.06	0.09	0.00	0.37	1.97	482	0.05
Cost of treatment	0.27	0.98	0.04	0.18	0.36	6.10	488	0.00
Ease of purchase	0.24	0.73	0.04	0.17	0.31	6.75	429	0.00

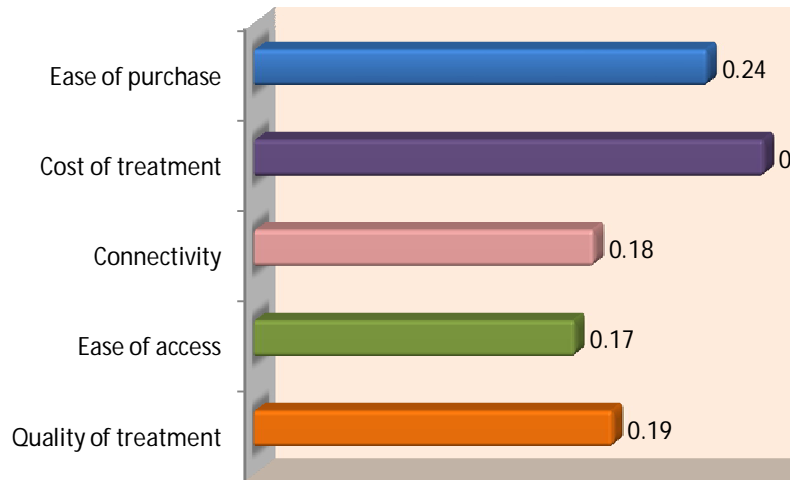
Note Since all the values in the last column (significance) are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist in pre procedure stage are significant. That these differences cannot be attributed to chance error due to sampling.

It is important to understand whether the gaps shown above are statistically significant or are just because of a sampling error. Researchers administered a paired sample t-test for the sample means for each of the 5 factors for 95% confidence level (See Table 5.2).

Except for the 'connectivity' the gap between expectations of the tourist and their experiences during the pre procedure stage are significant. This means

that as far as connectivity is concerned the expectations and experience are not significantly different. Size of the gap is evaluated and presented in Figure 5.3.

Figure 5.3: Size of gap between tourists' expectations and their experiences during the pre procedure stage



The figure above shows that the biggest gap is in case of overall cost of the treatment followed by other non-medical facilities expected by the medical tourists.

Performance of tour operator

In case of Indian medical tourism most of the service providers (hospitals) have created a separate department/ responsibility for facilitating medical tourists. Only 7% respondents used services of independent medical tour operator. Elsewhere tour operators play an important role in tourists making purchase decisions. The respondents were asked to rate on a 5 point scale their expectations from tour operators (See Table 5.3).

Table 5.3 : Expectations of tourist from medical tour operator

Rank	Variables	Mean (μ)	S.D. (σ)
1	Good networking	4.54	0.56
2	Range of Services	4.50	0.56
3	Easy access	4.30	0.74
4	Some minimal kind of guarantee	4.19	0.82
5	Brand name	4.11	0.81
6	Promotional schemes	3.81	0.79
7	Alternative leisure options offers	3.74	0.70

Note Mean value shows perceived importance of factor on a 5 point scale. Standard Deviation (S.D.) reflects the consistency with which the respondents have rated the factor. A smaller S.D. means more consistency in response and vice versa.

Medical tourists using the services of medical tour operators wanted them to have a good networking with medical service providers wherein the range of services offered should be broad. They also expect some minimal guarantee for good treatment. The respondents who have used services of tour operators were requested to rate their experience with the tour operators.

The respondents were not very concerned with the brand name, promotional schemes and alternative leisure options' offer. Their expectation were not much and therefore their expectations appeared to be have met (the difference between expectations and experience was not statistically significant). As the business of medical tour operators is in nascent stages of growth they were not able to meet the expectations of the customers for important concerns like good networking, range of services, minimal guarantee. This is evident from a statistically significant difference in the expectations and the experience for these dimensions of purchase through medical travel operators.

Another interesting observation is that a large number of medical tourist visiting India are Cohen's type 5, that is, pure patients- who come for medical treatment and return. They are not much interested in additional leisure tourism and therefore do not demand/ expect these services from medical tour operators (rated as least important concern).

Table 5.4: T-test to evaluate if the difference between experiences and expectations of medical tour operator is significant

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean difference	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Easy access	.500	.941	.157	.182	.818	3.188	35	.003
Brand name	.229	.877	.148	-.073	.530	1.541	34	.133
Good networking	.667	.926	.154	.353	.980	4.320	35	.000
Range of Services	.939	.933	.162	.608	1.270	5.782	32	.000
Alternative leisure options offers	.265	1.109	.190	-.122	.652	1.391	33	.173
Promotional schemes	.294	1.142	.196	-.104	.693	1.501	33	.143

Note If the values in the last column (significance) are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist with medical tour operator are significant.

Tourists expect operators to have a good networking, be able to offer a range of services and be accessible. Unfortunately experience was that the expectations were not met and all three gaps were statistically significant (<0.05).

One factor deserves special mention. The respondents suggest that the wait time for treatment is shorter than what they expected. This could be one of India's competitive advantages in medical tourism market at least for now.

14 variables (expectations) were identified at the pre-procedure stage. These were further reduced to 5 factors. Besides these there were 4 other variables which were important for the inbound medical tourists. These were travel time to destination, international accreditation, facility of prior consultation and getting relevant information from hospital chosen for procedure. Since feedback was taken from the respondents who had arrived in India and had already decided on these 4 variables, there was no point measuring experience

of the respondents for these variables. The mean of expectations was 4.03 on a 5 point scale with values ranging from 4.73 to 3.31.

Table 5.5 : Expectations of tourist for additional 4 factors

<i>Rank</i>	<i>Variables</i>	<i>Mean (μ)</i>	<i>S.D. (σ)</i>
1	Travel time to destination	4.02	2.00
2	Prior consultation with doctors	3.81	0.74
3	International accreditation	3.65	0.85
4	Information from chosen hospital	3.24	0.97

Note Mean value shows perceived importance of factor on a 5 point scale. Standard Deviation (S.D.) reflects the consistency with which the respondents have rated the factor. A smaller S.D. means more consistency in response and vice versa.

It is important to note that all these variables were rated less than mean (4.03). One reason for this could be that the respondents have already been through these variables and they do not figure in their expectations any more. Travel time to destination is close to the mean but has a large standard deviation making it difficult to infer that this was relatively important for all the respondents. It was interesting to see that for the segment buying medical tourism from India, accreditation was not so important. However, this must be inferred with caution. This could be a “qualifying factor” where sub optimal performance may lead to dissatisfaction whereas over kill does not extend any additional advantage.

Summary

Study identified five important concerns of medical tourists visiting India at the pre-procedure stage. These are the quality of treatment, connectivity, the cost of treatment, the ease of access and the ease of purchase. Quality of treatment and ease of access were relatively more important. Except for connectivity, there was a significant difference in what the medical tourists expected and what they experienced. This indicates that reasons for the gaps need to be addressed by service providers and policy makers.

Indian medical tourism draws advantage from a shorter wait time.

Medical tourists using services of medical tour operators expect them to help with a large choice of healthcare providers through good networking and offer

a range of services. They also expect the medical tour operator to offer some kind of guarantee to offset the perceived purchase risk associated with an intangible yet very important service- healthcare at a foreign destination.

Appendix: T-tests for paired difference in variables of factors of concern at pre-procedure stage

Table 5.6 : T-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant in case of *Quality of Treatment*

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Competence of doctors and paramedical staff	0.26	1.00	0.05	0.17	0.35	5.78	494	0.00
Quality of medical procedure	0.25	0.71	0.03	0.19	0.31	7.94	495	0.00
Quality of clinical infrastructure	0.14	0.78	0.04	0.07	0.21	4.09	493	0.00
Quality of non-clinical infrastructure	0.14	1.00	0.05	0.05	0.23	3.04	484	0.00

Note If the values in the last column (significance) are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist in pre procedure stage are significant. That these differences cannot be attributed to chance error due to sampling.

Table 5.7 : T-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant in case of *Connectivity*

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Destination well connected to home country	0.18	2.06	0.09	0.00	0.37	1.97	482	0.05

Note If the values in the last column (significance) are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist in pre procedure stage are significant. That these differences cannot be attributed to chance error due to sampling.

Table 5.8 : T-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant in case of *Cost of Treatment*

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Low cost of medical procedure	0.26	1.00	0.05	0.17	0.35	5.78	494	0.00
Overall cost of travel and treatment	0.27	1.08	0.05	0.18	0.37	5.61	489	0.00

Note If the values in the last column (significance) are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist in pre procedure stage are significant. That these differences cannot be attributed to chance error due to sampling.

Table 5.9 : T-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant in case of *Ease of Access*

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Less wait time for treatment	-0.03	2.73	0.12	-0.28	0.21	-0.27	488	0.79
Availability of visa	0.41	1.13	0.05	0.31	0.51	8.12	494	0.00
Pre- procedure documentation	0.11	0.93	0.04	0.02	0.19	2.49	481	0.01

Note If the values in the last column (significance) are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist in pre procedure stage are significant. That these differences cannot be attributed to chance error due to sampling.

Table 5.10 : t-test to evaluate if the difference between experiences and expectations of medical tourists at pre procedure stage is significant in case of *Ease of Purchase*

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Help to finalise travel itinerary	0.00	0.93	0.04	-0.09	0.08	-0.10	483	0.92
Terms of payment	0.34	1.00	0.05	0.25	0.43	7.26	446	0.00
Availability of medical insurance	0.43	1.10	0.05	0.33	0.53	8.53	482	0.00
Affordable cost of medical insurance	0.26	1.10	0.05	0.16	0.36	5.15	477	0.00

Note If the values in the last column (significance) are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist in pre procedure stage are significant. That these differences cannot be attributed to chance error due to sampling.

6. Procedure stage

Figure 6.1: Major concerns of medical tourists during the procedure stage



Procedure stage is the central stage of the value chain where the tourist is actually treated. The stage begins when the medical tourist is picked up at the airport and continues through the treatment in the hospital. It comes to an end with discharge of the patient from the hospital. At this stage medical tourists had 4 concerns (see Figure 6.1).

Table 6.1: Relative importance of factors of concern (expectations) at procedure stage

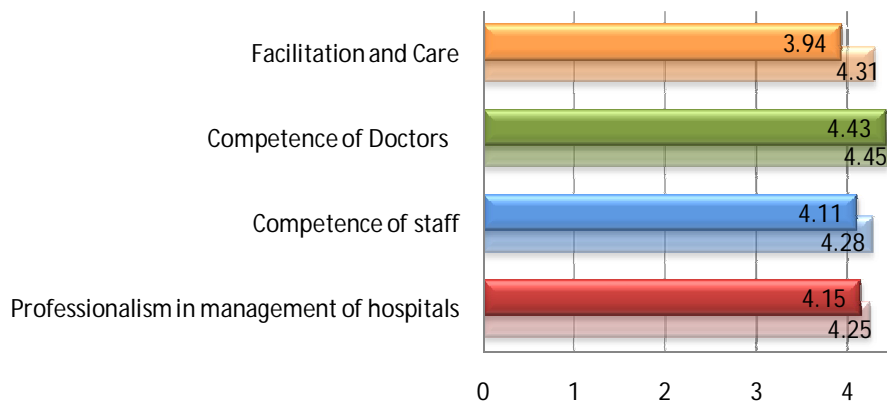
	<i>Factor</i>	<i>Mean (μ)</i>	<i>S.D. (σ)</i>
1	Professionalism in management of hospitals	4.25	0.43
2	Competence of staff	4.28	0.53
3	Competence of doctors	4.45	0.43
4	Facilitation and care	4.31	0.38

Note Mean value shows perceived importance of factors (expectations) on a 5 point scale. Standard Deviation (S.D.) reflects the consistency with which the respondents have rated the factor. A smaller S.D. means more consistency in response and vice versa.

The most important factor (on a 5 point scale) was found to be Competence of doctors (4.45) followed by Facilitation and care (4.31), Competence of staff (4.28) and Professionalism in management of hospitals (4.25) in that order (See Table 6.1). Medical tourist seems to attach high importance to technical, social and service skills of the medical and Para medical staff. Perceived relative importance of these factors was measured on a 5-point scale- '5' for most important and '1' for least important. There were 503 valid responses.

The respondents were asked to rate their experience vis-à-vis these 5 factors as shown in Figure 6.2. Corresponding gap between 'what they expected' and 'what they got' was evaluated. Competence of doctors was considered the most important factor. The gap for this factor was the smallest (0.02) meaning thereby that customer perceived that they have got what they expected. The biggest gap (Expectation – Experience) appeared to be in case of facilitation and care. This included linguist abilities of staff, empathy, lodging and boarding of accomplice and self.

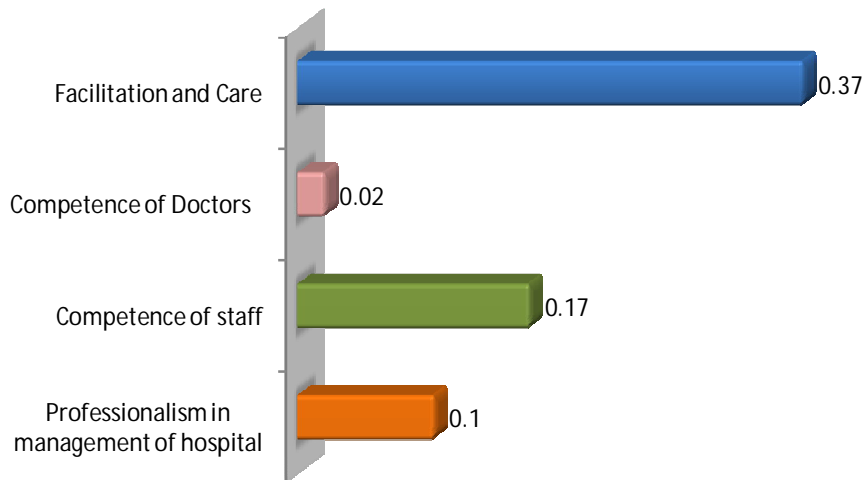
Figure 6.2: Tourist experience relative to their expectations for the procedure stage



Bars in the foreground are tourists' experiences (shown with mean values), while those in the background are their expectations for the corresponding factor

The relative size of these gaps was evaluated and is shown in Figure 6.3.

Figure 6.3: Size of gap between tourists' expectations and their experiences during the procedure stage



It is important to understand whether the differences between expectations and experience are statistically significant or are because of a sampling error. A paired sample t-test for the mean difference for each of the 5 factors for 95% confidence level was administered. The result of the t-test indicates that the perceived difference between the expectations and experience of competence

of doctor (the most important factor) was not statistically significant. This is therefore one of the key competitive advantage of the Indian healthcare. However, for the other three factors the difference was significant. Absolute size of the gap was largest for facilitation and care which indicates that much remains to be done (See Table 6.2).

Table 6.2 : T-test to evaluate if the difference between experiences and expectations of medical tourists at procedure stage is significant

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Professionalism in management of hospitals	0.09	0.54	0.03	0.04	0.14	3.38	457	0.00
Competence of Staff	0.17	0.67	0.03	0.11	0.23	5.53	461	0.00
Competence of Doctors	0.02	0.52	0.02	-0.03	0.07	0.83	461	0.41
Facilitation and Care	0.38	0.55	0.03	0.32	0.43	14.16	453	0.00

Note Since the values in the last column (significance) for Professionalism in management of hospital, behaviour of staff and facilitation and care are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist for these factors at the procedure stage are significant. That these differences cannot be attributed to chance error due to sampling.

Summary

At the procedure stage four important factors were identified. The most important was *Competence of the doctors* followed by *Facilitation and care*, *Competence of staff* and *Professionalism in management of hospital* in that order.

There was a gap in expectations of the customers and their experience (expectation - experience), which meant that customers' expectations are not being met. However, the gap was not statistically significant in case of *competence of doctors* which can be interpreted as satisfactory performance. India should increasingly make use of this factor to promote its medical tourism products to its targeted segments. T-tests (see Table 6.5) also revealed that Doctors' qualifications and skills appeared to exceed the expectations of the customers.

Gaps were statistically significant in case of other three factors. Which means efforts must be made to bridge these gaps. Gap was largest in case of

facilitation and care followed by behaviour of staff and Professionalism in management of hospital in that order.

Appendix

Table 6.3 : T-test to evaluate if the difference between experiences and expectations of medical tourists at procedure stage is significant in case of *Professionalism in Management of Hospital*

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Swift admission process	0.07	0.81	0.04	0.00	0.15	2.01	488	0.05
Attention to customers' needs	0.04	0.77	0.03	-0.03	0.11	1.12	488	0.26
Coordination between different wards and departments	0.08	0.80	0.04	0.01	0.16	2.31	488	0.02
Enthusiastic and proactive staff	0.12	0.81	0.04	0.05	0.19	3.31	485	0.00
Pickup facility on arrival	0.12	0.85	0.04	0.04	0.19	3.04	486	0.00
Counseling at hospital on arrival	0.14	0.69	0.03	0.08	0.21	4.52	475	0.00

Note If the values in the last column (significance) are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist in pre procedure stage are significant. That these differences cannot be attributed to chance error due to sampling.

Table 6.4 :T-test to evaluate if the difference between experiences and expectations of medical tourists at procedure stage is significant in case of *Competence of Staff*

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Assurance of confidentiality	0.11	0.80	0.04	0.03	0.18	2.91	475	0.00
Helpful and cheerful daily care staff	0.14	0.77	0.04	0.07	0.21	3.99	477	0.00
Daily care staff sensitive to customers' needs	0.19	0.81	0.04	0.12	0.26	5.12	472	0.00
Knowledgeable and skillful nursing staff	0.27	2.02	0.09	0.08	0.45	2.88	476	0.00
Quick and responsive nursing care staff	0.19	0.78	0.04	0.12	0.26	5.43	477	0.00
Nursing staff demonstrates concern	0.16	0.82	0.04	0.09	0.23	4.26	477	0.00

Note If the values in the last column (significance) are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist in pre procedure stage are significant. That these differences cannot be attributed to chance error due to sampling.

Table 6.5: T-test to evaluate if the difference between experiences and expectations of medical tourists at procedure stage is significant in case of *Competence of Doctors*

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Doctors available when required	0.09	0.72	0.03	0.02	0.15	2.62	472	0.01
Doctors willing to share information	0.02	0.69	0.03	-0.05	0.08	0.53	468	0.60
Qualified and skillful doctors	-0.03	0.65	0.03	-0.09	0.03	-0.92	476	0.36

Note If the values in the last column (significance) are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist in pre procedure stage are significant. That these differences cannot be attributed to chance error due to sampling.

Table 6.6: T-test to evaluate if the difference between experiences and expectations of medical tourists at procedure stage is significant in case of *Facilitation and Care*

Pair	Paired difference					t	df	Sig. (2-tailed)
	Mean	Std. deviation	Std. error of mean	95% confidence interval of the difference				
				Lower	Upper			
Linguist abilities of the doctors and nurses	0.14	0.73	0.03	0.08	0.21	4.31	470	0.00
Linguist abilities of non medical staff	0.40	0.89	0.04	0.32	0.48	9.79	471	0.00
Empathetic doctors and nurses	0.18	0.79	0.04	0.11	0.25	4.95	470	0.00
Comfortable (and affordable) accommodation	0.34	0.86	0.04	0.26	0.42	8.52	470	0.00
Good and palatable food	0.78	1.00	0.05	0.69	0.87	16.80	470	0.00
Privacy	0.40	0.79	0.04	0.33	0.47	10.97	472	0.00
Proper arrangements for accompolice	0.35	0.77	0.04	0.28	0.42	9.84	471	0.00

Note If the values in the last column (significance) are less than 0.05, the differences between the expectations of the tourist and the experiences of the tourist in pre procedure stage are significant. That these differences cannot be attributed to chance error due to sampling.

7. Post procedure stage

Convalescence period that follows the medical procedure is also important. In this post treatment stage support and facilities are required for recuperation. Patients and their accomplices might also demand leisure and vacationing during this period. 12 variables were identified for this stage (See Table 7.1).

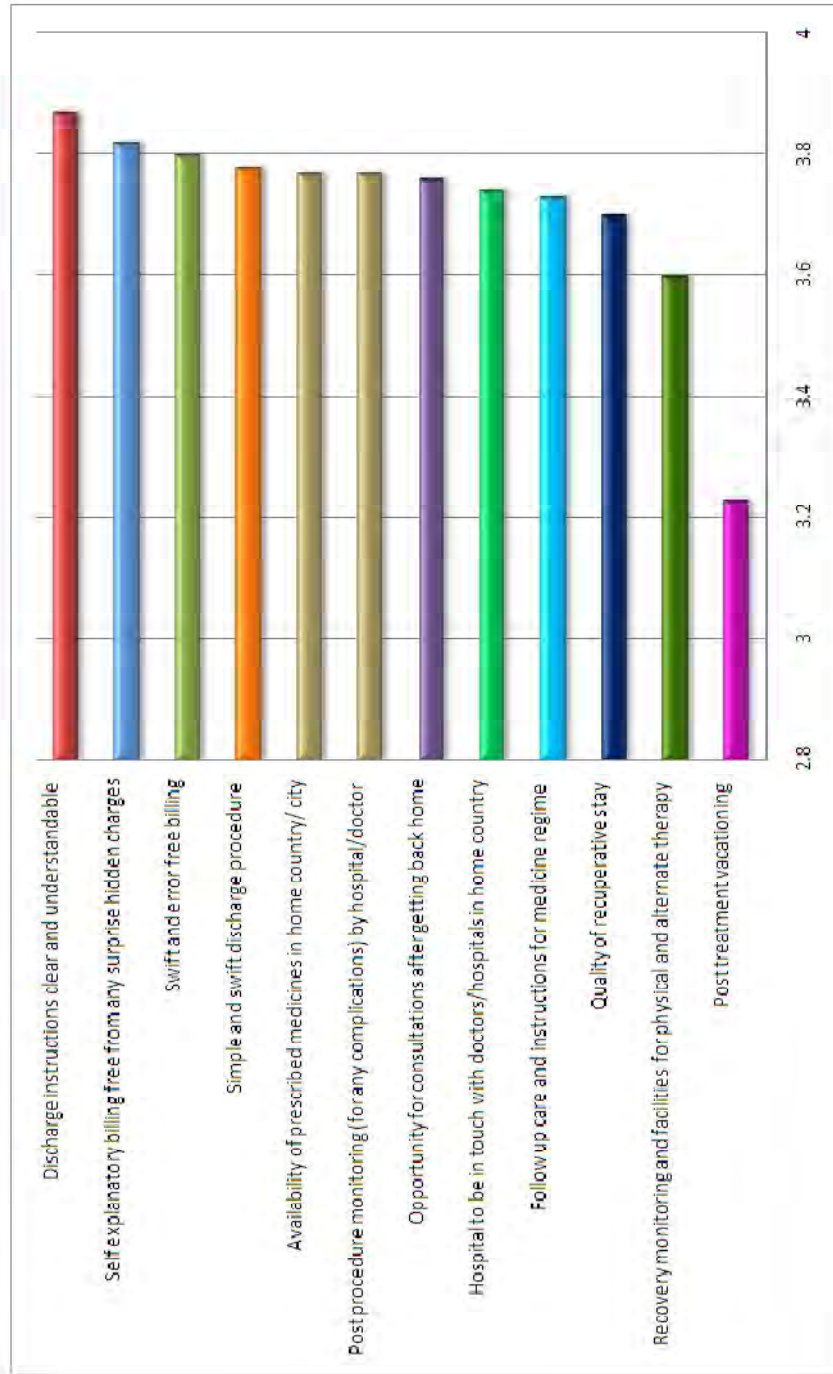
Table 7. 1: Factors of concern (expectations)at Post Procedure Stage

	<i>Variables</i>	<i>Mean (μ)</i>	<i>S.D. (σ)</i>
1	Simple and swift discharge procedure	3.78	.61
2	Discharge instructions clear and understandable	3.87	.36
3	Self explanatory billing free from any surprise hidden charges	3.82	.40
4	Swift and error free billing	3.80	.43
5	Quality of recuperative stay	3.70	.48
6	Post procedure monitoring (for any complications) by hospital/doctor	3.77	.47
7	Recovery monitoring and facilities for physical and alternate therapy	3.60	.61
8	Follow up care and instructions for medicine regime	3.73	.50
9	Post treatment vacationing	3.23	.85
10	Availability of prescribed medicines in home country/ city	3.77	.45
11	Opportunity for consultations after getting back home	3.76	.48
12	Hospital to be in touch with doctors/hospitals in home country	3.74	.50

Note Mean value shows perceived importance of factor on a 5 point scale. Standard Deviation (S.D.) reflects the consistency with which the respondents have rated the factor. A smaller S.D. means more consistency in response and vice versa.

Factors analysis resulted in grouping all variables under one factor. Possible reason for this is that all the respondents contacted were at procedure stage. It was rather hypothetical to anticipate requirements at post procedure stage. Expectations therefore co varied. Expectations/ concerns were measured on a 4 point scale. The relative importance of post procedure variable is shown in Figure 7.1.

Figure 7.1: Relative importance of post procedure variables



The five most important concerns of the respondents for the post procedure stage are *Discharge instructions clear and understandable* (3.87), *Self explanatory billing free from any surprise hidden charges* (3.82), *Swift and error free billing* (3.80), and *Simple and swift discharge procedure* (3.78). Two factors ranked 5 with a mean of 3.77- *Availability of prescribed medicines in home country/ city* (S.D. =0.45) and *Post procedure monitoring (for any complications) by hospital/doctor* (S.D. =0.47). It may be noted that these important post procedure concerns are rated with fair consistency (lower standard deviations) (see Table 7.2).

Table 7.2: Top 5 variables of concern at post-procedure stage

Rank	Factor	Mean (μ)	S.D. (σ)
1	Discharge instructions clear and understandable	3.87	0.36
2	Self explanatory billing free from any surprise hidden charges	3.82	0.40
3	Swift and error free billing	3.80	0.43
4	Simple and swift discharge procedure	3.78	0.61
5	Availability of prescribed medicines in home country/ city	3.77	.045
5	Post procedure monitoring (for any complications) by hospital/doctor	3.77	0.47

Note Mean value shows perceived importance of factor on a 5 point scale. S.D. (Standard Deviation) reflects the consistency with which the respondents have rated the factor. A smaller S.D. means more consistency in response and vice versa.

It may be noted from Table 7.1 that except for Post treatment vacationing (Mean value 3.23) means for all other variables at the post procedure stage ranged from 3.6 to 3.87 on a 4 point scale corroborating with earlier observation and clearly indicating that post procedure vacationing is not considered important for the current segment. These facilities are not demanded.

Summary

The respondents expect hassle free post procedure period. This included clarity with post procedure instructions by doctor/ hospital, botheration free settlement of bill and discharge. They also expected support during post procedure recuperation including monitoring by doctors and availability of prescribed medicine. Post procedure vacationing was a low priority with most of the respondents.

8. Observations, conclusions and suggestions

Like tourism, medical Tourism is not one thing. It offers many variants to different segments that come from diverse socio-economic backgrounds, arrive from different geo-political regions; and demand a range of products.

The general perception is that outbound medical tourism in US/UK/ Canada and other western countries is on a rise and lot of medical tourists are arriving in certain developing countries like India, Thailand, Jordan and Singapore for medical procedures that are cost effective. The dynamics of medical tourism, however, is much more intriguing than this simplistic picture.

SWOT analysis based on feedback on structured questionnaire, discussions with administrators of hospitals, medical tour operators, customers and their accomplices.

Strengths of Indian medical tourism

<i>Strength</i>	<i>This means that...</i>
Indian doctors are recognised as amongst the best at international levels- skilful and qualified, share information with patients (as desired) and make self readily available when required.	This adds to customers' perception of good quality care in India.
No or little waiting time	Means tourists can be attracted for procedures where waiting time is large in home countries. There is a sizeable segment available in Canada, UK and Australia among other developed countries.
Good nursing staff- knowledgeable and skill full also quick and responsive	Creates a good image of the system which adds to brand equity of Indian medical tourism.
Medical technology, equipments, facilities and infrastructure in India	This adds to customers' perception of good quality care in India.

at par with world standards	This, and repute of Indian doctors to a certain extent offsets the need formal JCI and other accreditation especially where the customers are content with brand India and seek comparable quality low cost treatment.
Doctors and staff good at English	Makes it comfortable for tourists from English speaking/ commonwealth countries. However, a large number of tourists are coming from Middle East and Africa.
No racial discrimination, especially in case of tourists from Africa (The respondents have specially mentioned that they were happy that they were not discriminated on racial grounds as in some western countries.)	Customers, especially from Africa are comfortable in India. This should be used to advantage.
World class treatment at fraction of cost in western countries.	This is India's USP especially for all those cases where cost is a concern. This includes customers from low GDP countries and procedures not covered by insurance in western world.
Patients from more than 55 countries are treated in India	Means there is a positive word about Indian healthcare in the world. However, a wide variety of backgrounds of customers would demand that hospitals consciously target select sub-segments and organise for facilities demanded by the targeted segment.
Top rated education system provides an estimated 30,000 doctors and nurses each year	This supports a growing healthcare system in India which can accommodate and cater to inbound medical tourists demanding a range of healthcare services.

Weaknesses of Indian medical tourism

<i>Weakness</i>	<i>This means that...</i>
Only 16 JCI accredited and 63 NABH	Appears to be a weakness. However,

accredited hospitals (as on 25.1.2011)	<p>targeted customer segments were not particular about the accreditation. Discussions revealed that the general brand of the destination (India) for medical tourism was more important than individual hospital accreditation.</p> <p>Hospitals had sufficient number of domestic medical tourists and large number of inbound tourists who were less concerned with accreditation and therefore they (hospitals) had no motivation to engage in hassles of paperwork for accreditation.</p> <p>However, limited number of hospitals with JCI accreditation can position themselves to target US/ UK and other westerner markets which appears to be a niche market.</p> <p>Many tourists from 'developed' west came for enhancements, dental care and IVF which did not fall under the purview of JCI accreditation.</p> <p>A few hospitals presented self as having acquired accreditation but actual got only part accreditation for ambulatory care or just the laboratory.</p>
Cost of treatment is less but other costs could be inhibiting	<p>If the service providers target customers from low GDP countries, they should organise or network/ partner with other companies to offer affordable yet good quality accommodation for patients and their accomplices.</p>
Language related problems in case of non-English speaking customers	<p>Hospitals/ service providers must work out a solution. There is need for training of linguists for example specialists of Arabic. Some hospitals are using services of students from customer's country studying in India.</p>
Food not to taste	<p>Hospitals and service providers should be sensitised to the palate of the tourists.</p>
Lodging arrangements inadequate	<p>Hospitals should go beyond the usual</p>

	<p>medical procedure to organise affordable accommodation for the medical tourist and the accomplice. Since these are not the forte of hospitals they need to partner with other service providers but provide a seamless value to the customer.</p>
<p>Indian medical tourism not aggressively promoted by Government. Individual hospitals are aggressively promoting their services.</p>	<p>There has to be coordinated effort at Government level.</p>

Opportunities for Indian medical tourism

<i>Opportunities</i>	<i>This means that...</i>
<p>Cost of medical treatment in developed western world is high</p>	<p>Patients from third world, where comparable quality medical care is not available seek treatment outside their home countries. They compare western service providers with Indian service providers and find Indian medical care cost effective.</p>
<p>Not so good medical care facilities in other South Asian countries</p>	<p>Patients from these countries find good quality care in neighbourhood, where travel time is less and cultural divide is less, for example patients from Bangladesh and Myanmar are comfortable in Kolkata; those from Sri Lanka are comfortable in Chennai and Kerala; those from Pakistan and Afghanistan are comfortable in northern India; those from Maldives are comfortable in Kerala.</p>
<p>Not so good medical care facilities on African continent and middle eastern countries like Iran, Iraq, Oman</p>	<p>Patients from these countries find Indians friendly, and have not observed any kind of racial discrimination. India is one of closest yet cost effective and quality care destination.</p>
<p>Health insurance in US is largely employer driven. The new healthcare reform bill introduced. Starting in 2014, large employers must offer health coverage to every full-time</p>	<p>Employers in US are looking for ways to decrease their employees' medical expenses providing appropriate health coverage concurrently. Employers will look for low cost care</p>

employee or face penalty.	in India and other Asian countries.
Customised Insurance premium. Insurance companies in western countries are offering full cover and care in home country at a higher premium payment. Insurance companies are offering packages where customers can choose a lower premium but will have to get them treated at hospitals with comparable quality outside the country, with which they have tie-ups.	Indian accredited hospitals can choose to compete for a share of this segment.
India rated as among the top five favourite medical tourism destination	This has to a certain extent helped offset the implications of lesser number of JCI accredited hospitals. Especially true for customers from low GDP countries.
Around 400 hospitals have applied for NABH accreditation	Quality clinical infrastructure in India is improving.
Airport infrastructure is improving	But same should happen for other ports important for medical tourism.

Threats faced by Indian medical tourism

<i>Threats</i>	<i>This means that...</i>
Patients from US/ UK and other developed countries are covered by insurance for ailments	<p>People do not generally travel outside their normal place of stay for medical treatment unless there are compelling reasons. Since good quality care is available and the costs are taken care by insurance covers, patients from these regions do not travel to other destinations including India.</p> <p>Segments of customers who are either un-insured or under insured will travel for medical treatments. Also, customers will travel for medical procedures not covered by insurance.</p>
Competition from neighbouring countries especially Thailand and Singapore	The segments are different. While medical tourists visiting Thailand are primarily interested in combining

	their vacation with some medical procedure, India is receiving 'mere patients' who are less interested in leisure.
Lot of customers from non-English speaking countries	Prepare service providers and their employees for non-English linguist skills as more medical tourists from non-English speaking countries are expected.
General infrastructure is not impressive	Health care system/ providers can do little about this. However they can offset part of discontent by showing concern and offering support services
<p>Visa related problems</p> <ul style="list-style-type: none"> • Cost of Medical visa is inhibitive. It is almost twice the cost of tourist visa. • It is not available in some countries from where India receives patients • Some respondents have reported corruption in grant of visa (specifically complained) • Extension of visa takes time • Abuse of medical visa by tourists and accomplice • A minimum two months cooling is required for re-entry on a medical visa which is restricted to three entries a year. For example, if a patient arrived for consultation, s/he must wait for at least two months to come back to India. It was told that India is losing these patients to Thailand. 	<p>Medical tourists travel on tourist visa which is cheaper and readily available.</p> <p>Government should reassess the medical visa policy.</p> <p>Should check corruption and facilitate medical visa.</p>
<p>Differential pricing</p> <p>Some hospitals are using differential pricing for medical procedures. Whereas others have same prices for medical procedure but administer a different price for pre and post procedure care and arrangements.</p>	<p>NRIs and PIO who are difficult to differentiate present self as domestic patients to avail lower prices.</p> <p>Similarly medical tourists from neighbouring countries also do not disclose their identity and seek price benefits posing as domestic patients.</p>

<p>Reported insensitivity of immigration officers/ FRRO.</p> <p>Every patient on medical visa must register with FRRO. At times critically ill patients find it difficult to 'go to' FRRO office in person. Things are reportedly 'managed'.</p>	<p>Train immigration officers/ FRROs for superior interpersonal skills and affable attitude.</p> <p>Should consider evolving a mechanism for verification where the patient may not have to go physically to the FRRO office, at least in cases of critical situations.</p>
<p>There is no institutional tie-up of Indian hospitals with insurance companies in westerners/ developed world who are offering lower premium to their clients if they agree for a procedure in a low cost quality hospital at some other destination. There are such arrangements with hospitals especially in Singapore.</p>	<p>This is going to be a big challenge for Indian medical tourism. Indian hospitals should aggressively seek such institutional tie-ups with insurance companies.</p>

Conclusions and suggestions

Recommendations and suggestions are made for policy makers and service providers that are mainly hospitals. Here the discussion excludes wellness and spiritual tourism, and travel for alternative therapies.

Source market (target segment)

Who is and will be our targeted customer? This is an important first decision. This decision will have a bearing on other decisions relating to infrastructure, accreditation, visa, competition etc.

Policy makers: Must decide the level of interest in inbound medical tourism business. On one hand there are examples of Singapore and Dubai where government has direct interest in medical tourism. On the other hand government can play a role of facilitator alone but should determine what medical tourism products would be offered and to whom. Having decided on this, policy should ensure a seamless value chain.

Indian healthcare businesses are receiving customers from developing countries (low GDP countries) that need to travel out of their countries for medical procedures and lure them with comparatively cost effective yet good quality

medical care in India. Many tourists would come from the neighbouring countries as the cultural assimilation is easier and the cost and effort to travel to a far off destination is more. Does India need to focus on this segment and eye for a larger share of this market or India needs to reposition itself to premium up market from west? In later case, the social security regime of western society would continue to be a road block and challenges would also include refurbishing of civil infrastructure in the country.

Customers, especially from Africa are comfortable in India. Government should promote medical tourism to select Afro-nations using India's long standing rapport with Afro-nations and friendly image.

However, there are two important niche markets that target western tourists. One, India can focus on the USP of shorter waiting time for customers from developed countries (e.g., Canada, UK and Australia) where waiting time is more. Two, there is a large segment of tourists who seek elective medical procedures that are generally not covered by medical insurance in developed world

Service providers: At the firm level, each service provider must also target specific segments. Homogeneity in customers and products demanded would allow better servicing. Each hospital should target a segment with some USP. They must engage with source communities, healthcare systems and governments over a longer period of time thereby specializing in handling customers from specifically targeted regions and for specific products. Knowledge of markets, consumers and channel partner over a period of time would allow competitive advantage.

Quality

There is a perception that quality of medical procedure and care is good in India. In fact, the targeted audience expect competent doctors and they found them to be better than their expectations. Doctors were qualified and skilful, and allowed customers adequate time and were available when required. Together with comparative lower costs of procedures this is the source of competitive advantage. JCI accreditation was not a big concern of the respondents. A Grail Research (2009) cites that with lesser JCI accredited hospital (in 2007) Thailand had more inbound tourists. While Singapore with more JCI accredited hospitals had lesser number of medical tourists. While this on one hand suggests that there is not much

relationship between the JCI accreditation and number of inbound medical tourists, on the other it should be understood that this is so because of different targeted segments those have different expectations.

In case of India there is a general good brand image about the quality of doctors and clinical infrastructure. The performance of paramedical staff was rated as satisfactory. They were proficient and caring. Their non-English linguist capabilities were a limitation.

Policy makers: Government should continue to motivate and persist on accreditation and may even link incentives with accreditation so as to reinforce the notion of quality with the umbrella brand of 'Indian healthcare'. At the end of the day quality matters (even though accreditation may not).

Service providers: Medical tourists from US, UK and developed west is a niche market. For these customers, JCI accreditation is an important search criterion when choosing a hospital. However, these segments approach Indian medical tourism for two reasons, one for procedures that are not covered by insurance in their host countries or for procedure for which there is a long waiting in home countries. Price is a secondary concern and so a few high end hospitals in India may decide to target this niche segment and also organise other related services accordingly.

Costs

Cost of procedure is at present a source of competitive advantage. With the targeted segments, India enjoys an image of low cost provider of quality care. Inbound tourists have a reference price for the medical procedure and therefore the same is acceptable. The 'other' costs including lodging, boarding is perceived as prohibitive.

Some respondents complained that the actual price charged was more than what was quoted. However, hospitals maintained that in such cases illness was not properly diagnosed. Quote was for the reported ailment where as when patients arrived they were found to be suffering from some other disorder/ disease.

Some hospitals use differential pricing for post care support. Because of this many NRIs/ PIOs and travellers from neighbouring countries do not disclose their domicile and register as domestic patients.

Policy makers: Government may consider placing hospitals in infrastructure sector like 'hotels'. The benefits may be passed to customers rendering Indian Medical Tourism competitive.

Service providers: Should reconsider their pricing strategies more so if they are targeting customers segments that are price conscious. Post care costs are hurting the customers the most. Service providers should network to bundle procedure and post procedure costs and make them attractive

Medical visa

Scheme of medical visa does not appear to be very successful, especially with the segment that is currently being served. One, it is costlier than the tourist visa. Two, it is easier to obtain a tourist visa. Three, medical visa is not readily available in some countries from where medical tourists arrive, especially some African countries. There is reported abuse of medical visa.

Another stipulated condition is that foreigners arriving on medical visa are required to get themselves registered well within the period of 14 days of arrival with the concerned FRROs/ FROs. In many cases these patients are not in a condition to report in person. This provision is than susceptible to corruption.

Policy makers: Government may reassess the medical visa policy. A medical visa allows three entries per year. Further there must be a 2-month gap between two entries. An inbound patient who travels for consultation with doctors has to wait 2 months for treatment. It is believed that India is losing many customers to Thailand for this reason.

Government should also take steps to check corruption in issue of medical visa. Government should also reconsider the condition of personally reporting to FRROs/FROs. A more realistic and humane way has to be devised.

Competition

It is clear that Indian medical tourism is not competing with healthcare systems of developed world for tourists/ customers from the developed world. It is competing with similarly placed destinations like Thailand, Jordan, Malaysia, Singapore, South Africa, etc.

However competition is geo-politically regional, i.e., India is competing more with medical destinations in the neighbourhood. Most competing destinations receive patients from the neighbourhood.

Thailand is considered a strong competitor. However, Cohen (2010) cites various sources to conclude that medical tourists visiting Thailand are spread between Types 3 and 5. While little statistical support is available for this belief, the attractive and heavily promoted combination of treatment with vacations causes Types 3 and 4 (Medical Tourists and Vacationing Patients) to outnumber Type 5 (Mere Patients). This is contrast to India, which is attracting more Mere Patients (Type 5) for medical treatment from low GDP countries (Second Type of McKinsey classification).

Singapore targets high end medical surgeries for tourists from the western world. Many of these tourists are covered by health insurance in their own countries where medical procedure in Singapore is part of the package. However, Singapore does not offer the cost advantage. Further, it was rendered costlier during the recent global recession and lost some customers to India and Thailand. Another challenge with medical care in Singapore is that though the state has a reputation for cleanliness, order, ultra high standard of private medical care, fluent English staff and familiar infrastructure to westerners; but its climatic condition is not conducive for recuperation/ post procedure holiday. India has an advantage here.

Government of Singapore and Dubai are directly getting into medical tourism through their public hospitals and are therefore promoting aggressively the destination for medical tourism. In India hospitals are becoming destination rather than the country. Individual hospitals are promoting self. For example some hospitals have gotten promotional brochures printed in Arabic and making it available to end customers. These hospital specific brochures were made available at Indian consulates. A number of the respondents were of the opinion that should

these brochures be on behalf of Indian government this would have much more impact.

Policy makers: Government should set a vision for kind of medical tourism that the country will be competing and what healthcare products would be offered.

Marketing

Indian medical tourism is lacking in coordinated marketing efforts. Marketing is rather directionless and does not result in synergy.

Policy makers: Government should aggressively promote brand India especially through its consulates. To begin with vernacular brochures must be made available to end customers in different parts of the world through consulates and tour operators.

Government can also consider corporate/ institutional arrangements with governments of countries where they (governments) are responsible for medical care of their citizens.

Service providers: Indian health care providers should be proactive in identifying and targeting segments in terms of source markets, medical speciality etc. and engage extensively with source markets: say network with hospitals, doctors and channel partners to attract customers. Currently Indian hospitals operate on this business model. Many hospitals either have a clinical set-up in the targeted source markets or have tied up with local doctors in lieu of commissions that range between 10-20 percent of overall cost.

Even at the firm level, possibilities of corporate/ institutional arrangements with governments of countries which have directly owned up the responsibility for healthcare of their citizens.

Indian hospitals should also aggressively pursue institutional arrangements with insurance companies particularly from west. This will also allow them access to the captive customers of these companies.

Service providers should experiment with bundling cultural and other tourism products with healthcare.

Other recommendations for policymakers

Government should undertake capacity building programmes to train paramedical and non-medical staffs of the service providers for cross-cultural sensitivities. There should be focused language training for select countries from where tourists are coming in larger numbers particularly Arabic. Some hospitals have been using students from the patients' country studying in India.

In many cases, especially for tourists from Africa and Middle East, there is no direct air connectivity. Patients must break journey at some Middle East airports which is tiring and could be uncomfortable for patients. Middle East is itself emerging as a competitor and India may lose customers to them. A lot of tourists coming from these countries are seeking intensive procedures and journey breaks are all the more distressing.

9. Note on research methodology

This study was commissioned to investigate problems and challenges faced by medical tourists visiting India within the framework defined by its specific objectives.

The objectives were:

- To map the Indian medical tourism value chain.
- To identify the important concerns of medical tourists visiting India vis-à-vis various service providers in value chain.
- To identify the gaps in service (by measuring expectations- experience gap).
- To identify the bottlenecks in medical tourism industry.
- To make recommendations to address concerns of medical tourists.
- To identify research issues for further research.

Methodology

Secondary literature survey, exhaustive review of existing literature was undertaken in order to assure and the relevant information extraction. Relevant documents were sourced from the private players in the field of medical tourism alongwith the contribution of the academic publications. The information from the trade associations (like CII, FICCI, etc.) was also exhaustively analyzed and used at various places in the report.

These analysis were evaluated in the areas of

- a. Modern medical tourism trends
- b. International medical tourism market
- c. National and regional economic medical tourism data
- d. Best practices in international and national arena

The researchers also assimilated and evaluated the promotional literature published in electronic format too besides the traditional promotional patterns

Primary field survey

The primary field survey targeted 3 types of the respondents

- a) Medical tourists in hospitals
- b) Medical tourists through operators
- c) Medical tourists through doctor /referrals

The primary data was collected using structured questionnaires. The questionnaires comprised of both closed ended and open ended questions. The questionnaires were finalised after inputs from experts during a meeting at Ministry of Tourism, New Delhi.

The structured questionnaires were administered among the medical tourists in order to gather information in relation to:

- I. Demographic profile of the medical tourists
- II. Their experiences and expectations through the two stages of value chain. For structured questions 5-point likert scale has been used.
 - a. Pre procedure stage
 - b. Procedure stage
- III. For the post procedure stage, only expectations were understood as the respondents were either at the pre procedure or procedure stage. Expectations were measured on a 4-point scale.

The pilot study was conducted in the NCR region with 39 respondents. Instrument was modified accordingly.

Sampling

Sampling frame

There is no precise definition of medical tourists visiting India. For the purpose of this research the targeted segment from which the sample was drawn may be largely described as below:

<i>Classification</i>	<i>Categories</i>	<i>Sampling frame for this study</i>
<i>TRAM (2006)</i>	(1) Medical tourism (treatment of illness), (2) Enhancements (cosmetic surgeries), (3) Wellness tourism (spa and alternate therapies) and (4) Fertility or birth tourism (reproduction).	Primarily (1) Medical tourism
<i>Deloitte (2008)</i>	(1) Less invasive surgery, (2) complex surgery with follow up, (3) elective cosmetic and (4) more invasive surgery with less follow up.	All except for elective cosmetic surgery ((1), (2) and (4)).
<i>McKinsey (2008)</i>	(1) High quality medical care available anywhere in the world at any price, (2) better medical care than available in their home countries, (3) quicker medical care (shorter wait time), (4) low cost medical care, (5) lower cost care for discretionary procedures.	Primarily (2), (3) and (4)
<i>UNESCAP (2009)</i>	(1) Under insured patients from developed countries, (2) patients from developed countries in long queue, (3) cosmetic procedure seekers, and (4) Quality care (seekers) not available in home country.	Primarily (1), (2) and (4)
<i>Erik Cohen (2010)</i>	(1) Mere tourist, (2) Medicated tourists, (3) Medical Tourist proper, (4) Vacationing patients, and (5) mere patients.	(2) through (5) but mostly (5)

Study Sample

536 medical tourists visiting JCI/ NABH (*Joint Commission International/ National Accreditation Board for Hospitals and Healthcare Providers*) approved medical facilities and other hospitals who have applied for accreditation located in 17 cities were contacted. There were 503 valid responses that were usable.

Field work

To ensure good coverage of the medical tourists, two rounds of survey were planned. The first round of survey was completed during June and July 2010 and covered 14 cities, 88 hospitals and 176 tourists. Out of the 176 responses collected during the first round of survey 163 were usable. Second round of survey was carried out during the months of October through December 2010, 10 cities were visited. 360 tourists were contacted from where 340 usable responses were obtained.

Measurement

For the purpose of this study, customer's expectation of performance is referred to as 'Expectation'; customer's perceived experience of performance is referred to as 'Experience'.

The usual measures of customer satisfaction involve a survey (Kessler, 2003) with a set of statements using a Likert Technique or scale. The customer is asked to evaluate each statement in terms of their perception and expectation of performance of the service being measured. In this study customers' expectation of a particular aspect of service was measured along with their experience with that aspect of services. Attempt is made to evaluate if there was a difference in what they expected and what they experienced.

Analysis

Given the objectives of research the data so collected was analysed using SPSS (Statistical Package for Social Sciences).

Expectation- experience matrix

Matrix was generated using scatter plot facility of SPSS with axis set to mean values of responses for expectations and experience. Variables were mapped on the matrix and interpreted as discussed earlier.

Factor analysis

14 and 22 variables were identified at pre-procedure and post procedure stages respectively (expectations). Since the number of variables was large, it

was decided to reduce the data using rotated component method of factor analysis. Factors were generated for Eigen values greater than 1.

In case of post procedure phase factor analysis resulted in only one factor. This might be possible because the questions were rather futuristic and the respondents did not have an idea of kind of challenges they may face.

Once factors were obtained for the pre-procedure and procedure stages, the mean for the expectations of the respondents were calculated by adding the mean values of all variables for that factor and dividing the same by number of variables for the same factor. Similarly, mean for experience for each factor so determined was also calculated. The difference between expectations and experience was calculated to determine the size and nature of the gap.

T-test

To determine whether the gap between expectations and experience was significant or not for the factors and the underlying variables paired samples t-tests for 95% confidence levels were administered.

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Annexure

Annexure 1: List of JCI accredited hospitals in India (as on 31-Jan-11)

S.No	Name of Hospital	City
1	Ahalia Foundation Eye Hospital	Palakkad/Kerala
2	Apollo Hospitals	Bengaluru
3	Apollo Hospitals	Chennai
4	Apollo Hospitals	Hyderabad
5	Apollo Gleneagles	Kolkata
6	Asian Heart Institute	Mumbai
7	Fortis Hospital	Mohali
8	Fortis Escorts	New Delhi
9	Grewal Eye Institute	Chandigarh
10	Fortis Hospitals (Formerly Wockhardt Hospital)	Mumbai
11	Moolchand Hospital	Delhi
12	Indraprastha Apollo	Delhi
13	Satguru Pratap Singh Apollo Hospitals	Punjab
14	Sri Ramchandra Medical Centre	Chennai
15	Shroff Eye Hospital	Mumbai
16	Fortis Hospitals	Bengaluru

Annexure 2: List of NABH accredited hospitals (As on 31-Jan-11)

S.No	Hospital	City
1.	B.M. Birla Heart Research Centre	Kolkata
2.	MIMS Hospital (MIMS Ltd.)	Calicut
3.	Kerala Institute of Medical Science	Thiruvananthapuram
4.	Max Super Specialty Hospital	New Delhi
5.	Max Super Specialty Hospital (A Unit of Devki Devi Foundation)	New Delhi
6.	Moolchand Hospital	New Delhi
7.	Narayana Hrudayalaya	Bengaluru
8.	Dr. L. H. Hiranandani Hospital	Mumbai
9.	Fortis Hospital	Noida
10.	Sagar Hospitals	Bengaluru
11.	Columbia Asia Medical Centre- Hebbal	Bengaluru
12.	Manipal Hospital	Bengaluru
13.	Nethradhama Superspecialty Eye Hospital	Bengaluru
14.	Lakeshore Hospital & Research Centre Ltd.	Kochi
15.	Baby Memorial Hospital	Calicut
16.	Escorts Heart Institute And Research Centre	New Delhi

17.	Sir Ganga Ram Hospital	New Delhi
18.	Fortis Escorts Hospital	Jaipur
19.	Fortis Hospital	Mohali
20.	Medwin Hospitals	Hyderabad
21.	Advanced Medicare And Research Institute (AMRI)	Kolkata
22.	Sevenhills Hospitals Ltd.	Visakhapatnam
23.	Dharamshila Hospital & Research Centre	Delhi
24.	Chacha Nehru Bal Chikitsalaya	New Delhi
25.	Kailash Hospital & Heart Institute	Noida
26.	G. Kuppuswamy Naidu Memorial Hospital	Coimbatore
27.	Sterling Hospitals	Ahmedabad
28.	Amrita Institute Of Medical Sciences	Kochi
29.	Apollo Specialty Hospitals	Madurai
30.	Paras Hospitals Pvt. Ltd.	Gurgaon
31.	Wockhardt Hospitals Ltd.	Nagpur
32.	P.D. Hinduja National Hospital & Research Centre	Mumbai
33.	N.M. Virani Wockhardt Hospital	Rajkot
34.	Godrej Memorial Hospital	Mumbai
35.	Fortis Ft. Lt. Rajan Dhall Hospital	New Delhi
36.	Kasturba Hospital	Manipal
37.	General Hospital	Gandhinagar
38.	Escorts Hospital and Research Centre Ltd.	Faridabad
39.	Ruby Hall Clinic	Pune
40.	Sterling Hospitals	Vadodara
41.	Artemis Health Institute	Gurgaon
42.	Sparsh Hospital for Accidents, Orthopaedic, Plastic and Maxillo Facial Surgery	Bengaluru
43.	Apollo Specialty Hospital	Chennai
44.	Shalby Hospitals	Ahmadabad
45.	Wockhardt Hospital	Bhavanagar
46.	Fortis Hospitals Ltd.	Kalayan
47.	Wockhardt Hospitals Ltd.	Nashik
48.	Rockland Hospital	New Delhi
49.	K.G. Hospital	Coimbatore
50.	Holy Spirit Hospital	Mumbai
51.	Batra Hospital and Medical Research Centre	New Delhi
52.	PSG Hospitals	Coimbatore
53.	Frontier Lifeline Hospital	Chennai
54.	B.L. Kapur Memorial Hospital	New Delhi
55.	Global Hospitals & Health City	Chennai
56.	Yashoda Super Specialty Hospital	Ghaziabad
57.	Jeewan Nursing Home & Hospital	New Delhi
58.	Pushpanjali Crosslay Hospital	Ghaziabad

59.	Yashoda Hospital	Secunderabad
60.	Holy Family Hospital	Mumbai
61.	Primus Super Specialty Hospital	New Delhi
62.	Max Hospital	Gurgaon
63.	Dr. Ram Manohar Lohia Combined Hospital	Lucknow
64.	B.M. Birla Heart Research Centre	Kolkata

Annexure 3: List of hospitals visited for survey

	<i>Hospital</i>	<i>Accreditation</i>
Hospitals visited in Delhi		
1	Sir Ganga Ram Hospital	NABH
2	Moolchand	JCI
3	MAX Hospitals	NABH
4	Medanta The Medcity	Non Accredited (applied)
5	Fortis Escorts Heart Institute	JCI
6	Kailash Hospital & Heart Institute	NABH
7	Indraprastha Apollo	JCI
Hospitals visited in Bengaluru		
1	Narayana Hrudayalaya	NABH
2	Sparsh hospital for accidents, orthopedics, plastic and maxilo facial surgery	NABH
3	Apollo Hospital	JCI
4	Sagar Hospitals	NABH
5	Columbia Asia Hospital (Hebbal)	NABH
6	Columbia Asia Hospital (Yeshwanthpur)	Non Accredited (applied)
7	Fortis Hospitals	JCI
8	Manipal Hospital	NABH
9	Netradhama Super speciality eye hospital	NABH
10	Meedineed.com International Patient Service	Service Provider
11	Bengaluru Baptist Hospital	Non Accredited (applied)
12	Satya Sai Hospital	Non Accredited (not applied)
13	Cauvery Medical Center Limited	Non Accredited (not applied)
Hospitals visited in Chennai		
1	Apollo Hospitals, Greams Road	JCI
2	Apollo Speciality Hospital	NABH
3	Sri Ramachandra Medical Centre	JCI
4	Fortis Malar Hospital	Non Accredited (not applied)
5	Dr. Agarwal's Eye Hospital Ltd.	Non Accredited (applied)
6	Billroth Hospitals	Non Accredited (not applied)

	Hospital	Accreditation
7	MIOT Hospitals	Non Accredited (not applied)
8	Global Hospitals and Health City	Non Accredited (applied)
9	Dr. Mehta's Hospital	Non Accredited (applied)
10	Vijaya Group of Hospitals	Non Accredited (applied)
11	Sri Devi Hospitals	Non Accredited (applied)
12	Vee Care Hospital	Non Accredited (not applied)
13	Frontier Lifeline Hospital	Non Accredited (applied)

Hospitals visited in Hyderabad and Secunderabad

1	Apollo Hospitals, Jubilee Hills	JCI
2	MEDWIN Hospitals	NABH, NABL
3	Yashoda Hospital	Non Accredited (applied)
4	Geetha Multi Speciality Hospital	Non Accredited (applied)
5	Krishna Institute of Medical Sciences Ltd.	Non Accredited (applied)
6	CARE Hospitals	Non Accredited (applied)
7	Kamineni Hospitals	Non Accredited (applied)
8	Global Hospitals	Non Accredited (applied)
9	STAR Hospitals	Non Accredited (applied)
10	Rainbow Children's Hospital and Prenatal Centre	Non Accredited (applied)
11	Indo- American Cancer Institute & Research Centre	Non Accredited (applied)
12	LV Prasad Eye Institute	Non Accredited (applied)

Hospitals visited in Visakhapatnam

1	SevenHills Healthcare Pvt Ltd.	NABH
2	Vasan Eye Care Hospital	Non Accredited (not applied)
3	Care Hospitals	Non Accredited (applied)
4	LV Prasad Eye Institute	Non Accredited (applied)
5	NRI Hospital	Non Accredited (not applied)
6	Manipal Hospital	Non Accredited (not applied)
7	Indus Hospitals	Non Accredited (not applied)
8	Apollo Hospitals	Non Accredited (not applied)

Hospitals visited in Mumbai

1	Asian Heart Institute	JCI
2	Hinduja Hospital	NABH
3	Hiranandani Hospital	NABH
4	Godrej Memorial Hospital	NABH
5	Lilavati Hospital	Non Accredited (applied)
6	Shroff Eye	JCI
7	Fortis Hospital	JCI
8	Saifee Hospital	Non Accredited (not applied)
9	Breach Candy Hospital Trust	Non Accredited (applied)

Hospital**Accreditation****Hospitals visited in Pune**

1	Ruby Hall Clinic	NABH
2	Kind Edward Memorial Hospital	Non Accredited (applied)
3	Colony Nursing Home	Non Accredited (applied)
4	Deendayal Memorial Hospital	Non Accredited (applied)
5	Sahyadri Speciality Hospital	Non Accredited (applied)
6	N.M. Wadia Institute of Cardiology	Non Accredited (applied)
7	Kotbagi Hospital	Non Accredited (applied)
8	Lokmanya Hospital	Non Accredited (applied)

Hospitals visited in Kolkata

1	AMRI Hospitals	NABH
2	Apollo Gleneagles Hospitals	JCI
3	BM Birla Heart Research Centre	NABH

Hospitals visited in GOA

1	Apollo Victor Hospitals	Non Accredited (not applied)
2	SMRC Salgaocar Medical Research Centre's V.M. Salgaocar Hospital	Non Accredited (not applied)
3	Vrundavan Hospital and Research Centre	Non Accredited (not applied)
4	Manipal Hospital Goa	Non Accredited (not applied)

Annexure: Research Team

Project Director

Prof. Manjula Chaudhary, *Director IITM*

Principal investigator

Dr. Monika Prakash, *Associate Professor*

Co-Investigators

Nanita Tyagi, *Assistant Professor*

Ramesh Devrath, *Assistant Professor*

Research Assistance

Saurabh Chawla

Yashwant Bharadwaj

Savya Sachi Sharma