Medical Tourism: Treatments, Markets and Health System Implications: A scoping review

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SUMMARY

1. The global growth in the flow of patients and health professionals as well as medical technology, capital funding and regulatory regimes across national borders has given rise to new patterns of consumption and production of healthcare services over recent decades. A significant new element of a growing trade in healthcare has involved the movement of patients across borders in the pursuit of medical treatment and health; a phenomenon commonly termed 'medical tourism'. Medical tourism occurs when consumers elect to travel across international borders with the intention of receiving some form of medical treatment. This treatment may span the full range of medical services, but most commonly includes dental care, cosmetic surgery, elective surgery, and fertility treatment. There has been a shift towards patients from richer, more developed nations travelling to less developed countries to access health services, largely driven by the low-cost treatments available in the latter and helped by cheap flights and internet sources of information.

2. Despite high-profile media interest and coverage, there is a lack of hard research evidence on the role and impact of medical tourism for OECD countries. Whilst there is an increasing amount written on the subject of medical tourism, such material is hardly ever evidence-based. Medical tourism introduces a range of attendant risks and opportunities for patients. This review identifies the key emerging policy issues relating to the rise of 'medical tourism'.

3. The review details what is currently known about the flow of medical tourists between countries and discusses the interaction of the demand for, and supply of, medical tourism services. It highlights the different organisations and groups involved in the industry, including the range of intermediaries and ancillary services that have grown up to service the industry. Treatment processes (including consideration of quality, safety and risk) and system-level implications for countries of origin and destination (financial issues; equity; and the impact on providers and professionals of medical tourism) are highlighted. The review examines harm, liability and redress in medical tourism services with a particular focus on the legal, ethical and quality-of-care considerations.

4. In light of this, our broad review outlines key health policy considerations, and draws attention to significant gaps in the research evidence. The central conclusion from this review is that there is a lack of systematic data concerning health services trade, both overall and at a disaggregated level in terms of individual modes of delivery, and of specific countries. This is both in terms of the trade itself, as well as its implications. Mechanisms are needed that help us track the balance of trade around medical tourism on a regular basis. The evidence base is scant to enable us to assess who benefits and who loses out at the level of system, programme, organisation and treatment.

RÉSUMÉ

1. L'accroissement général de la circulation transfrontières des patients et des professionnels de la santé ainsi que de la technologie médicale et des capitaux, et l'extension des régimes réglementaires au-delà des frontières nationales, ont donné lieu à de nouveaux modes de consommation et de production des services de santé au cours des dernières décennies. L'expansion du commerce des soins de santé s'est en particulier caractérisée par les mouvements transfrontières de patients à la recherche de traitements médicaux et de santé, phénomène que l'on désigne communément à l'aide de l'expression « tourisme médical ». On parle de tourisme médical lorsque des consommateurs choisissent de traverser des frontières internationales dans l'intention de recevoir un traitement médical sous une forme ou sous une autre, lequel peut relever de toutes les spécialités médicales, mais concerne le plus souvent la dentisterie, la chirurgie esthétique, la chirurgie non vitale et l'assistance à la procréation. Une évolution s'est produite en ce sens que ce sont surtout les patients de nations plus riches et plus développées qui se rendent dans des pays moins développés pour bénéficier de services de santé, essentiellement en raison du faible coût des traitements, des possibilités de voyager à bon marché et de la disponibilité d'informations sur l'internet.

2. Bien que le tourisme médical soit très médiatisé, rares sont les informations concrètes issues de la recherche sur son rôle et son impact dans les pays de l'OCDE. Même si l'on écrit de plus en plus sur ce thème, les travaux publiés se fondent rarement sur des données probantes. Le tourisme médical présente à la fois des risques et des avantages pour les patients. La présente étude identifie les principaux enjeux liés à l'expansion du « tourisme médical ».

3. L'étude fait le point des connaissances actuelles sur la circulation des touristes médicaux entre les pays et examine les interactions de la demande et de l'offre de services de tourisme médical. Elle présente les divers groupes et organisations impliqués dans cette activité, y compris l'ensemble des intermédiaires et des services auxiliaires qui sont apparus parallèlement à son développement. L'accent est mis sur les modalités des traitements (qualité, sécurité et risques) et sur les conséquences systémiques du phénomène pour les pays d'origine et de destination (questions financières, équité et impact sur les prestataires et les professionnels intervenant dans le tourisme médical). L'étude envisage les services de tourisme médical sous l'angle des dommages, des responsabilités et des possibilités de recours en s'intéressant particulièrement aux aspects juridiques et éthiques ainsi qu'à la qualité des soins.

4. Cette vaste étude présente donc d'importantes considérations liées à la politique de la santé et appelle l'attention sur l'existence de sérieuses lacunes dans les données disponibles. La principale conclusion sur laquelle elle débouche est le manque de données systématiques, tant globales que désagrégées sur le commerce des services de santé au niveau des différents modes de prestation et des pays, et cela, à la fois sur le plan du commerce proprement dit et sur le plan de ses implications. Il est nécessaire de mettre au point des mécanismes qui nous aident à suivre régulièrement l'évolution des échanges commerciaux liés au tourisme médical. Les données dont on dispose, qui sont insuffisantes, ne permettent pas de déterminer qui est gagnant et qui est perdant au niveau des systèmes, des programmes, de l'organisation des soins et des traitements.

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BACKGROUND

Globalisation of the health care market

5. The global growth in the flow of patients and health professionals as well as medical technology, capital funding and regulatory regimes across national borders has given rise to new patterns of consumption and production of healthcare services over recent decades.

6. The free movement of goods and services under the auspices of the World Trade Organization and its General Agreement on Trade in Services (Smith, 2004, Smith *et al*,. 2009b) has accelerated the liberalisation of the trade in health services, as have developments with regard to the use of regional and bi-lateral trade agreements. As health care is predominantly a service industry, this has made health services more tradable, global commodities. A significant new element of this trade has involved the movement of patients across borders in the pursuit of medical treatment and health care, a phenomenon commonly termed 'medical tourism'.

7. The consumption of health care in a foreign land is not a new phenomenon, and developments must be situated within the historical context. Individuals have travelled abroad for health benefits since ancient times, and during the 19th Century in Europe for example there was a fashion for the growing middle-classes to travel to spa towns to 'take the waters', which were believed to have health-enhancing qualities. During the 20th Century, wealthy people from less developed areas of the world travelled to developed nations to access better facilities and highly trained medics. However, the shifts that are currently underway with regard to medical tourism are quantitatively and qualitatively different from earlier forms of health-related travel. The key differences are a reversal of this flow from developed to less developed nations, more regional movements, and the emergence of an 'international market' for patients. The key features of the new 21st Century style of medical tourism are summarized below:

- The large numbers of people travelling for treatment;
- The shift towards patients from richer, more developed nations travelling to less developed countries to access health services, largely driven by the low-cost treatments and helped by cheap flights and internet sources of information;
- 'New' enabling infrastructure – affordable, accessible travel and readily available information over the internet;
- Industry development: both the private business sector and national governments in both developed and developing nations have been instrumental in promoting medical tourism as a potentially lucrative source of foreign revenue.

8. What are the implications of these changes in medical travel for OECD countries? Fundamentally, such developments point towards a paradigm shift in the understanding and delivery of health services. The market in medical tourists is set to grow, with potentially far-reaching impacts on publicly-funded health care including the developing notion of patients as 'consumers' of health care rather than 'citizens' with rights to health care services. There will of course also be a range of attendant risks and

opportunities for patients. Predictions for this emerging global market are difficult but the direction and speed of its travel is becoming increasing clear. This report identifies the key emerging policy issues relating to the rise of 'medical tourism'. In this introductory section we explore competing definitions and concepts relating to medical tourism.

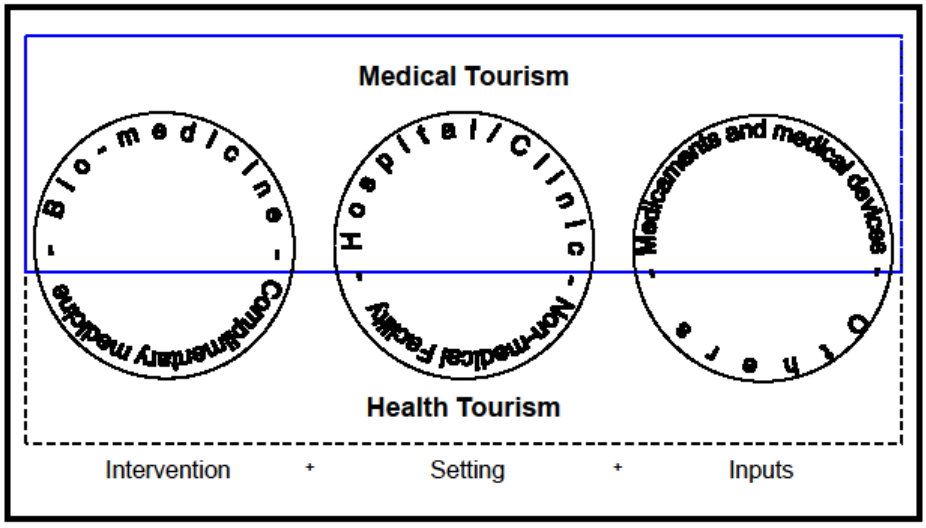
Definitions of medical tourism and health tourism

9. It is important to begin by defining what is meant by 'medical tourism'. For the purposes of this report we define medical tourism as when consumers elect to travel across international borders with the intention of receiving some form of medical treatment. This treatment may span the full range of medical services, but most commonly includes dental care, cosmetic surgery, elective surgery, and fertility treatment. Setting the boundary of what is health and counts as medical tourism for the purposes of trade accounts is not straightforward. Within this range of treatments, not all would be included within health trade. Cosmetic surgery for aesthetic rather than reconstructive reasons, for example, would be considered outside the health boundary (OECD, 2010, pp.30-31).

10. Medical tourism is related to the broader notion of health tourism which, in some countries, has longstanding historical antecedents of spa towns and coastal localities, and other therapeutic landscapes. Some commentators have considered health and medical tourism as a combined phenomenon but with different emphases. Carrera and Bridges (2006, p.447), for example, define health tourism as "the organised travel outside one's local environment for the maintenance, enhancement or restoration of an individual's well-being in mind and body". This definition encompasses medical tourism which is delimited to "organised travel outside one's natural health care jurisdiction for the enhancement or restoration of the individual's health through medical intervention".

11. As Figure 1 suggests, medical tourism is distinguished from health tourism by virtue of the differences with regard to the types of intervention, setting and inputs.

Figure 1: Health and Medical Tourism



Source: Carrera and Lunt (2010).

Mobility of patients across international borders

12. Medical tourism can be understood as a subset of the wider notion of patient mobility which itself may be sub-divided as follows:

13. *Temporary visitors abroad*: These include those individuals holidaying abroad who use health services as a result of an accident or a sudden illness. Health services for tourists are funded variously through the European Health Insurance Card (for EU citizens) for occasional or emergency treatment within the EU, private insurance and out-of-pocket expenses. These would not be considered as 'medical tourists', more just 'unfortunate tourists'!

14. *Long-term residents*: There are increasing flows of EU citizens choosing to retire in countries other than their country of origin, within the EU borders and indeed beyond (Rosenmöller *et al*., 2006), and there are growing exchanges of working-age citizens within Europe. Such residents may receive health services funded variously by the country of residence, the country of origin, private insurance, or through private contributions. Again, these individuals would not be considered as 'medical tourists'.

15. *Common borders*: countries that share common borders may collaborate in providing cross-national public funding for health care services from providers in other countries (Rosenmöller *et al*., 2006).

16. *Outsourced patients*: are those patients opting to be sent abroad by health agencies using cross-national purchasing agreements. Typically, such agreements are driven by long waiting lists and a lack of available specialists and specialist equipment in the home country. These patients often travel relatively short distances and contracted services (both public and private) are more likely to be subject to robust safety audits and quality assurance *(*Lowson *et al., 2002,* Burge *et al., 2004,* Glinos *et al., 2006,* Muscat *et al.,* 2006). These individuals could be described as 'collective' medical tourists, albeit they being state or agency-sponsored rather than acting as individual consumers in the traditional sense.

17. Medical tourism more commonly refers to patients who are mobile through their own volition and this type of patient mobility is the focus of this report. Such medical tourists do not make use of EU rights (where the phenomenon is ordinarily known as 'cross-border care') but choose to pay *out-of pocket*, and therefore are better cast as consumers rather than as individuals exercising their European citizenship rights (Lunt and Carrera, 2010).

Medical tourism or cross-border care?

18. Within the European context a medical tourist may be categorised in one of two ways. First, there are those citizens who use their European citizenship rights to access medical care in EU Member States and their national purchaser reimburses the costs of their treatment abroad. This is allowed because European citizens, under specific circumstances, have rights to receive medical care in other EU countries. Such rights have been established by successive rulings of the European Court of Justice on private cases regarding consumption of health care in another EU Member State and reimbursement by the (national) purchasing body in the home country (Bertinato *et al*., 2005).

19. There is ongoing debate about the most appropriate terminology to describe the movement of individuals overseas for treatment. A range of nomenclature is used in the health services literature, including international medical travel (Huat, 2006a, Fedorov *et al*., 2009, Cormany and Baloglu, 2010, Crozier and Baylis, 2010), medical outsourcing (Jones and Keith, 2006), medical refugees (Milstein and Smith, 2006), and even biotech pilgrims (Song, 2010). Although for the purposes of this report we adopt the term medical tourism, some commentators object to the use of this term (Whittaker, 2008, Glinos et al., 2010, Kangas, 2010).

- "the industry-driven term 'medical tourism' insinuates leisurely travelling and does not capture the seriousness of most patient mobility" (Glinos *et al.*, 2011, p. 1146).

- "medical tourism is a misnomer, as it carries connotations of pleasure not always associated with this travel…" (Whittaker, 2008, p.272).

- "A term that suggests leisure and frivolity. The term promotes a market place model that disregards the suffering that patients experience" (Kangas, 2010, p.350).

20. We believe that the concept of medical tourism does have analytical value. As a concept it conveys both the *willingness to travel* and *willingness to treat* as core processes within the new global market of health travel. It also captures the health sector element as well as the wider economic impact of such travel. Such a focus facilitates an understanding of which individuals go where, why and for what, and what the impact is for whom from this. Whilst we agree medical tourism may have little to do with general tourism (cf Glinos *et al*., 2011), the term emphasises the commodification and commercialisation of health travel. Medical tourism also highlights the role of the industry, issues of advertising, supplier-induced demand and extends beyond the notion of 'willingness to travel'.

Globalisation and medical tourism

21. Health policies and health delivery have traditionally been bounded by the nation state or between federal tiers of government. Within the UK, for example, the establishment of the National Health Service in 1948 introduced primary and secondary health care services funded by public taxation and delivered to the national population free at the point of use. In recent decades significant economic, social and political changes have encouraged a more trans-national and international role for health policy development. These national interconnections (political, economic, social and technical) include the movement of people, products, capital and ideas and this has offered new opportunities and challenges for health care delivery and regulation. A number of developments support this growth in medical travel:

- Regulatory regimes (such as the General Agreement on Trade in Services and other World Trade Organization agreements);

- Recognition of transnational disease patterns;

- Growing patient mobility (low-cost airlines, advancements in information-communication technology, and shifting cultural attitudes among the public about overseas destinations);

- Industry development.

22. The medical tourist industry is dynamic and volatile and a range of factors including the economic climate, domestic policy changes, political instability, travel restrictions, advertising practices, geo-political shifts, and innovative and pioneering forms of treatment may all contribute towards shifts in patterns of consumption and production of domestic and overseas health services. There are, for example, important bilateral exchanges between OECD members (e.g. United States to Mexico; United States to Korea; northern Europe to central and eastern Europe). Some OECD countries seek to leverage their own strengths to become providers in the medical tourism market with all the attendant implications. There are also flows of patients from OECD countries to Lower and Middle Income Countries (LMIC), in particular India, Thailand, and Malaysia which will necessarily have potential repercussions for health systems of OECD countries.

Structure of the report

23. The report is not a systematic and comprehensive overview of the literature. Rather, the attempt is to identify policy issues at the systemic (regulation and finance), programmatic (system-level priorities), organisation (management of services) and instrumental (clinical interface) levels (Frenk, 1994) (see Section Seven). The rest of this report is organised into seven sections:

- Section One explores the market in medical tourists, and considers both established and emerging medical tourism markets. We detail what is currently known about the flow of medical tourists between countries and discuss the interaction of the demand for, and supply of, medical tourism services.

- Section Two provides an overview of the medical tourism industry, and describes the growth of a range of supporting health information resources, including internet marketing. We also discuss the different organisations and groups involved in the industry, including the range of intermediaries and ancillary services that have grown up to service the industry. Alternative provider models are discussed and we highlight a range of strategies that governments have used to develop their own facilities for medical tourism.

- Section Three focuses on treatment processes, including consideration of quality, safety and risk, clinical outcomes, continuity of care and infection rates that are of crucial importance to protecting the welfare of patients. We also discuss issues relating to the accreditation and regulation of medical tourism services.

- Sections Four and Five look at system-level implications for countries of origin and destination for medical tourists. We examine the financial issues; equity; and the impact on providers and professionals of medical tourism.

- Section Six highlights issues that relate to harm, liability and redress in medical tourism services with a particular focus on the legal, ethical and quality-of-care considerations.

- Section Seven examines the future development of the medical tourism industry. We present a conceptual framework for understanding medical tourism and discuss recent developments in regulation, quality and safety policy.

SECTION ONE
THE MEDICAL TOURISM MARKET

Introduction

24. From marketing materials (both print and web-based sources), it is apparent that the range of treatments available overseas for prospective medical tourists are wide, including:

- Cosmetic surgery (breast, face, liposuction)
- Dentistry (cosmetic and reconstruction)
- Cardiology/cardiac surgery (by-pass, valve replacement)
- Orthopaedic surgery (hip replacement, resurfacing, knee replacement, joint surgery)
- Bariatric surgery (gastric by-pass, gastric banding)
- Fertility/reproductive system (IVF, gender reassignment)
- Organ, cell and tissue transplantation (organ transplantation; stem cell)
- Eye surgery
- Diagnostics and check-ups.

Collectively, not all of these treatments would be classed as acute and life-threatening and some are clearly more marginal to mainstream health care. Some forms of plastic surgery would be excluded from health spending (e.g. for solely cosmetic reasons); other forms of medical tourism (e.g. IVF) would be counted within the remit of health trade (OECD, 2010).

25. A detailed online search derives a broad ‘menu’ of available treatments and claims of cost savings achieved by having treatment abroad compared to the UK private sector (see Table 1).

Table 1: Medical tourism prices (in selected countries)

Procedure	US	India	Thailand	Singapore	Malaysia	Mexico	Cuba	Poland	Hungary	UK
Heart bypass (CABG)	113 000	10 000	13 000	20 000	9 000	3 250		7 140		13 921
Heart Valve replacement	150 000	9 500	11 000	13 000	9 000	18 000		9 520		
Angioplasty	47 000	11 000	10 000	13 000	11 000	15 000		7 300		8 000
Hip replacement	47 000	9 000	12 000	11 000	10 000	17 300		6 120	7 500	12 000
Knee replacement	48 000	8 500	10 000	13 000	8 000	14 650		6 375		10 162
Gastric bypass	35 000	11 000	15 000	20 000	13 000	8 000		11 069		
Hip resurfacing	47 000	8 250	10 000	12 000	12 500	12 500		7 905		
Spinal fusion	43 000	5 500	7 000	9 000		15 000				
Mastectomy	17 000	7 500	9 000	12 400		7 500				
Rhinoplasty	4 500	2 000	2 500	4 375	2 083	3 200	1 535	1 700	2 858	3 500
Tummy Tuck	6 400	2 900	3 500	6 250	3 903	3 000	1 831	3 500	3 136	4 810
Breast reduction	5 200	2 500	3 750	8 000	3 343	3 000	1 668	3 146	3 490	5 075
Breast implants	6 000	2 200	2 600	8 000	3 308	2 500	1 248	5 243	3 871	4 350
Crown	385	180	243	400	250	300		246	322	330
Tooth whitening	289	100	100		400	350		174	350	500
Dental implants	1 188	1 100	1 429	1 500	2 636	950		953	650	1 600

* Costs of surgeries around the world. Costs given in US$

** The price comparisons for surgery take into account hospital and doctor charges, but do not include the costs of flights and hotel bills for the expected length of stay.

Source: Authors, March 2011, compiled from medical tourism providers and brokers online.

Established and emerging medical tourism markets

26. Patterns of travel between source and destination countries are well-established. For example, those accessing medical treatment in Hungary tend to be from Western Europe and some countries exploit longstanding historical ties, for example between Malta and the UK or the UK and Cyprus (cf. Muscat, 2006). Other Western Europeans take advantage of the growing familiarity with countries as a result of the opening of Eastern Europe and the former USSR (for example, between the UK and Poland). However, more accurate data are required about patient flows between different countries and continents.

27. Whilst any global map of medical tourism destinations would include Asia (India, Malaysia, Singapore, and Thailand); South Africa; South and Central America (including Brazil, Costa Rica, Cuba and Mexico); the Middle East (particularly Dubai); and a range of European destinations (Western, Scandinavian, Central and Southern Europe, Mediterranean), estimates rely on industry sources which may be biased and inaccurate.

28. It would appear that geographical proximity is an important, but not a decisive, factor in shaping individual decisions to travel to specific destinations for treatment (Exworthy and Peckham, 2006). Whether this is a reflection of the 'tourism' element, meaning that people are travelling with not just medical treatment as the sole reason, but also factors related to the wider opportunities for tourism is not clear. Travel distance is likely also related to cost.

29. The demand for services may also be volatile (MacReady, 2007, Gray and Poland, 2008) with travel determined by both wider economic and external factors, as well as shifting consumer preferences and exchange rates. Providers and national governments may seek to challenge existing suppliers, for example Latin American fertility clinics (Smith et al., 2010). A number of governments are also promoting their health facilities and emerging consumer markets are stimulated by brokers, websites and trade-fairs. Exchange-rate fluctuations may also make countries more or less financially attractive, and restrictions on travel and security concerns may prompt consumers to explore alternative markets. Moreover, an unanswered question concerns the status of medical tourism as a luxury good or not. That is, do consumers spend proportionately more on medical tourism treatments as their incomes rises, how use of services varies with price (price elasticity) and does a worsening of wider economic conditions impact deleteriously on the demand for medical tourism. It may even be that a declining economic climate has the reverse effect because reduced public service provision at home prompts patients to look elsewhere to avoid waiting lists and tighter eligibility criteria.

Places of consumption and flows of medical tourists

30. For some medical tourist destinations, attempts are being made to promote the cultural, heritage and recreational opportunities. It is likely that for some treatments the vacation and convalescence functions will be more marginal, for others it could be a significant component of consumer decision-making. The reputation of places as highly customer-focused service providers is also a prevalent emphasis in advertising (Turner, 2007). An emphasis on marketing services as high technology and high quality is common, as well as a focus on clinicians that have overseas experience (training, employment, registration) is also potentially important. Familiarity and cultural similarity is emphasised when services are targeted at Diaspora populations, for example Korean health care services to those settled or second-generation within the United States, Australia and New Zealand. Similarly, the colonial connection between the UK and India appears to have encouraged a medical market between the two countries. While Mexican migrants to the US return to Mexico for health services, this may be because they are uninsured, have problems with accessing services in the US, or have particular preferences to return to Mexico (Bergmark *et al.*, 2008, Gill *et al.*, 2008, Lee *et al.*, 2010, Smith *et al.*, 2011c).

31. Some destinations have marketed themselves as a healthcare city, or more widely as a Biomedical City. Singapore, for example, from 2001 was promoted as a centre for biomedical and biotechnological activities (Cyranoski, 2001). High-end medical tourism can be seen as part of this development. Singapore is not alone in its pursuit of such recognition; the last ten years has also seen the emergence of the Dubai Health Care City (DHCC). As Crone notes, perhaps unlike the Singaporean Biopolis, the DHCC represents the product of an intentional programme that "started from scratch" (Crone, 2008, p.119). Whereas the Singapore bio-city is a government supported networking of established and emerging facilities and organisations, the DHCC represents a planned bio-city. The DHCC is an attempt to attract the vast numbers of Middle Eastern medical tourists to stay within the Middle East rather than travel to Asia. However, as Connell highlights, the key selling point of the DHCC is quality, rather than cost (Connell, 2006). This is perhaps expected given the sheer scale of investment combined with its links with Harvard Medical International. The DHCC is much more than a destination for medical tourists, hosting clinics, accident and emergency sites, research units, and teaching sections (Crone, 2008).

32. Despite a number of countries offering relatively low-cost treatments, we currently know very little about many of the key features of medical tourism. Indeed, there are no authoritative data on the number and flow of medical tourists between nations and continents. While there is a general consensus that the medical tourism industry has burgeoned over the past decade and that there is scope for even further expansion, there remains disagreement as to the current size of the industry. Estimates of the numbers of medical tourists generally lie on a continuum between statistics published by the Deloitte management consultancy at one end of the spectrum and a more conservative estimate by McKinsey and Company at the other. Figures that are regularly reproduced in the literature (Johnson and Garman, 2010, Whittaker, 2010) draw on data collected and projections made by Deloitte, which put the number of US citizens leaving the country in search of treatment at 750,000 in 2007 (Keckley and Underwood, 2008). This number, Keckley insists, would reach somewhere between 3 and 5 million by 2010 (Keckley and Underwood, 2008, Keckley and Eselius, 2009). Given that US tourists are thought to represent roughly 10% of the global number of medical tourists (Ehrbeck *et al.*, 2008), this would suggest that total worldwide figures would lie somewhere between 30 and 50 million medical tourists travelling for treatment each year. Even where commentators avoid placing a figure on the number of medical tourists, the frequent citation of medical tourism as a $60bn industry can be traced back to Deloitte's report (MacReady, 2007, Crone, 2008, Keckley and Underwood, 2008).

33. The main objection to Deloitte's figures come from McKinsey and Co who suggest that, while the potential for such large numbers exist, a more accurate worldwide figure would be between 60,000 and 85,000 medical tourists per year (Ehrbeck *et al.*, 2008). In large part, this disparity may be due to different definitions of medical tourism. For Ehrbeck, a medical tourist should only be included where they have travelled for the purpose of elective surgery. This, he insists, excludes expatriates, those undergoing emergency unplanned surgery, and outpatients. While Youngman agrees that some estimates are clearly overstated, he rejects one of Ehrbeck's key principles, pointing out that although dental tourists are often not inpatients, this nevertheless makes them no less a medical tourist (Youngman, 2009).

34. The numbers of medical tourists proffered by McKinsey still appear rather small, particularly given the context of a US population of 360 million. While the often cited one million foreign visitors to Thailand (Carabello, 2008, Crozier and Baylis, 2010) encompasses wellness tourists visiting spas, it also includes a number of medical tourists who meet Ehrbeck's definition that far exceeds his estimate. It is reported, for example, that the Bumrungrad hospital in Bangkok admitted close to 500,000 patients in 2003 (Turner, 2007, McClean, 2008). By 2005, the hospital admitted 93,000 Arab patients alone (MacReady, 2007). Given that even the most conservative estimates of inward medical tourism to India place the number of tourists at 200,000 (Carabello, 2008, Crone, 2008, Youngman, 2009), alongside figures of between 200,000 and 350,000 for Singapore (Huat, 2006b, Carabello, 2008, Youngman, 2009), 200,000 for Cuba (Crozier and Baylis, 2010), and between 50,000 and 100,000 for the UK (Youngman, 2009), it

would seem that McKinsey's numbers are unrealistically low. Youngman for his part stakes his claim at 5 million, based on the lowest estimates of official figures from providing countries (TreatmentAbroad, 2009, Youngman, 2009), though there is no way to assess the accuracy of this figure. In summary, therefore we can narrow down the number of medical tourists worldwide as lying somewhere between 60,000 and 50 million! This huge gap is a clear pointer for the need to agree parameters and pilot robust ways of collecting and analysing information on the number of medical tourists travelling for treatment. Such numbers are important to quantify economic impact and also to assess potential risk to source health systems. Clarification is required around the sources and surveys used to provide numbers, including the role of national agencies and private facilities in providing numbers. Extrapolating from a country to a more global perspective is difficult, as is ensuring 'the count' is appropriate (do we count patients or treatment episodes; day treatments or in-stay treatment; expatriates and those funded by their multinational employers; only large and accredited providers?). That many of the flows are confidential to protect privacy around treatments and choices makes the count further problematic. Such health trade is also not seen as a priority for measurement by national stakeholders.

35. The patient profile of medical tourists is similarly opaque. Different drivers may exist for higher and lower income patients groups travelling from North America and Western Europe. But we know relatively little about socio-demographic profile, age, gender, existing health conditions and status in attempting to map the composition of the medical tourism market. Medical tourists are likely to come from certain social and population groups and future research should seek to identify this social patterning, as it might increase inequality (cf Exworthy and Peckham, 2006).

36. While there is a disagreement over the total number of medical tourists, figures are relatively consistent with regard to the costs of procedures. Table 1 shows that treatment outside the wealthier OECD countries is much less expensive in South and Central America, Asia, and Africa. The potential savings range from a 75% reduction in price compared with US inpatient prices, to a 90% reduction depending on the type of procedure and the location. Ehrbeck *et al* (2008) note, however, that cost is not necessarily the main driver, suggesting that availability and quality are the major factors for many medical tourists.

Demand-side drivers of mass-market medical tourism

37. Drivers of medical tourism include globalisation – economic, social, cultural and technological. Many domestic health systems are undergoing significant challenges and strain – tightened eligibility criteria, waiting lists, and shifting priorities for health care may all impact on consumer decision making. There is also the emergence of patient choice and forms of consumerism, including within countries that traditionally have had public-funded services. Openness of information and development of diverse providers competing on quality and price now cater for all demands.

38. Unlike other forms of patient mobility where decisions on behalf of the patient are made by an expert clinician (the agency relationship), medical tourism involves individuals acting as a consumer and making their own decisions regarding their health needs, how these can best be treated, and the most appropriate provider. They are therefore especially prone to well-known problems related to information asymmetry and provider-induced demand.

39. Glinos *et al.,* (2006) identify five drivers behind the increases in demand for medical services overseas: familiarity, availability, cost, quality and bioethical legislation (international travel for abortion services, fertility treatment, and euthanasia services. In terms of familiarity, expatriates often have medical care on their visits back to their 'home' country, which would also show up as medical tourism, for example, the large Indian Diaspora in the UK. Some treatments may not be available or may be subject to a wait in the home country. This may include latest technology and techniques. Some treatments may not be legal in the country of origin. The desire for privacy and the wish to combine traditional tourist attractions,

hotels, climate, food, cultural visits with medical procedures are also thought to be key contributing factors to the growth in this market (see discussion in Connell, 2006, MacReady, 2007, Ramírez de Arellano, 2007).

40. The Flash Barometer survey (2007) – albeit focussed on the EU market for all forms of patient mobility – lists the lack of availability of treatment at home; the better quality of treatment abroad; the provision of services by specialists; faster treatment and the affordability of care as among the key drivers that motivate citizens of EU member states to seek treatment outside of their home country (although this includes individuals asserting their EU rights rather than simply paying out of their own pocket). There is, however, little firm evidence on the *relative* importance of these different factors in influencing decisions to seek treatment abroad. There remains a dearth of empirical research; for example, there is little that adds to knowledge concerning the patient's decision to have domestic cosmetic treatments (Brown *et al*., 2007). We know relatively little about particular treatments and source/destination countries. If proximity is an important, but not a decisive, factor in shaping choices given peoples' ability and seeming willingness to travel longer distances there is a need for a greater understanding of how trade-offs are made and how these differ for different treatments and consumer groups (Exworthy and Peckham, 2006).

Decision-making

41. Important questions remain with regard to how consumers assimilate and synthesise the information they retrieve from website searches, and how they take into account commercial interests and bias when making decisions. Again there is no research evidence around this dimension of medical tourism and this requires research investment, for example to know about patient understanding of risk. There is some evidence relating to how breast augmentation patients use the internet, with one survey suggesting that 68% of respondents utilized internet information, and of this subset of patients the information influenced decision making around the choice of procedures (in 53% of cases), choice of surgeon (36% of cases) and choice of hospital (25% of cases) (Losken *et al*., 2005). Elsewhere, Peterson *et al*., (2003) suggest that consumers of medicine are aware of bias, commercialization and lack of regulation when they explore health sites, but suggest that the context of what is being searched is important. They argue that commercial considerations "may have an impact on the motives for, and quality of, information". What is unclear, for example, is whether potential consumers purposively seek information that cautions about possible pitfalls and difficulties (perhaps through professional or regulatory sites), in addition to the more aesthetic, clinical and cost attractions of medical tourism.

42. We need to know more about how individuals access, process and judge medical tourist information they retrieve given such information may be confusing, overwhelming, and even contradictory. An important distinction is likely to exist between how consumers actually conduct searches and reach decisions from what they *say* they do. For instance, Bates *et al*., (2006) note that while consumers may report that the credibility of the source is important in judging information quality, observational studies would suggest this is rarely borne out in practice. Retrospective and prospective studies are thus required. Marshall and Williams (2006) discuss the ways in which health information is assessed by consumers and recommend improved public awareness of critical appraisal tools, developing information literacy for health, and health information access points. Underpinning the search and interpretation of sites is the fundamental issue of how trust and credibility of information are established and maintained given there are limits of choice, the existence of uncertainty and the possibility of pain incurred by treatments (Natalier and Willis, 2008). How information is used in supporting intended cognitive, affective and behavioural shifts and how material is weighed alongside other forms of hard and soft intelligence (including media reports, professional networks, and friends and family) requires investigation.

43. A systematic review of 50 on-line websites from a UK consumer perspective examined the sites using 10 key dimensions drawn from guidelines of the British Association for Plastic, Reconstructive and Aesthetic Surgeons, looking for clear statements on the websites for each of these. Many of the sites contained details on how long surgeons had been practicing (25 of the 38 provider sites). Qualifications and affiliations were also frequently listed (25 of 38 provider sites), and the attachment of full CVs, copies of certification on-line and publication lists were all commonplace. It was less common, however, to find details of the number of procedures carried out – only 5 of the sites listed surgeon experience of each procedure performed. For 10 of the provider websites there was a clear statement that pre-operative consultative was available in the UK and Ireland. Typically, pre-operative consultation was conducted via email exchange with a surgeon creating, at best, a virtual consulting room. Where UK/Ireland consultation was available, it was not always conducted by the operating surgeon – in one case, for example, the pre-operative assessment was carried out by a contracted nurse (Lunt and Carrera, 2011).

Supply side: models of service delivery and funding

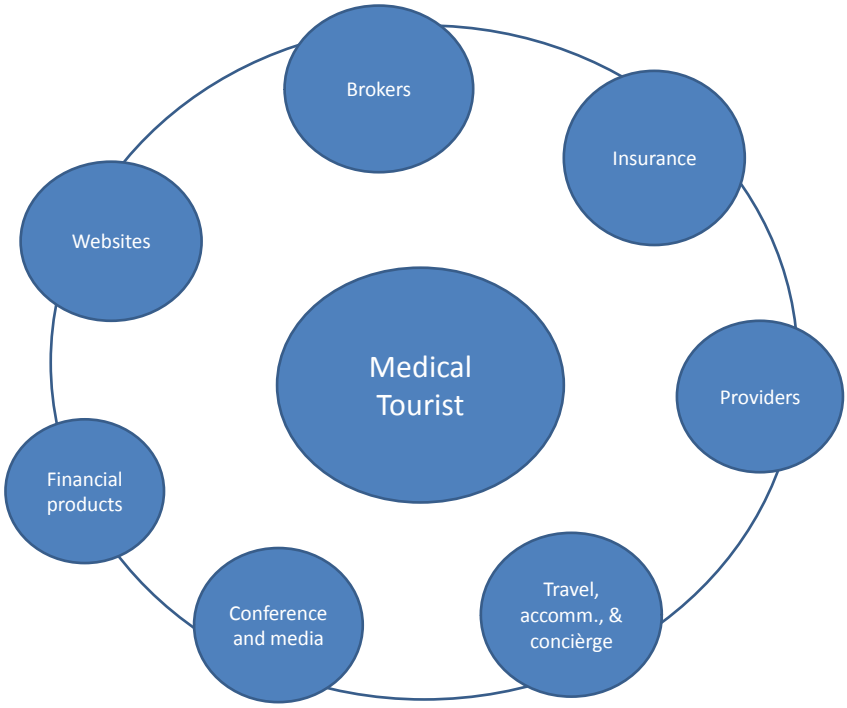
44. In terms of medical tourism delivery and funding, a number of private (and public) providers in LMIC have targeted what they see as a lucrative medical tourism market. In part, the experience of many UK and American private patient hospitals and hospital wings for wealthy patients has informed the strategy of emergent medical tourism destinations with emphasis on quality and customer service. In Thailand, provision for medical tourism developed to support the failing private sector where domestic private patients were shifting to the publicly funded system.

45. As well as individual out-of-pocket payments for treatment, a potentially more lucrative source of income would be the private and workplace insurance systems. To date there has been relatively limited success by medical tourist providers in tapping these potential revenue streams. Examples of more institutionalised arrangements do exist but are rare. In 2009, following its achieving international accreditation, a hospital in Mexico arranged a deal with a US-based insurance group which enabled Blue Cross and Blue Shield members to utilise that hospital's services. This arrangement is not just about proximity but also reflects the close links with US Latino communities, especially on the West coast and in the Southern states. Some places such as Juárez in Mexico are seeking to target the migrant population (Bergmark *et al.*, 2008, Cuddehe, 2009). Arguably, the industry is engaged in a process of legitimating and marketing with an emphasis on promoting service quality and competitiveness and targeting workplace/private/public health insurance schemes are part of this.

SECTION TWO
THE MEDICAL TOURISM INDUSTRY

46. Medical tourism is an emerging global industry, with a range of key stakeholders with commercial interests including brokers, health care providers, insurance provision, website providers and conference and media services. These commercial interests are summarised in Figure 2. This section explores the role of a number of ancillary and supporting services for medical tourists.

Figure 2: The Medical Tourism Industry



Medical tourism and the web

47. A key driver in the medical tourism phenomenon is the technological platform provided by the internet for consumers to access healthcare information and advertising from anywhere in the world. Equally, the internet offers providers vital new avenues for marketing to reach into non-domestic markets. Commercialisation is at the heart of the growth in medical tourism and in some part this is due to the availability of web-based resources to provide consumers with information, advertisements and market destinations, and to connect consumers with an array of healthcare providers and brokers. A review (Lunt *et al*., 2010) suggests the following typology of websites:

- portals (focussed on provider and treatment information)
- media sites

- consumer-driven sites
- commerce-related sites (providing ancillary services and information)
- professional contributions (from sources such as professional associations and state regulatory institutions are relatively rare).

48. Medical tourism sites satisfy a range of ends and needs. First and foremost, the scope of such sites is to introduce and promote services to the consumer. The main services of the sites can be separated into five main functions: as a *gateway* to medical and surgical information, *connectivity* to related health services, the *assessment* and/or promotion of services, *commerciality* and opportunity for *communication* (Lunt *et al*., 2010). The internet offers a range of functionalities and formats including discussion forums, file sharing, posting information and sharing experience, member only pages, advertisements and online tours. The internet also facilitates decisions regarding the *purchase* of treatments.

Quality of information

49. The range of medical tourism sites and related content raise concerns associated with unregulated on-line health information (Eysenbach, 2001). The internet sites are relatively cheap to set up and run, and contributors may post information without being subject to clear quality controls or advertising standards. Selective information may be presented, or presented in a vacuum, ignoring for example issues such as post-operative care and support. There is always the possibility of unreliable products being marketed via the internet – poor-quality surgery or inadvisable treatments, unnecessary and even dangerous treatments. As Mason and Wright (2011) note, medical tourist sites promote benefits and downplay the risks.

50. Given the large amount of material concerning how medical tourism is sourced on line, it raises questions about the quality and veracity of the information used. Clear evidence from other studies suggests that the quality of health information online is variable and should be used with caution (Eysenbach *et al*., 2002). For example, when the *Journal of the American Medical Association* standards for responsible print were used to judge the quality of infertility treatment information resources on the web, information was found to be, at best variable and at the worst misleading (Okamura *et al*., 2002). Similarly, in the area of *domestic* cosmetic surgery, a study using the search term 'breast augmentation' located 130 sites and concluded that 34% of these sites contained information that was either false or misleading (Jejurikar *et al*., 2002). Gordon *et al* (2001, p.176) examined the quality of plastic surgery information concluding "it is difficult for the average lay person to get authoritative information quickly and easily on at least one aspect of cosmetic surgery". Commenting on Stem Cell sites, Murdoch and Scott (2010) note such sites are thick with therapeutic language.

Advertising and marketing

51. Given the role of advertising in influencing consumer decisions, there are questions relating to asymmetry of information between provider and consumers where there are differences in access to availability and quality of information, and issues of safety and informed choice that link to medical tourism and Internet usage. Many of the sites are primarily adverts and 'infomercials' (with a series of buttons, banners and popups). It would appear there are relatively few sources that are non-commercial in nature and provide independent information as opposed to information provided to serve commercial and marketing ends. While there is some evidence that the presence of advertising on a website reduced its credibility (Walther *et al*., 2004), there is no clear evidence for the medical tourism field.

52. The evidence of Direct-to-Consumer sales in other sectors suggests a number of potential problems which may be present in medical tourism. Gollust *et al*., (2003) examine the Direct-to-Consumer

internet sales of genetic services and note that sites are likely to exaggerate the benefits of such services. Datta *et al.,* (2008) explore the quality of websites marketing home diagnostic tests and conclude that the majority of websites provide information that is of inadequate quality. Illes *et al.,* (2004) focus on Direct-to-Consumer advertising in print and information brochures, concluding that such materials fail to provide consumers with the sort of comprehensive and balanced information necessary for informed decision-making. They suggest it is common to identify misinformation, unsubstantiated scientific claims, fear-provoking threats, and a lack of information on the uncertainties and the risks of particular services – in their case tomographic and magnetic resonance imaging. With regards to surgery, Salant and Santry (2006) highlight the growth of web-based advertising of bariatric surgery centres. Bariatric surgery centres in the US – in common with many medical tourist destinations – rely on patient self-referral and thus need to stimulate demand for these services, "constructing the need for bariatric surgery through strategic advertising approaches" (p. 226). The marketing of unproven stem-cell treatments raises particular concern, encouraging patients with severe diseases to travel to seek 'unorthodox' therapies and cures (Dedmon, 2009, Murdoch and Scott, 2010).

53. A systematic review of 50 medical tourism websites, marketing treatments and services in mainland Europe (Lunt and Carrera, 2011) found that the sites were variable. In a small number of sites, both the grammar and spelling were poor, giving little confidence in a clinic's proficiency in the English language and ability to communicate clearly. Sites contained details on arrival, treatment and travel home arrangements and itineraries and length of recuperation but little was stated explicitly on arrangements for follow-up (only 5 of the 50 sites). Surgery was presented as routine and itineraries listed in a vacation-like fashion from day one of arrival to day of departure. Many sites included photographs, videos and virtual tours of facilities – and often emphasised the modern and 'hi-tech' features, cleanliness and infection-control technique of facilities and services. However, few were explicit on the number of staff, size of the establishment (e.g. bed numbers) and emergency arrangements and facilities (only 3 from 50 sites) (Lunt and Carrera, 2010).

54. Underpinning the search and interpretation of sites are the fundamental issues of how trust and credibility of information are established and maintained given there are limits of choice and a great deal of uncertainty and information asymmetry when potential medical tourists make decisions around treatments, providers and destinations. The fine line between editorial content and advertising of online sites does not help assuring informed choice on the part of the patient.

55. Despite a growth in the number of websites dedicated to medical tourism, there is currently little empirical evidence on the role, use and impact of these websites on the behaviour of health care consumers. This is a major deficit in evidence. For example, from a consumer perspective there is a need to understand how medical tourists view advertising and whether this changes with demographic group.

Brokers

56. There has been a steady rise in the number of companies and consultancies offering brokerage arrangements for services and providing web-based information for prospective patients about available services and choices, which can be attributed to the transaction costs associated with medical tourism, where individuals have to assemble their own information and negotiate any treatment. Typically, brokers and their web-sites tailor surgical packages to individual requirements: flights, treatment, hotel, and recuperation (Whittaker, 2008, Cormany and Baloglu, 2010, Reddy and Qadeer, 2010, Lunt and Carrera, 2011). Brokers may specialise in particular target markets or procedures (treatments such as dentistry, or cosmetic surgery), or destination countries (e.g. Poland, Hungary). A series of interrelated issues exist around the precise role of these intermediaries in arranging overseas surgery: how do they determine their market, source information, choose providers, and subsequently determine what the most appropriate

advice is? What is noteworthy is that website facilitation businesses may disappear as quickly as they entered the market (Cormany and Baloglu, 2010).

57. Mirrer-Singer (2007) cites one company that is a network of pre-qualified hospitals (i.e. that are inspected and verified and form a pool from which clients then choose). But it is not clear what these processes consist of. A number of potential legal issues that arise with regard to brokerage are discussed in Section Six.

Travel insurance

58. A market in travel insurance for medical tourists is emerging. Purchasing adequate specialist travel health insurance may be problematic, especially if the intending medical tourist has significant pre-existing health problems prior to travelling. Traditional insurance policies for travel and accommodation (delay, loss of baggage) would exclude those individuals travelling for the purposes of planned medical tourism. Insurance products have been developed that cover medical tourists for such contingencies when travelling for surgery. Insurance products have also emerged that go beyond insuring travel and loss, and which seek to cover the costs of further treatments that may be required as a result of complications and dissatisfaction following surgery abroad. It is extremely unwise to travel outside of one's home country without this type of insurance unless a deal has been negotiated with the provider hospital that they will cover all possible eventualities.

Providers

59. Within the wide picture of medical tourism there is a diversity of participating providers – or as Ackerman (2010) notes there are "cottage industries and transnational enterprises". Providers are primarily from the private sector but are also drawn from some public sectors (e.g. Singapore and within Cuba). The NHS has some facility for treating foreign patients who pay and for those who do not.

60. Relatively small clinical providers may include solo practices or dual partnerships, offering a full range of treatments. At the other end of the scale are extremely large medical tourism facilities (e.g. Bumrungrad in Thailand, Raffles in Singapore, Yonsei Severance Hospital in South Korea) where clinical specialism is the order of the day. Hospitals may be part of large corporations (the Apollo Group for example has 50 hospitals within and outside India), and ownership itself may lie primarily in the higher income countries from where patients mostly originate. We know relatively little about the development of European and international industries and markets trading in medical tourism. As the review of patient mobility in Europe4Patients (Rosenmöller *et al*., 2006, p.6) noted, a lack of data around mobility in general is compounded in relation to information about the commercial sector.

61. Countries seeking to develop medical tourism have the options of growing their own health service or inviting partnerships with large multinational players. Individual hospitals may develop relations with travel agencies or wider brokerage companies (Whittaker, 2008). Securing accreditation from international programmes may be a part of the development of services. In addition to accreditation, other approaches to raising the profile of countries and their health facilities have been used. For example, partnerships and oversight by overseas hospitals and universities, most often from the American private sector, can fulfil a similar role. Formalised linkages with widely recognised medical providers and educators (like Harvard Medical International, the Mayo Clinic, the Cleveland Clinic, John Hopkins Hospital, are becoming increasingly popular among hospitals catering for medical travellers. (As Exworthy and Peckham (2006, p.282) note, hospital reputation is based on many factors not solely the quality of clinical services). Medical tourist facilities will often target particular cultural groups – Bumrungrad for example has a wing for Middle East patients (Cohen, 2009, Reddy and Qadeer, 2010).

National strategies

62. A range of national government agencies and policy initiatives have sought to stimulate and promote medical tourism in their countries. Many countries see significant economic development potential in the emergent field of medical tourism. The Thai, Indian, Singaporean, Malaysian, Hungarian, Polish and Maltese governments have all sought to promote their comparative advantage as medical tourism destinations at large international trade fairs, via advertising within the overseas press, and official support for activities as part of their economic development and tourism policy (Mudur, 2004, Chee, 2007, Whittaker, 2008, Reisman, 2010).

63. Since 2003, SingaporeMedicine has been a multi-agency government-industry partnership aiming to promote Singapore as a medical hub and a destination for advanced patient care. It is led by the Ministry of Health, and has the support of the Development Board (new investments and healthcare industry capabilities); International Enterprise Singapore (growth and expansion of Singapore's healthcare interests overseas); Singapore Tourism Board (branding and marketing of its healthcare services).

64. India has introduced a special visa category – an M visa – to cater for the growing number of medical tourists (Chinai and Goswami, 2007) as well as allowing tax breaks to providers. Sengupta (2008) notes that medical tourism facilities allow increased rate of depreciation on life saving equipments, and also prime land at subsidised rates.

65. In Malaysia, the National Committee for Promotion of Medical and Health Tourism was formed by the Ministry of Health in 1998. It developed a strategic plan and networked both domestically and overseas with relevant interests. Tax incentives were provided for buildings, equipment, training, advertising and IT, and providers were encouraged to pursue accreditation with an emphasis on quality (Chee, 2007).

66. Toyota (2011) suggests that the medical tourism markets of both Singapore and Dubai, alongside those of India, Thailand, and Malaysia should be considered as the 'first wave' of Asian medical tourism. She points to the post-2008 expansion of both the Japanese and South Korean medical tourism markets as representing a second wave, one marked by increasing state involvement. Both the Japanese and Korean governments have declared publically the desire to place medical tourism at the heart of plans for future economic growth (Sang-Hun, 2008, Hall, 2009, ITTimes, 2009, Independent, 2010, Kester, 2011) and both have matched this commitment with a relaxation of visa laws (Sang-Hun, 2008, Toyota, 2011), making inbound medical tourism easier. Here, however, the similarities largely end. In the Japanese case, the low numbers of trained doctors and high cost of treatment has severely constrained the growth of the medical tourism market (Hall, 2009, Toyota, 2011, p.10). Indeed, as Connell highlights, Japan has until recently been primarily thought of as a source country rather than a destination country in terms of medical tourism, with large numbers of Japanese citizens travelling abroad for healthcare (Connell, 2006, p.1096).

67. The Japanese government has recently outlined plans to reverse the outbound medical tourism trend, rolling out a new organisation with the sole aim of increasing inbound medical tourism. This will work alongside the Ministry of Economy, Trade and Industry (METI), which currently coordinates medical tourism strategies (Hall, 2009, Toyota, 2011, p.9). METI has placed particular emphasis on the high-end, high-cost and skills-intensive procedures that are perhaps not offered or taken up in lower cost Asian medical tourism markets such as India and Thailand (Hall, 2009). The rationale being that Japan cannot compete with the lower costs offered in such markets and thus should concentrate on the types of procedure where access and quality are the primary motivations for medical tourism rather than simply the cost (Hall, 2009).

68. In contrast to Japan, the Korean government have matched their commitment to the expansion of the inbound medical tourism market with investment in a market to directly compete with other Asian countries. In particular, the Korean government have created through an Act of Government the Korean Medical Institute (KMI), which alongside the Korean Tourism Organisation and the Korean International Medical Association has actively sought to promote the healthcare industry, both domestically and internationally (Toyota, 2011, p.5). Similarly, the state-funded Korean Health Industry Development Institute has placed the development of a Korean market that is globally competitive at its heart (KHIDI, 2011). Where the Japanese market is somewhat stifled by domestic issues such as the number of doctors, the cost of procedures, and the high internal demand for healthcare services, Korea markets itself as offering high-quality care at 'hospitals in the developed world', with lower costs (Sang-Hun, 2008, ITTimes, 2009, Independent, 2010). The development of healthcare cities akin to the DHCC in Seoul (Sang-Hun, 2008), Daegu (ITTimes, 2009) and Jeju (Sang-Hun, 2008, Toyota, 2011, p.6) are particular strategies. The high quality and low cost of treatment is also being used as part of a targeted campaign to encourage Korean expatriates and members of Korean communities in countries such as the United States and New Zealand (Lee *et al*., 2010, pp.108-109) to opt for procedures in Korea with plans currently in train to open a marketing office in Los Angeles to attract Korean-Americans (Sang-Hun, 2008, Toyota, 2011, p.6). For some, the expansion of the Korean market, which has been put at between 40,000 and 60,000, is simply a matter of time (ITTimes, 2009, Independent, 2010, Toyota, 2011, p.5).

69. State involvement in the medical tourism industry is not confined to Asia. As with Asian countries, State involvement varies from country to country with a mixture of private and public facilities catering for medical tourism. In Poland, a popular destination for dental tourists and cosmetic tourists, medical tourism is facilitated through private companies, many of the clinics used are state-owned, serving Polish citizens alongside medical tourism. This reflects the Polish government's desire to capture the potential of medical tourism and marked by the creation of the Polish Medical Tourism Chamber of Commerce (Reisman, 2010, p.133) and networking with the Polish Association of Medical Tourism (PAMT). The Polish government is actively attempting to harness the potential of recent EU accession to compete with more far-flung destinations for the custom of European medical tourists.

70. Hungary has also sought to harness the opportunities presented by EU accession and develop a medical tourism industry. While many of the clinics offering treatment to medical tourists are undoubtedly private, the role of the Hungarian government should not be overlooked. Terry refers to Hungary as the "dental capital of the world" (2007, p.419) and only a cursory glance at medical tourism sites reveals that a wide range of procedures are being actively marketed to tourists.

71. Beyond national strategies there a range of ways that national policy can directly foster the domestic medical tourism industry. Examples include:

- From 2009 the South Korean Government allowed hospitals to fully market health services to foreign patients

- Supporting trade fairs: many of which include government support (through tourism, airlines or health) – UAE, Dubai, Turkey, Cyprus, and Malta.

- In some cases, governments have directly supported the process by encouraging the acquisition of international accreditation by their hospitals, for example in Singapore and Dubai (UAE).

SECTION THREE
TREATMENT PROCESSES

Quality, safety and risk

72. There are a range of organisational dimensions related to the quality and safety of medical treatment abroad. Many of these are not necessarily unique to medical tourism in that health care is replete with information asymmetries and potential threats to the quality and safety of patient care pathways, but these are intensified given the dimensions of "distance" including legal jurisdiction.

73. Ideally, a common regulatory platform and reporting system would serve as the basis of an assessment of comparative quality of care using a range of performance indicators as facilitated by international accreditation and certification. Presently, there is a lack of comparative quality and safety data, and knowledge of infection rates for overseas institutions and reporting of adverse events is lacking. Importantly, bodies like the World Health Organisation have yet to publish any firm guidance on this and there does not appear to be any immediate intention to do so. For some, a lack of transparency on quality is an impediment to a fully developed market in medical tourism (Ehrbeck *et al*., 2008, p.6). Availability of evidence about the quality of a particular surgeon or clinical team, some suggest, would encourage more people to pursue medical tourism (Unti, 2009).

74. As with all medical treatments, an element of risk exists to the patient's health, which is supposedly outweighed by the potential benefits resulting from the treatment. What can be gleaned from the literature concerning risk and safety-related incidents for medical tourism is limited. Whilst there is evidence regarding, for example, the occurrence of adverse events in UK hospitals (Sari *et al*., 2007), there is no similar overseas/international data.

75. Medical tourism adds a new dynamic to this element of risk, due to the overseas travel involved. The journey home can be difficult and painful, especially following surgery. A study of Norwegian patients found that this was perceived as the most negative aspect of visiting overseas providers (HELTEF, 2003). Travelling when unwell can lead to further health complications, including the possibility of deep vein thrombosis (Crooks *et al*., 2010). Despite medical tourism involving air travel, there is no published evidence on travel risk resulting from medical tourism, for example on thrombosis.

Patient satisfaction

76. Patient satisfaction is an important dimension of healthcare treatment. Relatively little is known about the experience and satisfaction of medical tourists. According to Ehrbeck *et al* (2008, p.7), patients report generally high satisfaction with quality of care received overseas but it is not clear that this can be extrapolated outside of the US and to a range of treatments. Patient clinical outcomes and satisfaction do not necessarily go together and satisfaction is not always the primary indicator for some treatments such as dental work. Similarly, with regard to cosmetic surgery there is evidence that a small percentage of patients may suffer from psychological body-related issues that make such judgements problematic (Grossbart and Sarwer, 2003). Conversely, Hanna *et al* (2009) note that for a sample of outsourced patients (rather than medical tourists) whilst the majority of patients operated upon abroad obtained comparable functional results with those expected locally, they were often dissatisfied with the overall experience. There is a gap

in understanding of patient expectations and how these may be raised by individuals paying a market-price and taking responsibility for choosing a provider.

Clinical outcomes

77. Evidence of clinical outcomes for medical tourist treatments is limited and reports are difficult to obtain and verify. Little is known about the relative clinical effectiveness and outcomes for particular treatments, institutions, clinicians and organisations. There is scant evidence on long or short-term follow-up of patients returning to their home countries following treatments at the range of destinations.

78. That a positive treatment outcome should result is important, not least because the patient's local health care provider takes on the responsibility and funding for post-operative care including treatment for complications and to remedy side-effects (Cheung and Wilson, 2007). In the event of an adverse outcome, it should be known whether, and to what extent, the patient has recourse for redress.

79. Patient follow-up by providers is rare; a study of 20 patients presenting at a German university hospital after overseas refractive surgery concluded that there was insufficient management of complications and a lack of post-operative care (Terzi *et al*., 2008). For 'transplant tourism', Canales' (2006) study of kidney patients transplanted abroad found that there was a high incidence of serious post-operative infections (6 serious infections for 4 patients), although graft survival and function were concluded to be good – see also Geddes' follow-up of kidney patients who had travelled from Scotland to Pakistan for treatment (Geddes *et al*., 2008). Similarly, Gill *et al*., (2008) followed 33 kidney transplant patients and concluded that graft and patient survival are not significantly worse but that there was a more complex post-transplantation course and higher incidence of acute rejection and severe infectious complications.

80. With regard to cosmetic surgery, 203 out of 325 members of the British Association of Plastic, Reconstructive and Aesthetic Surgeons responded to an Association survey and, of these, 76 (37%) had seen patients in the NHS with complications arising from overseas cosmetic surgery (Jeevan and Armstrong, 2008). In an audit of the pan-Thames region, 35 out of 65 consultants replied to requests about cosmetic surgery impacts (Birch *et al*., 2007). Sixty per cent of those replying had seen complications and the majority of these cases (66%) were emergencies that required inpatient admission. Australian research on professionals raises a similar issue (MacReady, 2007) and there are detailed case studies of detrimental outcomes from surgery abroad incurring significant public costs to rectify poor outcomes (Cheung and Wilson, 2007). Birch *et al*., (2010) highlight the case of medical tourist patients who sought bariatric surgery and required urgent surgical management at a tertiary care centre within Canada.

81. For the growing phenomenon of 'fertility tourism', a UK study of 11 years follow-up of high order multiple pregnancy found that 26% had fertility performed overseas (McKelvey *et al*., 2009).

82. In terms of dental treatment abroad there are some reported cases of complications having to be dealt with by the home health system. Barrowman et al (2010) report cases histories of five Australian travellers requiring attention by oral and maxillofacial surgeons because of dental implants. Case reporting from the UK documents two returning dental tourists requiring hospital and dentist consultation (Milosevic, 2009).

83. In sum, relatively little is known about readmission, morbidity and mortality following self-funded medical treatment abroad (see also Balaban and Marano, 2010). The overseas and private nature of delivery explains why there is such a dearth of information relating to clinical outcomes, post-operative complications, lapses in safety and poor professional practice (cf Alleman *et al*., 2010).

Continuity of care

84. It is ethical to ensure that patients are as well cared for as possible and, to this end, patients should receive appropriate advice and input at all stages of the caring process. When medical treatment is sought abroad, the normal continuum of care may be interrupted. It is useful to consider the cycle of care through all its possible stages, pre- or post- the period of hospital care.

- There is a period prior to travelling, and if this involves travel to a country with a tropical or a sub-tropical climate such as Thailand or India, where the disease ecosystem is different, then this should be factored into the system.

- There may be issues around pre-counselling and informed consent for procedures being contemplated. Individuals may have a pre-existing illness (e.g. diabetes mellitus, cardiovascular deficiency, respiratory disease, renal failure, HIV disease) or be taking significant medications prior to travelling, which will need to be dealt with at the earliest possible opportunity.

- There may be shortcomings of communication surrounding immediate treatment processes. Canales' (2006) study of kidney transplants, for example, concludes there was inadequate communication of information – immunosuppressive regimens and preoperative information. Similar gaps may be evident elsewhere.

- The medical traveller/tourist may become ill while in the foreign country, perhaps in a way quite unrelated to their primary reason for becoming a medical traveller, or they might develop complications or side effects related to their treatment.

- Problems can develop during the return flight, such as deep venous thrombosis and pulmonary thromboembolism, or a myocardial infarct.

- Subsequent to arriving home, complications, side-effects and post-operative care become the responsibility of the home medical care system, and patients may encounter problems accessing adequate healthcare. For example, physicians in the US may be uncomfortable dealing with patients who had travelled overseas to another country and undergone an operation to implant a kidney they had purchased (Boschert, 2007).

85. Patients should be aware that the quality of post-operative care can vary dramatically depending on hospital and country, and may be different from US or Western European standards. The medical traveller is usually in hospital for only a few days or even weeks, and then may go on the vacation portion of their trip or return home, when complications, side-effects and post-operative care then become the responsibility of the healthcare system in the patients' home country.

Privacy and confidentiality

86. The use of IT information by professionals and how patient information flows across national boundaries are further important questions for the regulation of the medical tourism industry. Continuity of care can be facilitated by sharing of patient records. Data protection regulations among countries – even within the EU, however, make difficult ease of access to medical records. It is not clear to what extent the European Health Card will foster improvements in this regard.

87. According to the World Tourism Organization's "Global Code of Ethics for Tourism" (1999), there is an expectation that tourists and visitors should have the same rights as citizens of destination countries with regard to the confidentiality of their personal data and information, especially when these

are stored in electronic formats. Laws and regulations will vary in different parts of the world in relation to medical confidentiality, including the protection of data kept on computer. On the other hand, people may travel to other countries for treatment for personal reasons related to an expectation of greater confidentiality in that country compared to the home country (e.g. HIV care, treatment for infertility, gender reassignment surgery).

88. There may also be issues of confidentiality related to the clients of companies who act as facilitators of medical tourism. The staff of medical tourism facilitators' offices may be party to clinical information on patients, and this private and sensitive information would need to be dealt with very carefully and there is potential for them to sell the information to other medical service companies.

89. In the UK, signed informed consent prior to an elective procedure is considered best practice and a standard requirement ensuring that patients are fully informed as to the benefits and adverse effects of a procedure or treatment they are being advised to undergo, and they also have the opportunity to ask questions and seek answers (GMC, 2008). This may not be available every time in the medical tourism setting, and it is possible that medical tourists may come to regret this if there are failings in professional or clinical practice (Pennings, 2004, Barclay, 2009, Jeevan *et al*., 2011).

Infection and cross-border spread of antimicrobial resistance and dangerous pathogens

90. The public health aspects of medical tourism have not been adequately studied. Of significance is the potential for hazardous micro-organisms transferring between hospitals located in different parts of the world on the body of a medical tourist (Green, 2008). These could include antimicrobial resistance, such as the potential for *Clostridium difficile*, VRSA (CDC, 2005) or XDRTB (CDC, 2009), or a dangerous pathogen, such as SARS or Congo-Crimean Haemorrhagic Fever, with potentially fatal implications for hospital staff (Suleiman *et al*., 1980). The rapid spread of North American "swine" flu out of the United States and Mexico to the rest of the world in 2009 and after illustrates the ease with which micro-organisms can be transported across borders.

91. Instances of infection outbreaks arising from treatment of US citizens at overseas 'medical tourist' facilities have been reported within the literature (Newman *et al*., 2005). Anecdotally, one author (Green) is aware of cases where hepatitis B was acquired during cardiac surgery in Pakistan and renal transplantation in India. A study of medical tourists undergoing kidney transplants concludes there was inadequate communication of information regarding preoperative information and postoperative immunosuppressive regimens (Canales *et al*., 2006).

92. Medical travellers may be travelling from home to countries with very different ecosystems and disease profiles, and in some destinations may encounter diseases such as malaria, dengue and other arthropod-borne infections. All people, whether medical travellers or not, who are travelling to different countries should be made aware of the potential for acquiring diseases and injuries which are not common in their own country. Immunisations, preventative medications (e.g. anti-malarials) and general precautions should be considered and arranged for prior to the trip overseas. The lack of any routine data means there is little idea of how prevalent infections are or how they compare with rates from regular tourists.

External Quality Assessment and accreditation

93. Quality maximisation and risk minimisation are two key ingredients for creating better and safer health care services, whether they are providing services for domestic consumption or for medical travellers. This can only be accomplished through the setting-up of appropriate forms of organisational framework within the hospital or clinic designed to assess quality, identify risk, and deal with all relevant issues, and at the same time promote a culture of remaining vigilant. At the present time, medical tourism

services remain largely unregulated and a huge issue that needs to be faced up to is whether or not the quality and safety standards on offer through medical tourism are to be trusted.

94. External Quality Assessment (EQA) – the introduction of a trusted third party to assess quality control – contains within it the potential for increasing both the information flow, especially exchange of good practice between organisations, and transparency within organisations. A number of EQA models exist that the medical tourism industry could draw upon:

- Statutory inspection (including licensing)
- Public sector educational programs for training and testing private providers
- Industry-based assessments:
    - ISO certification
    - Evaluation (usually internal) against the 'business excellence' framework.
- Healthcare-based assessment through peer review:
    - Reciprocal visiting
    - Increase regulation and monitoring of private providers
    - Self-directed quality improvement tools
    - Licensure, certification, and accreditation.

Accreditation

95. Concerns for the quality and safety of the medical care provided overseas have also emerged due to the lack of robust clinical governance arrangements and quality assurance procedures in provider organisations, intended to safeguard the quality of care provided to tourists (Zahir, 2001). There have also been questions over the training, qualifications, motivations and competence of health care professionals. In response to such concerns, a range of independent accreditation schemes have been established with the aim of assuring the care of medical tourists in a way that avoids potential conflicts of interest. Groups such as the Joint Commission International from the United States (covering 44 countries: http://www.jointcommissioninternational.org/Accreditation-and-Certification-Process/) and Quality Healthcare Advice Trent Accreditation in the UK for example have accredited a number of health providers centres around the world.

96. Accreditation is a form of EQA where surveying is carried out by a third-party conformity assessment body known as an "accreditation scheme", using a combination of self-assessment and external peer review led by a team of external peer reviewers. Common characteristics of all accreditation schemes are:

- Surveys and reviews conducted by professional peers with appropriate training;

- The means should be put into place by which problems can be identified prospectively and corrected and continuous improvement ensured;

- A mechanism within the accreditation process for ensuring follow-up action takes place on any recommendations that arise from the survey and for correcting any problems identified by the measurement process; and

- The assessment process should be repeated periodically, usually between two to four years.

- Accreditation is generally accepted to apply to organisations rather than individuals, although it can apply as readily to a dental clinic as to a full hospital. Accreditation has come to be thought of as a "stamp of approval" verifying the authenticity and quality of the services provided.

97. Potential problems with accreditation include:

- The commercial needs and aspirations of the accreditation schemes themselves may be allowed to dominate the picture. Many (but not all) of the accreditation schemes operating internationally are private companies or corporations.

- Less well-off countries may have no access to the accreditation process, or engaging in accreditation may lead to financial hardship.

- Accreditation processes may not tackle ethically contentious areas, such as organ trafficking, payment issues around organ and tissue donation, selective gender abortion, surrogate pregnancy, unnecessary operations, use of currently unproven therapies such as human stem-cell therapy for cosmetic reasons.

98. Standards are at the heart of accreditation, and they must be directed towards those factors that may make a difference to the quality of care. Accreditation schemes should be fit for purpose, based on the results of the best available research, and sensitive to change.

99. There are therefore three categories of area where accreditation is of interest to the medical tourism market:

a) Offering assurance to commercial interests of the quality and safety of the product they are selling to the public, which in turn may reduce their liability and minimise bad publicity in the future.

b) Potential access to funding from overseas sources: In the USA, accreditation schemes such as the JCAHO, the American Osteopathic Association and DNV's National Integrated Accreditation for Healthcare Organizations, are routes to US Medicare participation.

c) Attraction of business: Potential customers for medical tourism may look at whether or not a hospital has accreditation, and hospitals can in turn advertise their being in possession of accredited status.

100. Currently, there is no universal "official agency/group", such as the United Nations, the World Health Organization, the World Tourism Organization or the World Trade Organization, engaged in either the delivery of accreditation, the co-ordination of delivery of accreditation, or licensing or studying the existing schemes that deliver accreditation. Mandatory accreditation may appeal to governments and commercial healthcare purchasers such as third-party payers (e.g. insurance companies and occupational healthcare providers). Accreditation has most often been used as a marketing tool by wealthier provider hospitals, medical tourism facilitators and the governments of provider countries seeking to grow their share of the medical tourism business.

SECTION FOUR
SYSTEM IMPLICATIONS: COUNTRY OF ORIGIN

Origin and destination

101. Some places may be simultaneously acting as countries of origin and destination in the medical tourism marketplace. High-income countries may service overseas elites whilst at the same time their citizens choose to travel as medical tourists to Lower and Middle Income Countries for treatments. Thus, Harley Street in the UK and facilities including the Mayo and Cleveland Clinics in the United States have longstanding reputations in the international provision of healthcare. Conversely, the emergence of lower-cost treatments in Thailand, India or parts of Eastern Europe will attract individuals from higher incomes countries who pursue treatments on the basis of cost. This section focuses on the implications for countries from the perspective of them being an origin or source of medical tourists. In trade parlance, this concerns the services that a country imports (if their patients go overseas to receive care, then effectively they are importing a service). It explores a range of financial, social, political, ethical and legal issues, and implications for local industry.

Financial impacts

102. There are financial impacts on individuals and their families. Some families may fall into debt to fund treatments. It is also the case that not all medical tourism is treatment 'on the cheap' – travel to countries for experimental treatment may consume considerable family resources (Song, 2010). This assertion of choice and autonomy may, however, lead to externalities at the system level.

103. There are a range of financial impacts for source countries that may arise for the publicly funded health care system. Costs may result from overseas cosmetic surgery or dental work that requires emergency or remedial treatment within home countries (Cheung and Wilson, 2007, Jeevan and Armstrong, 2008, Healy, 2009). Infection outbreaks resulting from travel will also bring their own costs (cf Newman *et al*., 2005). Similarly, there may be health and social care costs that arise from multiple births (cf Ledger *et al*., 2006) arising from overseas fertility treatments. But there has been little systemic collection of evidence or attempts to estimate overall system costs.

104. There are also potential impacts on private health activity – given that they potentially lose business to overseas providers, for example cosmetic surgery. There are associated costs of patients travelling overseas – the necessity to monitor/regulate advertising and provide detailed information and advice to support potential or actual medical tourists carries its own costs. Again, there are no detailed estimates of the implications.

Exacerbation of a two-tier system

105. There is the likelihood that large numbers of medical tourists will impact on the source country's own health system, perhaps increasing trends that are encouraged by the current domestic private provision. Outflows of high-income patients for example from LMIC will reduce both revenue and dilute political support for developing local services. Such flows also reduce the pressure for investment in particular facilities and technology. Indeed, there is an argument that some types of outflows of medical tourists for treatments that could be provided locally signal a failure of policy and delivery in the sender country.

106. But it is also within higher income countries where the possibilities of a exacerbating two-tier system can emerge. If, for example, eligibility for services such as fertility or dental work is tightened, then

those with private resources may choose to travel overseas to maintain access (thus exercising choice and exit). Those lacking the resources to travel may retain only the option of voice. Patients who are able to circumvent waiting times highlight the familiar issues of access and equity.

107. In those countries where third-party insurers are exploring medical tourism as a provider option, those that are insured under these plans – perhaps unable to get alternative cover – may find themselves disadvantaged.

108. Clearly, however, source-country payers may benefit from outflows of patients – including employers and employees contributing to health plans, and the public insurance system itself. There may be some opportunities for financial benefit if medical tourism is an option. Mattoo and Rathindran (2006), for example, highlight that for the United States 15 treatment that would show savings of $1.4b annually if one in ten US patients chose to undergo treatment abroad. Such savings could be beneficial for public health systems. For instance, a recent study looking at possible bi-lateral medical tourism trade between the UK and India demonstrated substantial savings could accrue to the UK NHS from sending its patients to India, both financially and in alleviating waiting lists (Chanda *et al*., 2011, Smith *et al*., 2011c, Smith *et al*., 2011b, Smith *et al*., 2011a). If one takes the waiting lists for a selected number of procedures suitable for medical tourism, and compares the cost of sending those patients (plus an accompanying adult) to India, with the costs of getting treatment in the UK, the savings would be of the order of £120 million (Table 2). This figure becomes £200 million if no accompanying adult is paid for (Table 3). Some subsets of the population, such the Indian Diaspora, may prefer to go back "home" for treatment, and may be happy to cross-subsidise some of the costs, or may not need an accompanying adult, further increasing the amount saved.

Table 2: Cost for patient and one accompanying person travelling

Procedure	Cost UK (£)[a]	Cost procedure India (£)[b]	Cost of flight[c]	Hotel Stay[d]	Total cost India	Cost saved per operation (£)	Waiting list[e]	Total saved (£)
CABG	8,631	3,413	1000	230	4,643	3,988	97	386836
Coronary angioplasty	2,269	2,363	1000	69	3,432	-1,163	25,241	Not worth it
Total hip replacement	8,811	3,413	1000	322	4,735	4,076	28,800	117,388,800
Total knee replacement	6,377	5,145	1000	161	6,306	71	53,911	3,827,681
Femoral hernia repair	1,595	819	1000	69	1,888	-293	1,686	Not worth it
Inguinal hernia repair	1,595	717	1000	46	1,763	-168	65,064	Not worth it
Total								**121,603,317**

[a]NHS reference costs 2007-2008
[b]From Fortis Healthcare Mohali (JCI accredited)
[c]From British Airways, two week in advance of flying (i.e. 30th of September)
[d]Used exchange rate £1=89.7 Rp £23/night in Mohali (where Fortis is), luxury accommodation (Imperial Hotel Mohali).
[e]Obtained from Hospital Episode Statistics, Main procedures and operations 2007-2008

Table 3: Cost for only patient travelling

Procedure	Cost UK (£)[a]	Cost procedure India (£)[b]	Cost of flight[c]	Total cost India	Cost saved per operation (£)	Waiting list[d]	Total saved (£)
Coronary artery bypass graft (CABG)	8,631	3,413	500	3,913	4,718	97	457,646
Coronary angioplasty	2,269	2,363	500	2,863	-594	25,241	Not worth it
Total hip replacement	8,811	3,413	500	3,913	4,898	28,800	141,062,400
Total knee replacement	6,377	5,145	500	5,645	732	53,911	39,462,852
Femoral hernia repair	1,595	819	500	1,319	276	1,686	465,336
Inguinal hernia repair	1,595	717	500	1,217	378	65,064	24,594,192
Total							**206,042,426**

[a]NHS reference costs 2007-2008
[b]Conversion used £1=$1.66, rounded to the nearest pound
[c]From British Airways, two week in advance of flying (i.e. 30th of September)
[d]Obtained from Hospital Episode Statistics, Main procedures and operations 2007-2008

109. Plausibly, the health systems within source countries could develop relations with off-shore medical tourism facilities to leverage cost savings – providing individuals with a choice of overseas destinations. This could also reduce waiting lists – and reflects a form of outsourcing or more 'collective' medical travel (Smith *et al*., 2011c).

Competitive pressure on local providers

110. One of the drivers for medical tourism is price because treatments may often be available locally within the private sector, but at greater cost. There are arguments that some medical systems are inefficient and face restrictive barriers to entry. A development such as medical tourism can potentially exert competitive pressure on systems importing health care and help drive down the costs and prices offered in domestic systems (Herrick, 2007). Medical tourism may encourage economies to maximize their comparative advantage in labour costs, technology and/or capacity.

SECTION FIVE
SYSTEM IMPLICATIONS: DESTINATION COUNTRY

111. We have seen in Section 4 that source counties – or those importing health services – may benefit from medical tourism through alleviating waiting lists and lowering healthcare costs, but may risk quality of care and legal liability. In this section we turn our attention to destination countries – or those exporting health services. What potential benefits and risks do they face?

112. Medical tourism has historically been from lower to higher income countries, with better medical facilities and more highly trained and qualified professionals. However, this trend is now reversing, and most recently "hubs" of medical excellence have developed which attract people regionally (Horowitz *et al*., 2007, Lautier, 2008). Many countries participate in medical tourism as importers, exporters or both. The main importing countries (those where the medical tourists come from) are in North America and Western Europe. Although current levels of movement are relatively limited, as outlined in Section Four , the potential, if payment was covered by third-party payers, is significant. For instance, a study carried out by Beecham (2002) suggested that 40% of the patients questioned in a UK nationwide poll would be willing to travel outside the UK for treatment; 26% would apparently travel anywhere in the world!

113. The main exporting countries (those who provide the services to medical tourists) are located across all continents, including Latin America, Eastern Europe, Africa and Asia. Countries have specialised in certain procedures. For instance, Thailand and India specialise in orthopaedic and cardiac surgery, whereas Eastern European countries are hotspots for dental surgery (Smith *et al*., 2011c). Thus, although all countries may possibly be source and destination countries for medical tourists, this section will take the view that it is predominantly LMIC who are the destination countries, and HIC the source countries. Nonetheless, many of the issues are quite generic and will affect any destination country, regardless of the level of economic development, just to a greater or lesser extent. It is also worth noting that the magnitude of the possible effects being discussed is largely unknown – in many cases the potential or actual occurrence of these effects has been observed, but the scale of effect, and how this scale may differ between countries is an unknown quantity (Smith *et al*., 2009b).

Economic impacts

114. Most countries that engage in delivering care to medical tourists do so to increase the level of direct foreign exchange earnings coming into their country; to improve their balance-of-payments position (Timmermans, 2004, Ramírez de Arellano, 2007, Turner, 2007). To some extent this might be income thought of as accruing directly to the health system. For instance, foreign patients purchase health care services, and hence provide an income that can be used within hospitals to cross-subsidise care for domestic patients, or could be used to help fund capital investment, such as MRI scanners, that are then used by all patients in the hospital. For instance, in Singapore the authorities stress that involvement in medical tourism enables them to provide a broader range of clinical services to the indigenous population than would be the case if income was not being generated through medical tourism (India and Malta use such arguments) (Lee, 2010, Lee and Hung, 2010). Similarly, Ramírez de Arellano (2011) suggests that the Cuban experience is to reinvest income from foreign patients into the national system. It is therefore possible that some countries may seek foreign patients in order to develop facilities to better serve local patients (e.g. improve staff, investment, specialist expertise, cross-subsidise, etc) – although these arguments are more likely to be 'window dressing' of the core motive which is to earn foreign exchange.

115. However, one must remember that foreign patients are merely an addition to domestic private patients; and this may be a significant or insignificant addition. There may also be different economic implications depending if these patients are simply using spare capacity or competing with domestic patients. For instance, the push by Thailand to be a hub for medical tourists in the 1990's was a result of the economic crisis in Asia generating a fall in domestic private patients and hence leading to spare capacity in their private sector. In this case, increasing foreign patients was more or less a net benefit to the private health system with substantial income and little real opportunity cost. However, where there is not spare capacity, and hence this capacity has to be developed, there are substantial potential costs in financial terms, but also in the wider context of fears of two-tier system developments, internal brain drain, etc., as outlined below.

116. Although there may be income generated for the health sector, it is typically not health care income that concerns destination countries of course, but general increases in tourist income, since there is hoped to be a substantial level of expenditure by medical tourists, and their companions, that is not related to medical care (food, accommodation, sights, travel). Certainly medical tourism can be an important source of foreign exchange. A report by the Tourism Research and Marketing Group estimates that there are 37 million health-related trips each year, generating €33 billion (TRAM, 2006). A report carried out by McKinsey and CII (2002) predicts that by 2012, India's medical tourism industry will be worth US$2 billion.

117. Indeed, it is the promise of these earnings that often drives government involvement in investing directly or indirectly (tax incentives) in private hospitals and actively promoting medical tourism (Ramírez de Arellano, 2007, Reed, 2008, Lee, 2010). Indeed, the Indian government stated in its National Health Policy in 2002 that medical tourism was considered to be a "deemed export" and therefore awarded it fiscal incentives, including lower import duties, prime land at subsidised rates and tax concessions (Garud, 2005, Ramírez de Arellano, 2007, Sengupta, 2008). Similarly, the Thai policy promoting medical tourism has been deemed to be such a success that it has recently been renewed. Thus, sectors other than medical care – especially those associated with hospitality and travel – may benefit to some degree from increased medical tourism, as will the government more centrally through increased taxation revenue. This revenue can, of course, help support the domestic public health system, for example.

118. Nonetheless, the net income from medical tourism may not be as significant as it appears. Part of the rationale for the pursuit of medical tourists is to generate additional tourism income, which presupposes that these individuals (and their companion(s)) would not otherwise have been in the country. However, in many cases medical tourists are either Diaspora or patients who have previously visited the country and are likely to again. Thus, they are 'regular' visitors who on one trip happen to 'add in' an element of medical care. In this situation it is highly likely that the non-health care revenue would have been raised irrespective of their visit for medical reasons. In this situation clearly the additional income generated by the 'medical' element of medical tourism is far more limited, and the overall addition to the economy consequently less, which may put a different perspective on the balance of benefits and risks.

119. Further, there are also financial costs to be borne from inviting medical tourists into a country. As mentioned above, often there are requirements for upgraded infra-structure – either specifically within the health sector (e.g. hospital facilities) and/or outside of that sector, such as roads, telecommunications etc. However, such infrastructural investments will create favourable spillovers for non-medical tourists and the local population. There are also likely to be costs concerned with appropriate staffing of facilities, possible accreditation schemes, and other requirements to attract medial tourists.

120. For instance, 35 countries have sought accreditation from the US-based Joint Commission International (JCI), the international arm of the Joint Commission, which accredits US hospitals. India has already sought and obtained JCI accreditation for seventeen hospitals, and Thailand for fourteen (JCI,

2011). Other international accreditation bodies include the Australian Council for Healthcare Standards, the Canadian Council on Health Services and the Society for International Healthcare Accreditation. This high number of accreditation associations shows there is a strong commitment from exporting countries to develop or strengthen their medical tourism industry. However, there are costs associated with increasing and ensuring standards to meet these various criteria, maintenance of these accreditations, and the processing costs themselves.

Trickle down of best practice/technological transfer

121. Stemming from the economic, or financial, benefits which are sought, there is an associated argument around 'trickle down' of best practice and technological diffusion. Part of this relates to the increased ability to purchase the latest technology for example. However, part of this also relates to the exposure to international patients and staff that may generate more qualitative advances. Thus, there is an argument that servicing the needs of foreign patients may broaden the case-mix for staff, or may increase throughput to enable them to become more skilled; it might open up the door to secondments to overseas facilities which, provided migration is temporary, may lead to enhancement of human capital; it may provide increased quality through ensuring compliance with (higher) international standards for care (as alluded to above); and it may promote a culture of personal development in skills and technologies available to treat patients generally, which local patients will of course benefit from.

122. However, there are also associated risks. For example, there is the possibility of resources being taken away from the domestic population and invested into private hospitals; another possibility is that investment is directed towards urban tertiary care rather than rural primary care centres which more appropriately reflect domestic population needs. There may also be a skew in the resources devoted to the conditions associated with medical tourists rather than those associated with local populations, such as a focus on high technology orthopaedic, dental and reproductive care, rather than more basic public health measures focused on infectious disease. It is also not clear how much the accreditation of private hospitals dealing with medical tourists will be replicated in private, or public, hospitals which do not serve this client base.

Internal brain drain and reverse brain drain

123. Some exporting countries have taken advantage of the growth of medical tourism to attract back to their home country health workers who had emigrated, thus reversing the 'brain drain' (Chinai and Goswami, 2007, Dunn, 2007, Connell, 2008). It is argued that this is possible since hospitals catering for medical tourists can offer competitive salaries and working conditions more comparable with overseas institutions. This has the double benefit of giving a high quality signal, as international patients are more likely to trust doctors who have trained or practiced in their countries of origin, as well as ensuring that precious human resources are brought back to the country or are less likely to leave (Connell, 2008).

124. However, there is uncertainty over the precise magnitude of this affect, and also of the extent to which human resources are made available for the domestic population and thus of benefit to the domestic health system, or rather are simply an 'internal export' by only treating the same patients that they would have if they had migrated, it is just that they are doing this 'at home'.

125. Closely related to this, is that whilst the prospect of reversing the *international* brain drain is very positive, there are concerns that medical tourism will cause an *internal* brain drain, with health professionals leaving the public health system to work for the hospitals that attract medical tourists, lured by the better salaries and work opportunities just alluded to (Arunanondchai and Fink, 2006, Burkett, 2007, Chinai and Goswami, 2007). This would decrease the quality of the public health system and the doctor-to-patient ratio. As with other aspects of medical tourism, there is little empirical evidence of whether this is

happening, and to what extent; and what there is, is unclear. For instance, Vijaya (2010) found that there was an internal brain drain from the Thai public to private system. However, another study which assessed the influence of medical tourism on the internal brain drain in Thailand concluded that it is not the influx of foreign patients, but the numbers of Thai private patients that have the highest influence on the internal brain drain (Wibulpolprasert and Pachanee, 2008). As raised earlier, it is important – and seldom if ever done – to separate the effects of private care from the additional impact of a sub-sample of foreign private patients and seek to isolate the effect that being a *foreign* private patient per se has.

Two-tier system

126. All of this, of course, leads us to the primary concern about the possibility of medical tourism generating – or at the least exacerbating – a two-tiered health system, where foreign patients benefit from sophisticated private hospitals with a high staff-to-patient ratio and expensive, state-of-the-art medical equipment, whereas the local population only has access to basic, under-resourced health facilities (Chanda, 2002, Garud, 2005, Ramírez de Arellano, 2007, Connell, 2008, Leahy, 2008).

127. Certainly there is the *potential* for medical tourism to have effects in terms of the distribution of healthcare resources for the less well-off local population, unless the government has some sort of policy of wealth redistribution in place, or there are robust charitable ventures in place to assist the local population (Chee, 2008, Heung et al., 2010). There is anecdotal evidence that may support this. For instance, there have been various accusations that in some countries private-sector medical tourists may be accumulating medical resources and taking healthcare services and personnel away from the local population (Sengupta, 2011), and one study (Pennings, 2007) suggests that although private hospitals in India may have a responsibility under the Public Trust Act to provide free health care to the extent of 20% of resources, there are no checks undertaken to ensure that this occurs and others have suggested that Indian hospitals renege on promises to provide free healthcare (Shetty, 2010).

128. Nonetheless, as with much in this area, there is no strong evidence that medical tourism creates a two-tier system (especially given the point earlier about the extent to which they may simply add some additional private patients to an already sizable domestic private sector), or even that they may exacerbate this.

SECTION SIX
HARM, LIABILITY & REDRESS

129. Whilst ethical and legal issues arise for all forms of medical care – informed consent, liability and legislating for clinical malpractice – these are intensified for medical tourism. 'Cosmetic tourism', 'fertility tourism', 'transplant tourism', to say nothing of recent developments in the areas of 'stem cell'-tourism' and 'euthanasia tourism', raise ever-more complex medico-legal and ethical questions. We are entering relatively uncharted and rapidly developing territory with regards to the legal dimensions. Currently, there is no clear legislative picture or developed body of case law to guide practice in this area. Clearly, however, as the range of treatments and sites offering them expands there is a need to understand these issues – for patients, surgeons, overseas facilities and legal systems.

Medico-legal issues (quality of care, redress, liability, litigation)

130. In the event of an adverse outcome arising from failings in clinical and professional practice, how do patient fare in seeking redress given there is no international regulation of medical tourism? There are warnings that clinics overseas are not necessarily regulated according to source-country standards and regulations. Choosing an overseas treatment centre brings a number of challenges – difficulties in assessing comparative quality and performance of alternative providers, differences in legal liability and knowledge concerning the processes of how to pursue complaints and receive redress (MacReady, 2007).

131. If patients experience poor-quality treatment which results in adverse outcomes and as a result wish to bring a civil or criminal case, they face potential confusion with a number issues not fully clarified (Vick, 2010). A combination of services may contribute towards the medical tourist experience including product advertising, initial internet consultation, a brokerage service, surgery itself, and various mixes therein.

132. With regards to advertising and promotional material, there are typically national and European restrictions on what can be advertised, but given the role of the internet in promoting medical tourism this may be difficult to regulate and hold miscreants to account.

133. There are complexities regarding who could be subject to legal proceedings, the jurisdiction of hearing any case, and the country's law that should govern any case (Svantesson, 2008, Vick, 2010). There are questions about who to sue and whether a dissatisfied medical tourist should sue the individual surgeon, the clinical team, the hospital, or even the broker that may have arranged the treatment. The jurisdiction question concerns where any legal case would be heard and the laws and legislation that would govern it. For an Australian citizen for example, domestic legislation would provide three potential routes for redress: action for breach of contract; action for tort of negligence; action under the misrepresentation of Trade Practice (contracts) Act (1974) (Svantesson, 2008, see also Vick, 2010 for a UK analysis).

134. A potential difficulty in pursuing a breach of contract or clinical negligence is that medical tourists may be encouraged to sign legal disclaimers prior to receiving treatment that restrict where any subsequent case will be held, the law that will cover it, and include further liability limitation or exclusion clauses. Such clauses may seriously reduce effective redress options, although they are themselves potentially subject to legislation with regard to the fairness of their contract terms (Vick, 2010).

135. Pursuing a legal case overseas brings its own difficulties. Should complications arise during medical tourism, patients may not be covered by insurance or indemnity policies that are carried by the hospital, the surgeon or physician treating them, and they may have little recourse to local courts or medical boards.

136. Travelling to an overseas country to pursue a legal case also involves having to employ a suitable lawyer, and problems with regard to arranging travel and accommodation as well as the potential legal, language and cultural difficulties of courtroom understanding. In India, for example a civil case *could* be brought using the Fatal Accidents Act and Section 357 of the Code of Criminal Procedure (or via a consumer route under consumer protection legislation). But 95% of cases are dismissed because there is not a culture of professional critique (Howze, 2007). If a favourable judgement is handed down in an overseas jurisdiction – to what extent is this enforceable or likely to ensure a significant financial award? Patients should be made aware that other countries might have different malpractice laws and legal traditions and these will impact on the size of malpractice payouts. One reason US health care is so expensive is the size of malpractice premiums, an indication that US citizens are litigious and value their right to seek legal redress. Unti (2009) cites the example of professional liability insurance premiums for surgeons in India that are estimated at only 4% the premium for a similar practicing surgeon in New York.

137. Informed-consent practices for undergoing procedures vary around the world, and may in fact not be available in some countries. What happens if there is a complication and the patient's subsequent necessary spell in the Intensive Care Unit is beyond their ability to pay? Will the hospital repatriate the body of a patient who dies on the operating table? What if the patient acquires VRSA, HIV or *Clostridium difficile* while an in-patient at the overseas hospital? As suggested earlier, there are strong arguments that consent is given in writing.

Issues for providers, ancillary interests and third-party funders

138. The current legal uncertainly with regard to medical tourism raises key issues for those providing medical tourism treatments and services. As Vick (2010) suggests "By promoting their services across international borders to attract overseas patients, clinics may not appreciate that they may become subject to the jurisdiction and laws of those countries, with important implications for litigation and insurance cover".

139. New insurance products exist that do provide legal and financial protection for the patient should medical malpractice arise while they are overseas undergoing treatment, and such insurance and financial services are increasingly becoming available. Clearly with such products the devil is often in the detail and medical tourists need to check carefully any exemptions the policy may carry. It may also be advisable for medical tourist brokers to consider insurance cover for themselves given they potentially could become subject to claims for damages whether via commercial or criminal routes.

140. Issues clinics are well advised to pay close attention to include:

- considering a patient's history and communicating appropriately
- detailed documentation of decision-making and treatment pathways
- fully informed consent and consideration of risk, particularly when there are vulnerable patients (including those with psychological issues, the seriously ill, and children)
- validating qualifications of surgeons

- clarifying the relationships of the clinic and its surgical and clinical staff
- ensuring adequate insurance
- recovery planning (Vick, 2010)

141. Beyond the liability of brokers, surgeons and clinics, what are potential liability issues for Health Maintenance Organizations that decide to include overseas providers within their suite of referrals? Under such circumstances should they be expected to validate the credentials of physicians, and are they likely to be subject to vicarious liability, or is this avoidable through disclaimers? Within some states in the US, regulatory power over health insurance will prevent those insurers within the state from offering plans that require the insured to travel overseas to receive healthcare services (Cohen, 2010).

142. In summary, there are several important issues relating to the legal context and redress mechanisms available to medical tourists. Should regulation be introduced to tackle the range of issues outlined above and, if so, how would it operate? Furthermore, what legal information is available to prospective and actual medical tourists? A starting point is the requirement to comprehensively review national frameworks and practices in terms of legal redress, and to review and analyse the experience of bilateral legal proceedings to date. Legal remedies are dealt with in Section Seven.

Ethical dimensions

143. An established framework for healthcare ethics suggests the importance of:

- Autonomy (respecting a person's right to be their own person and make their own decisions, and ensuring those are reasoned informed choices).
- Nonmaleficence (avoid doing harm and endeavour to reduce risk – whilst all treatments will involve some measure of harm, it should not be disproportionate to the treatment benefits).
- Beneficence (promote patients' welfare and consider the risk/benefit balance).
- Justice (consider benefits, risks and costs distribution; patients in similar positions should be treated in a similar manner) (Beauchamp and Childress, 2001).

144. To what extent do these hold for medical tourism? At its root medical tourism is underpinned by trade in health services and competition amongst providers. Whilst there have always been some traditions of fee for service, medical tourism is qualitatively different – what is the balance of commercial and professional ethics? Price as an allocation mechanism in the competitive marketplace provides the opportunity to avoid long waiting lists in the home country but also – within an unregulated market – to offer unproven and potentially illegal treatments. Moreover, does medical tourism reflect deeper ethical dilemmas such as existing forms of health care funding and delivery that allow the number of uninsured to grow (cf Pennings, 2007)?

145. Who should fund the treatment of any medical complications and adverse health outcomes for patients returning from overseas private surgery? Should a patient's local health care system take on the responsibility and foot the bill for post-operative care including treatment for complications and side-effects? Discussions in the US, UK and Australia have all pointed towards costs being imposed on publicly funded health systems and the implications for local population health (e.g. exacerbating waiting lists even further) (Cheung and Wilson, 2007, Jeevan and Armstrong, 2008, Barrowman *et al*., 2010).

146. As outlined in Section Five, medical tourism raises particular issues when treatments are carried out in LMIC destinations. Questions include whether economic and health benefits trickle down to local populations (Mudur, 2004, Bose, 2005, Sengupta and Nundy, 2005, Meghani, 2011) and does the use of local health care professionals, doctors and nurses reduce the level and quality of health provision for local populations.

147. Different ethical standards may operate in different parts of the world due to religious and cultural differences, for example in relation to treatments including fertility therapy, organ donation and plastic surgery. Stem-cell therapy may not involve fully developed notions of informed consent and there may be little involvement of ethics review boards compared to practices within developed countries (MacReady, 2009). Some countries may seek to provide treatments that are illegal or highly experimental in other countries (Cortez, 2008). For example, rewarded kidney donation is controversial and even illegal in some parts of the world but not in others (Rouchi *et al*., 2009). There are major concerns about the vulnerability of organ donors motivated by financial incentives (The Declaration of Istanbul of Organ Trafficking and Transplant Tourism has condemned transplant tourism and the associated practices). Particular worries concern the possibility of poor aftercare and absence of separate clinical advocacy for donors. Officially it has become illegal for the organs of executed Chinese prisoners to be made available for transplant to foreign transplant tourists (Rhodes and Schiano, 2010). Questions remain, however, over how transplant programmes in high-income countries should deal with returning patients who have managed to circumvent overseas restrictions.

Nonmaleficence and beneficence

148. Given that ability to pay rather than need alone is the allocative mechanism in the medical tourism market, there are concerns that commercial rather than professional priorities are privileged in decision-making. This may include unnecessary or multiple treatments being offered to patients. There are also treatments where there are more likely to be associated psychological factors than with the broader population – such as those seeking cosmetic surgery who may have associated conditions such as body dysmorphic disorder (Grossbart and Sarwer, 2003).

149. Human stem-cell therapies are a controversial procedure and scientifically are of unproven value, especially as beauty therapies. Within the medical tourism field there are examples of countries offering stem-cell therapies targeted at specific conditions including Parkinson's, stroke and brain infections. What should be made of such treatments given there are no clinical trials to assess efficacy and effectiveness? The pursuit of unproven – and even dangerous – therapies across national boundaries may be particularly marketed as treatments for desperate patients who cannot obtain these in their own country of origin. There are particular ethical issues when these are pursued for children (Zarzeczny and Caulfield, 2010), and complex ethical dilemmas of 'hopeful' treatments being marketed to those who are gravely ill (Murdoch and Scott, 2010).

150. There are therefore many potential roles for professional associations, regulatory authorities and domestic physicians in counselling, advising, providing information and in the extreme possibly deterring would-be medical tourists. Such activity itself needs to be balanced with consideration of the principle of patient autonomy.

SECTION SEVEN
CONCLUSIONS AND CONSIDERATIONS FOR FUTURE RESEARCH

151. Despite high-profile media interest and coverage, there is a lack of hard research evidence on the role and impact of medical tourism. Whilst there is an increasing amount written on the subject of medical tourism, such material is hardly ever evidence-based. In light of this, our broad review outlines key health policy considerations, and draws attention to significant gaps in the research evidence. In order to make sense of the diversity of material and the gaps in extant knowledge, it is worth framing the conclusions and recommendations in terms of Frenk's (1994) framework for health policy analysis. This hierarchical framework presents four levels within any health system: systemic (regulation and finance), programmatic (system priorities), organisational (service management) and instrumental (clinical interface with patients).

System issues

152. Key issues at this level relate to the finance and regulation of medical tourism. Despite concerns generated by the current financial crisis, there is no sign that economic liberalization is slowing down. As the trading opportunities in other sectors become exhausted, as experience within services trade generally expands, and as the financial climate stabilises, countries will increasingly look to the opportunities that international trade in services has to offer. For importing services, this will centre on cost, quality and timeliness. For exporting services, this will centre on technology transfer, skill enhancements and foreign income.

153. At present, medical tourism is driven by commercial interests lying outside of organised and state-run health policy-making and delivery. Are there possibilities to bring it more within the remit of domestic policy competency, involving for example third-party payers sending patients overseas? Given the heavily 'politicized' nature of health care in all countries (even those with substantial private health care sectors), there will also be concerns about the threats this poses, including aspects related to brain drain, quality of care and equity. The Crisp Report (2007), commissioned to look at how UK experience and expertise in health could be used to best effect to help improve health in developing countries, argues that by engaging in country-level agreements, and drawing up Memorandum of Understandings between two countries, international recruitment of health professionals can be done ethically and based on a 'twinning' arrangement of reciprocal movement and benefit. If an agreement is achieved to send patients abroad on a more bi-lateral basis, then this may open channels for other agreements such as these, which can then combine international recruitment with training and work experience programmes to address brain drain issues in the importing country. If such a route were taken, this would effectively be a form of outsourcing, with such agreement typically following the well-worn tracks of medical tourist mobility. At this point medical tourism would begin to merge into other forms of patient mobility (EU-cross border care and state-sponsored outsourcing).

154. Countries continue to evaluate their positions on trade liberalization in health, as part of wider bi-lateral, regional and multilateral trade agreements. The latter especially has been the focus of debate, centred on the World Trade Organization's General Agreement on Trade in Services (Blouin *et al*., 2006). However, there is widespread recognition that the trade agenda (in services generally, and health specifically) is increasingly pursued at the regional or bi-lateral levels (Smith *et al*., 2009a). Not only have multi-lateral trade negotiations 'stalled' with the ongoing Doha round of WTO trade negotiations, but neighbouring countries often have similar culture, language and economic systems, as well as shorter

travel times, facilitating engagement in trade relations. As a result, trading blocs, such as the European Union (EU) or the Association of South East Asian Nations (ASEAN) have developed, where a significant proportion of international trade takes place. Additionally, many countries bypass the GATS system and engage in direct bi-lateral trade agreements (Smith *et al*., 2009a). Could this development be broadened to include medical tourist exchanges with countries where travel distance are longer, culture and language less familiar, but where cost savings to the public purse are more apparent?

155. This is an important shift in the dialogue, as greater bi-lateral and regional trade may reduce many of the concerns expressed over health services trade, and offer greater benefits. For instance, it may result in greater quality assurance, as well as better litigation procedures. However, much of the research evidence, anecdote and opinion on trade in health services remain focussed on this multi-lateral perspective. It is important, therefore, to explore bi-lateral trade in more detail, and to assess how it compares to multi-lateral trade. Such a focus would move discussion from the level of global medical tourism to more specific bilateral exchanges – for particular treatments, under specific quality-assured conditions (Smith *et al*., 2011c).

156. Beyond the national level, medical tourism raises questions for trans-national and global structures and processes. How, indeed if at all, should the medical tourism industry be best regulated, and where is intervention most likely to be effective? There is currently a lack of agreed international standards for assessing and ensuring quality and safety of medical tourism providers and health professionals, and no obligation for them to ensure quality and safety other than an ethical one. Currently, there is no universal "official agency/group", such as the United Nations, the World Health Organization, the World Tourism Organization or the World Trade Organization, engaged in either the delivery of accreditation, the co-ordination of delivery of accreditation, or licensing or studying the existing schemes that deliver accreditation. There is a range of possible solutions (both national and transnational) ranging from interventions that provide more information (although by whom and at what points is not clear); those that restrict choice of potential consumers (either directly prohibited or through discouragement); or attempts to restrict supply (whether approving or licensing providers or intermediaries). There are also interventions that may aim to offer consumer protection around poor-quality treatments which could involve encouraging independent holistic accreditation by recognised schemes, advising that clinicians responsible for delivering services take out personal medical indemnity which would compensate their patients in the event of problems occurring as a consequence of their seeking healthcare, or requiring medical tourists to take out insurance coverage (Cohen, 2010). Source health systems may attempt to shift risk onto individual medical tourists, for example with disclaimers to prevent medical tourists from seeking to rectify poor outcomes at cost to the public purse.

Programme issues

157. What are the programme priorities surrounding medical tourism for both source and destination countries? As outlined, medical tourist choice may lead to externalities at the system and programme level. Costs may result from overseas cosmetic surgery or dental work that requires subsequent treatment within home countries. There are few case reports or studies of these aspects and the scale of any problem is not clear. Large numbers of medical tourists will also impact on the source country's own health system, because outflows reduce both revenue and support for local services. Patients who circumvent waiting times make access and equity for the wider population more problematic. Opportunities for financial benefit from medical tourism include potentially exerting competitive pressure on systems importing health care and may help drive down the costs and prices offered in domestic systems, or relaxing legal restictions in order to stimulate domestic provision of treatments.

158. Most countries that engage in delivering care to medical tourists do so to increase their level of direct foreign exchange earnings. Some countries may promote health services in order to develop facilities

to better serve local patients, although the possibility of resources being diverted from the domestic population and invested into private hospitals and away from rural areas remains a potential dysfunctional outcome. Similarly, whilst the prospect of reversing the *international* brain drain is very positive, there are concerns that medical tourism will cause an *internal* brain drain, with health professionals leaving the public health system to work for the hospitals that attract medical tourists.

159. Research is needed on the economic impact for source and destination countries, particularly those low- and middle-income countries where there is speculation but little evidence about the impact of medical tourism treatments on local citizens, either in a health sense or indeed an economic sense. Country case studies of such state-driven support for medical tourism would be a useful starting point to better understand the positive and negative impacts on country finances and populations of involvement with medical tourism.

Organisation and clinical issues

160. In terms of management of services and treatments, there are continuing questions about the range of information and its quality. Given the role of the internet, how (if at all) the quality of medical tourism information is best addressed is unclear: ranging from codes of conduct, through quality labels, user guidance tool, third-party quality and accreditation labels, to educating users and assisting those wishing to search (Lunt *et al*., 2010). Frontier medicine and the marketing of biotechnologies present a particular issue (Murdoch and Scott, 2010) given that such treatments may not be based on proven clinical trials.

161. A number of business models (e.g. brokers, ownership forms) are emerging within medical tourism. These should be better documented and understood, including their strengths and drawbacks, as well as the implications for managing quality, safety and risk. The relations of emerging business models (e.g. partnership, multinational providers) and patterns and trends of accreditation require investigation.

162. The roles and responsibilities of clinicians and healthcare providers within both provider countries and countries of origin, and organisations responsible for credentialing and continuing professional development of clinicians in provider countries, require clarification regarding their duties in relation to patients who seek help and advice in advance of engaging in medical tourism. What is the role of informing, persuading and advocating for individuals that intend to travel abroad, and the role on return? What about the public health dimensions, such as pre-travel vaccination, anti-malarial prophylaxis etc.? How may publicly-funded providers and professional associations be involved? Should clinical ethics committees with lay membership have a greater role?

163. At the clinical interface the normal continuum of care may be interrupted. Full medical documentation, both pre and post-treatment, is crucial in order to minimise risk. In the UK, signed informed consent prior to an elective procedure is considered best practice and a standard requirement ensuring that patients are fully informed as to the benefits and adverse effects of a procedure or treatment. Patient-clinician dialogue may be problematic given language and distance, and treatment decisions may be unduly influenced by patients having already arrived in the destination country for pre-treatment consultation. Relatively little is known about readmission, morbidity and mortality following self-funded medical treatment abroad. Within treatment speciality there is a need to link together reports of adverse infection control or sub-optimal outcomes. Any legal cases that are pursued should also be documented so that it is possible to build national and international understanding of the implications of trade in health services.

Summary

164. The central conclusion from this review is that there is a grave lack of systematic data concerning health services trade, both overall and at a disaggregated level in terms of individual modes of delivery, and of specific countries. This is both in terms of the trade itself, as well as its implications. For instance, there is little robust evidence that medical tourism adds especially to the economies of destination countries, as figures tend to be quoted in aggregate, but not at the marginal level of the additional tourist-related income specifically resulting from *medical* tourism. This review has also touched upon overarching legal and ethical considerations surrounding medical tourism. Prior to considering any regulation we need more information and understanding (cf. Smith *et al*., 2009a).

165. Research and evaluation has not kept pace with the development of medical tourism and there is a need for national governments and potentially international bodies (e.g. EU, OECD, WHO) to invest in research this area. To this end, the UK National Institute for Health Research has recently commissioned research on the implications for the NHS of inward and outward medical tourism and it is hoped that the evidence generated from this study will help inform the development of future policy and practice in this area (Lunt *et al*., 2011).

166. The lack of data is significant if countries are to keep fully informed about the significance (potential or actual) of medical tourism for their health systems. Mechanisms are needed that help us track the balance of trade around medical tourism on a regular basis. The evidence base is scant to enable us to assess who benefits and who loses out at the level of system, programme, organisation and treatment. On balance there is a pressing need to explore further as to whether medical tourism is virus, symptom, or cure.

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