Medical Tourism

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KEY POINTS

- Medical tourism is the practice of people traveling outside their country of residence for the primary purpose of receiving medical treatment.
- The most common categories of procedures sought are cosmetic surgery, dentistry, cardiac surgery, and orthopedic surgery.
- Medical tourists travel throughout the world for therapies and procedures. Destinations include both developing and developed countries.
- The risks of postoperative complications can compound the risks of international travel.
- Follow-up care when the medical tourist returns home may be complicated by lack of documentation provided on the services received abroad.

INTRODUCTION

Since antiquity, people have traveled in search of healing. There are places throughout the world that are thought of as healing places, with aspects in the natural, built, symbolic, and social environments that people associate with healing.[1] Many historical sites, such as Lourdes in France, continue to attract pilgrims.

In more modern times, there has been a great deal of interest in creating therapeutic spaces. Florence Nightingale introduced early concepts such as facilitating healing through the provision of fresh air, adequate lighting, and good accommodations for staff.[2] In 1984 *Science* magazine published a study by Roger Ulrich showing that patients in hospital rooms that looked out on the natural world healed faster. Architects have worked with medical researchers to design buildings such as hospitals and wellness spas to facilitate healing.[3]

Travelers to places in search of health care are described as medical tourists. Medical tourists include those traveling to:

- Hospitals or clinics for conventional medicine, invasive treatments, state-of-the-art technology, experimental procedures, or medical treatments unobtainable in their country of residence
- Wellness centers and spas that offer complementary medicine and traditional natural preventive medicine
- Destination spas offering body and mind treatment backed with medical knowledge and treatments such as hydrotherapy tubs, steam baths, and therapeutic massage

This chapter will focus on the first group: those individuals traveling internationally for medical treatment in hospitals or clinics.

MEDICAL TOURISM DEFINED

Medical tourism is the term to describe the phenomenon of people traveling outside their home country primarily for the purpose of seeking medical treatment.[4,5] Multiple factors, such as cost or interest in combining vacation activities with medical care, may influence the decision to seek treatment abroad.[6] In a Hastings Center Report, Cohen suggested separating medical tourism into three types:

- Services that are illegal in both the patient's home country and the destination country, such as those associated with organ sales
- Services that are illegal in the patient's home country but legal in the destination country, such as some stem cell therapies
- Services that are legal in both the patient's home country and the destination country, such as joint replacement[7]

Each type of medical tourism presents different ethical, legal, and other issues for prospective medical tourists and clinicians working with them. A list of advantages and disadvantages of medical tourism is summarized in Table 39.1.

Medical travel is expected to increase significantly in the next 5–10 years.[5] However, few reliable epidemiologic data on medical tourism exist. Prevalence estimates for medical tourism among US residents range widely from 60,000–750,000 medical tourists annually.[5,8] Various groups define medical tourism in different ways: Some include travelers going to spas and travelers seeking traditional healing; some exclude specific countries as medical tourism destinations. One report by the Deloitte Center for Health Solutions calculated that by 2012, >9 million Americans would travel abroad for medical care.[9] In 2016, the Centers for Disease Control and Prevention conducted novel, population-based surveillance of medical tourism behaviors, although findings are not yet available. This surveillance data will provide estimates of common destinations, procedures, and adverse outcomes.

The most common categories of procedures that medical tourists pursue include cosmetic surgery, dentistry, cardiac surgery, and orthopedic surgery.[4,10] Other treatments include bariatric and reproductive procedures. Common destinations include Argentina, Brazil, Costa Rica, Cuba, Dominican Republic, India, Malaysia, Mexico, Pakistan, Philippines, Singapore, and Thailand.[4,6,11] The type of procedure and the destination need to be considered when evaluating the risk of medical tourism.

Some insurers and large employers have developed alliances with overseas hospitals, and several major medical schools in the United

Abstract

Medical tourism is defined as travel primarily for the purpose of receiving health care. Medical tourists may travel for a variety of procedures, including novel or experimental treatments. Medical tourists may also travel to developing or developed countries. Medical tourism represents a growing health care market, and this group of travelers presents unique challenges for public health and clinical medicine. In addition to traditional travel health recommendations, medical tourists have unique health needs and should be advised accordingly. Some of these needs include ensuring current medical conditions are stable enough for travel and the need for appropriate follow-up care after procedures.

Keywords

Cross-border health care
Health care globalization
Infectious disease
International travel
Medical tourism
Transplant tourism

TABLE 39.1 Potential Advantages and Disadvantages of Medical Tourism

Potential Advantages

- Lower health care costs
  - Often lower total overall cost for those paying out of pocket
  - Co-pays and deductibles may be covered by some insurance companies
- More luxurious accommodations than local hospitals, including "recovery resorts"
- Ability to access novel treatments or procedures unavailable in country of residence
- Possibility of combining leisure activities with medical care
- Faster access to medical provider

Potential Disadvantages

- Accreditation standards and regulations may not provide sufficient patient protection
- Experimental treatments or procedures may not be effective
- Possible variations in laws regulating insurance coverage
- Limited tort options in event of a bad outcome
- Potential language or cultural barriers
- Risks of long-distance travel, including risks of traveling postsurgery
- Risks of adverse outcomes, especially infection, possibly with drug-resistant organisms
- Use of resources and health care personnel that might otherwise be available for local population of low-income countries

States have developed joint initiatives with overseas providers, such as the Harvard Medical School Center for Global Health Delivery in Dubai, The Johns Hopkins Singapore International Medical Center, and the Duke-National University of Singapore.[11,12] At present it is not known how such joint ventures affect the number of people traveling for health care.

Beyond specific institutional collaborations, the Association of American Medical Colleges has established Global Health Learning Opportunities (GHLO). The mission of the GHLO is "[t]o provide a global network that facilitates educational mobility for health professionals." This is a network of collaborating institutions in countries throughout the world that facilitates medical and public health students interested in pursuing electives outside their home country. Students from 87 different institutions in 34 countries undertake training electives at 57 institutions in 30 countries.[13] They also train in over 30 programs in 10 countries that are a part of the Child Family Health International (CFHI) global health education programs.[14]

GENERAL CONSIDERATIONS RELATED TO MEDICAL TREATMENT ABROAD

Prospective medical tourists should consult a travel medicine provider for advice tailored to their individual health needs and destination, preferably at least 4–6 weeks before travel.[15] In addition to the considerations for healthy travelers, medical tourists should be advised on the risks associated with surgery and travel—either while ill or while recovering from treatment. Travelers should also ensure that any current medical conditions are stable enough to withstand travel and any planned medical procedures. The Aerospace Medical Association has published medical guidelines for airline travel that provide useful information on the risks of travel with certain medical conditions.[16] (See Chapter 4 for more information about fitness to fly.) Unfortunately it is suspected that many individuals traveling for medical tourism would not seek the assistance of a travel health advisor prior to travel. These individuals may be at greater risk for problems on return.

When advising travelers considering a trip overseas for medical care, clinicians should consider the guiding principles developed by the American Medical Association for employers, insurance companies, and other entities that facilitate or offer incentives for care outside the United States.[17] These guidelines discuss ensuring the voluntary nature of the care, the need to use an accredited facility, legal recourse, and transfer of data between facilities.[17] In addition, patients should be advised that they should arrange for follow-up care in their home country **before** they travel.[17]

Health care providers should advise prospective medical tourists to determine whether providers and health care facilities where they are considering receiving care are accredited. Local accreditation standards may differ from those of the United States. Some health care providers and facilities may carry additional accreditations beyond local requirements, such as being board certified in the United States. Health care facilities may be accredited by international entities such as Joint Commission International or Accreditation Canada International.

Many concerns have been raised in relation to medical tourism. Medical tourists may lack access to data on quality of care; they also face challenges regarding continuity of care.[18,19] It is often not possible to obtain information regarding sterility of equipment or safety procedures in other countries. Thus there are concerns regarding transmission of bloodborne infections with any procedure. In addition there may be public health implications. For example, in countries with publicly funded health care systems, the public in the patient's home country may shoulder costs for follow-up care and ongoing treatment after patients return home, potentially creating an excessive financial burden that might not otherwise exist.[20] Implications for the health care system of the country providing care for medical tourists are unknown. Proponents of medical tourism believe it will improve health for local populations by encouraging technologic advancements in the medical field and providing a source of economic growth. Others are concerned that physicians and health care resources will be diverted from local populations to provide for international patients.[21] Finally, numerous concerns have been raised about exploitation of individuals who provide surrogacy services, or those who sell their organs for transplant or eggs for fertility treatments.[22,23]

COSMETIC SURGERY TOURISM RECOMMENDATIONS

The American Society of Plastic Surgeons (ASPS) advises patients who have had cosmetic procedures of the face, eyelids, and/or nose, or who have had laser treatments, to wait 7–10 days before flying.[19] Patients who have had body procedures (such as liposuction) should wait 5–7 days before flying.[22] Patients also are advised to avoid "vacation" activities such as sunbathing, drinking alcohol, swimming, taking long tours, and engaging in strenuous activities or exercise after surgery.[19,25]

The International Society of Aesthetic Plastic Surgery (ISAPS) was organized by the United Nations and represents over 3200 board-certified aesthetic plastic surgeons in 103 countries. ISAPS developed guidelines for plastic surgery travelers covering areas such as surgeon training and certification and facility certification.[26] The guidelines also caution travelers to ensure that key personnel speak the traveler's language fluently as a way to prevent complications. Travelers should be clear on how aftercare and complications will be handled, and whether additional payment will be required for any additional treatment.

DENTAL WORK ABROAD

The Global Dental Safety Organization for Safety and Asepsis Procedures developed the *Traveler's Guide to Safe Dental Care*.[27] Although these guidelines were not developed for medical tourists, they may be useful for travelers to consider when selecting a facility or planning a trip for medical or dental care. A major concern for dental procedures is infectious complications, so travelers planning dental care abroad should inquire about the sterilization and disinfection procedures in the office. Particular caution is required if the traveler is going to an area that has problems with drinking water contamination. In those areas, sterile or boiled water is required for all surgical procedures. The patient should be sure that new needles and gloves are used, and that hands are washed before and after each procedure.

TRANSPLANT TOURISM

One controversial form of medical tourism is sometimes called "transplant tourism": travel for the purpose of getting a transplant of an organ purchased from an unrelated donor.[30] A 2007 report, still the most recent, on the international organ trade found that China, the Philippines, and Pakistan were the largest organ-exporting countries.[28]

In 2004 World Health Assembly Resolution 57.18 encouraged member states of the World Health Organization to "take measures to protect the poorest and vulnerable groups from 'transplant tourism' and the sale of tissues and organs."[29] In 2008 the Transplantation Society and the International Society of Nephrology convened an international summit in Istanbul, Turkey, to address the issue of transplant tourism and organ trafficking.[30] That meeting resulted in the Declaration of Istanbul on Organ Trafficking and Transplant Tourism. From that declaration: "Organ trafficking and transplant tourism violate the principles of equity, justice and respect for human dignity and should be prohibited. Because transplant commercialism targets impoverished and otherwise vulnerable donors, it leads inexorably to inequity and injustice and should also be prohibited." In response to these events, the World Health Organization revised the Guiding Principles on Human Cell, Tissue and Organ Transplantation in May 2010.[31] Several studies have identified potential problems that travelers and health care providers should be aware of when considering transplantation overseas: lack of documentation related to the donor and the procedures, patients receiving less immunosuppressive medication than in current practice in the United States, and the majority of patients not receiving antibiotic prophylaxis.[24,32,33] However, it is not clear whether these issues represent issues faced by all patients who travel for transplants. Data comparing complication rates between transplants performed in a patient's home country with those in lower-income countries are limited.

In 2015 the Pontifical Academy of Sciences Summit on Organ Trafficking and Transplant Tourism stated that organ trafficking and human trafficking for the purpose of organ removal are "true crimes against humanity [that] need to be recognized as such by all religious, political and social leaders, and by national and international legislation."[36]

BARIATRIC TOURISM

In addition to the previously described recommendations, individuals seeking bariatric surgery abroad should be reminded that obesity is considered a chronic disease, even after bariatric surgery.[37] Some bariatric surgeons have suggested that a multidisciplinary care team skilled in the ongoing management of patients after bariatric surgery should be involved in the follow-up plan.[37] In addition to monitoring for surgical complications, the team can assist with complications that arise due to rapid weight loss or from ongoing obesity or nutritional or emotional problems. Patients should be encouraged to liaise with an appropriate center in their home country before undergoing surgery abroad.

REPRODUCTIVE TOURISM

Increasingly patients are traveling to other countries or different regions within their own country to access fertility treatments, perhaps because of lack of local expertise, cost, long waiting times, or illegality of the procedures in their home country.[21] Patients may travel to access donor eggs or surrogates, or have more embryos implanted than are allowed in their home country. In some areas reproductive care may exclude certain patient groups, such as single women or those in same-sex relationships. Finally, some may travel for added privacy. Although there are limited data on outcomes, the majority of studies have shown high patient satisfaction. Language and communication problems were the most common problems reported by patients.[21]

MEDICATIONS

All travelers need to be aware of the global problem of counterfeit medications. The content of these medications varies widely, from insufficient active ingredients to toxic levels of active ingredients, or the presence of toxic additives. Substandard, spurious, falsely labeled, falsified, and counterfeit (SSFFC) medical products affect every region. The most commonly reported SSFFC medical products include antibiotics, a fact that has important implications for medical tourists.[34] Herbal medicines may lack standardization and may not be regulated by local authorities and may carry risks similar to counterfeit medications. The Centers for Disease Control and Prevention (CDC) recommends that travelers carry a sufficient amount of their routine medications and drugs needed for the trip, considering there may be delays. Travelers should also be advised to carry copies of their prescriptions and a list of all medications they take, including the brand name, generic name, dosage, and manufacturer.[13]

ADVERSE EFFECTS AND COMPLICATIONS

Although many medical tourists hope to achieve a quality of care similar to that in their home country at a reduced cost, there are few or no outcome data from international centers.[19] Infection control practices may not be as rigorous as those in the patient's home country, and rates of various bloodborne infections in the local population may be higher. For example, contaminated instruments or blood products could therefore lead to acquisition of HIV, or hepatitis B or C. One study comparing patients who had transplants performed abroad to those who had transplants performed in their home country of Saudi Arabia revealed that those traveling abroad were more likely to have hepatitis C seroconversion.[35]

Postoperative wound infections due to nontuberculous mycobacteria have also been associated with medical tourism. In 1998 nine patients who underwent liposuction or liposculpture procedures in Venezuela were found to have confirmed or probable infection due to rapidly growing mycobacteria.[38] Two outbreaks of *Mycobacterium abscessus*, an organism ubiquitous in the environment, also were identified among US residents who had received cosmetic surgery in the Dominican Republic. The first outbreak was identified in 2003–2004, the second in 2013–2014. Both investigations found patients required extended courses of antimicrobial therapy as part of their treatment, and in some cases, debridement and reversal of the original surgical procedures.[39,40] These reports highlight the difficulty of identifying outbreaks related to surgical procedures when follow-up care is not confined to the treating

institution. Many of these infections developed after patients had returned home, making it more difficult to identify that an outbreak had occurred.

Foreign travel also has been identified as a risk factor for colonization with resistant organisms. A prospective study from Sweden in 2010 demonstrated that international travel is a major risk factor for colonization with extended-spectrum beta-lactamases producing Enterobacteriaceae.[41] Another concerning organism is the New Delhi metallo-β-lactamase-1 (NDM-1), first described in 2009 in a Swedish man who had been hospitalized in India.[42] In 2016 a Nevada resident was diagnosed with pan-resistant NDM-1 *Klebsiella pneumoniae* most likely acquired during hospitalization in India.[43] Organisms that express NDM-1 have now been reported in Canada, the United States, Turkey, Japan, China, Singapore, Australia, and many European countries, including the United Kingdom.[42] Another organism, *Candida auris*, has been identified as a very serious pathogen causing invasive infections transmitted in health care settings. Patients infected with multidrug-resistant strains of *C. auris* have been identified in many countries and also in the United States, with the origin of many of the US isolates having been traced through genome sequencing to acquisition in other countries. *C. auris* transmission has been reported in India, Pakistan, South Africa, and Venezuela. The organism has been isolated from urine or wound cultures and bloodstream infections; patients may remain colonized for prolonged periods. Unfortunately this organism is not easily identified in the laboratory. The US CDC has sent an alert notice to clinicians, laboratorians, and public health regarding the emergence of this new pathogen (www.cdc.gov/fungal/diseases/candidiasis/candida-auris-alert.html).

Patients may also have difficulty obtaining follow-up care upon their return home. Some providers may not wish to see patients after having procedures abroad if they disapprove of medical tourism, or worry about the potential for litigation if the patient has a complicated course following treatment.[6] Therefore patients should arrange for appropriate follow-up care before traveling. Furthermore, clinicians seeing patients returning from an international trip for medical procedures face many challenges. Documentation on the procedures and treatments performed may be incomplete or unavailable. Aftercare for a patient who received a transplant or developed a wound infection, in the absence of adequate information on the immunosuppressive medications given or the antibiotics provided, can lead to the development of further complications.[44]

Finally, options for legal recourse may be limited by local laws and difficulty navigating a foreign legal system. Even when successful, the amount of compensation may be considerably less than that in the patient's home country.[19]

CONCLUSIONS

The international medical tourism market is rapidly expanding with patients traveling around the world for many different kinds of procedures. All medical procedures carry some risk and medical tourism is no exception. Healthcare providers should counsel prospective medical tourists on the risks associated with their destination and any planned procedures, as well as ensure that any current medical conditions are controlled for travel and medical care. Medical tourists should obtain copies of their medical records for any care received abroad, and seek appropriate follow-up care upon return to their country of residence.

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