

## Medical Tourism in Iran: Analysis of Opportunities and Challenges with MADM Approach

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**Abstract:** Globalization and liberalization of trade in health services has made medical tourism feasible and continues to grow. This industry provides new additional financial resources to health systems of the participating countries and also provides saving costs of health services for those countries are outsourcing these services to developing countries and for the uninsured patients have to pay treatments bills out of pocket too. This study aims to define the challenges and opportunities of medical tourism industry in Iran and propose some mechanisms to make Iran prosper with this new industry. The potential opportunities and challenges of Iran medical tourism got through interview, this phase led to create the 5 point Likert scale questionnaire. Data gathered from the questionnaires were answered by health services providers in private sector was analyzed by MADM approach, TOPSIS method. The most important challenges Iran Medical Tourism faced by are: create dual market structure in health services, non-portability of health insurances and lack of support of private sector by the government and main opportunities are increasing access to medical tourism market that resulted to increasing revenues, growing private sector participating in health services and decreasing of the number of patients go abroad for treatment. The opportunities and challenges of this industry are different between countries and every country should enter this area with attention to its relative advantages.

**Key words:** Medical tourism, challenge, opportunity, uninsured, questionnaire, Iran

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### INTRODUCTION

Health systems are evolving and continuously faced by new challenges. Trade in health services is one of the most complex and important challenges that health systems have to respond to (Siddiqi *et al.*, 2009) and now a days it seems to be one of the best mechanisms of financing and creating additional resources for health systems in developing countries.

In fact liberalization of trade in health services has the potential to create new challenges as well as create new opportunities, particularly in low and middle income countries for the provision of efficient and sustainable health services (Siddiqi *et al.*, 2009). Health services in recent years have become increasingly traded (Drager and Smith, 2009) because of advances in ICT, growing mobility of health services provider and customers and increased private sector participation in delivery of health services (Smith, 2006). An increasing number of countries are competing to become key

exporters of health services (Cattaneo, 2009). It caused by the high cost of health care in developed countries, the steep rise in demand for health services as a result of the ageing of populations in those countries and the increasing availability of advanced health and medical services in developing countries with high quality and lower prices than in developed countries (Bernal, 2007) in addition to long waiting lists for surgery in those countries (Caballero-Danell and Mugomba, 2007). The lack of health insurance is the most common factor for medical travel (health tourism statistics and facts).

A study indicates that key drivers for this new industry are: increased costs of health services, limited medical insurance coverage, affordable and high quality alternative options, increased facilities with international accreditation, increasing access to ICT and linkages between key players of the industry and some of the geopolitical events such as incident of 11 September (ESCAP, 2007). In a growing number of fields of treatment, the most cost effective option is traveling to a developing

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country. Hence, the provision of world class health care services and facilities at competitive prices has opportunity for those developing countries that can do. In fact globalization and liberalization of trade in health services has made health tourism possible and continues to flourish (Aniza *et al.*, 2009).

According to GATS, the most important multilateral agreement about trade in services, health tourism is the second mode of trade in health services. In this mode customers (patients) leave their home country and go to the providers country to obtain health care services with high quality and affordable prices (Blouin *et al.*, 2006). Health tourism according to Jabbari (2009) is divided to wellness tourism, curative tourism and medical tourism and medical tourism refers to modern medical treatment and complementary medicine.

Medical tourism is the abroad looking for available quality combined with cost effective and low price health services while offering a similar level of safety to the patient (Dhaene, 2009). Medical tourism has become a US\$60 billion a year business with growing rate about 20% by a year which could increase to \$100 billion by 2012 (Herrick, 2007).

A projection estimates that only US patients will expend >\$40 billion for health services abroad by year 2017 (Deloitte, 2008a). Now days many governments and insurance firms are to outsourcing medical services to low cost providers abroad.

Apart from the savings aspect from the patient's perspective, medical tourism is a growing part of the global health market with countries taking on and favoring this activity as a part of their national industry (Dhaene, 2009) and this attractive industry is open to all countries can utilize their opportunity of outsourcing health services from developed countries with respect their capabilities and competences.

For a long time medical tourism was commonly the travel of rich patients from a less developed country to the health facilities in more developed countries had advanced medical facilities to obtain better treatment. But today the worldwide market place for health and medical care has changed and medical tourists go in both directions, from rich and poor countries in a similar way and developing countries became the main destinations where high quality combined with affordable healthcare is available (Smith, 2008). After Asian economics crisis in 1990 health and medical tourism has grown in some countries (Kazemi, 2007). Asia has become the hub of medical tourism and successful Asian countries in this mode of supply of medical services are Thailand, Malaysia, Singapore, India and Jordan. In Iran despite of its high potential for this industry focusing on low cost

and high quality of healthcare services and access to Arab market (Jabbari, 2009) at present, medical tourism does not have grown well. Some hospitals and health care centers began to enter to this industry but they faced by so challenges.

**Health system in Iran:** The Islamic Republic of Iran is a low middle income and oil exporting country. It is the 4th largest country of Asia and 17th largest country in the world with an area of 1,648,195 km<sup>2</sup>. It is an ancient country located in the Middle East, a region between Asia, Europe and Africa (Mehrdad, 2009). The country has 30 provinces, 293 districts, 885 cities and about 68000 villages and total population was estimated to be 70,000,000 in 2007 (EMRO, 2009). The country is bordered on the East by Pakistan and Afghanistan, on the North by Turkmenistan, Armenia and Azerbaijan, as well as the Caspian Sea, on the west by Iraq and Turkey and on the south by the Persian Gulf and the sea of Oman. At present, 830 hospital provide health care services in the second and tertiary level of health system and >70% evaluated with first degree of health evaluation system of Iran (Jabbari, 2009). According to last statistics of statistical center of Iran about 120000 hospital bed and 4551 laboratories, 3042 rehabilitation center, 2293 radiology and imaging centers and 7601 pharmacy are providing health services in Iran .

**Medical tourism in Iran:** Medical tourism is not new phenomenon in the world as well as in Iran. In the past some people from neighbor countries especially from Arab countries of Persian Gulf came to Iran especially to Fars province to get health care services. In this area in the country, there are no exact statistics about medical tourists came to the country but some resources indicated about 17500 patients came to Iran in 2005. The most popular procedures which are demanded include: advanced treatments of cardiac treatments and surgeries, cosmetic surgeries, productivity treatments, organ transplant (CHN news).

The main reasons of coming patient to Iran are: quality of health services and low cost of treatments and drugs in comparison with other countries of the region (Middle East and Middle Asia), access to advanced and new medical procedures, equipment and qualified professionals and medical staff, similarity of culture and language in some regions of Iran with neighboring countries such as Iraq, Azerbaijan and lack of some medical procedures, equipment, medical professionals and health infrastructures in those countries combined with natural attractions, ancient and historical buildings in famous cities of Iran (Jabbari, 2009). Despite of these

factors and existence of some legal factors such as the 4th and at present 5th program of economic, social, cultural development of Iran, medical tourism in Iran has not developed yet and some hospitals and medical and health centers individually are working in the area of importing patients from foreign countries and provide health services for them and some patients come to Iran in a traditional way.

**Medical tourism in Asia:** According to an estimate, the medical tourism business is being done operational in 28 countries (MTG, 2010). The most popular medical tourism destination in the world are countries are renowned as third world such as Thailand, India, Malaysia, Singapore, the Philippines, Jordan, Turkey, Hungary, Mexico, Cuba, Chile and South Africa while a few other medical tourism hubs are rising in Dubai and Eastern Europe (McCallum and Jacoby, 2007).

After Asian financial crisis in 1997 health profit for employees were dropped because the crisis caused a descend in number of patients going private hospitals. Hence, private hospitals were required to search for alternative options in other countries (ESCAP, 2007). The key exporters of medical tourism in Asia are Thailand, Singapore, India and Malaysia. These countries have been running advantageous and suitable programs since 1990 (Garcia and Besing, 2006).

Thailand medical tourism in its modern type is the first and has been still leading country in terms of quantity of foreign patients treated and foreign exchange revenues (Hadi, 2009). This country has the advantage of tourist attractions and needed infrastructure. The Thai medical tourism is flexible in pricing for services to provide accommodation for the customers (Herrick, 2007). The costs of medical services are often packaged with stays at ocean-front resorts, guided tours and entertainments to attract international patients (Hadi, 2009). After the September 11 attacks in New York, Arab citizens were discouraged from going to the United States, between the years of 2001 and 2006 the number of Arabs treated at Bumrungrad Hospital increased from 5,000- 93,000 (McReady, 2007).

Singapore is the oldest medical travel destination in Asia. Some of the upper middle class neighboring countries of Singapore have benefited from it is modern medical services since 1980s (ESCAP, 2007). Singapore benefited with the increase in medical tourists from 270,000 in 2004-410,000 foreign patients annually. It is estimated that this will increase to a million patients by 2012. Singapore offers various medical services in 13 JCI accredited hospitals for only 35% less than U.S. prices (MTG, 2010). Malaysia is also becoming a famous

destination with 300,000 medical travelers in 2006. Cosmetic surgery and alternative medicine can be obtained in Malaysia for 25% of the U.S. cost (MTG, 2010).

The main advantage of medical tourism industry in Malaysia is significance price gap and with focusing this advantage private hospitals are targeting less developed markets like middle Eastern countries and some of the neighboring countries (ESCAP, 2007).

India has also benefited with an increase in medical tourists from 150,000 in 2002 to 450,000 in 2007. India provides various health services at 20% of the U.S. cost. (Medical Tourism Statistics and Facts). An estimated 50% of Indian hospitals in tertiary level of health system focus on supplying health services to the medical tourism sector. Some key industry players like Apollo and wockhardt etc., have changed the appearance of this industry by providing world class services. They have hospital chains in all regions of India (Murugan, 2008).

**Objective of the study:** In this study, we focused on current opportunities and challenges of medical tourism in Iran (from the attitude of providers). This study is a part of project that included comparative study of globalization and trade in health services in selected countries of Asia and the opportunities and challenges of health care globalization in Iran.

The main objective of this research is to ranking the challenges and opportunities of Iran medical tourism and in this way to make policy makers able of using this ranking in their decision making process. In the other word, it makes the health policy makers able to allocate their resources in the best manner, in order to utilize the opportunities of medical tourism and decline the challenges and change them to opportunities of this emerging phenomenon.

## **MATERIALS AND METHODS**

This study is a cross sectional survey. In the first step of this study, we interviewed a purposive sample of 11 participants to define Iran medical tourism opportunities and challenges. The participants identified in consultation with the former researchers of Iran health tourism. The participants were coordinated by letters explaining the purpose of the research and introducing the investigator.

About 2 interviewees from ministry of health (different deputies), 2 from medical universities, 3 from private hospitals and 2 from hospitals and medical centers affiliated to medical universities those are involved in medical tourism industry and 1 from private sector that

recently research on creating a structure for marketing of health tourism in Iran and 1 from tour operators society. The criteria for choosing participants were academic or executive experiences in health and medical tourism. About 8 of interviews were conducted face to face and the others through phone in 2009. First, we had 2 in depth interview to obtain general information about the situation of Iran health tourism that helped to have better semi structure interview after. The challenges and opportunities of Iran medical tourism got from interviews and combined with those got from literature review. So in this stage, we designed a list of challenges and opportunities that were the questionnaire with the 5 point Lickert scale (less important, un-important, medium, important and very important).

The validity of the questionnaire was confirmed through expert attitudes and its reliability through Cronbach's Alpha. The Cronbach's Alpha for the questionnaire of opportunities was estimated 0.91 and 0.89 for questionnaire of challenges. About 70 questionnaires were distributed in 35 private hospitals under the supervision of Iran University of Medical Sciences (IUMS) to rank the opportunities and challenges of medical tourism of Iran by hospital managers and managing directors (in private hospitals of Iran there is a managing director that is representative of hospital board of trustees and a hospital manager that has less authorities), 46 questionnaires were referred. Some hospitals did not refer the questionnaires and in some both managers and managing directors completed the questionnaire and in some of them only the hospital manager responded.

The data came from questionnaires was interred to excel and we prioritized them using Multiple Attribute Decision Making (MADM) approach (TOPSIS method). We selected MADM approach because of the structure of questionnaires that included various factors under each opportunities or challenges and TOPSIS because it can order the factors and weight them too and is the best method of MADM approach (Asgharpour, 2008).

## **RESULTS AND DISCUSSION**

In this study, in the first step we identified the opportunities and challenges of medical tourism of Iran through interview and literature review. In this study, challenges are all factors restricted entering this industry and include threats of medical tourism industry for Iran and existence challenges or weaknesses (threats + weaknesses). In this way, we defined 9 threats and 9 weaknesses and opportunities include various factors of strengths up to opportunities are produced from entering

this industry or all the factors encourage development of medical tourism (opportunities + strength) so the number of opportunities defined for Iran medical tourism were 13 and the number of strengths were 6.

In the other step with TOPSIS method, we prioritized data first in group of existence challenges (weaknesses) and challenges are made in result of medical tourism (threats) (Table 1) and existence opportunities (strengths) and opportunities in reesult of medical tourism (opportunities) (Table 2). Second, we prioritized the data in two groups challenges and opportunities (Table 3). According to Table 1, the most important threats of medical tourism for Iran are creating two tired health services and increasing the price of these services that (cause dissatisfying of health system and versus effect on equity in availability and affordability of health services and the most important existence challenges are barreirs in mobility of health insurances of foreign patients and legal restrictions about importing medical tourists to the country.

According to Table 2, the most important opportunities of medical tourism for the country are access to the foreign patients market and decreasing the number of patients go abroad for treatment that these are resulted in increasing foreign revenues and saving for health system to provide better health services for the population specially for the poor. In Table 3, all of the challenges and opportunities of Iran medical tourism have prioritized.

In Table 3, we have 18 challenges and 19 opportunities and it also indicates that T1 (creating two tired health services) and W2 (restrictions of mobility of health insurances) are the most important challenges Iran health system faced by and the main opportunities are O1 (access to medical tourism market in the region) and S5 (participation of private sector in health services delivery). Medical tourism is a fast rising industry catering to patients who traveled abroad to get medical treatments (Deloitte, 2008b).

Although, this new shape of medical travel has benefits for the developing countries it may result to bad effects on health systems and creates some difficulties in doing their duty to provide health for the population. Hence, many of developing countries that seek more ways to improve their country economics before and also after entering into this industry analyzed its impacts. Thailand is one of the key exporters of medical care with modern hospitals.

Cohen (2007) in his study, demonstrated that medical tourism has also challenges such as increasing the price of private hospital services in result of upgrading their facilities and has been hitting many social groups of the country and intenal brain drain and priority of foreign

Table 1: Ranking of the challenges of Iran medical tourism (separated to existence challenges or weaknesses and challenges because of medical tourism or threats)

Rank	Challenges produced by medical tourism (threats)	
1	T1	Creating dual market of health services and providing health (medical) services with better quality to foreign rich customers (patients) versus health services with less quality to the nationals
2	T8	Increasing the price of health services because of overuse of advanced technology
3	T7	Existence of other key exporters of health services in the Asia
4	T2	Internal BrainDrain of qualified medical professionals from public to private sectors which providing health services to foreign patients (because of revenue gaps between public and private sector)
5	T9	Changing into a market to consume the west advanced medical technologies
6	T6	Development of profit oriented medicine (which tend to increasing revenues and ignore ethics)
7	T5	Creating difficulties in controlling and supervising of contagious disease
8	T4	Resource deviation from preventive sector (the first level of health)to treatment level which provides more revenues to health system therefor unequal distribution of health resources
9	T3	Crowding out of local population because of not providing health services that are providing to foreign patients
Rank	Existing challenges (weaknesses)	
1	W2	Barriers in mobility of insurances from the patient's home country
2	W1	Legal restrictions about inflowing foreign people (tourists) to the country such as visa process and ...
3	W6	Lack of government supporting of private sector to provide health for medical tourists
4	W4	Limitations of human resource capabilities specially in IT and language skills
5	W3	Barriers in foreign exchange of the country
6	W5	Lack of advantageous marketing system in medical tourism
7	W8	Undesirable transformation infrastructure in the country
8	W9	Lack of suitable health tourism organization in the country
9	W7	Existence of some limitations in the area of patient's right and malpractice law

Table 2: Ranking of the Iran medical tourism opportunities (separated to existence opportunities or strengths and opportunities because of medical tourism)

Rank	Opportunities produced by medical tourism (opportunities)	
1	O1	Increasing access to medical tourism market (patients in search of desirable quality with affordable prices of medical care in developing countries)
2	O13	Decreasing the number of patients going abroad to obtain advanced medical treatments
3	O6	Enabling human resources in IT and professional expertise
4	O9	Increasing the domain of health services the country population can access to
5	O2	Increasing revenues from export of medical (health) services
6	O7	Improving the quality of health services
7	O5	Increasing foreign revenues of the country (because of entering medical tourists and cashflow to the country)
8	O3	Preventing external BrainDrain and increasing employment of health professionals
9	O4	Creating new jobs in health related economic sectors
10	O11	Increasing investments in public sector of health because of creating new financial resources
11	O12	Provide health in the region of the country (middle east and middle asia)
12	O8	Improving the standard level of human resources,equipment and other infrastructures and closeness to international standards
13	O10	Growing and developing private sector and insurance institutions (private insurances)
Rank	Existing opportunities (strengths)	
1	S5	Increased participation of private sector in providing health services
2	S6	Existence of natural and tourism attraction in Iran
3	S1	Low price of health services and drugs in Iran (in comparison with other countries of the region)
4	S3	Advanced technological and physical infrastructure in health sector of Iran (in comparison with other countries of the region)
5	S4	Possession of more desirable level of population health in Iran (in comparison with other countries of the region)
6	S2	Qualified human resources (in all levels of health services)in public and private sector

Table 3: Ranking of the Iran medical tourism opportunities and challenges

Rank	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Challenges	T1	W2	W6	W1	T8	W4	W3	W5	T7	T2	T6	W9	W8	W7	T9	T5	T4	T3	-
Opportunities	O1	S5	O13	S1	O6	O9	S6	O7	O2	S4	S3	S2	O5	O4	O3	O11	O12	O8	O10

patients and providing better and sooner services to them are the other issues of this country. But medical tourism causes many medical professionals are working abroad come back to the home country. A SWOT analysis of medical tourism in India indicates that this country have strengths in terms of quality of health service with affordable cost, enormous supply of qualified doctors providing advanced healthcare e.g., cardiovascular, organ transplants, high success rate in surgeries, international status of hospitals and physicians, variety of tourism destinations and the weaknesses are lack of government

support to promote medical tourism, lack of coordination between the various players in the medical tourism industry, client opinion as an unhygienic country, lack of proper accreditation system for hospitals and no standardized and uniform pricing policies across hospitals. This study also shows opportunities about increased demand for health services from developed countries with aging population (like U.S. and U.K.), shortage of supply of health services in National Health Systems in countries such as U.K. and Canada, competitive cost of international travels, health demand

from underdeveloped healthcare facilities countries and the threats of this industry are other strong competitors such as Thailand, Malaysia, Singapore and lack of international accreditation and lack of Suitable Insurance Policies for Medical Tourism (SINET) another study demonstrates the current Indian healthcare infrastructures is not adequate to meet the future demands. To meet the present rate demand approximately US\$ 30-40 million investment in providing needed hospital beds by 2012 are required (Murugan, 2008).

A study in Philippine indicated four key niche in it is medical tourism program; some of the surgical and medical care such as women's health care, dental care, optometric care and rehabilitation in private and government health care facilities with international accreditation like JCI, traditional and alternative health care of this country, existence of spas and wellness farms and finally International Retirement Center and the opportunities are increased revenues for health care sector, more job opportunities for practitioners and cooperation between all key players of this industry in government and private sector, non-portability of insurances and lack of health care facilities with international accreditation are most important challenge the country faced by Garcia and Besinga (2006).

Cortez (2008) in his study in the area of medical tourism explained the opportunities and challenges of medical tourism in terms of it is effect on cost, quality and access to health care services.

Non-portability of health insurances, abuse and fraud in providing bills for insurance institutions are challenges under the cost and the opportunities are economic gains for the exporters and the importers of these services like U.S. and the shift towards cross-border health insurance coverage and in area of quality the main challenge is malpractices and in the area of access to health services the main debate in developing countries is whether the promotion to attract foreign patients will pay no attention to the health needs of local citizens and also caused diverting resources to private hospitals that cater to foreign clients and crowding out domestic population in result of internal brain drain but the opportunity is pleasing to the patient autonomy in selecting the healthcare facility and practitioners.

### **CONCLUSION**

This study indicates that Iran has potential opportunities to enter medical tourism industry as well as challenges and barriers it has. The impacts of entering into this industry are various between countries and successful countries came to this attractive market have also involving with some barriers but they did utilize their competencies such as high quality and low costs of health services and overcame the challenges of this multi

billion dollar industry and in this way they could reinforce the health infrastructure of their countries in terms of human capabilities, physical and technological infrastructures and the quality of the services.

We also should utilize the potential capacities and competencies of our country's health system such as high quality and competitive prices of health services (diagnostic and treatment services) and advanced technologies also qualified medical professional staff and other sectors infrastructures to get into this market and participate to provide health services for neighboring countries in the region in addition to obtain financial benefits.

To provide for brighter prospects for this industry in the country, in the first step the MOH should organize medical tourism unit with cooperating with other players of this industry in government and private sector like tour operators, airline carriers and hotel companies and etc. and all of the decisions about this industry must make by this new party with cooperation of other key players of the industry, in addition to strategic planning of medical tourism the other actions should be done are defining the target market of Iran medical tourism, utilizing appropriate marketing approaches, defining the potential capabilities and determining health care facilities are volunteer in providing these services to foreign customers, encourage hospitals and other facilities to acquire international accreditation, standardize procedures and facilitate foreign patients in selecting the best services and healthcare facilities.

### **RECOMMENDATIONS**

The government should encourage and support private sector to act in all area of this industry from participating in policy making and strategic planning up to marketing and introducing Iran health services to target countries and act as medical tourism facilitators and providing health and medical services.

The policy makers also should pay attention that without participating private sector this industry won't be succeeded. The government of Iran can also reinforce its support through quick visa processing, improvement and development of IT and transformation infrastructures, improvement of regulations about patients' right and reinforcement of health staffs' skills and all of these activities must take place with respect to this principle that the first priority of a health system is providing health for the country population.

### **ACKNOWLEDGEMENT**

This study was funded by the Iran University of Medical Sciences, Deputy of Research and Technology.

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