



Patients beyond borders: A study of medical tourists in four countries

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Abstract

This exploratory study assesses the experiences of medical travelers seeking out of country health care in four destination countries: India, China, Jordan and the United Arab Emirates. It aims to identify the source countries of medical travelers, to understand their reasons for seeking out-of-country care, the type of services they obtained, and their level of satisfaction with the experience. Cost, physician and facility reputation and hospital accreditation were ranked as the most important factors in choosing out-of-country care. Wait times at home or lack of access to care were important motivations for international medical travel. Patient assessment of treatment outcomes is as high as might be found in similar assessments in high-income country facilities. Certain forms of treatment sought by respondents (i.e. organ transplantation) raise specific ethical concerns. Also of concern is that the present health systems in all four countries fail to adequately meet the health needs of their population (notably poorer groups). Evidence and inference strongly suggest that access to health care for poorer groups will worsen in these countries as medical tourism increases, at least in the short term, raising generic ethical and policy challenges over the extent to which access to essential health care by poorer persons is compromised by the public subsidization or promotion of medical tourism.

Keywords

China, health travel global market, India, international patients, Jordan, medical tourism, the United Arab Emirates

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Introduction

One of the rapidly emerging manifestations of the global commercialization of health care is medical tourism (also frequently referred to as health tourism or medical travel). The term refers to the cross-border utilization of health care, often motivated by lower cost, avoiding long wait times or obtaining services not available in one's own country. While cross border flows of patients go in all directions, the north (developed) to south (developing) country flow is becoming one of the better known and more controversial. The majority of individuals along this route originate in the USA, Canada and Western Europe, with key developing country destinations in Asia, the Middle East and Latin America. Costs for uninsured services and wait times are major drivers in this flow (Lewis et al., 2000; Posner, 1986). Such out-of-country care is frequently linked with tourist activities or amenities to ease foreign patients into a new cultural environment and to occupy them during the pre- and post-operative periods, hence the popularized term of 'medical tourism.' Medical tourism may well be one of the fastest growing 'new' businesses in the world (Chaudhuri, 2008), facilitated by advancements in medical technology, more affordable travel, the availability of information to potential patients through the Internet and a rapidly growing medical tourism brokerage industry (Leahy, 2008).

Although transplantation and reproductive tourism have been reasonably studied due to the strong ethical and even legal concerns they raise, there is little empirical data on the overall numbers of medical tourists, key source and destination countries, types of services being sought and patients' perceptions of their out of country/medical tourist experiences (Hopkins et al., 2010; Leahy, 2008). This study begins to fill some of the gaps in this information base. We report on survey responses of medical travelers seeking care in four destination countries: India, China, Jordan and the United Arab Emirates (UAE). The choice of these countries was opportunistic, owing to the first author's post-doctoral fellowship at Huazhong University of Science and Technology in China, his Jordanian background, and personal contacts he had with facilities catering, in part, to international patients in UAE and India. This exploratory study provides some basic empirical data on medical travelers in each of these four countries, the role of their respective governments in encouraging this industry, how medical tourism fits into the context of their health care systems, and the implications of medical tourism on overall health care accessibility.

Methods

An Internet search to select participating hospitals was conducted, using the keywords 'hospital', 'international patients', 'medical tourism', and the name of the country. Contact information for 128 private and public hospitals/health centers in six countries was obtained (29 in China, 31 in India, 15 in Jordan, 26 in Turkey, 5 in UAE, and 22 in Thailand). Initial contact of the hospitals and health centers was attempted through email and regular mail. These attempts were unsuccessful. The principal investigator therefore resorted to personally recruiting volunteers (practitioners within these

facilities who were known to the principal investigator) and encouraging them to recruit other colleagues. Facilities identified through these means were located in four of the six originally selected countries: India, China, Jordan and UAE. Participating facilities numbered three in India (all located in New Delhi) one of which specialized in Ayurvedic medicine in addition to specialized western medical services; six in China (2 in Shanghai, 2 in Beijing and 2 in Wuhan), two of which specialized in traditional Chinese medicine yet also provided specialized western medical services (surgery, dental, etc.); four in Jordan (all located in the capital city, Amman); and one in UAE (in Dubai). All facilities functioned as general hospitals and offered a minimum of 10 specialties. In India, all of the hospitals were large (600–850 beds), in China they were both medium and large (310–1200 beds), in Jordan all were medium (150–350 beds), and in UAE the one participating hospital was small (less than 100 beds). All facilities were private, none catered exclusively to international patients, but had no restrictions on the total number of such patients they would accept at any given time, and several had ‘VIP’ rooms available to patients willing to pay the extra costs and which were most frequently used by international patients. The hospitals that agreed to participate did so with the explicit provision that confidentiality of their identity (and that of the volunteer practitioners and participating patients) would be fully preserved. This precludes us from providing any additional information about the facilities that might lead to their identification.

Short questionnaires consisting of 5 demographic items (sex, age, education, marital status and household income) and 17 medical tourism items were sent to all of the participating facilities. The questionnaire was available in English, Arabic, French, Chinese, Russian and German based upon the nationalities considered likely to access out of country health care in one or all of these four destination countries. Each participating facility had 1 to 3 volunteers who were health care providers (i.e. doctors, dentists and nurses) serving international patients. These persons were given detailed information on the research project, the ethical issues involved, the importance of adequate data collection and the project timeline. Two five-hour Internet-based training sessions on administration of the questionnaire and assessment of treatment outcomes were undertaken with the volunteer personnel in each participating facility. The first author was also able to visit participating facilities in China, Jordan and the UAE to help manage the research. The questionnaire was administered by the participating health care providers to all consenting international patients who received care during the study period (July 2008 to February 2009). The survey was provided at the completion of their treatment during a final clinical interview. Only international patients who had traveled specifically to seek out-of-country care were eligible to participate in the study, thus eliminating foreign patients who became ill while visiting and of necessity sought health care. Participants were asked to respond to why they had sought out-of-country care, whether they participated in associated tourist activities, how they located the facility they attended, if they encountered any difficulties associated with seeking out-of-country care, what treatments they were obtaining and what was their assessment of the outcome of the treatment.

Table 1 provides a breakdown of response numbers in each of the four countries. Each country was provided with 600 questionnaires divided equally amongst the facilities. It

Table 1. Participating facilities and completed questionnaires by country

| | India | China | Jordan | UAE |
|------------------------------------|-------|-------|--------|-----|
| Number of participating facilities | 3 | 6 | 4 | 1 |
| Number of completed questionnaires | 406 | 100 | 212 | 52 |
| Number of volunteers | 8 | 14 | 6 | 2 |

was not possible to determine the response rate or representativeness of respondents since the total number of international patients approached to participate was not tabulated. Eligible participants continued to be approached until the study period came to a close. This partly explains why countries with a greater number of participating facilities generated a higher number of completed questionnaires. The reason for the much higher completion rate in India compared to China and Jordan is not known; although all of the hospitals in India were large which may have resulted in proportionately more medical travelers being approached during the study period.

As with any study, there are limitations. The voluntary nature of the survey introduces response bias, especially as the administration of the survey did not include data on non-responders thus preventing any examination of representativeness. A limitation of the survey instrument was the use of closed questions for most, but not all, items. In particular, the survey did not allow respondents to comment on reasons for seeking out-of-country care other than those itemized on the questionnaire. Although these items were selected on the basis of previous studies or commentaries, it precluded the generation of novel motivators for out of country care. Another limitation of the study design was that time and resource constraints precluded any interviews with health workers or hospital and government officials in the destination countries on their views of medical tourism.

Ethics

The study received ethical approval from the Human Research Ethics Board of Huazhong University of Science and Technology. Participation by patients was voluntary and a signed informed consent form was required prior to patient enrollment. Sixty-five completed surveys were excluded from the final sample size due to lack of signed consent forms. The consent form included information about the research project, the purpose of the questionnaire, the right to withdraw from the study at any time and a guarantee of anonymity, as well as clearly stating that participating in the study was not required in order to receive treatment. Participants also consented to have their medical records scored by their health care providers using a scale to assess the quality of treatment outcomes. Parental consent was required for patients under the age of 18 with one or both parents completing the questionnaire for those under 18. The study took place in facilities where the volunteer health personnel administering the survey did not require additional institutional ethical approval from that granted by Huazhong University of Science and Technology.

Results

Patient Characteristics

In three of the countries, most persons were over the age of 46 (67% in India, 78% in China and 69% in Jordan); the one exception was the UAE where 41% fell between the ages of 36 and 45. Table 2 identifies source countries of medical travelers by region or country of destination. India had the largest proportion of medical travelers coming from USA (43.8%), Canada (24.6%) and Britain (10.3%), followed by China (30%, 22% and 10%, respectively). Jordan and the UAE showed a different nationality pattern. While American citizens still ranked first in Jordan (15.1%) they were followed closely by Emirati (14.2%), Canadian (12.3%) and Iraqi (10.4%). Medical travelers to the UAE, in even sharper contrast, came primarily from Qatar (23.2%), Oman (19.3%) and Yemen (11.6%).

Male medical travelers outnumbered females in India (1.4:1) and China (1.5:1), but the reverse pattern was found in Jordan and the UAE, where females outnumbered males 1.4:1 and 2:1, respectively. The UAE also stood out for having a lower number of medical travelers with a university degree (20%) compared to the other three destination countries, where the equivalent figure was 50%. This likely reflects the higher portion of medical travelers in the UAE sample coming from countries, notably Qatar and Yemen, with much lower tertiary education gross enrolment rates than those in the USA, Canada and Britain (see Table 14, UNESCO online data set: <http://stats.uis.unesco.org/unesco/TableViewer/tableView.aspx?ReportId=167>).

Table 2. Nationality/regional distribution of the 770 patients in the 4 destination countries

| Regions | India | | China | | Jordan | | UAE | |
|-------------------|-------|------|-------|-----|--------|------|-----|------|
| | No. | % | No. | % | No. | % | No. | % |
| USA | 178 | 43.8 | 30 | 30 | 32 | 15.1 | 2 | 3.8 |
| Canada | 100 | 24.6 | 22 | 22 | 26 | 12.3 | 2 | 3.8 |
| UK | 42 | 10.3 | 10 | 10 | 2 | 0.9 | – | – |
| EU | 10 | 2.5 | 6 | 6 | – | – | – | – |
| Russia | 10 | 2.5 | 4 | 4 | – | – | 2 | 3.8 |
| Qatar | 10 | 2.5 | 6 | 6 | 18 | 8.5 | 12 | 23.2 |
| Oman | – | – | – | – | 18 | 8.5 | 10 | 19.3 |
| UAE | 10 | 2.5 | – | – | 30 | 14.2 | – | – |
| Yemen | – | – | – | – | 4 | 1.9 | 6 | 11.6 |
| Other Middle East | 10 | 2.5 | 12 | 12 | 150 | 37.7 | 44 | 30.8 |
| South America | 10 | 2.5 | 4 | 4 | – | – | – | – |
| South Asia | 6 | 1.4 | 6 | 6 | – | – | 2 | 3.8 |
| Africa | – | – | 2 | 2 | – | – | – | – |
| Oceania | 20 | 4.9 | 4 | 4 | – | – | – | – |
| Southeast Asia | – | – | – | – | 2 | 0.9 | – | – |
| Total | 406 | 100 | 100 | 100 | 212 | 100 | 52 | 100 |

Obtaining out of country care

Figure 1 shows the difficulties medical travelers experienced in the course of booking their out-of-country care. Obtaining visas and registration were the most frequently encountered problem, particularly in China and Jordan. India is the only country of the four in our study that issues a special medical visa (M visa), which is only valid for the course of medical treatment. In other countries, a visitor visa is issued and patients are expected to renew their visa if they extend their visit. Data not presented in our tables indicate that brokerage firms were more likely to arrange the travel and book procedures for medical travelers to the UAE (52%) and India (50%), while it was patients or family members who shouldered that responsibility in Jordan (77%) and China (97%). Differences in language and communication difficulties are striking but understandable. India’s colonial history firmly positioned the English language within its society, notably in its medical education, which is an obvious attraction to medical tourists from Anglophone nations. Language and communication, in contrast, posed particular difficulties for medical travelers to China, unsurprising given the predominance of English-speaking patients in a country with limited English-language skills.

The questionnaire also probed for how medical travelers became aware of out-of-country options. Almost half (45%) indicated that they learned of such possibilities through friends, relatives or colleagues. Internet advertising and key-word searches were the primary source of medical tourism information for another 35% of respondents.

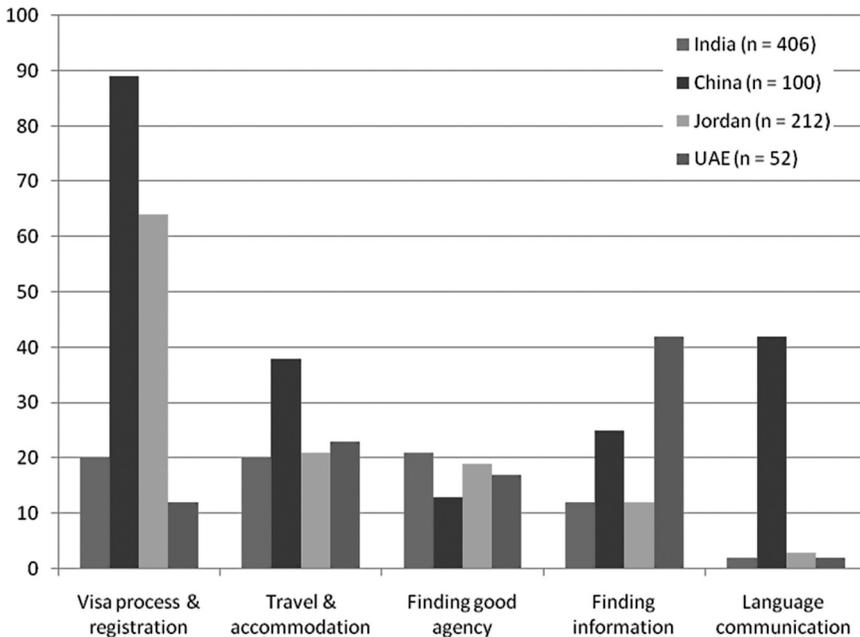


Figure 1. Difficulties in seeking out of country care (%), by destination country

Only 13% were referred to out-of-country care by their primary care physicians, and only 3% by their health insurance companies – indicative that, at least in our sample, personal patient decision-making is the principle driver in medical tourism. There were country variations. Medical travelers to India reported a much higher use of internet advertising, consistent with its aggressive global marketing of medical tourism (Hopkins et al., 2010). China lagged somewhat behind, and showed the highest portion of medical travelers relying on personal contacts for information. This could reflect barriers in the visa process and language (Figure 1); given these difficulties, seeking advice from someone who has already negotiated the Chinese system would be a sensible strategy. Reports from Jordan and the UAE again showed a slightly different pattern; more medical travelers were recommended by their primary care physician, especially for care in the UAE.

Reasons for medical travel, type of care and assessments of care quality

Although limitations in the design and response rates preclude drawing strong inferences from these differences, they do cohere with respondents’ reasons for why they did not seek medical care within their own country (Figure 2); and with their rankings of ‘very important’ or ‘important’ factors in seeking out of country care (Figure 3).

For medical travelers to India and China, the price of care in their home country was a major reason for seeking out of country care (Figure 2); correspondingly, (low) cost

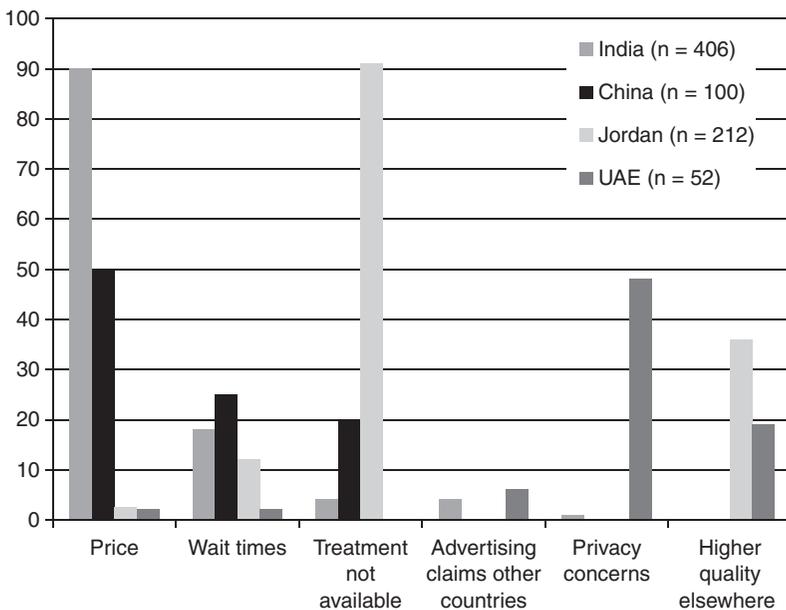


Figure 2. Reasons for not seeking care in own country (%), by destination country

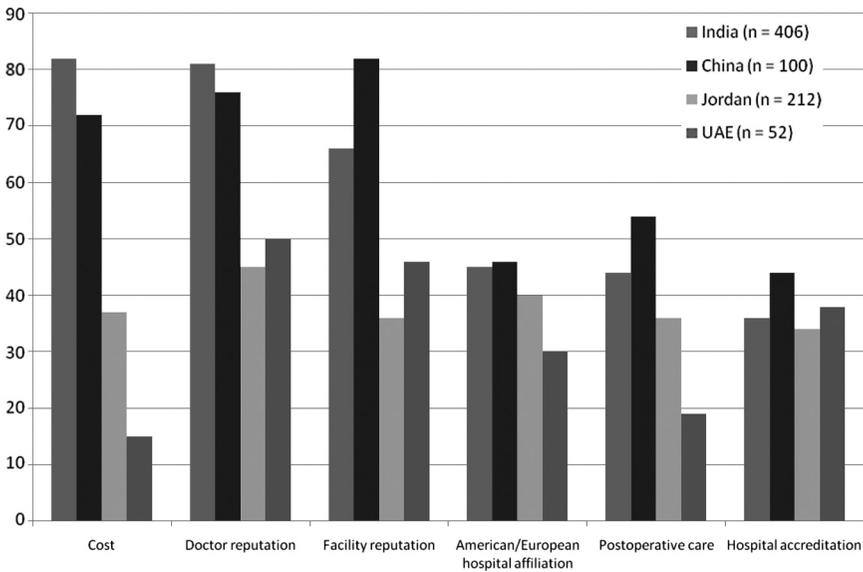


Figure 3. Factors 'very important' or 'important' in seeking out of country care (%), by destination country

was cited as among the most important factors for medical travel to these countries (Figure 3). Doctor reputation and facility reputation were also notably important in both India (which markets its medical tourism on the basis of high quality at low price) and China (Figure 3). A quarter of those seeking treatment in China, all of whom were British or Canadian medical travelers, noted that it was because of the waiting periods in their publicly-financed universal health care systems (Figure 2). A fifth of participating medical tourists in China reported seeking care because no such treatments were available in their home countries (Figure 2), likely a reference to traditional (alternative) Chinese medicine, which is promoted as one of its 'niche' medical tourism services.

Respondents in all four destination countries were fairly consistent in their ranking of 'American/European hospital affiliation' and 'Hospital accreditation' (Figure 3). The rather low importance ranking given to affiliation and accreditation is somewhat unexpected given efforts by hospitals, especially in India, to use international accreditation and joint venturing with American-based hospitals as a major marketing tool in their efforts to attract medical tourists from high-income countries (Hopkins et al., 2010). Although other information on doctor and facility reputation (which rated high in both India and China) may have been sufficient motivators for medical tourists to seek care in India (Figure 3), cost, at least for our sample seeking care in these two countries, appears to be most important driver.

Again, responses were strikingly different for Jordan and the UAE. In Jordan, most of the international patients (over 90%) reported a lack of available treatment in their home countries (Figure 2). While roughly a quarter of medical travelers to Jordan in our study originated from Canada and the USA, most came from neighboring Middle Eastern

states (Table 3), which presumably lacked the medical services on offer in Jordan. Unlike India or China, the perception that higher quality services were available outside of one's own country was also a motivator for medical travelers to Jordan (Figure 2). The same was true for UAE, although privacy concerns ranks highest for medical travelers not seeking care in their own country (Figure 2). Given that this was the one destination country where women medical tourists outnumbered men by 2:1, the emphasis on privacy may have something to do with gender politics in the source countries of these women. All but 4 of the 34 female respondents in the UAE sample came from an Arabic country. In 2007, the UAE ranked 25th on the UN Gender Empowerment Measure (comprised of economic and political participation/decision-making and control over economic resources), ranks for the primary source countries of its medical tourists, Oman, Qatar and Yemen, were 87, 88 and 109 respectively (see the UN Gender Empower site: <http://hdrstats.undp.org/en/indicators/125.html>).

Table 3 shows the types of medical care sought by medical travelers, by destination country. Participants could select more than one treatment; hence the total number of treatments is larger than the number of respondents. The higher rates for alternative medicine in India and China reflect patient interests in Ayurvedic and traditional Chinese healing, respectively. That the majority of treatments sought in China were for alternative or dental care may indicate China's own 'niche' in the medical tourism market, though again this is speculative. The high rate of rehabilitation in India refers to post-operative recovery (not a unique procedure) and was generally a second choice by respondents. It is not known why so many medical travelers to India ticked this item, although the country markets itself as a destination for assisted reproductive medicine (Mulay and Gibson, 2006), questions on which were not asked in the survey. Some reproductive health tourism may be captured in the rehabilitation category, although

Table 3. Medical treatment distribution of the 770 patients in the 4 destination countries

| Treatment | India | | China | | Jordan | | UAE | | Total |
|-----------------------------|-------|-------|-------|-------|--------|-------|-----|-------|-------|
| | No. | % | No. | % | No. | % | No. | % | |
| Alternative Medicine | 156 | 19.3 | 60 | 33.4 | 10 | 3.4 | 2 | 3.9 | 228 |
| Dental | 114 | 14.1 | 56 | 31.1 | 58 | 19.5 | 10 | 19.1 | 238 |
| Ear/Nose | 32 | 3.1 | 4 | 2.2 | 16 | 5.4 | 2 | 3.9 | 54 |
| Eye | 54 | 6.6 | 18 | 10.0 | 18 | 6.0 | 8 | 15.4 | 98 |
| Cosmetic | 64 | 7.9 | – | – | 26 | 8.7 | 6 | 11.5 | 96 |
| Bariatric | 10 | 1.3 | – | – | 20 | 6.7 | 2 | 3.9 | 32 |
| Orthopedic | 64 | 7.9 | 12 | 6.7 | 42 | 14.2 | 10 | 19.1 | 128 |
| Cardiac | 46 | 5.8 | – | – | 24 | 8.2 | 2 | 3.9 | 52 |
| Oncology | 32 | 4.1 | 16 | 8.9 | 18 | 6.0 | 2 | 3.9 | 68 |
| Laparoscopy | 20 | 2.6 | – | – | 30 | 10.1 | 2 | 3.9 | 52 |
| Organ | 8 | 1.1 | 6 | 3.3 | 10 | 3.4 | 2 | 3.9 | 26 |
| Rehabilitation | 212 | 26.2 | 8 | 4.4 | 22 | 8.4 | 4 | 7.6 | 246 |
| Total of medical procedures | 812 | 100.0 | 180 | 100.0 | 294 | 100.0 | 52 | 100.0 | 1338 |

there is no way of determining this. Excluding the rehabilitation response, the top two procedures in India (alternative and dental) are the same as those in China.

With the exception of alternative medicine, treatments sought in Jordan and the UAE were broadly similar. A higher portion of medical travelers sought orthopedic treatments in these two countries than in India or China, almost certainly due to their lack of availability in their home countries, although dentistry again ranked high. Ophthalmology services were commonly requested in UAE; and the slightly higher rates of cosmetic and bariatric surgeries may be due to the larger portion of female medical travelers to that country, although there is insufficient data to offer this as any more than a researchable conjecture.

Table 4 provides an assessment of treatment results. Patient assessments used a simple 4-point Likert scale. Provider assessments using the same scale were based on clinical charts. Providers are more likely than patients to report 'cured' than 'improved' while patients are more likely than providers to report 'worse' than 'unchanged.' The potential for bias in such assessments on the part of both patients and clinicians should neither be discounted, nor is any comparison across countries valid since patients may seek the same care but for differing reasons, leading to different recovery times or medical outcomes. A limitation also resides in the short period of time post-treatment when the assessments were made, which precludes assessments of complications that may take some time in appearing. Anecdotal accounts of medical tourism have documented cases of malpractice and medical misadventure, including novel infections and post-operative complications that only arise some time after patients have returned to their own country (Healy, 2009; Newman et al., 2005).

Within this limitation, it is striking that most respondents in all four countries expressed a high degree of satisfaction with the quality of care they received. The combined 'excellent' and 'good' percentages for all four destination countries (ranging from 79% in Jordan to 96% in UAE) reported by medical travelers are similar in range to patient reports of 'very satisfied' and 'satisfied' with health care received in high-income countries (Muhajarine et al., 2006). Over 80% of our respondents indicated they would return for more treatment to their destination country, if required.

Discussion

Precise data are not available, but estimates based on limited accounts suggest that medical tourism is growing rapidly (Chaudhuri, 2008; Saniotis, 2007; Yue, 2005). A 2008

Table 4. Assessment of treatment results (%) by patients and providers, by destination country

| Treatment Results | India | | China | | Jordan | | UAE | |
|-------------------|---------|----------|---------|----------|---------|----------|---------|----------|
| | Patient | Provider | Patient | Provider | Patient | Provider | Patient | Provider |
| Cured | 35 | 52 | 32 | 59 | 39 | 57 | 41 | 49 |
| Improved | 28 | 20 | 47 | 33 | 29 | 27 | 23 | 20 |
| Unchanged | 25 | 25 | 11 | 4 | 15 | 11 | 23 | 28 |
| Worse | 12 | 3 | 10 | 4 | 17 | 5 | 13 | 3 |

industry report forecasted the number of medical tourists to rise from 750,000 in 2007 to between 5.25m and 6.25m by 2010, and between 10.5m and 23.2m by 2017 (Deloitte Center for Health Solutions, 2008); waiting times in other developed countries would add to these estimates (Turner, 2007a). Although not necessarily representative of all global forms of trans-border health care, the majority of people seeking out-of-country care in our study were American citizens (cost factors) followed by Canadian citizens (wait times). A recent report found that wait times in Canada are among the highest of a selected number of OECD countries (Leatherman and Sutherland, 2010).

This reinforces another finding from our study: although cost and quality of care are important motivations for medical travel, they are not the only reasons. Timely access (or simply access) to services regardless of cost, which was the case with medical travel to the UAE, also appear to be important drivers in cross-border care. Most medical travelers in our sample were older adults with chronic (non-infectious) conditions and, presumably, a greater financial ability to afford the travel and out-of-pocket costs, suggesting that these may be other factors prodding the industry forward. The marriage of tourism with health care (the reason for the designation of 'medical tourism' in the first place) appears to be another force within the industry with respondents in our study reporting some engagement with tourism as part of the medical care package. Rates were highest in China (78%), followed by India (71%) and Jordan (69%). Only a few reported tourism in UAE (27%), which is somewhat surprising given the country's marketing of Dubai as a tourist destination and its efforts to create a tourist-linked resort, Dubai Health, within its Dubai Healthcare City complex. One possible reason for the low rate of tourist engagement in the UAE sample could be that a large number of the respondents were younger female patients who came from countries with low gender empowerment rankings, perhaps excluding financial means or cultural approvals for adding tourist activities to medical care. Finally, the ability to obtain services not available in one's country was a factor for some participants in our study, notably the pursuit of alternative medicine (traditional Chinese and Indian Ayurvedic medicine). This may reflect that many medical tourists, even those coming from the USA or Canada, could be Chinese or Indian emigrants lacking access to their traditional forms of health care in their adopted countries and who return to their original countries in order to obtain it. Our survey instrument did not ascertain the birth or ethnic origins of medical travelers; and thus prevents us from commenting on whether this pursuit of alternative medicine is a generic global phenomenon or one reflecting cultural preferences. It is also worth noting that China, with the reported support of its government, is moving into commercialized cosmetic and stem-cell therapy partly 'to attract patients from affluent countries that have more restrictive regulatory processes such as US and Europe' (International Medical Travel Journal [IMTJ], 2009), inferring that traditional medicine may be eclipsed by other reasons for foreign patients regarding China as a medical tourism destination in the near future.

An interesting finding from our study is the large number of individuals seeking dental care. Not only is such care expensive in the major source countries for medical travelers; it is often not covered, or only partially covered, by public or private health insurance systems. Lack of financial coverage for dental care may be an important reason behind this specific form of medical travel. That respondents from 10 different nationalities traveled considerable distance for such care, however, is a rather striking finding of our research, and one that fairly cries out for better empirical study.

One of the treatments sought by a small number of respondents (26) was organ transplantation. Information on whether the organs were supplied by relatives or from living donors in the destination country was not provided. While being unable to comment on the transplantation tourism encountered in this study, the commercialized aspect of this form of tourism has raised ethical and legal concerns about providing or seeking such out-of-country services (Mulay and Gibson, 2006; Pennings, 2002; Turner, 2008). Normatively, cross border organ transplantation is deemed 'transplant tourism' only when travel for transplantation 'involves organ trafficking and/or transplant commercialism or if the resources (organs, professionals, and transplant centres) devoted to providing transplants to patients from outside a country undermine the country's ability to provide transplant services for its own population' (Declaration of Istanbul, 2008). While all countries have banned payment for organs, 'reasonable reimbursements' for costs related to organ donation or financial 'donations' to those offering their organs are permitted in many jurisdictions, effectively bypassing such legal restrictions (Turner, 2008). Internationally accessible websites exist where prospective donors advertise kidneys for sale (see for example http://ph.88db.com/ph/Services/Post_Detail.page/Health_and_Medical/Physical_Therapy/?PostID=146509), although it is possible that such sites are involved in internet fraud rather than commercial organ sales. Both China and India are considered 'hotspots' in organ trafficking (Turner, 2009). In China, 90% of all organs come from executed prisoners (Huang, 2007) although this may now be decreasing (Huang et al., 2008) due partly to international pressure. New protocols have been implemented to bring organ donation more in line with stringent medical and ethical policies in other countries (Huang et al., 2008) although independent investigations cast some doubt on compliance with these policies claiming that deliberate 'harvesting' of organs from prisoners (notably practitioners of Falun Gong) is still occurring (for example <http://organharvestinvestigation.net/release/pr-2008-08-22.htm>). The Indian government, despite legislation restricting the commercial sale of organs, has been unable to monitor what is considered to be a sizeable market in illegal organ trade (Muraleedharan et al., 2006).

We use the term 'industry' when describing medical tourism and we do so deliberately. It is developing along the lines of a private, commercial enterprise. For individual international health care consumers this holds potential benefit; data from our study found that 94% of respondents indicated agreement with the idea that medical tourism should be promoted as a means of dealing with wait times, cost or lack of services in their respective countries with 64% strongly agreeing. Yet, the commercial aspects of medical tourism raise another set of ethical considerations with respect to how the growth of private health care facilities in developing countries catering to wealthier (local) or international medical patients affects access to essential health care for poorer populations. Empirical evidence on this issue is sparse (Leahy, 2008). Those supporting its growth (e.g. Bookman and Bookman, 2007) argue that medical tourism allows the development of sophisticated forms of secondary and tertiary care otherwise unavailable in these countries, may contribute to a reversal in the 'brain drain' of health professionals to high-income countries and can contribute to overall economic growth and aggregate welfare gains. Those critical of its growth (e.g. Turner, 2007b) argue that many destination countries are experiencing a drain of health professionals away from public services for the

poor, are failing to enforce requirements on private facilities to offer a portion of their services to poorer citizens, and are publicly subsidizing the growth of the private industry through training allowances for health professionals who eventually work in it and special tax and land acquisition arrangements for medical entrepreneurs establishing new facilities. These subsidies are at the expense of developing primary health care access for poorer population groups within the country. How well do our four countries fare on these allegations?

Implications of medical tourism on health care accessibility

Because the health systems differ tremendously across each of the four countries in our study, we comment on the implications of medical tourism for health care accessibility for their own citizens (and notably their poorer citizens) separately.

India

Of the four countries surveyed, India appears to do poorest in how medical tourism is negatively affecting equitable access to health care. Medical tourism attracted 150,000 patients to India in 2005, is projected to grow by 15% annually and is expected to generate US\$2bn by 2012 (Hazarika, 2010). The government subsidizes this growth through tax and land concessions, special visas for medical tourists, international marketing of the country as a tourist destination and training costs of physicians, the majority of whom work in the private health care sector (Chanda, 2002). One estimate placed the annual value of these medical training subsidies to the private sector at US\$100m – public monies that are unavailable for expansion of India's limited primary health care program for the rural poor (Sengupta and Nundy, 2005). Growth in medical tourism in India is predicted to increase the costs of care, limiting access for the poor; and, to worsen the severe shortage of health care professionals, especially those in the public system. Medical tourism's ability in India to induce a return of émigré physicians, one of its claimed benefits, so far has produced a reverse flow that is being far outstripped by the number of new Indian medical graduates leaving for high-income countries (Hopkins et al., 2010). In theory it should be possible for the Indian government through various tax or regulatory policies to use medical tourism as a source of cross-subsidization of its public health system (Chanda, 2002). To date, however, state interventions to do so have been minimal (Hazarika, 2010).

China

China's health system, like India's, has come under intense scrutiny since it began introducing market reforms in the late 1970s (Ma, Lu and Quan, 2008). The central government devolved much of the responsibility for health care to local and provincial authorities, with subsequent drops in transfers to these levels (Hsiao, 2008). Insufficient local

taxation forced many health centers and hospitals to adopt for-profit (cost-recovery) models resulting in extensive out of pocket expenditures for many of the rural poor, ironically pushing them back into a deep poverty that China's economic growth had begun to reduce (Liu et al., 2003). The central government set stringent guidelines on the costs that could be charged for routine visits, surgeries, tests and treatments; but it also set bonuses to the salary-system for physicians based on how much revenue they generated for hospitals. This created a perverse incentive for doctors to over-prescribe non-routine diagnostics and drugs, resulting in a dramatic rise in high-technology medical investments and novel pharmaceutical products (Blumenthal and Hsiao, 2005). While affordable to the coastal Chinese middle-class, such services were unaffordable to the 800m rural poor (Liu, 2004). No scholarly writing on medical tourism in China exists. Blogs (even positive ones) comment on persisting if declining problems of quality and safety; while industry-promoting websites emphasize the increased use of state-of-the-art western medical technologies, a partial outcome of the way in which the central government incentivized physician salaries. This waves a cautionary flag regarding both equitable access and quality of care should Chinese medical tourism expand, especially beyond its current focus on dentistry, cosmetic surgery and traditional Chinese therapies. At a minimum, China faces the same problem as India: an under-supply of health care workers with only 1.5 physicians and 1.1 nurses/1000 population mostly concentrated in Beijing or Shanghai (2007 figures), about a fifth the density commonly found in OECD nations (Ministry of Health of People's Republic of China, 2007). Medical tourism will almost certainly worsen this situation and particularly for the rural poor, as doctors and nurses (reportedly falling behind in earnings) choose to focus more on foreign patients seeking care in the modern coastal facilities. Although China is increasing its public health expenditures, a now entrenched profit motive within its health care system could offset potential benefits of any efforts to reform its marketization that has developed over the past three decades (Hsiao, 2008).

Jordan

Jordan differs from India and China as it still possesses a sizable public health system, although the rapid growth in medical tourism is increasing the reach of its private care system. A 2008 World Bank study ranked Jordan first in the region and fifth worldwide as a medical tourism destination (ThomasWhite-Global Investing, 2009). A report prepared by the Private Hospital Association estimated that between 210,000 and 250,000 foreign patients were treated in its 44 membership facilities in 2007; most came from neighboring Arab nations, although 3400 came from the USA, UK and Canada (Vequist, 2009). The industry is reported to bring in US\$1bn annually, with a steady 10% or greater year-to-year growth rate (Vequist et al., 2009). The country has a reasonable density of health workers (5.6 physicians and nurses/1000 population) and spends over 10% of its GDP on health, much higher than most other developing nations (Vequist, 2009). The level of health spending in light of the country's high poverty and unemployment rates is considered to signal inefficiencies rather than equitable coverage within its health care systems (WHO-EMRO, 2007). Over 40% of health care

spending is out-of-pocket and the public services themselves have a 15%–20% user-fee, although this is exempted for civil servants and their families, the poor and children under 6 through a government-run insurance scheme (WHO-EMRO, 2007). The absence of strong regulation is allowing the private sector to ‘flourish’ (WHO-EMRO, 2007). The total number of hospital beds (1.9/1000) remains well below the global average of 3.0/1000, and the country is considered to have a shortage of qualified nurses. This implies a shortage of both beds and staff for poorer Jordanians reliant upon the public system. The Jordanian government, while committed to improving health care access for vulnerable populations (Venquist, 2009), is simultaneously promoting growth in the medical tourism industry through its Medical Tourism Directorate. There is no indication of how the latter might work to subsidize the former.

United Arab Emirates

The United Arab Emirates (UAE) is an anomaly amongst the four countries, being designated a high-income country but with very low overall health care spending (0.6% of GDP and 7% of total public spending in 2002) (WHO-EMRO, 2006). Its public system, which finances 81% of health care spending (UAE Ministry of Health, 2010), provides just 1 bed, 0.33 doctors and just over 1 nurse per 1000 population; very low by international standards. The country, like Jordan, has a shortage of qualified health care workers (WHO-EMRO, 2006) and is expanding rather than contracting the privatization of its health care systems. It is also seeking to grow its medical tourism market, with development of a US\$500m ‘Healthcare City’ in Dubai that will be primarily devoted to treating foreign patients. Advertised as the world’s first ‘healthcare free zone,’ it is marketing itself to international entrepreneurial health care providers to establish themselves in the ‘City’ through such incentives as being 100% tax-free (no corporate, income or border taxes), allowing 100% foreign ownership and imposing no restrictions on capital, trade or quotas (Dubai Healthcare City Benefits, www.dhcc.ae/EN/AboutDHCC/Pages/Benefits.aspx). The absence of any form of taxation or public revenue generation from what the UAE intends to be the major regional health care centre effectively precludes any cross-subsidization to its small public health system.

Conclusion

Our study was not designed to probe the structural and economic dilemmas in the growth of medical tourism in these four countries. Rather, it is a descriptive study of the foreign patients who were traveling to these countries, how these patients chose where to go, and how they perceived the quality of care they received. While limited in its analytical detail, it nonetheless suggests that there are patient benefits in medical travel, and these may not be trivial. But it is also important to underscore that these are individual health gains, just as the economic gains in our four destination countries appear likely to accrue almost entirely to individual providers and health care institutions, and not to the government or the broader (and especially) poorer population.

What remains the fundamental policy quandary with medical tourism is how the private industry providing these individual health gains can become institutionalized or managed to create more equitable population health gains for national citizens in the destination countries. Of the four countries studied, Jordan may be in the best immediate position to reconcile the private market/public access dilemma, given its commitment to improving access to health care for vulnerable populations; with China following as it attempts to rebuild what was once a model of primary health care for all low-income countries. India appears to be treating medical tourism primarily as a commercial enterprise devoid of reference to ethical or normative dimensions of health care access for its own population, or even of the extensive literature on market failures in countries where provision of health care and health care financing is highly commercialized (Gilson, Doherty, Loewenson and Francis, 2007). It is also actively seeking to expand its medical tourism market, partly by lobbying other countries to extend their public or private health insurance coverage to services provided by hospitals in India, and partly by sponsoring medical tourism marketing events in high-income countries, such as one convened in Toronto, Ontario in November 2009 (see *India: Medical Tourism Destination 2009*, <http://www.imtd2009.com/>, accessed 10 June 2010). The one challenge it may eventually face around the health equity implications of this promotion is the growth of a 'right to health care' movement in the country (see for example http://phm-india.org/index.php?option=com_content&view=article&id=65:right-to-health-care-campaign&catid=10:jsa-campaigns&Itemid=3, accessed 9 June 2010). The UAE's capacity for using its medical tourism for cross-subsidization is constrained by its present very low level of public health care funding, and its general policy of low taxation.

But all four countries will continue to be challenged in providing timely and affordable access to quality care to their poorer citizens if they continue to expand private health markets for foreign-paying tourists without stringent regulatory and redistributive systems of cross-subsidy from their private to public spheres. Similar to the long-standing concern with the flow of health workers from poorer developing to wealthier developed nations, where it is now recognized that stopping the flow is unlikely to occur or even to work, the resolution to the medical tourism/health equity problematic will not lie in efforts to prevent medical travelers from seeking out of country, or necessarily to stem the growth of facilities that cater to them. The issue is one of how the private gains arising from medical tourism can be used to subsidize expansion of public health systems accessible to, and meeting the needs of, poorer populations within destination countries.

While national challenges for such management are daunting enough, the harder task will be how medical tourism as an industry might be regulated on a global scale. This difficulty differs little from the (now) decades-long debate over how the globalization of economic enterprises (whether actively or passively promoted by nation states) can be managed for a social purpose in the absence of global government. There is no supranational legislative body that exists independently of nation states; even the enforcement mechanisms associated with trade treaties often cited as the paramount example of global 'hard law' is a multilateral system of governance, not a representative, law-making system directly accountable to a global constituency. Much is made, instead, of the prospect for global governance, generally, and global governance for health, specifically (Fidler, 2003; Lee et al., 2002), in which a constellation of both state and non-state actors engage

in negotiations to create agreements towards defined goals. The Framework Convention on Tobacco Control is an example of ‘global governance for health’ and has been described as the first global public health treaty, albeit one without enforcement measures for those states who fail to abide by its protocols (Lencucha et al., 2010). Framework conventions could offer one approach to global management of the medical tourism industry, insofar as it could identify certain national ‘best practice’ policies that sustained or improved equitable health access in countries engaged in, or planning to develop, medical tourism. A voluntary code of conduct with a reporting requirement administered through the World Health Organization is another, lower level and perhaps less sovereignty-threatening global policy option. But even gaining World Health Assembly agreement to begin the process of developing such a code would require some recognition by the governments of countries presently keen to build and promote this global industry of the health equity concerns it creates.

Whether pursued at a national, regional or international (global) scale, policies aimed at regulating the medical tourism industry are unlikely to find political traction, especially in countries actively pursuing its growth, without more detailed research on the health equity implications and mobilized public health constituencies within those countries prepared to use such evidence in an advocacy campaign.

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Résumé

Patients sans frontières: Etude sur le tourisme médical dans quatre pays

La présente étude exploratoire analyse l'expérience de touristes médicaux qui, désireux de bénéficier de soins à l'étranger, se sont rendus en Inde, en Chine, en Jordanie et aux Emirats Arabes. Elle vise à identifier les pays d'origine de ces touristes médicaux pour comprendre les raisons qui les ont poussés à partir à l'étranger pour se faire soigner, déterminer le type de prestations qu'ils ont obtenues et évaluer leur degré de satisfaction vis-à-vis de cette expérience. Le coût, la réputation des médecins et de l'établissement de soins tout comme les accréditations dont bénéficient les hôpitaux figurent au premier rang des facteurs influençant le choix de soins à l'étranger. Les temps d'attente dans le pays d'origine ou le manque d'accès aux soins ont constitué d'importantes motivations dans l'entreprise de voyages médicaux.

L'évaluation des résultats des traitements répond à des critères aussi stricts que ceux des évaluations effectuées dans les établissements de pays à revenu élevé. Certains types de traitement recherchés par les répondants (à savoir, les greffes d'organes) soulèvent des questions éthiques spécifiques. Autre préoccupation: l'incapacité des systèmes de santé en place dans l'ensemble des quatre pays à répondre aux besoins de leur population (notamment des groupes plus défavorisés) en matière de soins de santé. Des constats et déductions logiques ont laissé fortement entendre que l'accès des populations plus pauvres aux soins de santé se détériorera dans ces pays à mesure que le tourisme médical se développera, du moins à court terme. Cette situation pose des défis éthiques et politiques généraux sur la question de savoir dans quelle mesure l'accès des personnes plus défavorisées aux soins de santé élémentaires est compromise par le financement public ou la promotion du tourisme médical.

Resumen

Los pacientes más allá de las fronteras: Un estudio de turistas médicos en cuatro países

Este estudio preliminar evalúa las experiencias de los turistas médicos a la hora de buscar, fuera de su país, asistencia sanitaria en cuatro países de destino: India, China, Jordania y los Emiratos Árabes. Su objetivo es identificar los países de origen de los turistas médicos para entender sus razones a la hora de buscar asistencia fuera del país, así como el tipo de servicios que obtuvieron, y su nivel de satisfacción con la experiencia. El coste, la reputación del médico y el centro además de las referencias del hospital fueron los factores más importantes a la hora de elegir asistencia fuera del país. El tiempo de espera en casa o la escasez de acceso a la asistencia médica fueron motivos importantes para realizar el viaje de carácter médico internacional. La evaluación del paciente sobre los resultados del tratamiento es tan positiva como la que podría obtenerse de evaluaciones similares en centros de países con mayores ingresos económicos. Ciertas formas de tratamiento demandadas por los entrevistados (ej. trasplante de órganos) han planteado preocupaciones éticas concretas. También es preocupante el hecho de que los actuales sistemas de salud de los cuatro países no satisficían, de forma adecuada, las necesidades de salud de su población (particularmente la de los grupos con menos recursos económicos). La evidencia y la deducción, firmemente, sugieren que el acceso a la asistencia sanitaria para grupos con menos recursos económicos empeorará en estos países al mismo tiempo que se incrementa el turismo médico, al menos, a corto plazo, provocando cambios genéricos éticos y de política sobre el alcance del acceso a la asistencia sanitaria básica por personas más pobres que se ve comprometido por la subvención pública o la promoción del turismo médico.

Biographical notes

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