Medical tourism today: What is the state of existing knowledge?

Laura Hopkins, Ronald Labonte, Vivien Runnels, and Corinne Packer

Abstract  One manifestation of globalization is medical tourism. As its implications remain largely unknown, we reviewed claimed benefits and risks. Driven by high health-care costs, long waiting periods, or lack of access to new therapies in developed countries, most medical tourists (largely from the United States, Canada, and Western Europe) seek care in Asia and Latin America. Although individual patient risks may be offset by credentialing and sophistication in (some) destination country facilities, lack of benefits to poorer citizens in developing countries offering medical tourism remains a generic equity issue. Data collection, measures, and studies of medical tourism all need to be greatly improved if countries are to assess better both the magnitude and potential health implications of this trade.

Keywords: medical tourism; global health equity; cross-border health care

Introduction

A rapidly emerging manifestation of global commercialization of health care is medical tourism (‘health tourism’, ‘medical travel’). The term refers to cross-border health care motivated by lower cost, avoidance of long wait times, or services not available in one’s own country. Such care is increasingly linked with tourist activities to ease foreign patients into a new cultural environment and to occupy them during the pre- and post-operative periods. Proponents claim that
growth of medical tourism will have positive economic and development impacts on destination countries. Skeptics raise concerns about patient safety, ethics of specific care (notably ‘reproductive’ or ‘transplant tourism’), and growth of private markets in developing countries at the expense of adequately staffed and resourced public systems. What those on both sides of this debate agree is that the market for out-of-country care, notably the flow of patients from the wealthier ‘north’ to the developing ‘south’, is likely to increase.

We undertook a systematic search of the literature to determine how much was known about this ‘burgeoning’ industry, and how it might affect health equity within and between nations participating in this trade (Box 1). We focus on cross-border flows from developed countries (the ‘north’) to developing countries (the ‘south’). The geographic designations oversimplify recent shifts in the global distributions of wealth and power, but capture the general and most frequently encountered direction of medical tourism, and the one that has raised the most concerns about health equity. We begin with a brief review of the medical tourism industry itself, then describe claimed advantages and disadvantages of the industry both to patients, and to source and destination countries. We conclude with some comments about the requirements for future study.

Box 1: Search strategy

To search the literature systematically, we used PubMed, Scopus, CINAHL, and CAB HEALTH databases, as well as internet search engines. Medical tourism has yet to be established as a searchable medical subject heading (MeSH) or otherwise indexed term. As a result, we used an extensive number or terms, alone or in combination: medical tourism, health tourism, medical, health, surgery, surgical, reproductive, fertility, stem cell, dental, dentistry, organ, transplant, tourism, travel, tourist, developing countries, developed countries, cross border care, patient mobility, and internationality.

Results yielded: 803
Sample reviewed and deemed relevant: 212

We assessed this sample according to a gradient of complexity modeled after an approach by Smith:

High (included new empirical data): 46
Medium (referenced empirical data, strong analytical arguments): 136
Low (commentary only): 30

Final sample of articles studied, low complexity literature excluded: 182
The Medical Tourism Industry

Medical travel is not new, but the global nature of the cross-border medical care industry is recent and has developed rapidly. The industry is facilitated by a growing number of internet-based brokerages, linking patients to facilities. Interactive websites allow consumers to schedule services, contact their surgeons or other specialists, book airfare and accommodation, and arrange for tourist excursions. Cost savings available in low- and middle-income countries is the primary focus of these sites. While Asian countries first embraced this new health-care industry (and offered considerable cost advantages) many South American countries aggressively promote surgical, cosmetic, and reproductive services to (largely) English-speaking and presumably American consumers.

Medical tourism brokerages emphasize the quality of care, frequently noting the western licensing and training of medical facilities, and their international accreditation by the Joint Commission on Accreditation for Healthcare Organizations through its affiliate, Joint Commission International (JCI). JCI has accredited more than 123 medical facilities and organizations across Asia, Europe, the Middle East, the Caribbean, and South America. Most of these facilities gained accreditation in late 2005 and 2006, reflecting the growing popularity of medical tourism. A number of international medical facilities found partners in western medical teaching facilities and hospitals with prestigious and familiar names to signal quality to prospective consumers. Harvard Medical International and the Mayo Clinic partnered with the Dubai Healthcare City; Wockhardt Group medical facility, one of the most prominent chains of health-care facilities in India, affiliated with Harvard Medical International. Wockhardt’s main competitor in India, the Apollo group of hospitals, partnered with Johns Hopkins Medicine International.

Advantages for the North

According to the most widely accepted estimate, nearly 350,000 patients from developed nations traveled to a variety of developing countries for health care in 2003. A 2008 report by Deloitte Center
for Health Solutions, based on an online survey sample of 3000 in the United States and ‘internal analyses’ (the methods for which are not described), forecasts the number of medical tourists to rise from 750,000 in 2007 to approximately 5.25 and 6.25 million by 2010, and approximately 10.5 and 23.2 million by 2017.\textsuperscript{7} We use these estimates with caution for lack of an alternative – noting that in other developed countries waiting times may increase the numbers.\textsuperscript{10} As one indicator of increasing cross-border patient flows, even from countries with publicly financed universal health care, the province of Ontario, Canada saw a 450 per cent increase from 2001 to 2008 in the number of patients reimbursed for out-of-country medical treatment.\textsuperscript{11} Even though much of this care likely took place in the United States, the substantial increase signals the potential of new involvement of public health systems with foreign care facilities, including one that Indian hospital representatives recently sought to promote at a medical tourism conference in Toronto, Canada in late 2009.

Lower labor and living costs, the availability of inexpensive pharmaceuticals, and the low cost or absence of malpractice insurance allow many developing countries to offer some procedures at 10 per cent of the cost in the United States, inclusive of travel and accommodation (see Figure 1). Similar price differences exist for

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{Figure1.png}
\caption{Comparative costs of selected medical services (US$).}
\end{figure}

*Sources:* ESCAP,\textsuperscript{12} York,\textsuperscript{13} except angioplasty, hip replacement, and all Malaysia data, taken from Woodman.\textsuperscript{14} Costs are based on surgery and hospital only, excluding travel and additional tourism costs.
other developed nations. A shoulder operation performed privately in the United Kingdom would cost £10,000, compared to only £1,700 in India, with only a little more than 1 week of waiting time from the initial contact. A recent cost analysis of surgical procedures for 15 non-acute health problems estimated annual savings of US$1.4 billion – comparing United States public insurance for the elderly and disabled (Medicare) to developing country facility charges. If coronary artery bypass surgery were included, the cost savings would be more than $2 billion annually. A more inclusive list of procedures for which north-based consumers are known to travel abroad would have produced a substantially higher estimate of savings.

The private health insurance industry, notably in the United States, is being encouraged to exploit the cost advantages of medical tourism. Some economists argue that a combination of importing foreign trained health workers (something at which the United States already excels) and of exporting patients to developing countries is the simplest and most cost-efficient solution to its health-care problems. Medical tourism brokerages operating out of the United States (Planet Hospital and Med Retreat, as examples) negotiate with insurance providers to develop policies for their client/patients, recognizing that the non-portability of insurance coverage poses one of the most significant barriers to the growth of medical tourism. Both self-insured companies and large insurance firms find the low-cost provider networks offered by the medical tourism industry attractive; they also encounter opposition. In 2007, a South Carolina company offered financial inducements to employees for accepting treatment in India, then rescinded the offer after the union condemned the policy, pointing to lax overseas medical malpractice laws. A 2006 attempt by West Virginia to adopt such a policy for its state employees similarly failed. At the same time, a European-owned supermarket chain in the United States successfully initiated a similar policy out of concern with the high costs of US-based health care.

Apart from cost motivations (for patients paying for themselves, or through private health insurers), medical travelers to developing country facilities sometimes pursue technologies and procedures that are not yet available or approved in their home countries.
Until 2006, the United States had not approved hip resurfacing, a less invasive alternative to hip replacement, although it was available in Canada, Europe, and in some (much lower cost) Asian destination countries. In India, the Wockhardt Group of hospitals is the only one in the world to perform conscious off-pump coronary artery bypass, a heart surgery designed for individuals who are not good candidates for surgery using anesthesia. Medical travelers from the developed world also seek medical procedures unavailable domestically owing to legal constraints, including organ transplantation from living donors motivated by poverty (Box 2) or assisted reproduction using legally restricted technologies or paid surrogates. Even though these practices are ethically the most immediately problematic, they may not comprise the largest or most troubling global health equity concern.

Box 2: Transplantation tourism

Several countries specifically advertise transplantation tourism, notably Colombia, India, Pakistan, and the Philippines; China, Bolivia, Brazil, Iraq, Israel, Moldova, Peru, South Africa, and Turkey are also significant exporters of commercially donated organs. Most of the literature regarding transplantation tourism is negative. A small minority of the organ trade involves the transfer of cadaver organs to individuals from the north; the majority of transplantations occur between live, unrelated donors motivated by financial incentives, often extreme poverty, and individuals from affluent countries, with the ability to purchase. Even though donors from the south may technically consent to this transfer, the practice involving vulnerable populations has been deemed implicitly and explicitly coercive. Many organs transplanted in China come from executed prisoners, raising questions of ‘due process’ and ‘informed consent’ in that country. Although transplantation tourism and organ trafficking is illegal in the nations named above, a number of these governments are alleged to be complicit by refusing to enforce transplant bans. In Pakistan, where the transplant tourism industry is unofficially sanctioned, more than 2,000 kidney transplants are performed each year on foreign patients. Although some contend that a seller’s decision to avoid extreme poverty in a properly regulated and remunerated market should not be denied, the health status for the majority of financially motivated donors worsens after the procedure, costing them more in lost employment or out-of-pocket remedial care than the (usually) minimal ‘donation’ they receive for offering their organ to a broker. Donors may also be subject to extreme forms of social ostracism. Of all forms of medical tourism, transplantation tourism raises the largest number of immediate ethical questions.
Risks for the North

Many hospitals and clinics in developing countries offer high-quality care. The Indian Apollo chain claims a 99 per cent success rate with cardiac surgeries, comparable to any specialized facility in the United States, although the company did not reveal how it measured this rate of ‘success’. Most medical facilities marketed to potential patients from the global north do not boast similar success rates; concerns persist about the quality of care in facilities in developing countries. Our search failed to locate statistical data on complication rates, but anecdotal accounts of malpractice or medical misadventure are frequent in the literature, including novel infections and post-operative complications. Some argue the subsequent financial costs borne by the public health systems of patients’ home countries to be extensive.

Lacking or lax enforcement of malpractice laws in developing countries poses another risk. Little or no malpractice insurance costs allow developing country practitioners and facilities to maintain low prices but leave medical tourists with few options if malpractice is suspected. In Singapore and Malaysia, courts overseeing malpractice suits defer to the opinions of attending physicians, essentially requiring a physician to ‘confess’ to malpractice in order for any compensatory damages to be awarded.

Advantages for the South

From the destination country perspective, the most powerful argument for burgeoning medical tourism derives from ‘trickle down’ economics. The industry increases an inward flow of foreign currency; this supports growth in health, tourism, and infrastructure industries, thereby improving aggregate economic development and sophisticated health-care facilities. Both eventually benefit the greater population. Estimated annual earnings for four major Asian destinations, although not (yet) huge, are substantial (Table 1).

A further benefit of medical tourism is a slow-down or reversal of the migration of medical professionals to developed countries. The Apollo group in India claims to have attracted more than 123 expatriate medical professionals to return by offering more
competitive salaries and the opportunity to live and work in their country of origin while still being able to practice advanced health care.\textsuperscript{2} This represents just 10 per cent of the number of Indian-trained physicians entering US medical residencies each year,\textsuperscript{43} and scarcely makes a dent in the estimated need for 800,000 more physicians in India over the next decade.\textsuperscript{44}

Medical tourism has also allowed some developing countries with smaller populations to sustain and subsidize advanced medical care and technology, as well as to maintain critical medical specialties with low domestic demand. Singapore, (a middle- to high-income country) with a population of only 4.5 million would find many subspecialties too expensive or difficult to sustain without attracting medical tourists to ensure sufficient demand for such services.\textsuperscript{44}

Underpinning the rise in medical tourism is the increased global commercialization of health care. A number of medical tourism destinations, including India, Thailand, Indonesia, and Nepal, have lowered restrictions on foreign direct investment in recent years, hoping to encourage growth in the commercial health sector.\textsuperscript{2,45} Trade agreements may facilitate these investment flows, although at present few of the major medical tourism destination countries have made liberalization commitments in trade treaties (Box 3).

### Disadvantages for the South

Critics of the north–south flow question the bases of the claimed benefits, arguing (often with substantiating empirical evidence) that

<table>
<thead>
<tr>
<th>Country</th>
<th>Patients treated</th>
<th>Estimated earnings (US$)</th>
<th>Major services provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>450,000 (2007)</td>
<td>480 million (2005)</td>
<td>Cardiac surgery, joint replacements, eye surgery</td>
</tr>
</tbody>
</table>

Sources: ESCAP;\textsuperscript{12} DiscoverMedicalTourism.com;\textsuperscript{41} Health-Tourism.com.\textsuperscript{42}
the prime beneficiaries are limited to medical tourists and the enterprises that provide services. The global entrenchment of twotiered health care following medical tourism poses the broader and larger ethical health equity concern.

Policies and regulations to ensure that revenues generated through medical tourism be taxed sufficiently and reinvested back into public health care are absent or unenforced in most developing nations; benefits purported to occur from medical tourism have yet to be realized by the majority of the population of these countries. In Thailand, the high-quality medical care available to medical tourists remains financially out of reach of the majority of the Thai
population.\textsuperscript{49} Thailand also provides evidence for another concern: that medical tourism will weaken public health care by incentivizing an internal brain drain of providers to private facilities offering higher salaries and better working conditions. Almost 6,000 positions for medical practitioners in Thailand's public system remained unfilled in 2005, as an increasing number of physicians followed the higher wages and more attractive settings available in private care.\textsuperscript{49} For countries such as Ghana, Pakistan, and South Africa, which lose approximately half of their medical graduates every year to external migration, the addition of internal ‘brain drain’ from public to private health care may be especially damaging.\textsuperscript{2}

A further financial burden to the public is the cost of training medical practitioners who choose to work in the medical tourism industry. In India, medical professionals are trained in highly subsidized public facilities.\textsuperscript{15} The annual value of these public training subsidies to the private sector where many physicians eventually work is estimated at more than $100 million,\textsuperscript{15} at least some of which accrues to the medical tourism industry.\textsuperscript{48} This diverts public funds that might otherwise have gone into improving public health care for the poor – to private care for more affluent individuals. This is a particular concern in India, where public health expenditures are very low even by developing country standards, and where almost all growth in the sector is now driven by private enterprise.\textsuperscript{45} Finally, medical tourism imposes a specific western biomedical model on developing nations that may undermine culturally specific and traditional approaches to healing and wellness.\textsuperscript{49}

Conclusion

On the basis of our consolidation of searchable-knowledge about medical tourism, we found a lack of hard data on the magnitude of medical tourism, with anecdotes, brokerage claims, and theoretical conjectures substituting for more deliberative study. This lack of data applies not only to patient flows, but to the scale of revenues generated directly and indirectly, and to detailed accounts of who may benefit and who may lose from the likely (though not definitively established) growth of this industry. National health and economic statistics can assist in developing metrics of

\textsuperscript{194} © 2010 Macmillan Publishers Ltd. 0197-5897 Journal of Public Health Policy Vol. 31, 2, 185–198
public/private revenues, benefits, and aggregate welfare gains from medical tourism, although detailed within-country studies would be needed to ascertain the distributional impact of net health gains and losses. Some measure of patient flows could be estimated from data collected by medical tourism brokerages or destination country health-care facilities, but such information may be considered confidential or the companies involved may be unwilling to release it. Surveys of patients obtaining cross-border care are other potential sources of useful data, but this also requires the cooperation of medical tourism facilities.

Obtaining a competent empirical grasp of the nature of this industry will not be easy. Any new research on medical tourism should also locate its questions and analyses within the broader frame of global health sector reform, which for the past several decades has been characterized by decreasing public or not-for-profit care provision and increasing private sector involvement. The weight of evidence suggests the latter is not well regulated, but is highly inequitable in access and impact.50,51

The key question about medical tourism is whether the ability of elites to benefit imposes costs on access for poorer groups. That this question underpins many other aspects of health systems and policy, and indeed of contemporary globalization itself, does not make it any less important or urgent to address.

About the Authors

Laura Hopkins is an MPH student in the School of Public Health at the University of Saskatchewan. She undertook the narrative review of medical tourism literature during her practicum with the Globalization and Health Equity Research Unit at the University of Ottawa.

Ronald Labonté (PhD) is Professor in the Faculty of Medicine, and Canada Research Chair in Globalization and Health Equity in the Institute of Population Health at the University of Ottawa. His research interests include globalization and health, health human resources migration, comprehensive primary health care, global health ethics, medical tourism, and social determinants of health.
Vivien Runnels is a PhD student in Population Health, and a research associate of the Globalization and Health Equity Research Unit in the Institute of Population Health at the University of Ottawa.

Corinne Packer (PhD) is Senior Researcher in the Institute of Population Health at the University of Ottawa, with principal interests in health human resources migration, medical tourism, and health equity in general.

References