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Medical tourism: a survey

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Contents

Abstract

Medical tourism, the act of traveling abroad in search of health care, has grown significantly in recent decades with an increasing number of countries seeking to become key exporters of medical services. This report highlights the experiences of some of these countries and provides an overview of factors that foster trade in health services as well as those that hinder its further growth. The report also highlights potential benefits and risks for exporting countries.

Introduction

Studies on health-related mobility have long focused on the South-North migration of patients. Recently, more attention has been paid to movements in the opposite direction, patients from industrialized countries traveling to developing countries in search of health care, also referred to as medical tourism. Factors such as rising health care costs, the aging of the population, long waiting lists for surgeries and globalization in general have driven the recent flow of patients from industrialized countries seeking treatments abroad. On the other hand, some of the factors that have enabled developing countries to offer medical services to foreign patients include lower labor costs, high-quality health care facilities and services at affordable prices.

Although health-related mobility is nothing new, medical tourism is a new tourism niche that has grown considerably over the past decade and many experts in the subject suggest that it will experience an even bigger growth in the upcoming years. The provision of health services can potentially represent an important source of foreign exchange earnings. Nevertheless, critics of medical tourism argue that these state-of-the-art health centers can function as enclaves that satisfy only foreign demand while the local population is relegated to lower quality health services, creating an inequitable two-tier system.

This paper surveys various experiences on medical tourism. Section I, explores the concept, the underlying factors behind this phenomenon, the advantages of this new type of trade and issues regarding data constraints. Subsequently, section II includes experiences of countries that are exporting their health services in Asia, the Middle East and Africa, as well as in Latin America and the Caribbean. Section III then deals with the promotion of medical tourism by the public and private sectors and touches upon the potential repercussions on domestic health care. Finally, section IV presents an overview of the main barriers currently hindering the growth of medical tourism and how they could be overcome.

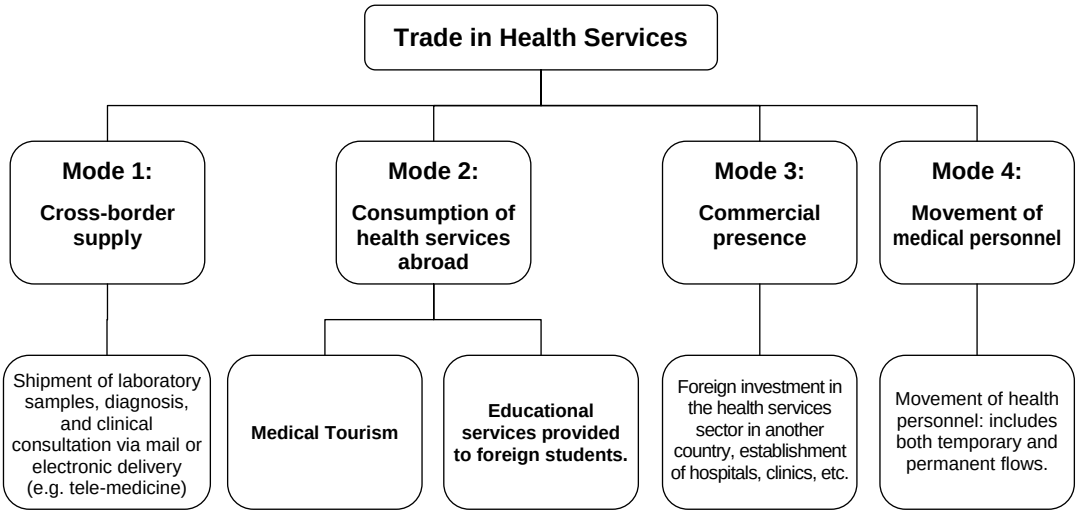
I. Medical tourism

Traveling overseas in search of increased health and well-being is not a new phenomenon. According to Ross (2001) the earliest form of health tourism is said to date back to the Neolithic and Bronze ages in Europe when people traveled to visit mineral and hot springs. By the 18th and 19th centuries, spa towns, especially in the south of France, became popular destinations for people living in the north of Europe searching for sun and an escape from the cold weather at home (Cook, 2008). In the late 19th century patients from less developed countries would travel to medical centers in Europe and the United States for diagnostics and treatment procedures not available in their own countries (Horowitz, Rosensweig and Jones 2007). Although traveling for health care is nothing new, the modern concept of "medical tourism" has only emerged in the past 10 to 15 years (Yanos, 2008a). Bookman and Bookman (2007) say it aptly: "what is different in the twenty-first century is that tourists are traveling farther away, to poorer countries and for medical care that is invasive and high tech."

It was not until 1973 that health tourism was first categorized as a commercial activity by the International Union of Travel Officials. As a form of international trade in services, it can be classified according to the categorization of trade in services of the World Trade Organization (WTO). The General Agreement of Trade in Services (GATS) defines four modes of supply through which services can be traded[1]. Although trade in health services entails the four modes of supply, medical tourism falls under Mode 2 which involves the movement of persons to the country where the services are provided (figure 1). A country that offers medical tourism services to foreign patients, the "destination country" is, therefore, the "exporter" while the patient's "home country" becomes the "importer" of the service.

[1] Mode 1 (Cross-border supply): from the territory of one Member into the territory of any other Member. Mode 2 (Consumption abroad): in the territory of one Member to the service consumer of any other Member. Mode 3 (Commercial presence): by a service supplier of one Member, through commercial presence, in the territory of any other Member. Mode 4 (Presence of natural persons): by a service supplier of one Member, through the presence of natural persons of a Member in the territory of any other Member.

FIGURE 1
MODES OF SUPPLY OF TRADE IN HEALTH SERVICES



Source: World Trade Organization, GATS, Part I, Article I.2. and Chanda 2001.

While it is clear that medical tourism is an economic activity that involves trade in services from two distinct sectors, health care and tourism, it is not necessarily clear which kinds of treatments are encompassed in "health care." Does the term involve only specific medical intervention as suggested by Connell (2006) or does it include elective as well as essential surgery? Do spa, relaxation, alternative and rehabilitation treatments qualify as part of the health services offered to medical tourists? Some authors differentiate "wellness tourism" from "health tourism" claiming that the former only involves spa and relaxation treatments while the latter encompasses all treatments including cosmetic surgery, elective and essential surgery (Caballero-Danell and Mugomba, 2007). Nevertheless, medical tourism is usually not perceived as being limited to few specific treatments. For example, Deloitte (2008a) in their often cited *Survey of Health Care Consumers*, define medical tourism as a rather general concept, referring to the act of traveling across national borders in search of specialized or economical medical care, well-being and recuperation.

Bookman and Bookman (2007) identify three forms of medical tourism: invasive, diagnostic and lifestyle. *Invasive* treatments involve high-tech procedures performed by a specialist; *diagnostic* procedures encompass several types of tests such as blood screenings and electrocardiograms; and *lifestyle* includes wellness or recuperation treatments.

Certainly, health care cannot always be traded across borders. For instance, an acute condition or a surgery that requires intensive follow-up treatments on-site are some of the factors that inhibit consumption health care abroad (Mattoo and Rathindran, 2006). According to Mattoo and Rathindran (2006), for a surgery to be easily traded, it not only has to constitute treatment for a non-acute condition and the patient has to be able to travel without major pain or inconvenience, but the surgery also has to be fairly simple and commonly performed with minimal rates of post-operative complications. Even though the tradability of health care does not apply to all treatments, Mattoo and Rathindran (2006) suggest that a sufficiently large range of treatments can be obtained through medical tourism.

Several authors such as Connell (2006) define medical tourism as a new form of niche tourism "where people travel often long distances overseas (India, Thailand and Cuba) to obtain medical, dental and surgical care while simultaneously being holidaymakers." However, Connell (2006) recognizes that conventional tourism has been a by-product of the growth in medical tourism. Similarly, authors as Gonzales, Brenzel and Sancho (2001) for instance, define medical tourists as

people traveling to another country *specifically* to consume health care services, without even making reference to touristic activities.

This survey considers medical tourism in a broad term that involves traveling in order to undergo different types of medical treatments that enhance a person's physical or mental well-being, ranging from medical intervention (elective or essential), traditional and alternative treatments, to holistic medicine offered by spas and wellness resorts. For a list of the most popular medical procedures see annex 1.

Engaging in one or more of the above-mentioned forms of medical or wellness treatments should be the primary reason for traveling. Touristic activities, although possible, are not necessarily required. Although medical tourism agents promote the "tourism" feature as an essential part of the healthcare package, the recreational value of travel is less important for patients with complex medical problems (Horowitz, Rosensweig and Jones, 2007). Further, the term medical tourism is preferred in this survey over health tourism because the former is perceived to better describe the fact that it can involve highly specialized and complex treatments. Besides, the phrase is increasingly being used by the general public and the media (Horowitz, Rosensweig and Jones, 2007).

a) Market drivers

In the last decade the medical tourism industry has become large. Deloitte (2008a) estimated that the world medical tourism market in 2008 was around US$ 60 billion and that it is expected to grow to US$ 100 billion by 2010. It is also estimated that around 6 million people a year worldwide will travel for medical care by 2010 (Herrick, 2008). Whereas at the beginning of the rise of the medical tourism industry there were only a handful of hospitals and only about 4 or 5 countries promoting themselves as medical tourism destinations, today there are hundreds of hospitals and clinics and over thirty different countries promoting it (Edelheit, 2009).

On the demand side, factors contributing to the growth of medical tourism are closely intertwined. Authors agree that rising health care costs in industrialized countries coupled with the availability of high-quality medical services at significantly lower prices in developing countries has become the primary incentive for patients seeking treatments abroad. According to Deloitte (2008a), medical services in India, Thailand and Singapore can be as low as 10% of those in the United States. Other research indicates that surgery is 30% to 70% cheaper than in the home country of the medical tourist (Caballero-Danell and Mugomba, 2007) and even 80% in some cases (Herrick, 2007). For example, an open heart surgery may cost about US$ 150 000 in the U.S. while in India's best hospitals the costs range between US$ 3 000 and US$ 10 000 (Connell, 2006). An MRI in Brazil, Costa Rica, India, Mexico, Singapore or Thailand costs between US$ 200 to US$ 300, compared to over US$ 1 000 in the U.S (Herrick, 2008). According to prices quoted on the Global Health Tours website, a bone marrow transplant and a root canal procedure in the U.S. cost about US$ 250 000 and US$ 1 000 respectively, as opposed to US$ 69 000 and US$ 100 in India (in Caballero-Danell and Mugomba, 2007).

While economic benefits are central to medical tourism, there are other factors in play. According to Mattoo and Rathindran (2006), most medical travel is for procedures that are not adequately covered by home-country health insurance. For example, health insurance plans usually do not cover various forms of dental or cosmetic surgeries (Connell, 2006). In countries where there is no widespread national healthcare, the lack of adequate health insurance, or no health insurance at all, are some of the reasons motivating people to seek treatments abroad (Caballero-Danell and Mugomba, 2007). This is particularly true for medical tourists from the United States where according to the U.S. Census Bureau (2009) there were 46.3 million uninsured in 2008.

But even in countries where there is a national healthcare program, as in Canada and the United Kingdom for instance, patients are also willing to travel abroad for health care in order to have timely treatment and avoid long waiting lists at home. In all these cases, patients thoroughly compare prices and services offered by alternative institutions. With the emergence of state-of-the-art facilities

and high skilled doctors in many important medical tourism destinations, patients do not even have to sacrifice quality for prices anymore. Mattoo and Rathindran (2006) add that there is significant evidence that the upper-end of the quality distribution of both professionals and hospitals in several advanced developing countries lies well above the minimum acceptable standard in industrial countries. Because of this, many medical tourism destinations are proud to offer "first-class services at third-world prices."

Rising incomes in industrialized countries have also fuelled the demand side of medical tourism. Although medical procedures and treatments are considerably less expensive in developing countries, a medical tourist needs to have enough disposable income so as to be able to pay for the medical and traveling costs out-of-pocket, given that most of these procedures are not covered by health insurance companies. Higher incomes have also translated in the possibility of buying more wellness and preventive medicine (Bookman and Bookman, 2007). According to Connell (2006) medical tourism has been "particularly attractive to elites, even -perhaps especially- in developing countries." Nevertheless, other authors disagree claiming that what *is* different about the current trend in medical tourism is that traveling to other countries in search of medical care is no longer exclusive to elites paying premium prices abroad, but is rather accessible to the mass population which now has the possibility of medical care and leisure abroad at a cost-effective price (Caballero-Danell and Mugomba, 2007). Horowitz, Rosensweig and Jones (2007) identify two types of medical tourists in the United States: one group of patients is middle-class adults with no health insurance or inadequate coverage; the other group is people searching for treatments that are not covered by their health insurance such as cosmetic surgery, fertility treatments and gender reassignment procedures. What is common in both groups, however, is that they have enough resources to purchase healthcare in low-cost medical tourism destinations but insufficient to afford the same services in their home country.

An additional factor that has fuelled the growth of medical tourism is the aging of the population globally. The fact that people are living longer and enjoying more retirement time means on the one hand, that there is a growing number of people with higher discretionary incomes and more time to travel. On the other hand, the aging of the population also translates into a larger number of people experiencing chronic health conditions, such as diabetes and hypertension and having a need for various kinds of specialized health services. There are 78 million baby boomers in the United States alone and this segment of the population is increasingly interested in traveling abroad to meet their health needs, according to Ross (2002). For instance, the population aged 60 years or older accounted for 10% of total arrivals to the Caribbean in 1998 (Gonzales, Brenzel and Sancho, 2001). Although not all of these travelers were medical tourists, the authors suggest that health tourism designed around the needs of seniors is a potential successful business for the region.

Medical tourists also choose to obtain health care in a foreign country because a treatment abroad may guarantee privacy and confidentiality, which many patients prefer especially when undergoing treatments such as plastic surgery. Patients also travel abroad in search of procedures that are not available or are illegal in their home countries such as stem cell therapy, drug rehabilitation or sex change procedures (Horowitz, Rosensweig and Jones, 2007). Finally, when choosing to travel to a specific country in search of a medical treatment, there are several factors that come into play. For example, geographical and cultural proximity, medical specializations, reputation and portability of health insurance are some of the reasons for a person's choice of one country over another (Bookman and Bookman, 2007).

The development and expansion of medical tourism has not only been demand-led but has also resulted from the countries' ability of supplying high quality medical services at significantly lower prices. Strong economic growth in developing countries has provided the resources and opportunities to improve capacity and infrastructure constraints that had hindered the development of this industry in the past (Deloitte, 2008a).

Globalization and improved communication technology have also contributed to the growth of this industry (Caballero-Danell and Mugomba, 2007). Advances in modern communication technologies over the past decades have been crucial, acting as a catalyst of medical tourism.

Horowitz, Rosensweig and Jones (2007) claim that it is due to these advances that potential medical tourists today are able to compare prices and arrange healthcare travel plans anywhere in the world. Similarly, Bookman and Bookman (2007) point out that new telecommunications technologies such as telediagnosis and teleanalysis have reduced geographical barriers and have facilitated the cross-border trade in medical services. The Internet, as the most effective communication channel for the medical tourism industry, has made possible, for example, video-conferencing between patients and doctors as well as "real time" guided tours of medical facilities (Caballero-Danell and Mugomba, 2007). Although the Internet has played a big role in the dissemination of information, some experts in the industry argue that the most effective type of communication channel in medical tourism has been word-of-mouth.

Bookman and Bookman (2007) add that other factors that have contributed to an increase in the supply of medical tourism include the liberalization of trade in services, the growing cooperation between private and public sectors and, most importantly, the successful merging "splicing" of the tourism and health sectors.

b) Opportunities

The exports of medical services can be associated with upgrades in medical knowledge and technological capacities, tourism and foreign exchange revenues. Trade of health services also offers countries the opportunity to improve their health systems through the generation of additional financial resources than can ease public health budgets. For example, in Cuba, health tourism generates revenues of around US$ 40 million a year from patients traveling to get treatments that include eye surgeries, neurological disorders, orthopedics and retinitis pigmentosa – also known as night blindness (Fawthrop, 2003). Mattoo and Rathindram (2006) suggest that a health care destination country could earn around US$ 400 million annually in export earnings even if trade were restricted to only 15 procedures.

The possibility of generating employment is another advantage. Caballero-Danell and Mugomba (2007) claim that the income-generator effect of tourism can help create more employment positions not only within the medical tourism sector which includes hospitals and hotels, but also other supporting services such as travel agencies, restaurants, transport and recreation. According to Bookman and Bookman (2007) medical tourism spills into secondary and tertiary sectors, generating cyclical waves of economic expansion.

In addition, the outmigration of skilled workers, also referred to as "brain drain," a phenomenon that poses a major problem and high social costs for many developing countries, might be reduced and even overturned with the possibility of more and better employment opportunities in health exporting countries. Inflows of industrialized-country patients could lead to higher incomes in destination countries and thereby a reduced incentive to emigrate (Mattoo and Rathindran, 2006). In Trinidad, for instance, West Shore Clinic actively recruits back specialists and qualified practitioners (Brenzel, 2004). Likewise, India's Wockhardt hospitals have experienced a reverse brain drain in the past with more than two dozen top doctors returning to India from Britain and the United States (The Economist, 2008). Chanda (2001) also provides evidence for a reverse brain drain in India. She finds that three Indian hospitals, namely the Fortis hospital in Mohali, Max hospitals and Apollo hospitals employ between 5 and 138 doctors who have returned from abroad.

Trade in medical services can also benefit health-importing industrialized countries by reducing health care costs and increasing competition. For instance, Mattoo and Rathindran (2006) find that the U.S. health care system could save around US$ 1.4 billion annually even if only one in ten U.S. patients, undergoing any of the fifteen procedures in their study, decided to travel abroad for treatment. There are signs that show the interest of insurance companies and employers in the U.S. to cover medical travel. In several states, Blue Cross Blue Shield now has a program called Blue Card Worldwide which allows policyholders to have emergency and non-emergency health care almost anywhere in the world (Brenzel, 2004). In addition, several fortune 500 companies are assessing the

possibility of outsourcing expensive medical procedures so as to reduce the costs of employee healthcare (Horowitz, Rosensweig and Jones, 2007). There have even been two attempts to enact legislation that would encourage insurers to cover medical tourism within their health plans. Although neither of the proposed bills passed, these attempts show that state legislators are becoming interested in the potential value of medical tourism (Deloitte, 2008b).

c) Data constraints

Most of the literature on medical tourism suggests that the industry has grown significantly during the past decade and will continue to expand in the near future; however, there is no systematic data to corroborate these findings. In fact, whenever data is presented, it remains rather anecdotal and scant. Imprecise data ranges from how extensive medical tourism trade is in most countries, to what degree it is part of conscious national strategies and how much leakage occurs (WHO, 2002). Lautier (2008) even calls most of the literature on the topic "data free."

Data on international trade in services can be found via the International Monetary Fund "Balance of Payment Statistics" (BoPS). This database covers transport, travel, insurance services and a category for "other services." The fact that trade in health services is captured under several items in the BoPS (mainly within travel services) makes it hard to estimate the real value of this type of trade. Nevertheless, Lautier (2008) suggests taking data provided under "health-related travel expenditures," a subcategory of the category "travel," as a proxy for medical tourism. However, he recognizes that data in the BoPS is incomplete and figures are probably under-evaluated. Another drawback of the BoPS is that the most prominent exporters of medical tourism do not notify health-related travel credit to the IMF (Lautier, 2008).

Furthermore, the General Agreement of Trade in Services (GATS) classification of trade in health services does not cover certain categories of this activity such as rehabilitation and addiction treatments, spas and wellness services and cosmetic surgery (Brenzel, 2004). To a great degree, the difficulty of gathering data on medical tourism is due to the very nature of the phenomenon. For instance, data on medical tourism may be overestimated if these numbers include expatriates from other nations, business travelers and tourists who require medical care while they are in these destinations for other purposes.

However, there are some country studies that provide substantial data on their respective health care industry. The Deloitte 2008 *Survey of Health Care Consumers* for example is based on a nationally representative online survey of more than 3,000 U.S. nationals and provides data and estimations on the growth of the U.S. outbound as well as inbound medical tourism industry. Similarly, Connell (2006) mentions a survey undertaken in Costa Rica where a university study in 1991 found that 14 percent of travelers to Costa Rica had received some type of medical care.

Although some countries systematically gather data on their domestic medical tourism industries, there is a high degree of heterogeneity of these national sources and consequently, comparisons between countries or even estimates of the global value of health services exports on the world market based on this information remain impossible (Lautier, 2008). Caballero-Danell and Mugomba (2007) recognize that the lack of certified medical tourism statistics makes it challenging to know the real market size of the industry, given that much of the data available comes from claims by individual government and medical groups.

II. Global and regional trends in medical tourism: selected countries

The promotion of international trade in health services is taking place throughout the world. Some countries are already recognized for their specializations in certain procedures. For instance, Eastern European countries have become important for dental care and plastic surgery; Jordan and Israel specialize in female infertility, in-vitro fertilization and high-risk pregnancies; South Africa and Argentina are popular for their cosmetic surgeries; Cuba specializes in skin diseases and Antigua is well-known for its dentistry (Connell, 2006).

This section briefly highlights some of the most prominent experiences of medical tourism in Asia, the Middle East and Africa, as well as those in Latin America and the Caribbean[2].

A. Asia

Asia has become the dominant player in medical tourism in the last few years. The region's highly competitive medical tourism industry is attributed to its low prices (mainly due to low labor costs), state-of-the-art hospitals, a broad range of highly specialized treatments and procedures, limited medical malpractice costs and attractive locations (Vequist et al., 2009). In addition, Asia has an elevated number of internationally recognized institutions. Indeed, as of January 2010, there are 66 JCI-accredited hospitals in Asia, of which India and Singapore lead the region with 14 and 15 accredited institutions, respectively.

Healthcare in Asia has an important geographical component, with many of the main health care exporters receiving a substantial amount of patients from nearby countries. But in contrast to other regions, the main destination countries for medical tourism in Asia, above all India and to a lesser extent Thailand are able to attract a large amount of patients from developed countries, mostly from the United States and the United Kingdom.

Countries such as India and Thailand not only provide a large number of medical professionals to industrial countries, but also have hospitals that are comparable to some of the best

[2] The countries presented in this survey are those that were most frequently identified in the literature and Internet search.

medical facilities in the developed world. The Apollo Hospitals, located in India, is the largest private health care provider in Asia[3]. The Bumrungrad hospital in Bangkok was the first hospital in Asia to receive international accreditation from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), paving the way for others to receive accreditation (Wolfe, 2006)[4]. Apollo in India and Bumrungrad in Thailand "have become the grand dames of LDC medical tourism," according to Bookman and Bookman (2007).

Other countries in the region are also entering the international market for health services. Malaysia is the second largest exporter in the ASEAN region, after Thailand and has also consciously encouraged its medical tourism industry. In the past few years the country has gained recognition mainly for its cosmetic surgery and alternative medicine. It is estimated that around 130 000 medical tourists visited Malaysia in 2004, generating export revenues of around US$ 27.6 million the same year (Bookman and Bookman, 2007). The Philippines counts with well-qualified and often English-speaking medical professionals and the country is promoting medical tourism through the inclusion of this industry in its 2004 Investment Priorities Plan. China's health exports, although comparatively small, have focused in the niche industry of traditional Chinese medicine (Chanda, 2001). Finally, Vietnam engages to a very small degree in the export of health services primarily to Cambodian patients (Arunanondchai and Fink, 2007).

1. India

Often referred to as one of the most popular destinations for medical tourists, India not only has some of the highest quality medical tourism destinations, but also has one of the lowest costs for treatments around the world (Herrick, 2007). Health care costs are, on average, 20 percent of those in the U.S. (Deloitte, 2008a). A large number of JCI-accredited Indian hospitals and a large pool of highly qualified and often foreign-trained physicians provide substantial proof of its advancement in this field. Despite the many comparative advantages that India enjoys, there are still several barriers to the export of health services including the lack of portability of health insurance coverage and the lack of recognition of Indian medical qualifications (Chanda, 2001).

India advertises itself as offering every type of treatment from Ayurvedic therapy to coronary bypasses and cosmetic surgery (Connell, 2006). The most common procedures sought by medical tourists in India are surgeries and highly specialized services in neurology, cardiology, endocrinology, nephrology and urology (Chanda, 2001). According to Yanos (2008b), the country is well known especially for cardiac and orthopedic procedures and has been a favorite destination for procedures unavailable until recently even in developed countries, such as the Birmingham hip resurfacing. Moreover, the provision of traditional and alternate medicine such as Ayurvedic and homeopathic treatments is an important niche area for India's medical tourism industry which could be exploited even further in the future through active marketing (Chanda, 2001).

Data on the inflow of foreign patients to India varies widely. Some estimates claim that in 2005 India received approximately 500 000 medical tourists, a number that had risen from 150 000 in 2002 (Herrick, 2007; Zanos, 2008), whereas Horowitz, Rosensweig and Jones (2007) refer to data from The Economic Times in India which claims that 1.2 million patients traveled to India for healthcare in 2004. The Confederation of Indian Industry estimates that annual revenues from medical tourism will reach US$ 2 billion by 2012 (Horowitz and Rosensweig, 2007).

[3] This super-specialty hospital group has over 8 000 beds in more than 41 hospitals and was the first hospital in India to receive JCI accreditation (Deloitte, 2008).

[4] This 554-bed hospital treats over 300 000 international patients annually from 154 different countries, employs over 600 physicians and dentists, most with international training and certification (Mattoo and Rathindran, 2006).

2. Thailand

Thailand is the largest exporter of health services in the ASEAN region and has become a medical tourism hub in Asia due to its strategic location. The country has earned international recognition in the treatment of infectious diseases, bone related ailments and cosmetic and reconstructive surgery (Garraway, 2007). It is estimated that Thailand received 630 000 foreign patients in 2002 and that this number increased to 1 million in 2004, with export revenues of US$ 500 million that year (Arunanondchai and Fink, 2007; Horowitz, Rosensweig and Jones, 2007; Lautier, 2008).

Thailand has 9 JCI-accredited institutions and a government agency that has been explicitly promoting service quality through an accreditation system. In terms of price competitiveness, Herrick (2007) points out that while prices are generally not as low as in India, Thailand counts with a large tourism industry which is believed to result in even better infrastructure, a factor that matters significantly when attracting medical tourists. Notwithstanding, health care costs in Thailand are much cheaper than those in industrialized countries, averaging 30 percent of those in the U.S. (Deloitte, 2008a). International Medical Center at Bangkok Hospital features translators in 26 languages and offers a menu catered to special diets, including western, Japanese and Muslim food.

3. Singapore

There are 15 JCI-accredited institutions in Singapore, the largest number in Asia. Herrick (2007) estimates that in 2005 approximately 250 000 foreign patients received health care in Singapore, a number that increased to 410 000 in 2006 (Deloitte, 2008a). The majority of these foreign patients come from other ASEAN countries, mainly from Indonesia, according to Arunanondchai and Fink (2007).

The country offers high quality hospitals, with a well-developed infrastructure of the health service industry. The Singapore-based Parkway Healthcare Group is one of the largest health care organizations in Asia. Another important medical group in Singapore is the Raffles Medical Group which has a network of 28 hospitals and miniclinics in the country (Díaz Benavides, 2002). Furthermore, the fact that English is widely spoken in Singapore is another advantage in attracting foreign patients. One of the disadvantages, however, is the high prices for treatments. Bookman and Bookman (2007) claim that Singapore has "priced itself out of the market" given that some of the prices for medical care are as high as those in the West.

B. Middle East and Africa

In the Middle East and Africa, medical tourism is primarily regional. There are a total of 79 JCI-accredited organizations in these two regions, of which the majority are located in the Kingdom of Saudi Arabia (30) and the United Arab Emirates (31). Jordan is considered the medical hub for patients from some countries in the Middle East, while Israel caters to Jewish patients as well as others from nearby countries and has specialized in female infertility, in-vitro fertilization and high-risk pregnancies (Connell, 2006).

1. Tunisia

Tunisia's trade in health services is mainly regional with the majority of foreign patients coming from Libya and to a lesser extent from Europe, Algeria and some Francophone African countries. Lautier (2008) notes that in most cases the Libyan state bears the costs of treatments obtained in Tunisia, providing an additional incentive for Libyan patients to travel to Tunisia to receive such treatments. According to Lautier (2008) there are also agreements between several clinics in Tunis with Mauritanian organizations to supply medical treatments to their employees and similar projects exist with other Sahelian countries.

Medical tourism in Tunisia grew from receiving an estimated 12 000 foreigners in 1998 (Chanda, 2001) to an estimated 42 000 in 2003 (Lautier, 2008) and 44 760 in 2004 (Tunisian Ministry of Health, quoted in Lautier, 2008). Lautier estimates the foreign exchange surplus contribution of medical tourism to be as high as US$ 46.5 million and when adding local expenditures (hotel, food and transport) of foreign patients and their companions this amount increases to US$ 107 million, which represents 0.43% of GDP and 0.9% of the country's total exports. In addition, the export of health services results in an estimated 10 500 jobs of which 5 000 come from the health sector and about 5 500 from the tourism sector (Lautier, 2008).

Although Lautier (2008) claims that there has been no explicit policy in Tunisia to promote medical tourism and that the export of health services has rather been demand-led, he mentions that the private sector has benefited from government incentives implemented in 1992 such as the exemption of import taxes for medical equipment. However, Chanda (2001) argues that although inherent factors such as geographic, linguistic, cultural and historical affinities have been decisive in inserting Tunisia in the global health services market, there has actually been a national conscious strategy to promote trade in health services.

2. Jordan

Considered the medical center of the Arab world, Jordan is the main medical tourism destination in the Middle East due to its relatively low cost (Connell, 2006). Since the beginnings of the 1990s, Jordan's strategy of becoming the medical center of the Arab world has consisted in massive investment programs to upgrade and modernize public hospitals and medical schools (Díaz Benavides, 2002). These investments have been additionally facilitated by the creation of incentives for national and foreign private investment in the health sector and the country's openness to foreign collaboration in health services (Chanda, 2001). Today Jordan has private hospitals that provide state-of-the-art specialized technology mainly to other countries in the region. According to Lautier (2008), data indicates that patients from neighboring countries searching treatment in Jordan have an 87% share in the country's health service exports.

3. United Arab Emirates

In Dubai, the second largest city in the United Arab Emirates, the Dubai Healthcare City (DHCC) was built with the intention of diverting and capturing the Middle Eastern market from Asia (Connell, 2006). The DHCC, "the world's first healthcare free zone," is a highly regulated institution that aims to provide high-quality health care, medical education and research in the region.

The DHCC is strategically located between Asia and Europe and offers benefits that include: no income taxes, no corporate taxes, nor customs duties; no restrictions on capital, trade barriers or quotas; quality health care services with state-of-the-art facilities; hassle-free government services such as visas and permits; and international licensing and quality standards as well as a full range of medical and complementary "wellness" medical services (Bookman and Bookman, 2007). In addition, the DHCC partnered with the Harvard Medicine School in launching the University Hospital which will open its doors to the public in 2011. The University Hospital will have state-of-the-art healthcare information and technology systems designed to meet the healthcare challenges facing the region.

A. Latin America and the Caribbean

Latin American and Caribbean health care exporters are indeed competing with Asia in attracting patients from industrialized countries. Although prices in most Latin American countries appear to be on average higher than in Asia, its geographic proximity to the United States gives the region an important comparative advantage in attracting patients from North America. Besides geographical proximity, the region has many strengths including English-speaking medical personnel, low medical

malpractice costs, scenic locations, a comfortable climate and a friendly and family-oriented culture that many Europeans and North Americans find familiar (Vequist et al., 2009).

Nevertheless, Vequist et al. (2009) also recognize that many medical tourists are either ill-informed or fearful of traveling to Latin America and the Caribbean because of violence and poverty. Other weaknesses that may hinder the growth of the industry are the relatively small number of JCI-accredited hospitals (a total of 36 institutions in only 7 countries) and the lack of marketing efforts (Chan and Brady, 2009). Even so, many Latin American and Caribbean countries have a growing interest in medical tourism and have started to see the industry as an opportunity to generate foreign exchange revenues. Selected experiences in the region are included below[5].

1. Brazil

Brazil has a total of 20 JCI-accredited organizations, the largest number in the region. The Albert Einstein Jewish Hospital in São Paulo was first accredited in 1999 becoming the first JCI-accredited facility outside the United States.

Many authors claim, however, that the presence of foreign patients in Brazil is only sporadic (Bookman and Bookman, 2007; Zarrilli, 2002). Although Brazil has a developed infrastructure and high-quality medicine, prices are often high, making it unattractive to medical tourists. According to Bookman and Bookman (2007) some hospitals in São Paulo charge fees that are even higher than those in the U.S.

One exception is the provision of plastic and cosmetic surgery, for which Brazil is the second largest market in the world (Yanos, 2008b). The famous Brazilian plastic surgeon Ivo Pitanguy attracts a substantial number of foreign patients to his clinic in Rio de Janeiro, with 40 percent of his patients being foreigners (Zarrilli, 2002; Yanos, 2008b). Although not accredited by the JCI, the renowned 14-bed Ivo Pitanguy Clinic includes a Cosmetology Department where general skin treatments and state-of-the-art procedures are performed (Deloitte, 2008a).

Further, Herrick (2007) points out that nine Brazilian organizations have established the Brazil Health Consortium to market the country as a medical tourism destination.

2. Chile

Chile has exported its health services to foreigners since the 1950s. Chilean market is strongly regional and is mainly composed of upper-income and upper middle-income patients from Bolivia, Peru and Ecuador as well as foreigners temporarily residing in Chile (León, 2002). The reason for patients from neighboring countries to travel to Chile is above all the quality of its health care system. For Bolivian patients there are different institutional arrangements that provide further incentives for obtaining health care in Chile. There are, for instance, agreements between Bolivian health care provider centers and Chilean clinics. In addition, two insurers in Bolivia have included reimbursement for care in Chile under their health plans (León, 2002).

Chanda (2001) finds evidence of Chile's interest in expanding the medical tourism industry. According to her, Chile is diversifying its health service exports by exploiting its natural endowments through the promotion of services relating to thermal baths, spas and rehabilitation. Additionally, health care is sought to be integrated within the tourism industry. These initiatives mainly target tourists from developed countries, but also in the Bolivian market, Chile's health service providers have increased their promotional activities (WHO, 2002).

According to León (2002) there are two alternatives for expanding Chile's export market. One would consist of expanding into neighboring markets (as it did with the Bolivian market), by

[5] Country experiences that were most frequenly identified in the literature and Internet search. Reference herein of any country, does not constitute or imply its endorsement, recommendation or favoring by the paper's authors.

improving transportation facilities and the health insurance programs. The other alternative would be converting MERCOSUR into the reference market by encouraging exchanges and integration of public and private health insurance programs at a sub-regional level and by specializing in health care for the elderly. There are already some initiatives in place. For instance, health cooperatives in the MERCOSUR countries have set-up the "Tarjeta MERCOSUR" which allows patients enrolled in the health cooperatives of one country to receive health care in another country through the services of the associated cooperative (Díaz Benavides, 2002).

3. Colombia

Colombia provides a diversified supply of private health services in areas such as ophthalmology, cardiology and numerous types of transplants, bone grafts, orthopedics, traumatology, plastic surgery, nuclear medicine and general checkups. The provision of these services is concentrated mainly in major cities such as Bogota, Cali, Medellin and Barranquilla. In 2009, the Fundación Cardiovascular de Colombia, located in Santander, became the first hospital in the country to achieve JCI accreditation.

The comparative advantage in quality is reinforced through modern hospital administration and quality assurance systems. Due to its low costs combined with high quality treatments, Colombia is able to attract a wide array of medical tourists. Patients come mainly from Panama, Costa Rica, Aruba, Curaçao, the Dominican Republic, Venezuela and Ecuador. Especially in border areas, patients from Venezuela, Peru and Brazil choose Colombia for medical treatments.

The Clínica del Country S.A., is working in association with Empresas Banmedica, the largest Chilean-based private health care organization in South America, in developing a project that aims to build a health complex offering the latest of technology and low-cost/high quality treatments (Chan and Brady, 2009). The Clínica Portoazul is expected to open in 2010 and will be located in the outskirts of Barranquilla, in the northern coast of Colombia. The clinic will have units in cardiology, gastroenterology, respiratory and physical therapy, ophthalmology and diagnostic imaging services. In addition, the complex will include a shopping center, offices, a hotel and restaurants among other services.

4. Costa Rica

Costa Rica is another popular destination, especially for medical tourists in search of dental treatments such as prostheses, implants, jaw surgery and general dentistry. Nevertheless, the most demanded service is plastic surgery. Other services that are exported are general checkups, cardiovascular diagnostics and different types of cardiovascular surgeries, kidney transplants, removal of kidney stones with ultrasound, orthopedics, geriatric services, treatment of addictive disorders and in conjunction with tourism, hydrotherapy.

Patients arrive generally from the United States, other Central American countries and the Caribbean. Costa Rica further receives medical tourism from Colombia, Venezuela, Spain and Canada. According to Herrick (2007) 150 000 medical tourists visited Costa Rica in 2006. Its low costs for treatments and, more importantly, the access to adequate and advanced technology appear to be the most significant incentives for medical tourists to travel to this country.

Hospital CIMA in Costa Rica, operated by the International Hospital Corporation, is affiliated with the Baylor University Medical Center of Dallas, Texas. It received JCI accreditation in 2008 and is the only hospital in Central America that is accredited by the Department of Veterans Affairs (Deloitte, 2008a).

5. Cuba

Since the end of the 1980s, one of the main objectives of the Cuban government has been to transform the country into a "world medical power" (Díaz Benavides, 2002). Cuba was among the first countries in Latin America and the Caribbean to begin offering its health services abroad launching an explicit state-led export strategy that has been successful in different levels (WHO, 2002). Given Cuba's long

history of medical innovation and excellence in quality of health services, medical tourism is no longer really considered a "new" phenomenon.

Patients from Europe, Russia and other Latin American and Caribbean countries travel to Cuba to obtain medical treatment. However, the majority of patients come from Latin America, especially Argentina, Ecuador and the Dominican Republic (Connell, 2006). The country's comparative advantage in the provision of health services lies in the combination of low prices, which is made possible primarily through low labor costs, the high quality and standards of its doctors and the provision of unique health services.

Treatments provided by Cuban institutions range from cardiovascular and ophthalmological surgery, to innovative treatments such as neurotransplants and neurology services. The country has made some significant advances, especially in the treatment of meningitis and hepatitis B. The lengthy lists of procedures that are offered to foreign patients even include treatments that are considered incurable in the rest of the world, such as treatment for pigmentary retinopathy and vitiligo. With the outstanding expertise in niche areas, Cuba now is able to offer diverse and sometimes unique services in the international marketplace, providing evidence of its comparative advantage in the medical tourism field.

The national strategy to promote trade in health services has been adopted and provided by the public sector. Servimed, a special unit of the health ministry is specifically responsible for providing and marketing health services to tourists. Although there are some institutions that specialize in providing health care to foreigners, the health infrastructure is mainly shared by national and foreign patients. In addition, Cuba also continues to provide free care or reduced rates to foreign patients from countries where the treatment needed is unavailable (Díaz Benavides, 2002). Finally, although no Cuban hospital is JCI-accredited, its doctors and health services are renowned internationally for their excellence and affordability.

6. Dominican Republic

Tourism for medical purposes in the Dominican Republic is relatively recent but appears to be developing rather quickly. A significant number of medical tourists are nationals of the Dominican Republic living in the U.S. and other countries in Europe. The country offers medical tourists scenic locations in addition to one of the first completely digitalized hospitals in the region.

The Metropolitan Hospital of Santiago (HOMS) is currently in the process of obtaining international accreditation. The HOMS has agreements with the Pontificia Universidad Católica Madre y Mastra and with Monterrey's Technological Institute. The agreement with the latter is a bilateral academic and technological transfer cooperation. Through this partnership, bone marrow transplants, lymphomas and other types of cancer treatments have been successfully performed at HOMS.

According to Francisco Javier García, Secretary of Tourism of the Dominican Republic, several other projects have been approved. In Canoa, located in the southwest of the country, a US$ 563 million thermal complex is being developed. The five-star thermal-waters spa/hotel and wellness resort will include 1 000 rooms, 20 tennis courts, a 27-hole golf course, thermal pools, waterfalls, pressurized water streams, a convention center and a school. Likewise, Regeno Clinik and Regeno Soul is a US$ 10 million investment project that will offer services such as stem cells procedures, ozone therapy, non-invasive esthetic medicine, mesotherapy, abdominal liposuction, carbon dioxide therapy, breast implants, blood purification and acupuncture.

Encouraged by the Dominican government, the Dominican University of Organization & Methods recently became a partner of Harvard Medical International with the objective of increasing foreign patient's confidence on the quality of its medical services.

7. Mexico

Mexico has a special comparative advantage in attracting medical tourists from the United States due to its geographic proximity. Additionally, the large number of Mexicans residing in the U.S. represents an important niche market for the promotion of health service exports. This type of trade is significant, especially in areas near the U.S.-Mexican border. Wolfe (2006) points out that certain towns such as Nuevo Progreso and Los Algodones in northern Mexico have become "dental oases" that attract U.S. patients in search of more affordable health care. U.S. and Canadian citizens are attracted to Mexico due to the lower cost of drugs, dental care and physician services, generally 40 percent lower than in the U.S. (Herrick, 2007).

Mexico exports mainly health services in dentistry, ophthalmology, cardiology, cosmetic surgery and transplants. Researchers also see an enormous potential in the export of services in hydrotherapy, an area in which Mexico holds a comparative advantage due to its natural resources.

Although obstacles to trade in health services remain, it appears that these barriers are being tackled recently. Herrick (2007) refers to some health plans in Southern California that offer lower premiums and copayments to patients who are willing to use network providers in Mexico. In addition, the Mexican Tourism Secretariat supports the medical tourism industry through a wide range of establishments in the Mexican territory.

Medical tourism in Mexico is highly concentrated in Monterrey. The city ranks second in the country in overall quality of life due to its excellent healthcare, urban infrastructure and tremendous educational institutions. It is also easily accessible receiving over 190 weekly non-stop flights from 10 major U.S. cities. According to Roberto Rumbaut, Director of the Center of Surgeries for Obesity in Monterrey, the "medical tourist" wave started in 1996 when obesity operations were prohibited in the United States. Rumbaut operates on about 40 to 60 patients a month and even though obesity operations are approved by the United States nowadays, patients continue to travel to Mexico for this type of procedure. The Rumbaut Hospital in Monterrey is the second in Latin America to use a robot in this type of medical treatment. In April 2008, Monterrey's Technological Institute announced its plan to build a US$ 100 million medical center in addition to owning the San Jose Hospital, demonstrating the city's continuous commitment to innovation and provision of medical services of high quality. Monterrey is also home to the first two JCI-accredited institutions in Mexico.

8. Panama

According to Herrick (2007), Panama's low cost for treatments, which are 40 to 70 percent less expensive than in the United States, make the country an attractive destination for medical tourists. Among some of the advantages used for marketing the country are: availability of direct flights from at least 10 major U.S cities, the usage of U.S. currency, the safe and politically stable democracy that the country enjoys and the lack of visa requirements for short term visit for most tourists (a $5 tourist card can be purchased from airline or upon arrival).

Rudy Rupak, president of Planet Hospital, a medical tourism agency researching qualified doctors and hospitals in countries around the world, says that Panama is "a strategic place, with a good location, just a five or six hour flight from the U.S. But the main factors are quality of doctors and the presence of a U.S. hospital" (New World Realty, 2007).

Hospital Punta Pacifica, located in Panama City, has built an excellent reputation by ensuring the quality of services rendered to its patients and through its affiliation with the prestigious U.S. hospital, Johns Hopkins International. Punta Pacifica also offers high-end hotel accommodations adjacent to the hospital, where patients can recover and are offered other amenities including trip planning, tourist attraction packages and translation services (Chan and Brady, 2009). Oppenheimer (2007) points out that 25 percent of Punta Pacifica's patients are foreigners, mostly Americans and Canadians.

Clínica Hospital San Fernando founded in 1949, is another renowned medical institution in Panama. It is affiliated to three important hospitals in the United States: the Tulane University Health Sciences Center Hospital and Clinic, the Baptist Health International Center of Miami and the Miami Children's Hospital.

9. The Caribbean

In general, the provision of health services in this region is concentrated mainly in few specialized facilities and mostly in the areas of spa, wellness and rehabilitation. Given the established tourism infrastructure, health and wellness services including spas, stress reduction and fitness services are the ideal services to promote in the Caribbean (Brenzel, 2004).

On the one hand, several characteristics of the English-speaking Caribbean make it an appealing destination for medical tourists, including its proximity to the U.S. and European markets, a climate conducive to recuperation and excellent hotel and tourism services (Brenzel, 2004). On the other hand, Gonzales, Brenzel and Sancho (2001) point out weaknesses in infrastructure, management capacity and shortages in health professionals. In addition, the fact that the Caribbean tourism industry is not necessarily low cost make the overall cost of the medical services product not as price competitive as in other regions.

In **Antigua and Barbuda**, the Crossroads Center is now an International Center of Excellence for the treatment of alcohol, drugs and other addictive disorders. The center has an internationally-trained staff and its 29-day inpatient rehabilitation program is closely modeled in U.S. treatment programs. The cost is about one third lower compared to facilities such as the Betty Ford and Hazelden clinics in the U.S. Patients treated in this facility come mainly from Europe, North America and South America (Gonzales, Brenzel and Sancho, 2001; Mattoo and Rathindran, 2006).

In the **Bahamas** there are a range of medical tourism activities primarily in the area of spa services (Gonzales, Brenzel and Sancho, 2001). Services such as dialysis and herbal treatments are also provided to tourists. Health care to foreign patients is provided and promoted exclusively by private facilities as noted by Gonzales, Brenzel and Sancho (2001).

Barbados has a well-developed health sector. In addition to cosmetic surgery to foreign patients, the country provides curative, preventive, convalescent and elderly care (Gonzales, Brenzel and Sancho, 2001). The provision of these services is limited to few private institutions. The Barbados Fertility Centre is one of the only two JCI-accredited hospitals in the Caribbean; the other one is located in Bermuda. An important target group for Barbados' health services are cruise line passengers. The Bayview Hospital, for example, holds contract arrangements with cruise line operators to provide care for their passengers (Gonzales, Brenzel and Sancho, 2001).

Since the late 1980s, **Jamaica** has experienced private sector development in health tourism, but this development has remained mainly fragmented with only modest progress, most of which has been taking place in the wellness services (Gonzales, Brenzel and Sancho, 2001).

Medical tourism in the form of wellness services is also provided in **St. Lucia** mainly through the renowned Le Sport, a premier spa resort. Alternative and complementary medicine is also offered and the country has promoted the production of medicinal foods and herbs (Brenzel, 2004).

Finally, in **Trinidad and Tobago** foreign patients receive treatments in private facilities in the areas of ophthalmology, cosmetic surgery and orthopedics (Gonzales, Brenzel and Sancho 2001). The West Shore Clinic in Trinidad is a private provider equipped with state-of-the-art facilities and is recognized for its procedures in laparoscopic surgery (Brenzel, 2004). The country has taken the lead in national accreditation and licensing which aims to reduce the gaps in quality of care provided by health care facilities (Brenzel, 2004).

III. Promotion of medical tourism and domestic health care

Experiences show that the medical tourism industry has grown in different ways and with different combinations of public and private sector involvement. Because of the many opportunities for economic growth through the promotion of medical tourism, many countries around the world are consciously marketing their health care to foreign patients. Marconini (1998) notes that "it has become increasingly accepted that national care systems should be regarded as export-oriented industries whenever national health conditions permit governments to do so." In the same vein, Bookman and Bookman (2007) find that the public sector encourages medical tourism in all of the ten destination countries under their study (Argentina, Chile, Costa Rica, Cuba, India, Jordan, Malaysia, Philippines, South Africa and Thailand).

Many countries have adopted extensive measures in order to boost their medical tourism industry. For example, the government in Philippines has supported all activities related to medical tourism by creating the *Medical Tourism Program* under the Philippine Medium Term Development Plan, with the hope of driving the country's economy (Caballero-Danell and Mugomba, 2007). And in Malaysia the government created the National Committee for the Promotion of Health Tourism (Bookman and Bookman, 2007).

Other countries have also adopted conscious strategies to promote trade of health services. In Cuba, the government has provided for easy-payment options including payment with credit cards or any convertible currency in order to facilitate the consumption of health services by foreign patients (Chanda, 2001). Chanda adds that the Cuban government's strategy of promoting exports of health generates resources for investment in health care infrastructure and provides an alternate source of financing for the public health system. In Jordan, a national policy for medical tourism for the middle-eastern area was adopted with the purpose of generating revenues for the health sector (Brenzel, 2004).

According to Bookman and Bookman (2007), once a country has decided to promote medical tourism, the challenge becomes deciding the type of incentives it will provide. According to the authors, governments can provide incentives such as reducing tariffs on importation of hospital equipment (e.g. Philippines in its 2004 Investment Priorities Plan), lowering import duties on equipment required for medical tourism (e.g. India) and giving incentives directly to hospitals (e.g. in Malaysia the government provides incentives to private medical hospitals that are involved in health tourism by marketing some of those establishments abroad).

Besides incentives to promote medical tourism services, governments can facilitate the development of appropriate physical infrastructure by investing in the improvement of roads, transportation, electrification and communication systems (Bookman and Bookman, 2007). Caballero-Danell and Mugomba (2007) note that in all of the destinations under their study the government was

involved, to some extent, in the development of infrastructure of the medical tourism industry including hotels, resorts and hospitals. In India, for example, The Ministry of Health and Family Welfare and the Ministry of Tourism have actively developed policies and infrastructure tools in an effort to promote the growth of the industry (Caballero-Danell and Mugomba, 2007).

Finally, governments can foster cooperation *within* the public sector by forming alliances among the different ministries of Health, Tourism and Commerce as well as offices in charge of migration and foreign travel (Bookman and Bookman, 2007). Cuba is the country with the most extensive history of cooperation within the public sector. The success of the Cuban medical tourism model is due to the strategy of coordination and collaboration of the Ministry of Health with other institutions in tourism, commerce and industry (WHO, 2002).

Authors such as Bookman and Bookman (2007) and Zarrilli (2002) point out that while the public sector's ultimate goal is to provide equitable and appropriate health care to all citizens, the private sector's primary objective is to maximize profits by attracting foreign patients. Given this duality, Bookman and Bookman (2007) suggest that a successful medical tourism industry can only be achieved with the cooperation of both. The authors point out that although formal partnerships have not been implemented in the medical tourism industry, many of the medical tourism destinations do have informal and voluntary cooperation of some form between the public and private sectors.

Government incentives or subsidies to attract private sector investment are key to the sustainable growth of the medical tourism industry. Authors such as Gonzales, Brenzel and Sancho (2001) and Brenzel (2004) recognize that both sectors can mutually reinforce the public health care system. In countries where the private sector leads the medical tourism industry, Brenzel (2004) notes that the governments' role would be to provide an enabling legal and regulatory framework as well as to make available necessary finance and technical support to private entrepreneurs.

Gonzales, Brenzel and Sancho (2001) suggest that policies should be implemented in order to ensure that the local population's health care access is not jeopardized. A commonly suggested strategy is cross-subsidization of the public and private health care sectors (Chanda, 2001; Díaz Benavides, 2002). Brenzel (2004) suggests that through cross-subsidization, part of the revenues generated from the provision of health care to foreign visitors can be allocated for improving the quality and access of health care to the domestic population. This can be achieved, for example, by taxing earnings from health service "exports". One of the challenges, however, would be to decide which economic activities related to medical tourism will be taxed and by how much (Bookman and Bookman, 2007).

In addition, many authors suggest that cross-subsidization could also be implemented through the provision of free beds, or at least at subsidized rates, to the local population while foreign patients are required to pay (Bookman and Bookman, 2007). In the same vein, Mattoo and Rathindran (2006) propose requiring private providers to offer a proportion of their services to the poor.

One of the challenges in fostering the industry is the potential of creating an inequitable two-tier system that promotes high quality health services to foreign patients and at the same time struggles to provide access to essential health care to the local population (Brenzel, 2004; Chanda, 2002; Lautier, 2008). This dual market can result in the "crowding out" of the local population if the best doctors, technology, beds and hospitals that are available to foreign patients are not accessible to the locals (Chanda, 2002). In India, for example, there is a general perception that the promotion of super-specialty hospitals for medical tourists has aggravated the already existing dual market structure between the private and the public Indian health care system (Chanda, 2001).

Another risk, especially in countries where health care delivery is already inequitable, is encouraging an "internal brain drain" which is identified as the exodus of skilled medical staff from public to private hospitals lured by higher wages. This internal brain drain will almost certainly hurt the public health care sector, where patients have very limited ability to pay. For instance, Arunanondchai and Fink (2007) find that in Thailand higher salaries offered to medical staff by private hospitals that export their services have diverted medical personnel away from public hospitals

and from private hospitals that serve only the local population, thereby increasing even more shortages of medical professionals in the country. Estimates conclude that an extra 100 000 patients seeking medical treatment in Thailand result in an internal brain drain of between 240 and 700 medical doctors (Arunanondchai and Fink, 2007).

Similarly, Adams and Kinnon (1998) note that there would be a "social cost" if public funds are used for subsidizing health care providers and upgrading health services to attract foreign patients, especially in cases when the capacity of the health system is already limited. Furthermore, Wolfe (2006) points out that through the promotion of technology-intensive tertiary services, medical tourism creates substantial distortions in the allocation of resources at the expense of primary care.

According to Mattoo and Rathindran (2006) national health care capacity (e.g. availability of beds in hospitals), though clearly limited in many exporting countries, is rather likely to expand as a consequence of increased foreign demand which, in turn, leads to greater domestic and foreign investment. In the same vein, Lautier (2008) argues that the private health sector normally does not face this capacity constraints and, therefore, crowding-out effects are less likely to result as a consequence of a private-sector led promotion strategy.

Several authors have proposed a number of suggestions to ensure the materialization of the potential gains from trade in health services. Adams and Kinnon (1998) and Díaz Benavides (2002) for example, call for putting the purpose of furthering public health objectives and the provision of universal health care to the local population as the principal objective of any policy that promotes the export of health services. According to Díaz Benavides (2002) in order to achieve a win-win situation for the exporting country as well as the importing country, the desired objectives of a health service export promotion strategy require a clear definition or rationale and an adequate selection and implementation of means. Chanda (2002) adds that it is extremely important that the existing conditions in the national health sector are acknowledged when defining export promotion policies.

Finally, in order to assess the development impact of trade in health services, Lautier (2008) proposes addressing two questions: Do developing countries have the potential to export health services and what are the value and consequences of this trade for the domestic economy regarding output, foreign earnings and employment? Although the impact of trade in health services will vary from country to country and is dependent on various factors, Chanda (2002) claims that the impact will ultimately depend on the specifics of a country's national health care system, the regulatory environment and government policies.

IV. Overcoming barriers and challenges

Countries engaging in medical tourism face a number of challenges. In a World Health Organization study on trade practices and export of health services, Díaz Benavides (2002) finds that the main barriers for medical tourism are: non-portability of insurance coverage; perceived quality of health professionals and health care facilities; mutual recognition of professional credentials; lack of standards for electronic medical records; and complexities in cross-jurisdictional malpractice liability. Additional barriers identified by other authors include the difficulties in international travel, cultural and linguistic differences and the management of post-operative complications. Although domestic policies can help alleviate or eliminate some of the barriers, most will require regional and international cooperation.

a) Non-portability of health insurance

One of the most important barriers to the export of health services, especially medical tourism, has to do with the non-portability of health insurance. Health insurance plans do not cover treatments abroad in most cases; but even when they do, patients must generally bear the full cost of travel and obtain only a small fraction of any cost savings (Mattoo and Rathindran, 2006).

There are indeed several reasons for this. Mattoo and Rathindran (2007) mention the difficulties and costs that insurers face when monitoring health care consumption as well as the quality of the treatment abroad. The authors add that a low-cost treatment overseas could prove costly to the insurer if the treatment worsens health problems and the insurer has the obligation to cover the costs of subsequent treatment. However, there are also some remedies. For example, insurance companies could institute the requirement for *ex ante* objective verification of the need for treatment, as well as an objective verification *ex post* of the receipt of treatment so as to minimize fraudulent claims (Mattoo and Rathindran, 2006). Similarly, to overcome moral-hazard problems due to lower prices of health care abroad, they suggest that insurance companies could offer two different contracts, a standard contract for those seeking health care domestically and a contract with lower-premium but higher-coinsurance payments for those willing to travel abroad. The lower premium would encourage traveling, while the higher coinsurance fee would prevent overconsumption.

Authors such as Connell (2006) and Mattoo and Rathindhan (2006) suggest that insurance companies should encourage overseas treatments in order to cut their own costs. Mattoo and Rathindram (2006) add that to realize the full gains from trade, insurance plans must cover not only medical but also travel expenses of obtaining treatment abroad.

b) Accreditation

One of the fundamental barriers in medical tourism is the perception of inadequate quality. Marketing strategies and improvements in quality through accreditation from an internationally-recognized institution are key to overcoming this barrier.

Since 1999, the Joint Commission International (the global arm of the organization that accredits most U.S. hospitals), has accredited over 290 hospitals in 39 countries (annex 2). JCI-accredited hospitals have to renew their accreditation every three years and must collect and report data on services provided and quality indicators (Mattoo and Rathindran, 2006). Other organizations that provide information on certain standards regarding the quality of hospitals, health care and medical ethics include the International Society for Quality in Health Care (ISQUA), the National Committee for Quality Assurance (NCQA), the European Society for Quality in Healthcare (ESQH) and the International Standards Organization (ISO). In addition, some countries are adopting their own accrediting standards.

Accreditation is crucial because it strengthens confidence in the quality of health care. This confidence increases if accreditation is accompanied by an affiliation with prestigious hospitals or health care systems in industrial countries (Mattoo and Rathindran, 2006). Some examples of these associations include the Harvard Medicine School which partnered with the Dubai Healthcare City in launching the University Hospital and the Johns Hopkins Hospital which has ties with well-known hospitals in Japan, Singapore, India, UAE, Canada, Lebanon, Turkey, Ireland, Portugal, Chile and Panama (Deloitte, 2008a). Brenzel (2004) notes that once health-care providers are accredited and part of international referral networks, they can be properly rated for risks and consequently, health insurance can also become more portable.

c) Mutual recognition of professional credentials

According to Caballero-Danell and Mugomba (2007), many hospitals involved in medical tourism employ doctors that have been trained in the U.S. or Britain, or that have internationally respected credentials, giving great comfort to medical tourists.

Mattoo and Rathindran (2006) suggest that doctors and nurses in export-oriented health care facilities could pass licensing exams of industrialized countries, such as the U.S. Medical Licensing Exam (USMLE) and the National Council Licensure Examination for Registered Nurses (NCLEX-RN). In addition, other authors suggest that policymakers should consider recognizing licenses and board certifications from other countries (Herrick, 2007).

d) Standards for electronic medical records

Physicians in health-exporting countries generally have to evaluate the health condition of potential medical tourists by using electronic medical records (EMRS) provided by doctors from the home country. These databases can reduce waiting times (doctors in destination countries can start evaluating the patient's health condition even before the patient arrives) and facilitate the exchange of information. However, insufficient patient information and lack of standards in record-keeping makes it difficult for physicians to manage patients' caseloads and provide appropriate treatment.

Dr. David C. Kibbe, senior adviser to the Center of Health Information Technology of the American Academy of Family Physicians, claims that looking into the future, medical records technology must provide for "secure, private and accurate aggregation and transport of all relevant personal health information, using tested international standards and methods, to assure that patients' experience continuity of information flow between their medical home and medical tourism providers and institutions and are assured that nothing important about their medical history gets left behind" (Carabello and Schult, 2007).

Arunanondchai and Fink (2007) add that the transfer of medical knowledge could be developed by promoting training initiatives and harmonization of course curricula, especially for new technologies.

e) Malpractice liability

Another issue often raised by authors is the difficulty of malpractice law and liability, especially in an international setting. If anything were to go wrong during a procedure abroad, the consumer would have to cope with the host country's legal system. In some countries, injured patients may have limited recourse through the court system, or may not even have the right to sue at all (Herrick, 2007). Additionally, many health insurances do not cover medical tourism because they are worried about potential lawsuits associated with bad outcomes and malpractice in a foreign country (Deloitte, 2008a).

International and regional cooperation to harmonize malpractice and liability will be of utmost importance. Caballero-Danell and Mugomba (2007) study on medical tourism shows that inadequate buyer protection laws against malpractice is a weakness that hinders the marketing efforts of international medical care providers. They suggest that as the industry continues to expand there is a critical need for homogenous international regulation.

f) International travel

There are also visa and travel formalities that inhibit medical tourism. Bookman and Bookman (2007) argue that "entry requirements and visa translate into government-imposed barriers to the international trade of medical services." Many authors agree that this barrier could be overcome by international and regional cooperation.

There are examples of countries that have begun to change their visa requirements in order to facilitate travel. India for instance, introduced the medical visa to "enable patients who wish to travel to India for medical reasons, to enter India…and stay for the duration of their treatment" (Caballero-Danell and Mugomba, 2007). The new M-visas are valid for a year and are also issued to the patient's companions (WHO, 2007). Likewise, some hospitals such as Bangkok's Bumrungard have an "in-house visa extension center" so as to facilitate visa extensions for patients (Bookman and Bookman, 2007).

g) Cultural and linguistic differences

Lagace (2007) claims that, "a lot of entrusting medical care to different locations is about a psychological fear of the unknown." Once in a foreign country, a patient may face the risk of miscommunication because of language barriers or lack of familiarity with a foreign culture (Yanos, 2008a). These concerns have already been recognized by providers of health services who are responding with multilingual nurses and physicians[6].

Hospitals have started to offer non-medical services such as logistics arrangements and hospitality services. For example, London Bridge Hospital arranges airport pick-up services; Bumrungard Hospital in Thailand features a Starbucks café and McDonald's facilities; and Asian hospitals also offer link-ups with hotels and bed and breakfasts (Teh and Chu, 2005). Teh and Chu (2005) add that hospital staff in medical tourist destinations is also expected to accommodate to the religious, dietary and cultural needs of the patients. Malaysia, for instance, has developed the *Feel At*

[6] According to Giovanni Piereschi, the Enterprise Information Vice President and Chief Information Officer of Grupo HIMA, the San Pablo Caguas Hospital in Puerto Rico will have a fully bilingual floor with not only doctors and nurses speaking English "but also the staff who clean the rooms and bring the food" (Fajardo, 2009). The principal corporate hospital chains in India employ teams of interpreters while Thailand's Phuket Hospital provides interpreters in 15 languages. The Bumrungard International Hospital in Bangkok employs 70 interpreters, all its staff speak English, and has 200 surgeons certified in the United States (Connell, 2006).

Home Program for tourists coming from West Asia which includes Arabic and Middle Eastern food and music (Bookman and Bookman, 2007).

Medical tourists also have concerns regarding the management of privacy and confidentiality issues in foreign countries. To this, Arunanondchai and Fink (2007) suggest the developing of privacy and confidentiality rules to assure patients that the foreign hospital will treat such information responsibly.

h) Post-operative care

Horowitz, Rosensweig and Jones (2007) claim that one of the issues that remains unresolved is the management of post-operative complications that occur after the patient has returned to his or her home country. Improper follow-up care when patients return to their home country is one of the major worries, not only for the patient but also for the insurance companies which have to cover the costs of the treatments after the patient returns home. Moreover, domestic health care providers are often hesitant to take on complicated open cases from unknown providers, especially foreign ones (Deloitte, 2008a).

V. Conclusion

Medical tourism has grown considerably in recent years. Rising health care costs in industrialized countries, increased availability of high quality health care at significantly lower prices in emerging and developing economies, and improved communications technology, especially the Internet, have contributed to the expansion of the industry and of trade.

Substantial economic gains, including improvement of medical knowledge and technological services as well as greater availability of high quality health care services are associated with the expansion of medical tourism. There is evidence as well that new job opportunities and high salaries provided by the boom of medical tourism have led to a reverse brain drain. On the other hand, the effect on the local supply of health services, and the potential crowding out of the local population are risks that demand careful consideration.

Expansion of medical tourism faces many challenges including providing state-of-the-art health care quality at low costs, availability of health insurance, and of accreditation. Most importantly, it will demand designing well-defined strategies and policies that ensure effective cooperation between the public and private sectors.

Finally, research on medical tourism is still in its infancy. It is important to collect comprehensive, reliable and internationally comparable data as well as to undertake analytical studies on the development of the industry and on its impact on the economy.

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Annexes

Annex 1

Most popular medical procedures

Diagnostic	Invasive	Wellness
Blood screening	Dental work • Cosmetic dentistry • Dental reconstruction	Spas
Heart stress test		Herbal treatments
Bone density testing	Cosmetic surgery • Breast augmentation/reduction • Facelift • Liposuction	Ayurveda
Lipid analysis		Yoga
Electrocardiograms		Acupunture
	Cardiology and Cardiac Surgery • Coronary artery bypass • Cardiac valve replacement/reconstruction	
	Orthopedic • Joint replacements/reconstruction	
	Bariatric surgery • Gastric bypass • Laparoscopic gastric banding • Body contouring	
	Reproductive system • In-vitro fertilization • Hysterectomy • Prostatectomy • Gender reassignment procedures	
	Organ and tissue transplantation • Solid organ transplantation • Bone marrow transplantation • Stem-cell therapy	
	Eye surgery	
	Cancer treatment	

Sources: Compiled from Gonzales, Brenzel and Sancho (2004); Bookman and Bookman (2007); Horowitz, Rosensweig and Jones (2007).

Annex 2

Joint Commission International (JCI) Accredited Organizations

Asia		Europe		Latin America and the Caribbean		Middle East and Africa	
Bangladesh	1	Austria	4	Barbados	1	Egypt	2
China	5	Cyprus	1	Bermuda	1	Ethiopia	1
India	14	Czech Republic	4	Brazil	20	Israel	3
Indonesia	1	Denmark	6	Chile	2	Jordan	5
Japan	1	Germany	5	Colombia	1	Saudi Arabia	30
Republic of Korea	2	Ireland	20	Costa Rica	3	Lebanon	2
Malaysia	6	Italy	17	Mexico	8	Qatar	5
Pakistan	1	Portugal	2			United Arab Emirates	31
Philippines	3	Spain	17				
Singapore	15	Switzerland	1				
Taiwan	7	Turkey	35				
Thailand	9						
Viet Nam	1						
Total	**66**	**Total**	**112**	**Total**	**36**	**Total**	**79**

Source: Joint Commission International.