

# **Understanding the Influence of Healthcare Systems on the spread of Medical Tourism**

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On my honor as a University Student, I have neither given nor received  
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### **Introduction to Medical Tourism**

In 2011, celebrity and NBA Champion Kobe Bryant traveled to Germany for a controversial knee therapy ‘Orthokine’ treatment, which he affirms as a key to his success as he aged in the NBA. The benefits of a medical procedure for a world-renowned athlete begs the question, why does the FDA have strict regulations against the procedure in the United States, and what alternative factors influence the need to travel abroad for medical purposes?

Medical tourism is defined as an individual traveling abroad to receive medical treatment. In the current climate, individuals all across the world are exercising their autonomy in deciding their healthcare options and traveling outside their domestic options (Dalen & Alpert, 2019). One major influential factor for medical tourism is the healthcare system present within the countries involved. The critical characteristics of healthcare can sway both an individual’s desire to travel abroad and the effect that tourism has on each country (Béland & Zarzeczny, 2018). Additionally, specific medical regulations within each country can dictate whether an individual is able to engage in a treatment in their domestic healthcare system or be required to travel abroad. The STS framework used is Actor-Network Theory (ANT) to map the numerous stakeholders and artifacts in the industry of healthcare and network of medical tourism, including the FDA, local, state, and national government, healthcare insurance companies, health service providers, tourism service providers, Chamber of Commerce, pharmaceutical companies, private and public hospitals, investors, and patients. Each of these stakeholders has a minor relationship with one another and interact regularly, directly bolstering the network. The ‘blackbox’ present within ANT will represent the bureaucracy of the healthcare systems, which is analyzed throughout the course of the study.

## **Research Question and Methods**

Research Question: Which major components of a country's domestic healthcare system most contribute to the spread of medical tourism to and from first-world countries?

I am utilizing Documentary Research Methods and am conducting a network analysis. I analyze primary articles regarding the influence of national healthcare policies on medical tourism within a country. Literature on this topic will convey the opinions that national governments have regarding medical tourism, whether they shape their healthcare policy to encourage medical tourism entering their country or oppose individuals coming from abroad and utilizing domestic medical resources. I am specifically interested in analyzing the policy within the United States, a country with a highly debated healthcare system that has the potential for significant change in the coming years. Additionally, I analyze secondary articles from reputable media sources regarding consensus views of tourism within a country. Specific keywords and phrases that are being used to find applicable sources are: financial luxuries in obtaining foreign medical treatment, controversial medical procedure regulations, and success of medical tourism in different healthcare systems. There are many opinions regarding the use of medical tourism, and Documentary Research Methods will provide the tools to analyze both objective information and subjective opinions regarding the prevalence of medical tourism. Through Network Analysis, I understand the role that the different stakeholders have on the network of medical tourism and the growth of tourism in different nations (Widdersheim, 2018).

## **Background on Medical Tourism**

Medical tourism is a growing phenomenon throughout the world. In the past, medical tourism typically defined those who traveled from less-developed countries to major medical centers in highly developed countries for treatment unavailable at home (Dalen & Alpert, 2019).

Today, patients from all around the world are exercising their autonomy in selecting their health care options by obtaining information from outside their usual health care providers and electing to pursue medical alternatives outside their domestic system. The national healthcare system present within a country can have major implications for the prevalence of medical tourism. The important institutional characteristics of healthcare, such as cost of insurance, may impact an individual's desire to travel abroad (Béland & Zarzeczny, 2018). Canada, for example, operating under a universal healthcare system, provides a blanket for individuals requiring emergency procedures. Yet, for non-emergency procedures, citizens in Canada experience long waiting lists, influencing them to travel abroad and pay for a procedure to avoid the wait (Mbadiwe, 2017).

An additional aspect of medical tourism is the regulation of procedures by the national governments. Specifically, the United States drug and device (DAD) approval system differs greatly to that of European countries. The United States follows a centralized approval process dictated by only one agency, the Food and Drug Administration (FDA). The European commission, on the other hand, is an assortment of 28 countries designed to protect inter-state commercial interests while preserving national autonomy. While the FDA has the advantages of centralization and common rules, the European Union regulates medical practices through a network of centralized and decentralized pathways. As the United States utilizes one centralized agency, a frequently held assertion is that slower FDA approval and its inherent risk averse nature deprives Americans of DADs that are common to European medical practices. On the other hand, concerns arise that DADs in European countries are approved too quickly, to the detriment of patient safety (Van Norman, 2016). This distinction contributes to American citizens taking advantage of controversial procedures allowed in European countries, and European citizens traveling to America to undergo low risk and highly safe procedures.

As stated, many factors contribute to an individual's desire to seek foreign medical treatment. One additional motivating factor is that many athletes and celebrities desire medical procedures that are strictly regulated by their domestic healthcare provider. These procedures are typically orthopedic surgeries or operations for athletes and cosmetic surgeries for celebrities. Frequently, lower- and middle-income nations have begun to capitalize on the comparatively wealthier citizens of Western nations who want to obtain discounted medical services. Developing nations build hospitals and attract highly trained physicians to entice foreign patients. Cosmetic surgery centers are a typical example of this phenomenon, as they offer procedures that are elective, paid for out-of-pocket, and nonurgent at a fraction of higher-income nation's prices. These qualities make them highly suitable as a medical tourism option (Franzblau & Chung, 2013).

### **STS Framework**

The effect of medical tourism has significant implications for the integrated relationship between technology and society. Specifically, medical tourism is only possible due to two forms of technology, one being air travel. The immense prevalence of economy flights has provided individuals the opportunity to search for foreign medical treatments which may possess qualities they desire in contrast to that of their domestic healthcare provider. Without the rapid expansion of planes and airlines, individuals wouldn't be able to take advantage of differing healthcare systems around the world. The second form of technology is that of advanced medical procedures. Medical technology throughout the last 50 years has progressed significantly, through development of new vaccines and treatment of near-death traumatic patients to advancements in cosmetic surgery, orthopedic procedures, and medical imaging. The ability of different medical systems around the world to specialize in certain procedures and improve

medical technology to enhance patient care has influenced individuals to take advantage of medical tourism opportunities.

In the political and social sphere, healthcare is an incredibly controversial debate topic, with many countries falling on different ends of the privatized-universal healthcare spectrum. Understanding how a country's inherent healthcare system acts for or against medical migration can shed light on the financial impact from tourism and the potential need for national healthcare reform. Additionally, the prevalence of tourism suggests a significant percentage of the population whose health depends on the medical practices within other countries. Analyzing individual experiences and their reasoning for traveling abroad for medical purposes can help medical practitioners and national health organizations determine the level of success of medical tourism (Ren et al., 2017). This understanding can lead to policy change either supporting or opposing the autonomy of citizens choosing foreign health care options.

I am utilizing Actor-Network Theory to understand the vast network of medical tourism. This framework is a method to map the relationships of people, organizations, objects, and influencers on each other and the broader network. The network defines the relationships each entity has with one another (Cressman, 2009). As a controversial and highly debated framework, ANT has been highly criticized. ANT relies on the agency and relationships between all actors in a network, many of which are nonhuman objects. Critics of ANT maintain that properties of intentionality and agency fundamentally distinguish humans from non-humans. An additional critique of ANT is that it may imply that all actors in a network are of equal importance. ANT fails to account for preexisting structures, such as power or bureaucracy, but rather views these as structures emerging from actors within the network (*Criticism of Actor-Network Theory*, 2010).

Actor-Network Theory has direct application to the topic of medical tourism due to the significant number of stakeholders involved. Within the United States alone, the stakeholders include: the FDA, local, state, and national government, healthcare insurance companies, health service providers, tourism service providers, Chamber of Commerce, pharmaceutical companies, private and public hospitals, investors, and patients (Jabbari et al., 2013). The stakeholders all influence one another and interact regularly, constantly adding to the network. The 'blackbox' within ANT depicts the bureaucracy of the healthcare systems and the influence they possess on medical tourism. I apply this framework to the topic of medical tourism to better understand the minor roles each stakeholder has on one another and how every interaction contributes to individuals participating in medical tourism.

## **Results and Discussion**

The results of this study show that medical tourism is bolstered by the effects that a national healthcare policy has on a country's domestic healthcare system. Within first world countries, these major effects include cost of procedure, timeliness of operations, drug and device regulations, and the standard of care within a country. However, other non-associated factors also play a significant role in the medical tourism industry, namely funding for medical research within a country, ease and affordability of international travel, and improvement in medical technology. From these results, it is evident that medical tourism within the United States has been greatly influenced by the given healthcare system and policy, but it is increasingly difficult to quantify the exact importance each healthcare factor has on the medical tourism industry given the large number of healthcare associated and non-healthcare associated influencers. This study will provide evidence explaining how each healthcare factor affects the

medical tourism industry and show how different factors are more relevant for certain countries and less relevant for others.

### *Cost of Care*

When understanding the industry of medical tourism, it is important to understand what makes a country an ideal tourism destination. One important quality is the cost of care. Many surgical procedures performed in medical tourism destinations costs just a fraction of the price they do in other countries. Throughout the early 2000's, market dominance by government and third parties in Western countries, namely the United States, was so great that there was scarce competition in healthcare over prices and quality. While the Affordable Care Act throughout the past decade was significant in providing individuals with increased access to insurance, healthcare costs still remain high and individuals believe packages are not cost-effective, influencing individuals to look for customer driven healthcare markets (Runnels & Carrera, 2012). Areas in which the state and third-party agencies are absent are rampant with innovation and entrepreneurship such that nurses and doctors are providing their services at competitive and often lower prices. A great source of revenue for developing countries come from their high-quality healthcare facilities catered towards tourists from industrialized countries(Hansen, 2008).

Data from the Organization for Economic Co-operation and Development, an intergovernmental economic organization with 36 member countries, found a heart bypass in the United States to cost roughly \$113,000, while in Singapore it was \$20,000 and in Thailand it was \$13,000 (Lunt, 2011). This staggering difference in the costs of a vital procedure supports the growing popularity for consumer driven healthcare markets in lesser developed countries around the world. Additionally, in the United States, the high cost of procedures is increasingly taxing for the 9% of Americans who remain uninsured. Those who lack insurance coverage but who



face a medical need might go abroad to seek cheaper treatment (Béland & Zarzeczny, 2018). The cost of healthcare acts as a major driving force of medical tourism, and is at least partially influenced by the market dominance by government and third party/private healthcare corporations (Maniam, 2015). Furthermore, with the adoption of the Affordable Care Act in the United States, while more individuals are insured, insurance premiums have gone up. The rise in premiums affects both individuals as well as employers, which benefits the adoption of medical tourism (*Medical Tourism*, n.d.).

### ***Medical Waiting Periods***

There is an inherent difficulty in understanding how a country's healthcare policy can influence healthcare outcomes, as numerous factors are often involved. The wait-time associated with operations, however, is a unique factor in that individuals with private insurance generally experience shorter wait times than publicly insured patients. A study conducted of ten states found that privately insured patients were almost all more likely than publicly insured patients to have wait times of less than one week for a new primary care appointment and were less likely to have a wait time of more than 30 days (Polsky et al., 2017).

The universal healthcare system in Canada illustrates a similar trend. Canadian citizens and residents are entitled to necessary health care services with no user fees. While the Canadian Health Care Act mandates comprehensive coverage for "all insured health services provided by hospitals, medical practitioners or dentists," many services still do not fall under the broad classification and the healthcare system has long waiting lists and residual time delays for non-emergency surgeries, including hip replacements (Schlosser, 2015). The wait times are understandably a source of frustration for many Canadian residents, many of whom elect to travel out of their domestic system and pay for their non-emergency procedures out of pocket

(Béland & Zarzeczny, 2018). Finland's universal healthcare system experiences similar delays in meeting general practitioners. More than four of five individuals across the country wait more than two weeks to see a general practitioner, and longer if there is a need to see a specialist. These delays can influence an individual's desire to seek faster medical treatment abroad (Lowe, 2019). Waiting times are much less likely to drive the demand for medical tourism in the US, where waiting lists are less of an issue.

### ***Drug and Device Regulations***

One driving factor for individuals to seek medical tourism is to utilize more lenient restrictions on drugs, devices, and procedures abroad. In the United States, the major stakeholder responsible for the limitations on Drug and Device Regulations is the Food and Drug Administration (FDA), ensuring that the United States follows a centralized approval process dictated by only the FDA (Health, 2019). The European commission, on the other hand, is an assortment of 28 countries designed to protect inter-state commercial interests while preserving national autonomy. While the FDA has the advantages of centralization and common rules, the European Union regulates medical practices through a network of centralized and decentralized pathways. As the United States utilizes just one centralized agency, a common viewpoint is that slower FDA approval and its inherent risk averse nature restricts Americans of DADs that are common to European medical practices. On the other hand, concerns arise that DADs in European countries are approved too quickly, to the detriment of patient safety (Van Norman, 2016). This distinction contributes to American citizens taking advantage of controversial procedures allowed in European countries, and European citizens traveling to America to undergo low risk and highly safe procedures.

The healthcare policy within a country has a strong influence coverage of drug, procedures, and device regulations as well. This is especially visible in the publicly funded healthcare system in Canada. There are a wide variety of medical treatments and health-related interventions offered in private markets that are not available or not publicly funded in Canada(Snyder et al., 2011). The public regulations regarding safety and efficacy may be more stringent or more specific, preventing Canadian citizens from utilizing those treatments or procedures. The main example of this is with unproven stem cell therapies in Canada, for which there is a very large international market. These therapies are not part of the approved standard of care in Canada or in the publicly funded healthcare system (Berger et al., 2016). Thus, to reduce out of pocket costs for care not covered by the healthcare within Canadian provinces, Canadian residents will pursue medical tourism options abroad.

### ***Medical Tourism's Impact on National Healthcare Systems***

Research suggests that the manner in which healthcare systems react to the spread of medical tourism greatly depends on the institutional characteristics of that system. For that reason, it is particular enlightening to compare the effects on the United States and Canada, two countries with differing healthcare ideologies and policy implications. Inbound medical tourism in the private healthcare market of the United is a clear target for wealthy medical tourists who can afford its high medical costs, which could influence price increases and the diversion of services away from less-fortunate citizens (Hall, 2011). In Canada, the limited scope of private health care in Canada restricts the availability of medical tourism opportunities for wealthy foreigners seeking treatments in the provinces. Outbound tourism from Canada can actually benefit some of the flaws in the universal healthcare system, such as the long waiting periods. With a lower demand in the nation, residents may have quicker turnaround times for

appointments (Snyder et al., 2017). For the United States, affordable outbound tourism can convince residents who do not have access to Medicaid, Medicare, or employer-based coverage that they do not need coverage at all because they can save money by traveling abroad if they need medical treatment. To combat this ideology, many private insurance companies, such as Anthem Blue Cross and Blue Shield and United Group Programs are considering adding medical tourism as a part of the coverage plans (Kirchner, 2013).

Depending on the institutional healthcare characteristics, policy movements to curb medical tourism in a country can include investing resources targeted at reducing domestic wait times, expanding public health insurance, limiting public coverage for follow-up care needs, or educating the public about the potential risks associated with medical tourism (Maniam, 2015). On the other hand, policy efforts to encourage the growth of medical tourism could include regulatory changes to increase resources for private system offerings and targeted marketing campaigns (Crooks et al., 2010). Either option may be enticing, depending on each country's specific situation.

### *Use of Actor-Network Theory*

Actor-Network theory has great application due to the vast number of stakeholders that influence the larger network of medical tourism. An elucidating example arises when considering the effect of drug and device regulations on medical tourism, specifically for an individual traveling from the United States to a European country. The major stakeholders in that situation are the FDA, private insurance companies, domestic healthcare providers, European Union, national regulatory branches for each European country, foreign healthcare providers, and the individual seeking treatment. The important artifacts are the device, drug, or treatment, the FDA regulation, and health patents. These listed stakeholders and artifacts dynamically bolster

the black-box that is the industry of medical tourism. The impact each stakeholder has on an individual's desire for medical tourism differs based on the individual, specifically their medical situation, desired treatment/operation, and their inherent desire for treatment and confidence in their current health provider. For that reason, it is increasingly difficult to quantify the extent that each stakeholder has on the network of medical tourism, but it is helpful to understand which actors play a role.

### ***Limitations and Future Research***

One limitation that was frequently discussed was the inability to quantify the impact that each actor had on the network of medical tourism. Due to the vast number of reasons for factors that contribute to medical tourism, and that every situation is unique and specific to each individual, it is difficult to assess each factor without completely understanding the individual's thought process. Additionally, throughout the study, the comparison of United States and Canada was conducted, as they both represent different sides of the spectrum of healthcare policy. However, there are a number of factors besides the inherent differences in their healthcare policy that could influence differences in medical tourism trends. These factors include location and geography, different levels of medical research funding within a country, differing viewpoints of international travel, and disparate improvements in medical technology between the countries.

In the future, research on this topic should focus on breaking down the industry of medical tourism to more fundamental research areas. One core area is health system interactions, mainly options for follow-up treatments and the roles of domestic healthcare providers. Another area is patient movement trends, including deeper analysis of treatment destinations and the popular desired treatment types. Additionally, what are the healthcare policy levers, specifically are there incentive schemes, information campaigns, or regulatory procedures? Deeper and more

pointed research can draw upon individual historical cases to better understand the mindset of individuals seeking foreign treatment. With a greater understanding of the relevant factors that influence medical tourism, further comprehensive research can begin to quantify the impact each actor has on the core components of medical tourism.

## **Conclusion**

This introductory study addresses and analyzes the major factors that influence an individual's desire for medical tourism and how a country's domestic healthcare system can attract or disenchant individuals from utilizing treatments from their local medical provider. The core determinants are cost of care, medical waiting periods, drug and device regulation, and standard of care. Each of the listed factors is affected by the national healthcare policy, illustrating that research on medical tourism has a large influence on the decisions of government officials and policymakers who would like to reap the financial benefits of medical tourism. Medical tourism has the potential to dictate success of private insurance companies and can alter the proclivity of uninsured residents to utilize public insurance coverages or engage in treatments abroad. Going forward, it is imperative that medical tourism is given increased importance when considering public insurance plans, drug and device regulatory decisions, and the cost of care.

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