
Medical Tourism's Impact on Health Care Equity and Access in Low- and Middle-Income Countries: Making the Case for Regulation

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Travelling internationally to acquire medical treatments otherwise unavailable or inaccessible in one's home country is not a novel concept. Conventionally, such medical travel largely entailed patients from developed countries or wealthy patients from the developing world seeking care in Western facilities like the Mayo Clinic in the U.S. and myriad private clinics along Harley Street in London, England.¹ What is different about the topical phenomenon known as "medical tourism" is the growing trend of health services export in the opposite direction. The number of patients travelling from the developed world to low- and middle-income countries (LMICs) for treatments has ballooned in recent years, primarily driven by difficulties with accessing affordable care at home.² According to a liberal estimate by the Deloitte Center for Health Solutions, the number of Americans travelling abroad for care rose from 750,000 in 2007 to 1.6 million in 2012.³ On the flip side, Thailand reportedly treated a total of 1.3 million foreign nationals in 2007, which represented a 16% leap from 2001.⁴ The volume of medical tourists visiting India approximated 150,000 in 2005, and was expected to continue expanding by 15% per year.⁵ In Malaysia, between 2004 and 2008, the number of patients from overseas grew by 21.4% annually from around 174,000 to 374,000.⁶

As the medical tourism industry expands, scholars have begun to contemplate its potential implications for health care systems in LMICs. On the one hand, there is much hype about the potential for medi-

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cal tourism to instigate health system and economic improvements in destination countries. Milica Bookman and Karla Bookman, for instance, posit: “Medical tourism is first and foremost related to economic growth. Not only does it bring in foreign currency but it also has linkages throughout both the health and the tourism industries. By way of the multiplier, medical tourism spills into secondary and tertiary sectors, producing cyclical waves of expansion.”⁷ In other words, by treating foreign patients on a private for-profit basis as well as by attracting foreign investments in the burgeoning medical tourism sector, health care systems in LMICs could stand to benefit directly from this fresh revenue. Moreover, since medical tourism is expected to stimulate development in tourism, hospitality, infrastructure and related industries, such economic growth could trickle down and enrich the health care sector in due course. In theory, LMICs could devote these new resources to upgrade health care facilities, improve the standard of care, create new training opportunities for medical practitioners, and foster favourable working conditions to counter the brain drain of health professionals to the developed world.⁸

On the other hand, some observers have raised concerns about medical tourism potentially worsening the accessibility of health care for citizens of LMICs. The expansion of medical tourism, they argue, diverts resources from basic health and social services depended upon by the majority of the local populations to secondary and tertiary care demanded by foreign patients, thus distorting health spending in LMICs.⁹ These critics contend that a successful medical tourism industry is likely to compete with the domestic health care regime for the limited number of health professionals available and therefore contribute to internal brain drain.¹⁰ The increased demand due to influx of medical tourists could also elevate the costs of health care and price out local patients, especially the poor.¹¹ Unlike proponents of medical tourism, these commentators are less optimistic about the prospect of revenues generated from medical tourism cross-subsidizing the public health care system. Instead, they fear that proceeds are reinvested back into the medical tourism industry to support its continuing growth and to satisfy its investors’ profit-making objectives.¹² Ultimately, as suggested by Laura Hopkins and colleagues, “the prime beneficiaries are limited to medical tourists and the enterprises that provide services. The global entrenchment of two-tiered health care following medical tourism poses the broader and larger ethical health equity concern.”¹³

Despite these disagreements, there appears to be consensus among academics that current understand-

ing about medical tourism and its effects on LMICs largely derives from “theory, assumption or conjecture.”¹⁴ Our objective in this paper is therefore to survey existing evidence regarding the impact of medical tourism on low- and middle-income destination countries. It is not until very recently that researchers have begun a concerted effort to approach the discourse on medical tourism from an evidence-based perspective. For instance, Glenn Cohen poses six questions that he argues must be empirically answered by researchers who seek to establish the adverse impact of medical tourism on health care access in LMICs, particularly for the poor, namely: (1) whether health resources consumed by medical tourists would have otherwise been available to citizens of destination countries; (2) whether the medical tourism industry lures away health providers who served local populations exclusively; (3) the degree to which the supply of health care resources in destination countries can be expanded to meet increasing demand from both local patients and medical tourists; (4) how successful medical tourism is in countering the emigration of LMICs’ health professionals; (5) how medical tourism’s positive and negative spillover effects on LMICs’ public health care systems balance against each other; and (6) the likelihood of economic gains from medical tourism to trickle down in destination societies.¹⁵

Without wishing to engage in a comprehensive evaluation of his proposed research agenda, we argue that there is an *a priori* bias embedded in how Cohen (and other commentators) has framed the problématique of medical tourism. As Cohen explains, his analytical framework is premised on the principle that “where there are willing providers of services...and willing consumers...pursuing an ordinarily morally unproblematic activity (providing medical services) involving voluntary transactions, the proponents of introducing new regulatory interventions should come forward with evidence showing a need to act.”¹⁶ In other words, the burden appears to rest on opponents of medical tourism to prove its negative consequences on LMICs’ health care access before regulatory actions may be considered. In contrast, we argue in this paper that the evidentiary burden should be reversed. We contend that even when access to health care in LMICs is not adversely affected by medical tourism, there are still equity-related concerns that in and of themselves render medical tourism normatively problematic. As we discuss further below, this inequity can (and often does) arise, for example, when access to primary and preventive health services for the general LMIC populations maintains the inadequate *status quo* while medical tourists from well-resourced developed countries are afforded cutting-edge secondary and tertiary

care. If equity is considered a relevant goal for health care systems and one accepts our conclusion that medical tourism in LMICs will likely have deleterious equity impacts, then the burden should be borne by medical tourism's proponents to demonstrate its benefits on health care access and to justify why some degree of government regulation is inappropriate.

That said, Cohen's six questions are very helpful in teasing out the key points of contention in the current debate over medical tourism's implications for LMICs. We will therefore refer to them in a general manner in

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this paper to structure our review of evidence regarding medical tourism's impact, while adopting a different approach to the burden of proof as described. Although our focus is on LMICs, we will examine relevant evidence from both developed and developing countries in order to augment our analyses in situations where evidence from LMICs is unavailable or incomplete. Ultimately, we suggest that there is some empirical support for concerns about medical tourism in its current form — supported by hefty public subsidies and yet subjected to little government oversight — engendering unequal treatments between foreign and local patients in destination countries and, to some degree, adversely affecting health care access for LMIC residents. We conclude that government regulation and/or intervention is necessary to redirect the ongoing expansion of medical tourism from its detrimental trajectory and that, to the extent possible, governments of developed countries should put in place policies to limit the attractiveness of medical tourism for their own citizens.

II. Increased Competition for Health Care Resources

One of the main worries that underpin objections to medical tourism is that foreign patients would compete with residents of LMICs for finite health care resources. For example, according to the World Health Organization (WHO), there were 3 physicians per 10,000 population in Thailand in 2010, falling considerably short of the global average of 14 physicians per 10,000.¹⁷ Although the country produced approximately 1,300 new doctors each year based on

2009 data,¹⁸ this number was just sufficient to meet the annual increase in health care demand due to population growth and the influx of foreign patients.¹⁹ As such, medical tourists potentially compete with local patients for newly trained physicians who could have otherwise been devoted to closing Thailand's physician deficit.

Further intensifying this competition, it has been observed that medical tourists do not merely displace resources otherwise available to domestic patients on a one-to-one ratio. In order to compete for international patrons, hospitals in destination countries commonly offer perquisites that go beyond the requirements of the usual standard of care, such as personalized nursing services, ready access to medical specialists, and hotel-style room accommodation.²⁰ By one estimate, the amount of resources used to treat one foreign patient in Thailand is roughly the same as what is generally needed to care for four to five local residents.²¹ Thus,

the presence of even a small number of medical tourists could nevertheless make a notable dent in health care resources for LMIC residents. Admittedly, it is possible that some of these health resources may derive from fresh private investments that would not have been available to LMIC patients in any event. However, as we will elaborate below, LMIC governments have at times reduced health care spending following increases in private expenditure, thus leaving the countries' overall health resources relatively unchanged. Under these circumstances, allocation of greater resources to medical tourists arguably must mean fewer resources for local residents. Moreover, as alluded to above, the level of care and quality of facilities enjoyed by foreign patients but not available to most of their local counterparts raises additional equity concerns.

Aside from diminishing the aggregate health resources available to local patients, medical tourism could also cause the uneven distribution of health resources within LMICs' health systems. As Nathan Cortez remarks, "As mobile as patients have become, they do not travel to all countries for all procedures. Patients generally receive preventative and emergency care where they live..."²² Therefore, health services sought by medical tourists are usually elective procedures that are either not covered by insurance or have a long waiting list at home, and in which destination countries enjoy a relative cost advantage.²³ As examples, treatments most commonly obtained by medical tourists in Thailand include heart operations, cosmetic surgery, dental work, cataract removal and bone-related procedures,²⁴ whereas foreign patients

to India frequently undergo, *inter alia*, hip and knee replacement, bone marrow transplant, coronary bypasses, cataract surgery, *in vitro* fertilization and plastic surgery.²⁵ Enticed by a higher profit margin associated with caring for foreign patients, health providers and private investors in destination countries may redirect their attention to these medical (sub)specialties, thus further depriving other essential fields of medicine in LMICs of resources.²⁶

Specifically, concerns are raised that technology-intensive secondary and tertiary care sought by medical tourists are favoured over primary and preventive services needed by local residents, particularly the poor.²⁷ In India, for instance, alongside a robust medical tourism industry that boasts the capacity to perform some of the most advanced surgeries in the world, tuberculosis and diarrhoeal diseases together continue to claim the lives of over one million people each year.²⁸ If health personnel and clinical resources are increasingly diverted to serving medical tourists, the ability for India to develop a functional public health care system that would ensure all citizens' access to at least basic health services may become ever more limited, and the gross disparities in access between rich and poor even more accentuated.

Similarly, according to 2005–2006 data from Thailand's Ministry of Public Health, approximately one-third of the country's computed tomography (CT) scanners and two-thirds of its magnetic resonance imaging (MRI) machines were located in Bangkok, which is a popular destination among medical tourists. Private health facilities reportedly imported a large majority of these machines specifically to support the government's vision of transforming Thailand into a medical hub in Asia.²⁹ In fact, one commentator asserts that the number of Gamma Knife machines, CT scanners and mammography equipment available in private institutions in Bangkok alone is greater than that available in all of England.³⁰ This high concentration of medical technologies within the private sector in one city raises serious doubts about health resources being spent in a manner that is aligned with priorities of Thailand's general population. Furthermore, it implies that a significant number of health technicians required to operate these machines would become less available, if at all, to work in the public health care system.

The growing emphasis on high-tech medical equipments could have an added effect of contributing to rising health care costs. A field study conducted by Rohit Varman and Ram Manohar Vikas found that the spread of specialized facilities and technologies in India has created an incentive for health providers to aggressively promote the usage of these equipments

in order to recover their capital investments. Such provider-generated utilization ultimately drives up the total health care outlays.³¹ In the same vein, the Health Minister of Malaysia chastised the country's private health sector in 2007 for allegedly “charging [patients] excessively and conducting unnecessary medical tests and consultations.”³² As the price of treatment escalates, which we will discuss in more detail later, local patients face increasing risk of being “crowded out” of the health care market, with the poor bearing the brunt of the effects.

In sum, as it has been predicted by some scholars, a “dual medical system” appears to emerge in LMICs where “specialization in cardiology, ophthalmology, and plastic surgery serves the foreign and wealthy domestic patients while the local populations lack basics such as sanitation, clean water, and regular deworming.”³³ Such inequalities between foreign and local patients per se raise significant concerns about the promotion of medical tourism in LMICs. Moreover, due to direct competition for finite resources and indirect mechanisms — namely, distortion of health resources allocation as well as elevation of treatment costs — we argue that a jump in health care consumption resulting from increased foreign patients is likely to further reduce the level of health services available to LMIC residents.

III. Exacerbation of Internal Brain Drain

Among the types of health care resources that are at risk of being “captured” by medical tourists at the expense of patients in destination countries, the loss of human resources has caused particular concern, in part because of the severe health personnel shortages already facing LMICs. As discussed above, medical tourism likely diverts medical personnel into niche specialties demanded by foreign patients. Beyond this, however, since medical tourism in many destination countries is accompanied by an expansion of private health care, particularly in urban regions, the continuing growth of the industry raises the prospect of medical personnel moving from the public system into the private sector and from rural regions into urban centers, a phenomenon commonly referred to as “internal brain drain.”

Medical tourism in many destination countries largely operates within a growing private health sector.³⁴ In Thailand, for example, four private hospital chains — namely, Bumrungrad, Bangkok, Thonburi, and Phyathai — have led the efforts in courting international clients.³⁵ Likewise, in India, the medical tourism market is dominated by the private Apollo and Wockhardt hospital groups.³⁶ Such overlaps between the medical tourism industry and the private health

care sector are apparently not accidental. According to Leigh Turner, following the Asian financial crisis in late 1990s that sharply reduced the purchasing power of local families, private hospitals in Thailand began setting their sights on foreign patients to offset decline in domestic demands.³⁷ Malaysia's medical tourism industry has a similar origin.³⁸ As such, a notable correlation exists between the development of the private health care sector in LMICs during recent decades and the growing prominence of medical tourism.³⁹

In order to support its continual expansion, evidence suggest that the private health industry is actively luring medical practitioners from the public health sector by promising them higher remuneration and lighter workloads.⁴⁰ In Thailand, salaries of medical doctors in private hospitals are reportedly between six and eleven times greater than what are offered by public institutions.⁴¹ Absent any regulations, such a significant income disparity is likely to divert public sector health workers into private establishments that are increasingly catering to foreign patients, thus affecting the accessibility of health care for local populations, especially the poor.⁴² To the degree that privatization of health care in countries like Thailand, Malaysia and India is predominantly occurring in urban areas, the problem of internal brain drain may be accentuated by an uneven geographical distribution of health care human resources, leaving patients who rely on public facilities in rural regions most severely disadvantaged.⁴³

Data from Thailand over the last decade arguably reinforces the fear that a bustling private health sector, fuelled in part by a growing medical tourism industry, may lead to internal brain drain. According to Thailand's Ministry of Public Health, since 2000 there has been an accelerated attrition of public sector physicians relative to almost constant medical school output. Whereas there was a loss of 41 public physicians versus 893 new medical school graduates in 2000, the same statistics were 294 and 913 respectively in 2002.⁴⁴ A news report further claims that in 2005, despite the government having managed to boost the number of newly trained doctors to 1,300, the public system also saw the outflow of physicians rising to almost 700 in that year.⁴⁵ Other sources, however, have presented figures that are more modest instead, indicating that over 350 doctors resigned from their public sector posts in the fiscal year of 2004/2005,⁴⁶ followed by another 300-plus doctors in the next year.⁴⁷ Notwithstanding the discrepancies in the empirical evidence, many agree that public health care facilities in Thailand have been incurring substantial losses in human resources on a persistent basis. Malaysia has

also incurred a similar downward trend in the number of public sector health professionals.⁴⁸

Although numerous reasons may potentially underlie medical practitioners' exit from the public health system — for example, as we discuss below, some doctors may emigrate for work opportunities abroad — there are indications that many of them in medical tourist destinations do so in order to take up positions in private medical facilities, which commonly service foreign patients. For example, a report by Bangkok's Chulalongkorn Hospital documented that 70 of the institution's medical specialists left between 2005 and 2010 to work at private hospitals that serve foreign patients.⁴⁹ In addition, private sector competition reportedly caused nearly 6,000 vacancies for medical practitioners across Thailand's public health care system to go unfilled in 2005.⁵⁰ In her 2008 interview with staff at a public infertility clinic in Bangkok, Andrea Whittaker was similarly informed that public medical institutions faced much difficulty attracting specialist nurses and laboratory technicians because private clinics and hospitals were offering more lucrative salaries.⁵¹ In contrast to these staffing challenges in the public sector, the number of medical doctors working in Thailand's private hospitals grew by 29.6% from 3,325 to 4,309 between 1997 and 2006.⁵² Chee Heng Leng observed a comparable public-to-private flow of health professionals in Malaysia.⁵³

To add another layer of complexity to the issue of internal brain drain, commentators have pointed out that medical practitioners who have moved from the public to the private sector tend to be those with the most experience.⁵⁴ For instance, the approximately 700 Thai doctors mentioned above who resigned from their public sector positions in the fiscal years of 2004/2005 and 2005/2006 are said to mainly consist of top specialists at medical school-affiliated teaching hospitals.⁵⁵ This observation largely corresponds to what John Connell describes as "foreign preferences for experienced and skilled doctors,"⁵⁶ and what was uncovered by the Israeli newspaper *Haaretz* in 2010, namely that medical tourists visiting Israel were either allowed to select their desired surgeons or guaranteed to be treated by senior members of the medical staff.⁵⁷ This targeted brain drain of highly skilled practitioners from the public system has human resource implications beyond the immediate loss of manpower. On the one hand, insofar as it could take years of on-the-job training for medical specialists to develop the necessary skills, the loss of experienced doctors threatens to create a qualitative deficit in the public health care sector that new medical school graduates cannot immediately replenish.⁵⁸ On the other hand, for countries like Thailand where medical education remains

largely a responsibility of the public system, the departure of top specialists that often serve as teaching staff at medical schools may adversely affect their capacity to produce new doctors.⁵⁹

Moreover, pursuant to neoclassical economic theory, intense competition between the public and private health facilities for a finite supply of skilled medical practitioners will generally exert upward pressure on the costs of health care human resources.⁶⁰ Citing India's software engineering industry as a cautionary

destination countries appear to have increased notably. According to calculations based on government data, the inflation-adjusted cost of each hospitalization in urban India, which receives the majority of medical tourists visiting the country, escalated by 9% in public facilities and 36.5% in private institutions between 1995 and 2004.⁶³ A study that tracks the average costs of five surgical procedures performed in Thailand's private hospitals, having minimized price variations relating to pharmaceuticals, shows continual price

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tale, where inflows of foreign investment bid up the salaries of software engineers that were in short supply, Thomas Maclean predicts that health services export would likewise inflate the outlays for health personnel in India.⁶¹ Anecdotes from Thailand somewhat corroborate this projection of a system-wide wage escalation. In an attempt to compete with the higher salaries offered by the private industry and to counter the internal brain drain, in 2008 and 2009, Thailand's Ministry of Public Health significantly increased the remunerations for health professionals in the public sector, including nearly doubling the income of physicians. This has caused observers to conclude that "the competing demand for health-care staff generated by medical tourism will more than likely lead the Thai government to increase its budget for public health-care services — especially to cover physicians' incomes — at a higher and faster rate than in the absence of medical tourism."⁶² Unless economic growth sustains a concomitant increase in public health care spending, price inflation is likely to curtail the provision of public health care services (as price and output are inversely related when the total health care spending is held constant). This is likely to have negative effects on overall resource allocation, particularly as it pertains to the most vulnerable.

Exacerbated by the cost pressure resulting from the aforementioned shift towards technology-based medicine, the overall prices of health care in some des-

escalation between 2003 and 2008, with the annual price increase as high as 10–25% in most hospitals between 2006 and 2008.⁶⁴ With costs of treatment trending upward, signs point to a growing prospect of patients in destination countries being priced out of the domestic health care market.⁶⁵ In Singapore — itself a popular medical tourist destination — rising health care charges have led the government to actively encourage citizens to seek more affordable services in neighbouring Malaysia.⁶⁶

Overall, available evidence from destination countries appears to demonstrate that an expanding private health care sector is diverting skilled professionals away from the public system with concomitant effects of raising the costs of medical care and diminishing service access for local patients. Insofar as medical tourism is complicit in the development of the private health care industry in recent years, it arguably is at least partially responsible for exacerbating these health system challenges.

IV. Elasticity of Health Resources Supply in Destination Countries?

Theoretically, LMICs could mitigate the competition between medical tourists and local patients and the problems associated with internal brain drain through boosting the supply of health care resources. In fact, proponents of medical tourism argue that the success of the industry itself could enlarge the pool of

health resources available to destination countries by stimulating fresh investment, both domestic and foreign, in the health sector.⁶⁷ With this influx of private capital, public resources could theoretically be freed to focus on delivering health services to individuals who are most in need.⁶⁸ To date, however, this purported benefit has seldom been realized, as most LMICs lack robust policies to ensure government resources are appropriately reallocated to engender greater health equity.⁶⁹ In India, for example, while the amount of private investment in the health sector soars,⁷⁰ health-related spending as a proportion of overall government expenditure has declined since the mid-1980s from 3.29% to 2.77% in 2005.⁷¹ Within this dwindling health budget, the amount allocated to public health initiatives (e.g., trachoma and blindness control, infectious diseases prevention, etc.) has decreased disproportionately.⁷² As such, instead of expanding health resources available to local patients, particularly the poor, increased private investment in India appears to have simply allowed the government to retreat from the health sector.

In addition to waiting for medical tourism itself to induce health resource expansion, destination countries have actively pursued policies aimed at expanding their human resource pool in particular. Nonetheless, many of these strategies are problematic and have hitherto yielded mixed results. Aiming at more immediate effects, for instance, countries in Southeast Asia have sought to acquire health workers from international sources. While such attempts have reportedly been quite successful in Singapore, they have been abysmal in Thailand, with fewer than ten foreign-trained doctors having received licenses to practice in the country since 1986.⁷³ In Malaysia, although the government has managed to attract a sizable number of medical professionals from overseas, the country apparently sees an even greater number emigrating abroad.⁷⁴ Therefore, the prospect of success associated with this type of tactics appears uncertain. Even more importantly, policies as such induce brain drain on an international scale and raise global equity concerns. For labor-sending nations, not only is their capacity to deliver health care to their citizens inevitably weakened, but they are also effectively subsidizing receiving countries' costs of health personnel training.⁷⁵

Another short-term method to enhance the health care capacity of destination countries is to stretch the existing human resource supply to the extent possible. In Thailand, after noting that an extra 10% of physicians than currently available would be required to satisfy the increased demand from foreign patients by 2015, a group of researchers suggested that this

extra demand be met by way of financially incentivizing doctors to work overtime.⁷⁶ Similarly, a committee created by the Israeli Health Ministry in 2010 to study ways of regulating medical tourism in the country recommended that international patients be treated in public hospitals only outside of regular service hours.⁷⁷ Both proposals expected health providers to serve medical tourists *in addition to*, rather than *in place of*, caring for their existing domestic patients. However, besides concerns about an increased workload potentially compromising quality of care, we query the extent to which it is possible to create excess capacity through stretching an already over-extended health system in LMICs. Even in a developed country like Israel, it has been reported that hospitals are already providing afterhours services to local patients to alleviate the pressure of wait times.⁷⁸ Therefore, it is difficult to see how any more overtime resources could be made available to foreign clients based on the current number of health personnel. Furthermore, the success of such a strategy would largely depend on destination countries having a sophisticated regulatory and monitoring system that ensures health practitioners who treat medical tourists also fulfill their duties to public sector patients.

A longer term approach to address human resource constraints in LMICs is to increase the rate of admissions to health professional schools, a policy recently implemented by Thailand.⁷⁹ Between 2005 and 2014, a total of 10,678 extra spots will be created in medical schools across the country.⁸⁰ Nevertheless, this strategy is expensive and therefore not always feasible for other LMICs. In Thailand, where medical training is heavily subsidized, it cost the government roughly US\$45,000 to produce one physician according to 2002 data.⁸¹ Based on this figure, Thailand's latest attempt to expand its medical school output would cost over US\$480 million. Moreover, based on past experiences, a country's effort to increase medical school enrolments tends to have limited effects on actually improving health care access in areas where human resource shortages are the most severe.⁸² Therefore, in the medical tourism context, enlarging the supply of health providers in LMICs may simply feed ever-expanding demand from foreign patients rather than reducing human resource deficits faced by local residents. Of course, LMICs could adopt policies and regulations to recapture public investments in human resources (e.g., requiring physicians who receive public subsidies for training to be bonded to the public system for a certain period of time, increased tuition costs for physicians who plan to practice privately, etc.). However, the implementation of these kinds of

measures requires robust governance structures often lacking in LMICs.

Thus, based on available evidence, neither increased private investment in the health sector nor government strategies to raise the supply of health professionals appear capable of satisfactorily neutralizing the diminishing effects of medical tourism on LMICs' health resources. Without a robust and carefully tailored regulatory framework that channels any expanded capacity in LMICs' health care systems to

and Australia, which represents a loss of US\$1.4 billion in education-related investment.⁸⁷

Commentators like Devon Herrick claim that a successful medical tourism industry would counter the migration of health practitioners from LMICs to developed countries by creating "[m]ore opportunities to work, higher pay and entrepreneurial opportunities in developing countries..."⁸⁸ Indeed, preliminary data confirms that medical tourism reduces the outmigration of LMICs' health workers. A 2007 report from the

Based on available evidence, neither increased private investment in the health sector nor government strategies to raise the supply of health professionals appear capable of satisfactorily neutralizing the diminishing effects of medical tourism on LMICs' health resources. Without a robust and carefully tailored regulatory framework that channels any expanded capacity in LMICs' health care systems to pre-existing areas of shortages, the distribution of these newfound health resources may continue to skew in favour of medical tourists, and leave the emaciated supply of health services *vis-à-vis* local residents, particularly the poor, largely unimproved.

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V. Medical Tourism as a Solution to External Brain Drain?

In order to translate increased production of health professionals into actual expansion in health service capacity, LMICs must also stem the outflow of their health workers. Driven by the prospect of professional development, greater financial rewards, better working conditions and more appealing socio-political environments, medical personnel in many medical tourist destinations have long pursued career opportunities abroad.⁸³ Between 1960 and 1975, Thailand lost approximately 25% of its physicians to the U.S. alone;⁸⁴ and, an estimate in 2006 suggested that there were nearly 60,000 Indian physicians practicing in the U.S., U.K., Canada and Australia, a number equivalent to 10% of doctors registered in India.⁸⁵ Such international brain drain has significant financial implications for labour-sending countries. According to a 2011 study, South Africa – another prominent medical tourist destination known especially for offering affordable cosmetic surgeries⁸⁶ – has approximately 11,000 of its doctors working in the U.S., U.K., Canada

UN Economic and Social Commission for Asia and the Pacific observes that a majority of the 600 health professionals employed at Bangkok's Bumrungrad International Hospital are Thais who have returned from the U.S.⁸⁹ In India, the Apollo hospital group claims to have hired 138 expatriate doctors by 2008,⁹⁰ whereas the Wockhardt hospital chain has attracted another two-dozen from the U.S. and the U.K.⁹¹

However, we caution that, in terms of scale, these reported successes are comparatively small when juxtaposed with health personnel shortages facing LMICs. In Thailand, an injection of 600 new doctors from abroad, while important, would represent an increase of less than 0.1 physician per 10,000 population,⁹² and hardly closes the gap between the existing physician density of 3 per 10,000 population and the world average of 14 per 10,000. Likewise, the number of expatriate doctors working in Apollo and Wockhardt hospitals falls far short of the 600,000 more physicians that India requires,⁹³ and it equates only to 10% of the amount of Indian-trained physicians that enter the licensing process in the U.S. annually.⁹⁴

Even assuming that medical tourism actually causes a sizable number of expatriate health workers to return, there remains the concern of how these extra human resources are distributed within LMICs. To the degree that services at private urban hospitals like Bumrungrad, Apollo and Wockhardt are priced

beyond the reach of most domestic patients and largely cater to medical tourists,⁹⁵ the fact that expatriate health professionals have returned to work in these facilities arguably does not off-set concerns regarding the adverse equity and access effects of medical tourism. In other words, potential benefits to LMIC health systems resulting from medical tourism's success in

petition between the public and private health sectors. Rather, as aforementioned, the overemphasis on medical technologies and the pressure to vie for skilled health practitioners appear to have distorted health care supply and demand, and pushed up the prices of treatments in some medical tourist destinations. Thus, medical tourism-induced inter-sectoral compe-

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curbing external brain drain may be cancelled out by its simultaneous exacerbation of internal brain drain. Therefore, as noted by Manuel Dayrit, Director of the WHO's Human Resources for Health Department, "it does not augur well for the health care of patients who depend largely on the public sector for their services as the end result does not contribute to the retention of well-qualified professionals in the public sector services."⁹⁶

Admittedly, even if practicing mainly in the private sector, there remains the possibility that knowledge and skills acquired by returning expatriate health workers from abroad, or extra tax revenues associated with their incomes, could accrue to the public health care system through spillovers or trickle-down economics, thus indirectly benefiting the entire patient population. Nevertheless, we must carefully weigh such positive effects, if any, against the burdens of medical tourism on LMICs' health resources.

VI. What about Positive Health Care Spillovers?

Proponents of medical tourism argue that gains enjoyed by the private sector will spillover into the public health care system in destination countries in at least four ways, and ultimately benefit local residents at large.

First, some commentators posit that the medical tourism industry — often boasting internationally accredited facilities, state-of-the-art technologies, and practitioners with credentials from developed countries — may "drive public hospitals to invest in their own medical infrastructure and possibly revitalize weak health-care systems."⁹⁷ However, during the course of our research, we did not uncover empirical data that clearly demonstrates such constructive com-

petition may well increase health care outlays without necessarily upgrading health service quality.

Second, arguments have been made that private health care establishments profiting from medical tourism could share their facilities and human resources with the public sector at a discounted rate, and thereby enable a larger segment of the local population to benefit from a higher standard of care. In some cases, the medical tourism industry has undertaken such cross-subsidization of its own accord. Both Bumrungrad and Apollo hospitals offer charitable cardiac treatments to low-income children, and the Wockhardt hospital group operates a mobile eye clinic and deworming camps for underprivileged Indians.⁹⁸ Nonetheless, since these initiatives are never formally evaluated, little is known about their cost-effectiveness.⁹⁹ Moreover, as these programs are philanthropic in nature, their scope and length are solely determined by private donors, sometimes based on considerations that are independent of the programs' efficacy. There is also room for debate regarding whether these initiatives represent an efficient allocation of a society's resources *vis-à-vis* health priorities since they may selectively target patients whose circumstances have a higher profile or are media-friendly.

Destination country governments sometimes mandate this sharing of health resources between private and public sectors through public-private partnership arrangements. Even in this context, however, any increase in local residents' access to private sector resources may remain trivial. In 1988, the municipal government of Delhi, India entered into an agreement with the Apollo hospital group to jointly develop a multispecialty medical centre. While the government provided land and portions of the start-up capital amounting to nearly US\$8 million, it tasked Apollo

with operating the medical centre and ensuring that one-third of the inpatient and 40% of the outpatient capacity would be available at no cost to low-income patients referred from public hospitals. Nevertheless, in 2003, a committee assembled by High Court of Delhi revealed that Apollo's undertakings were mostly honored in the breach:

- less than 19% of the hospital's beds (and only 10% of the beds in the intensive care unit) were allocated to public patients;
- of all outpatient services provided in 2002/2003, a meager 0.0015% was to public patients;
- instead of free care, public patients were billed for costs relating to diagnostic imaging, medical consumables and pharmaceuticals; and,
- facilities designated for public patients were qualitatively inferior to those enjoyed by private patients.¹⁰⁰

Although Apollo's disregard for its contractual obligations was ultimately condemned by the High Court of Delhi as having violated indigent patients' right to health,¹⁰¹ similar practices are apparently common within India's private health sector and often occur with legal and political impunity. A study in early 1990s found that among 27 private health facilities that had agreed to offer free services to low-income patients in exchange for government subsidies, a majority failed to fulfil their promises.¹⁰² Another study by India's Public Accounts Committee in 2005 reached similar conclusions.¹⁰³ Commentators observe that public officials generally turn a blind eye on these contractual breaches as they are frequently offered free treatments at these public-private partnership hospitals.¹⁰⁴ Thus, as described by the Public Accounts Committee, "what...started [as] a grand idea of benefiting the poor turned out to be a hunting ground for the rich in the garb of public charitable institutions."¹⁰⁵

A third claim is that governments could allocate portions of the medical tourism industry's revenues to subsidize the public system by way of, for example, an industry-specific levy. In comparison to cross-subsidization initiated by private hospitals, government-led strategies like this could better ensure that private resources are utilized in accordance with identified health priorities. Nevertheless, as Chantal Blouin notes, there is no indication to date that any destination countries have adopted this type of resource transfer mechanisms.¹⁰⁶ Some scholars have gone further to suggest that such cross-subsidization is not currently feasible in many LMICs that lack the rigorous government regulations needed to enforce inter-

sectoral resource sharing.¹⁰⁷ Thus, this kind of solution requires further thought and encouragement; although it potentially provides a way forward, it cannot be assumed to be a panacea given governance, regulatory and enforcement challenges.

Indeed, instead of imposing an industry-specific levy to better ensure the benefits from medical tourism are translated to public patients, destination countries seem to be increasingly offering substantial subsidies to the medical tourism industry in an attempt to maintain a competitive edge globally. In India, hospitals serving foreign patients enjoy corporate tax concessions, reduced tariffs on imported medical equipment, and financial assistance with marketing expenses;¹⁰⁸ and, the drain of publicly trained physicians into the private sector represents another government subsidy estimated to total over US\$100 million each year.¹⁰⁹ In Malaysia, the government has proposed tax exemptions on hospital revenues resulting from services delivered to foreign patients.¹¹⁰ The United Arab Emirates, seeking to enter into the medical tourism market, is developing a health care "free zone" in which trades in health services will be completely tax-free.¹¹¹ These policies indicate that, to the extent that government-directed cross-subsidization actually occurs in destination countries, health resources have tended to flow from the public to the private sphere instead of the other way around.

A fourth possibility is that, for destination countries with a small population, medical tourism may sustain the development of certain medical specialties or sub-specialties by enlarging the demand, thus facilitating domestic patients' access to these health services. This argument has particularly underscored the promotion of medical tourism in Singapore where public officials claim, for example, that the country would not have been able to support its three living-donor liver transplant teams without foreign patients.¹¹² As such, medical tourism not only allows Singapore to retain some of its skilled medical specialists but also enables citizens to receive advanced medical procedures at home, thus keeping health care expenditures within the country. While these advantages deserve acknowledgement, they arguably do not cancel out medical tourism's adverse impact on Singaporean citizens' access to health care. As mentioned above, medical tourism has also contributed to the rising health care costs in Singapore to the point that the government is now actively encouraging citizens to seek cheaper medical services abroad. As one weighs the improved physical accessibility of some specialized treatments against the diminishing financial accessibility of health care in general, we argue that medical tourism's spillover

benefits in the Singaporean context are not as obvious as its government purports.

In sum, whether it is constructive competition, cross-subsidization or sustaining the development of medical subspecialties, available evidence largely suggests that gains made by the private health care sector through medical tourism are not yet permeating into the public sector to any significant degree. In the rare cases where there are positive spillovers, allocation of private resources within the public system is apparently influenced by favoritism rather than health care needs and priorities. This seemingly limited success of medical tourism in generating spillover benefits is particularly accentuated when juxtaposed with the sizable amounts of public resources that have been poured into cultivating, marketing and promoting the industry, which could have been devoted to improving health access for the general LMIC population instead.

VII. What about Effects of Trickle-Down Economics?

Besides positive spillovers, it is claimed that medical tourism could benefit LMICs by way of trickle-down economics. Supporters expect medical tourism to spur developments and create jobs in not only the health care sector but also related industries like tourism, hospitality, transportation and construction.¹¹³ As LMICs' overall economies expand, it is hypothesized that trade profits will diffuse throughout all segments of their societies.¹¹⁴ In terms of access to care, presumably, with improved financial status, LMIC residents may be in a better position to purchase health services that were previously out of reach. At the same time, economic growth could enlarge the tax base and stimulate government investments in the public health care system to improve its access and quality.

Indeed, medical tourism generates significant amounts of foreign currency for destination countries. Data from 2007 shows that Thailand earned up to US\$1.35 billion in profits from medical tourism, of which approximately 84% were from health service provision and the remainder from tourism-related activities.¹¹⁵ In the same year, the estimated revenues from medical tourism for Singapore and Malaysia were US\$1.2 billion and US\$78 million respectively.¹¹⁶ However, it is unclear how much of the medical tourism revenue, if at all, actually trickled down to the bottom of these countries' economic pyramids, as we have not yet come across relevant empirical data on this matter.

When we examine the experiences of the broader tourism sectors in LMICs, which have similarly been expected to generate foreign currency that would then

spread to other industries and ultimately benefit the poor, the trickle-down effect appears to have been limited. As a large percentage of businesses in LMICs' tourism industries is foreign owned, the UN Conference on Trade and Development estimates that, on average, almost half of the tourism revenues accrue to stakeholders overseas.¹¹⁷ With foreign direct investments in medical tourism on the rise,¹¹⁸ comparable profit leakages may occur and as a result significantly curtail the prospect of any trickle-down benefits. For example, a Malaysian company's recent takeover of Parkway Holdings, which was Singapore's main hospital chain and had previously merged with the second largest health care conglomerate in India, prompted observers to caution that profits from medical tourism in Singapore and India may largely end up benefiting Malaysia.¹¹⁹

In fact, research is yet to conclusively prove the validity of trickle-down economics in general. A study by Santonu Basu and Sushanta Mallick regarding the impact of economic expansion on the rate of rural poverty in India actually finds that "the trickle down effect has never taken place ...; rather, it is the government redistribution policy...that not only produced a higher growth rate but also reduced the incidence of poverty at a much faster rate."¹²⁰ Even when scholars have identified a negative correlation between the incidence of poverty and economic growth triggered by laissez-faire policy, seemingly affirming the trickle-down theory, they discover that the trickle of wealth evaporates and rarely reaches those lowest on the socioeconomic ladder.¹²¹

VIII. Conclusion

Our review of medical tourism's impact on LMICs reveals an evidentiary gap in the scholarship. To the extent that relevant evidence exists, it remains largely anecdotal rather than statistical in nature. However, based on the limited information that we have uncovered, there are signs of correlation between medical tourism and the expansion of private, technology-intensive health care in LMICs and this raises inherent equity concerns about the differential treatment between the local population and medical tourists. As such, contrary to arguments that have been advanced in literature, we contend in this paper that governments have a legitimate interest in managing the medical tourism industry in light of the likelihood of a two-tier health care regime emerging in LMICs, and that such interventions need not be premised on the discovery of incontrovertible proof of medical tourism's deleterious effect on health care access in destination countries. In fact, we argue that the burden should rest on supporters of medical

tourism to demonstrate not only its benefits but also that these benefits outweigh the negative impacts on equity, and to justify why some degree of well reasoned, carefully designed governmental regulation is inappropriate.

Based on our review of evidence, medical tourism's purported benefits — namely, reversal of external brain drain, positive health care spillovers and trickle-down economics — appear to have not yet been realized to any significant extent so as to outweigh its deleterious impact on equity, notwithstanding the devotion of substantial public resources to cultivate and promote the medical tourism industry by LMIC governments. If LMICs continue to lack robust governance and regulatory structures that will ensure medical tourism revenues are channelled to the public health care system instead of being reinvested to perpetuate the industry's growth, the prospect of attaining these claimed benefits will, in our view, remain bleak. We argue that, generally, one cannot assume that “markets” would work in the same manner in health care as they do in other sectors: the supply of medical personnel is not highly elastic and is heavily publicly-subsidized; there is information asymmetry between providers and consumers of health services; and, health insurance creates an incentive for moral hazard. Thus, assumptions about the benefits associated with the global trade of services in other sectors do not necessarily apply to the health care context.

To date, commentators have put forth a number of recommendations for governments to regulate medical tourism. Mohd Jamal Alsharif, Ronald Labonté and Zuxun Lu, for instance, have considered the possibility of managing the medical tourism industry through a global governance regime where countries engaging in medical tourism would agree to a set of “best practices” concerning equitable health access in destination countries.¹²² While such a multilateral strategy arguably requires further consensus-building among stakeholders before it may be realized, we believe international collaboration is essential for the successful regulation of medical tourism. At a minimum, we contend that sending countries, particularly those in the developed world, should implement public policies so that their citizens receive (or are required to obtain insurance for) adequate and timely health care coverage, and that health insurers are barred from sending patients to LMICs for treatment. Implementing such policies could reduce the incentive for medical tourism and hence its equity-related concerns. For example, the 2010 enactment of The Patient Protection and Affordable Care Act in the U.S. is expected to radically lower the number of Americans without health insurance and to prevent private health insur-

ers from dropping the coverage of policyholders who are ill. The scope of this legislative reform would likely decrease the impulse for Americans to travel to LMICs for more affordable care in the future.

Admittedly, even when sending countries adopt our prescription and assume responsibility for providing adequate care to their own constituents, thus throttling down some demand for medical tourism, there may still be patients who travel to LMICs for care, including individuals seeking health services that are prohibited in their countries of origin. As such, it will also be critical for sending countries to re-examine the legitimacy of laws that render illegal certain health-related activities domestically but not extraterritorially, with a view to either liberalize these prohibitions or extend their extraterritorial application. Moreover, destination countries should pursue policies that would facilitate the transfer of some of medical tourism's profits to the public health care sector as cross-subsidies. For example, it has been suggested that destination countries could levy taxes on medical tourists or mandate private providers to contribute to a health care fund, which can then be earmarked for strengthening their public health care systems.¹²³ Rory Johnston and colleagues, on the other hand, have proposed the adoption of certain “equitable buying guidelines” that aim at encouraging medical tourists to purchase services from medical facilities with a track record of contributing to health equity in LMICs.¹²⁴ Similarly, one could envision a hospital accreditation system that takes into account the extent to which a private establishment provides free or discounted health care to public patients. The success of these strategies would depend heavily on the political context of each destination country, and unfortunately, many LMICs are marred by governance and regulatory failures that have hitherto hampered the successful implementation of this kind of policies. Nevertheless, the international community should encourage and support LMICs to continue fostering these policy instruments, and hopefully as time passes, LMICs will develop the governance structures needed to ensure a reasonable portion of the fruits of medical tourism indeed flows back to improve and expand their respective public health care systems.

There is no easy or obvious regulatory solution to ameliorate the problems posed by medical tourism in LMICs. Our support for international collaboration in managing medical tourism is with the acknowledgment that there will be many barriers to achieving this goal. Although challenges exist, we think it is beholden on wealthier countries to put their shoulder-to-the-wheel and work with LMICs to head off and counter the adverse effects of medical tourism rather

than allowing the cost of their poor policy choices to be borne by the poorest of the poor.

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89. S. Tata et al., *Medical Travel in Asia and the Pacific: Challenges and Opportunities* (Bangkok: UN Economic and Social Commission for Asia and the Pacific, 2009): at 24, available at <<http://www.unescap.org/ESID/hds/lastestadd/MedicalTourismReport09.pdf>> (last visited January 30, 2013).
90. See Cortez, *supra* note 2, at 110. However, the number of expatriate doctors who have returned to work in the Apollo hospital group was said to be 123 according to Hopkins et al., *supra* note 8, at 191.
91. C. Madden, "Medical Tourism Causes Complications," *Asia Times* (Hong Kong), November 7, 2008, available at <http://www.atimes.com/atimes/Asian_Economy/JK07Dk01.html> (last visited January 30, 2013).

92. See Figures derived from data provided in Kanchanachitra et al., *supra* note 4, at 771 (Table 2).
93. See Hazarika, *supra* note 5, at 249.
94. See Hopkins et al., *supra* note 8, at 192.
95. A. Saniotis, "Changing Ethics in Medical Practice: A Thai Perspective," *Indian Journal of Medical Ethics* 4, no. 1 (2007): 24-25, at 25; R. Chinai and R. Goswami, News Article, "Medical Visas Mark Growth of Indian Medical Tourism," *Bulletin of the World Health Organization* 85, no. 3 (2007): 164-165, at 165.
96. See Chinai and Goswami, *id.*
97. See Tata et al., *supra* note 89, at 24.
98. See Connell, *supra* note 1, at 152-153.
99. See Connell, *supra* note 40, at 267.
100. *All India Lawyers Union (Delhi Unit) v. Government of N.C.T. of Delhi & Others*, (2009) WP(C) No. 5410/1997 (Delhi H.C.), at para. 20, available at <<http://www.indiankanoon.org/doc/1508125/>> (last visited January 30, 2013).
101. *Id.*, at para. 30.
102. See Tattara, *supra* note 25, at 10.
103. P. Shetty, "Medical Tourism Booms in India, but at What Cost?" *The Lancet* 376, no. 9742 (2010): 671-672, at 672.
104. G. Thomas and S. Krishnan, Editorial, "Effective Public-Private Partnership in Health Care: Apollo as a Cautionary Tale," *Indian Journal of Medical Ethics* 7, no. 1 (2010): 2-4, at 3; see Connell, *supra* note 40, at 266.
105. See *Id.* (Thomas and Krishnan), at 2.
106. See Blouin, *supra* note 79, at 294; see also M. Alsharif, R. Labonté, and Z. Lu, "Patients Beyond Borders: A Study of Medical Tourists in Four Countries," *Global Social Policy* 10, no. 3 (2010): 315-335, at 327-329. It is noteworthy that New Zealand did consider the possibility of imposing a medical tourism tax in 2009, as reported in G. Armstrong, "Medical Tourism' Levy Under Scrutiny in New Zealand," *eTurboNews.com*, October 25, 2009, available at <<http://www.eturbonews.com/12431/medical-tourism-levy-under-scrutiny-new-zealand>> (last visited January 30, 2013). However, even in this example, the tax revenues would be earmarked to cover the potential costs of treating foreign patients who suffer from medical injuries while seeking care in New Zealand rather than to expand health care access for domestic patients.
107. See Whittaker, *supra* note 51, at 110.
108. See Johnston et al., *supra* note 10, at 5; Government of India, Ministry of Tourism, Press Release, *Medical Tourism Included Under the Marketing Development Assistance (MDA) Scheme* (November 15, 2010), available at <<http://www.pib.nic.in/newsite/erelease.aspx?relid=67035>> (last visited January 30, 2013).
109. See Sen Gupta, *supra* note 12, at 5.
110. See Leng, *supra* note 53, at 13.
111. See Alsharif et al., *supra* note 106, at 329.
112. See Connell, *supra* note 40, at 266.
113. See Hopkins et al., *supra* note 8, at 191; *id.*, at 267.
114. H. Arndt, "The 'Trickle-Down' Myth," *Economic Development and Cultural Change* 32, no. 1 (1983): 1-10, at 3-4.
115. See NaRanong and NaRanong, *supra* note 19, at 338.
116. See Pocock and Phua, *supra* note 39, at 2.
117. R. Scheyvens, "Exploring the Tourism-Poverty Nexus," *Current Issues in Tourism* 10, nos. 2-3 (2007): 231-254, at 239; see also J. Akama, "The Efficacy of Tourism as a Tool for Economic Development in Kenya," *DPMN Bulletin* 7, no. 1 (2000), available at <<http://www.dpmf.org/images/tourism-economic-devt-john.html>> (last visited January 30, 2013) (it is suggested that as much as two-thirds of tourism profits in Kenya are leaked to foreign businesses).
118. See for example, Z. Meghani, "A Robust, Particularist Ethical Assessment of Medical Tourism," *Developing World Bioethics* 11, no. 1 (2011): 16-29, at 28.
119. See Pocock and Phua, *supra* note 39, at 6.
120. S. Basu and S. Mallick, "When Does Growth Trickle Down to the Poor? The Indian Case," *Cambridge Journal of Economics* 32, no. 3 (2008): 461-477, at 469.
121. J. Thornton, R. Agnello, and C. Link, "Poverty and Economic Growth: Trickle Down Peters Out," *Economic Inquiry* 16, no. 3 (1978): 385-394; J. Formby, G. Hoover, and H. Kim, "Economic Growth and Poverty in the United States: Comparisons of Estimates Based upon Official Poverty Statistics and Sen's Index of Poverty," *University of Alabama Economics, Finance and Legal Studies Working Paper Series*, No. 00-11-01 (2000), available at <<http://ssrn.com/abstract=249068>> (last visited January 30, 2013); D. Schilcher, "Growth Versus Equity: The Continuum of Pro-Poor Tourism and Neoliberal Governance," *Current Issues in Tourism* 10, nos. 2-3 (2007): 166-193.
122. See Alsharif et al., *supra* note 106, at 330-331.
123. See Blouin, *supra* note 79, at 294; Cortez, *supra* note 2, at 342.
124. See Johnston et al., *supra* note 10, at 10.