
REVIEW

What Do We Know About Medical Tourism? A Review of the Literature With Discussion of Its Implications for the UK National Health Service as an Example of a Public Health Care System

Johanna Hanefeld, PhD,* Richard Smith, PhD,[†] Daniel Horsfall, PhD,[‡] and Neil Lunt, PhD[‡]

*Department of Global Health and Development, Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine, London, UK; [†]Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine, London, UK; [‡]Social Policy and Social Work, University of York, Heslington, York, UK

DOI: 10.1111/jtm.12147

Background. Medical tourism is a growing phenomenon. This review of the literature maps current knowledge and discusses findings with reference to the UK National Health Service (NHS).

Methods. Databases were systematically searched between September 2011 and March 2012 and 100 papers were selected for review.

Results. The literature shows specific types of tourism depending on treatment, eg, dentistry, cosmetic, or fertility. Patient motivation is complex and while further research is needed, factors beyond cost, including availability and distance, are clearly important. The provision of medical tourism varies. Volume of patient travel, economic cost and benefit were established for 13 countries. It highlights contributions not only to recipient countries' economies but also to a possible growth in health systems' inequities. Evidence suggests that UK patients travel abroad to receive treatment, complications arise and are treated by the NHS, indicating costs from medical travel for originating health systems.

Conclusion. It demonstrates the importance of quality standards and holds lessons as the UK and other EU countries implement the EU Directive on cross-border care. Lifting the private-patient-cap for NHS hospitals increases potential for growth in inbound medical tourism; yet no research exists on this. Research is required on volume, cost, patient motivation, industry, and on long-term health outcomes in medical tourists.

Medical tourism—people traveling abroad with the expressed purpose of accessing medical treatment—is a growing phenomenon associated with globalization.¹ This includes cheaper and more widely available air travel and cross-border communication through the Internet, which allows medical providers from one country to market themselves to patients in another.² At the same time, increased movement of health workers for education means doctors providing care in middle- and low-income countries have in many cases the same qualifications as those in the high-income countries in Western Europe and the United States. This has been coupled with an increase in foreign

direct investment in health care providers in destination countries.³ The increasing acceptance of health care portability is evident in Europe where greater patient mobility led to an EU Directive on cross-border health care.⁴ Together with a rise in out-of-pocket expenditures for health in many high-income countries at a time of economic crisis, this conspires to form a perfect storm for medical tourism.

Yet, understanding of medical travel is limited.⁵ Little is known as to which patients choose to travel and why, when others do not. Details of the volume of patient flows and resources spent remain uncertain.³ This has hampered efforts to understand the economic costs and benefits to countries experiencing inflows and outflows of patients. Similarly, for the medical tourism industry, the role of private providers and brokers and marketing remain a “black box.”¹ While interest in the issue has grown over the past decade, effects on patients and health systems are not fully understood.

Corresponding Author: Johanna Hanefeld, PhD, Department of Global Health and Development, Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine, 15-17 Tavistock Place, London WC1H 9SH, UK. E-mail: Johanna.Hanefeld@lshtm.ac.uk

This review of the literature seeks to outline the current level of knowledge on medical tourism. Specifically, it aims to better understand (1) patient motivation, (2) the medical tourism industry, (3) volume of medical travel, and (4) effects of medical travel on originating health systems. Results are reported and discussed, paying specific attention to evidence of impact and lessons for the UK National Health Service (NHS) as an example of how medical tourism affects even universal public health systems. The authors conclude on current levels of knowledge, critical gaps, and future research priorities on medical travel.

Methods

The review was conducted between September 2011 and March 2012 as part of wider research, assessing implications of medical tourism on the UK NHS. Authors developed a search strategy based on the aims set out above. They adapted the strategy used by Smith and colleagues,⁵ deemed particularly relevant as it presented a recent review of medical tourism albeit focused on bilateral tourism. It was amended to focus more broadly on medical tourism. Initial papers identified were reviewed for inclusion by J. H. and R. S. according to title and where this proved inconclusive according to the abstract. In line with research objectives, papers with general focus on medical tourism, published in English and German (languages read by authors), and focused on the NHS, were included. The following were excluded: papers on well-being, news items, commentaries, laws or directives, and conference proceedings; papers focusing on stem cell tourism, travel for assisted suicide, and transplant tourism, given the distinct ethical issues. Three hundred and seventy-four papers remained as initial sample. References of papers identified were further examined to ensure comprehensiveness and four additional papers were included. The initial selection of papers was then reviewed (abstract or full paper) applying these criteria and focusing more specifically on the aims of the review (as above). Two papers were not accessible and therefore excluded.^{6,7} A final list of 100 papers was derived for inclusion in this review. This sample was tested based on the criteria by D. H. The literature search is summarized in the PRISMA flowchart (Figure 1).

Results

A rapidly expanding literature over the past 5 years with an “explosion” in 2010 and 2011 is reflected in the dates of publication of papers included in the review—73 were published in 2010 and 2011.

Types of Studies Reviewed

Papers included in the review were classified into the following categories: (1) those based on primary data

collection (quantitative and qualitative): interviews, surveys, analysis of datasets collected and obtained by authors, or the calculation of revenue and tourist flows, and case studies of patients; (2) reviews: literature reviews of medical tourism websites or promotional materials; (3) analysis: papers which while drawing on secondary sources, provide substantive new insights or conceptualize it in a new way (a number of papers presented frameworks); and (4) overview articles which gave an introduction to the issue of medical tourism. The results are summarized in Figure 2.

Geographic Focus

Papers were grouped according to the region the research investigated (see Figure 3), or global where they were general. Europe was the focus of 29 papers, 13 explicitly focus on the UK and a further 11 papers refer to either UK patients or the NHS, thus a total of 24 papers mentioned or focused on the UK.

Literature reviewed suggests a regional dimension to medical tourism: Japanese companies send their employees to Thailand,⁸ or to countries in the Gulf.^{9,10} A study of medical tourists in Tunisia found that they were from neighboring countries.¹¹ Countries are known for specific areas of medicine: Singapore for high-end procedures,¹² Thailand for cardiac, orthopedic, and gender reassignment surgery,¹³ Eastern Europe for dental tourism,¹⁴ and Spain for fertility treatment.¹⁵ While some destinations were recognized as popular with UK patients, eg, Budapest for dental treatment, evidence from literature suggested that proximity alone does explain preference for one destination over another.

Motivation to Travel

Most papers made reference to push and pull factors determining patients' decision to travel. These relate to cost, perceived quality, familiarity, waiting lists or delays in treatment, or the lack of availability of certain treatments in the country of origin.¹⁶ As this list demonstrates, these are often complex and dynamic,⁶ and may vary according to the treatment for which a patient travels. Evidence suggests that patients traveling for cosmetic surgery may enjoy the anonymity of a destination far from their country of origin,¹⁷ whereas migrants may prefer to return “home” to feel more comfortable with language or type of care provided.¹⁸ These different factors allow for a division into different subsets of medical tourism.

Diaspora

A number of studies refer to a group of tourists classified as diaspora, documenting the return of recent migrants from India, China, Korea, and Mexico, to access treatment either not available or perceived to be not available in their country of residence, or perceived to be more effective.^{9,18–20} While cost plays a part in explaining why, eg, Mexican immigrants to the United States

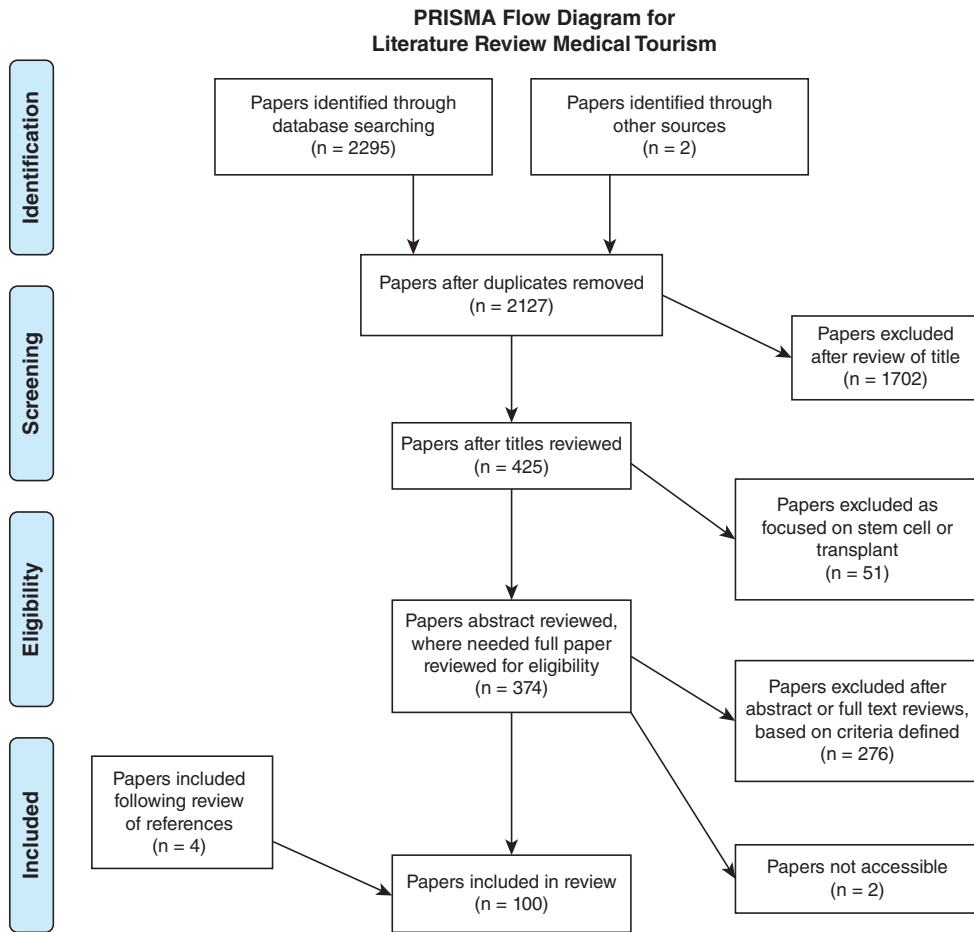


Figure 1 PRISMA flow diagram for literature review medical tourism.

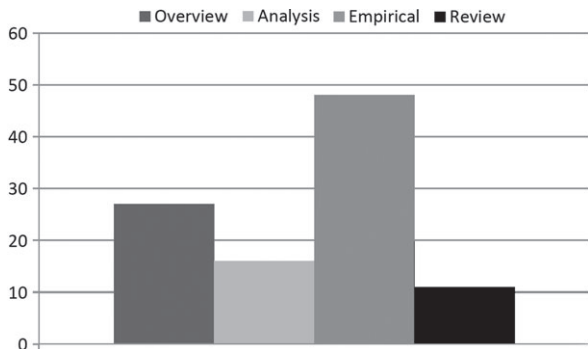


Figure 2 Type of study reviewed.

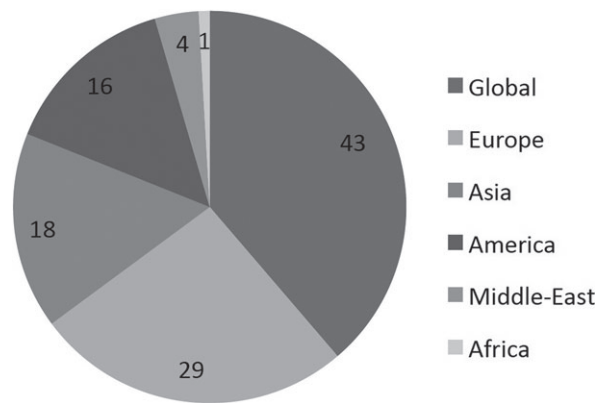


Figure 3 Countries covered.

return to Mexico for treatment, *trust* emerged as the key determining factor. This may partly be linked to language barriers, as a study of Korean immigrants to Australia suggests.¹⁸

Fertility

Reproductive or fertility travel is comparatively better documented than other forms of medical tourism.¹⁵ Of

the 16 papers identified for inclusion in this review, 6 papers focus on equity and ethical issues relating to fertility tourism, highlighting the rights of women in recipient countries and equity concerns where they may be compelled by poverty to donate eggs or act as surrogates. Four papers provide a general overview of the issues relating to fertility tourism.^{7,21-23} A review

of literature on cross-border reproductive care¹⁵ finds a consistent gap of empirical research—of 54 papers reviewed only 15 were based on empirical investigation. It noted the absence of evidence about patients' backgrounds and factors motivating their travel, and a gap in research on industry. A specific feature of fertility travel cited across papers reviewed is that availability of treatment (in this case gametes and surrogacy) is a factor in patient decision making. This includes the wish for timely and affordable treatment; in the UK it includes perceptions of the NHS as stressful and less effective.⁶ Evidence also highlights health effects of fertility travel on patients, showing an increase in multiple births in a London hospital resulting from fertility treatment received abroad.²⁴ Combined, these studies show that there is an effect of fertility travel on the health system of the country from which medical tourists originate, in this case the NHS, and that regulation of availability and (perceived) quality of service are factors leading patients to travel.

Dental Tourism, Bariatric and Cosmetic Surgery

Other types of tourism are identifiable, including dental tourism.²⁵ Three papers^{26–28} indicated this is likely to be an area of increasing travel by UK citizens, given the high cost of dentistry in the UK private sector, limited availability in the public sector, and lower cost in Eastern Europe.²⁷ A survey of dental clinics in Western Hungary and Budapest showed the largest group of patients (20.2%) originating from the UK with lower prices cited as main motivating factor.²⁸ Two papers focused in depth on issues surrounding bariatric surgery, exploring the ethical challenges and a case study of complications experienced by a US patient.^{29,30} Papers by Birch and colleagues³¹ and Miyagi and colleagues³² focus on complications from cosmetic tourism in UK patients. Others reported that a poll conducted amongst the members of the UK public found that 92% would consider traveling abroad for cosmetic surgery.³³ The possibility of a large number of UK patients seeking cosmetic surgery abroad appears supported by a survey conducted by the British Association of Plastic, Reconstructive and Aesthetic Surgeons which found that 37% of respondents had seen patients in the NHS with complications from overseas surgery.³¹

Risks

Risks for patients are covered in 29 papers. But surprisingly only 8 of these papers focus exclusively on the issue, and 10 studies mention longer-term health outcomes of patients. Three describe the recent outbreak of NDM1 bacteria following patients receiving treatment in India, a fourth describes an outbreak of hepatitis B in a London hospital traced to a patient recently returned from surgery in India, pointing to potential risks of diaspora travel.^{34–37}

While papers tend to mention regulation, only two^{38,39} review this more systematically. Both point to a

Table 1 Issues covered

Fertility	16
Cosmetic	5
Dental	3
Diaspora	7
Bariatric	2
Risks in health outcomes	29
Focus on recipient country's health system	37
Focus on originating country's health system	34

vacuum in regulation, with no one specific regulator or quality assurance standard in place, but rather a number of private companies offering quality assurance through affiliation, creating a market for quality assurance rather than independent standards.

Effect on Countries

As summarized in Table 1, 37 papers focused on the effects on recipient country's health system. Issues highlighted include the potential for medical tourism to retain or attract doctors in low- and middle-income countries who may otherwise emigrate, thus preventing or reversing a brain drain, and generating foreign currency.¹² Also considered is the danger of creating a two-tiered health system, resulting in increasing inequities in access and quality of health care for the local population in destination countries,^{40,41} mainly as a result of a rise in price where public health services are not provided for free in recipient countries, and the potentially greater concentration of doctors in the private sector.⁴²

A total of 34 papers focused on potential effects on originating countries' health system. These referred to factors leading to patients' travel, including rise in costs. Papers documented patients returning with complications.⁴³ Seven papers specifically highlighted complications dealt with in the NHS.³¹ Research highlighted the need for regulation, the lack of quality control of overseas providers, and the cost (potential or real) arising to the originating country from treating such complications. Two papers calculated the potential cost saving and benefits of sending patients abroad.^{20,44} Overall, papers focusing on the effects on originating countries' health system concentrate mainly on perceived negative consequences.

Industry

Forty-one papers reviewed focus at least partly on providers of medical tourism. A subset of 22 papers studied the medical tourism industry in a more focused way. These provide evidence of a highly diversified industry, with no clear typology emerging. For example, in Southeast Asia medical tourism is state-led, with large hospitals targeting foreign patients. In other cases, such as cosmetic or dental tourism, intermediaries organize travel and treatment for patients. Examining the entire

literature, it is clear that there is not a uniform model or chain for medical tourism.

Articles examining communication materials and websites highlight the limited information on follow-up care and redress in case of complications.² They point to an emphasis on testimonies by patients, rather than formal accreditation or qualification of clinicians, a focus on tourism aspects of the destination and on trust—offering services “as good as at home.”⁴¹ These are in addition to low cost used as a selling point. Studies focusing on medical tourism facilitators identify these as a heterogeneous group.^{45,46}

Papers reviewed mention individual hospitals or a medical tourism provider at the country level to give a flavor of the industry.^{8,45} However, only four papers^{47–50} report findings of a more systematic assessment of the industry, including focus on the strong state role in the development of medical tourism in Hong Kong, Malaysia, and Singapore, analyzing how these countries have fostered medical tourism, including through tax incentives. Singapore, for example, made a conscious decision to focus on the high-end complex procedures to have a competitive advantage.⁴⁷

Number of People Traveling

The actual volume in flow of medical patients was referred to in many papers but investigated in few^{10,11,28,42,51–54}; all papers provided further estimates or trends. Most papers cited similar figures of patient flows, but often sources were not accessible or based on media reports or other academic papers, which in turn quoted inaccessible sources. Seven papers referred directly to a report by Deloitte Consultancy, and six to McKinsey; the exact ways in which these were calculated remain unclear. Even where these were not referenced, the figures cited suggest these two reports as a source. For example, one paper³³ cites *The Economist* stating 750,000 US patients traveling abroad for treatment in 2007. This is the figure provided in the report from Deloitte consultancy in 2008.

Eight papers reviewed had either generated or collected own data on patient flows. Only three papers had calculated the total volume of medical tourism for 13 countries, including actual cost and effect on recipient country's health systems. NaRanong and colleagues calculate the contribution of medical tourism to Thai GDP (0.4%), while medical tourists with their higher purchasing power are likely to increase the cost of health services and lessen access in the public sector.⁴² This contrasts with Lautier's findings which highlight that export of health services in Tunisia simply makes use of excess capacity in the country's private sector.¹¹ Siddiqi's 11-country study in the Middle East showed complex flows within the region.¹⁰ Findings across the different studies suggest that the impact on recipient country's health system depends on the context and capacity, but that there is likely to be a small contribution to overall GDP. How income gained from medical tourism is in turn invested has not been studied.

Discussion

This review of the literature provides the most comprehensive overview of knowledge on medical tourism to date. The main limitation of the studies is the focus on English (and German) literature, and as set out in the search strategy a narrow definition focused on medical tourism rather than on the inclusion of broader health and well-being travel literature. This was essential to maintain feasibility of the review, given the large number of papers published.

Main Findings: What We Can Learn From the Literature on Medical Tourism

The literature reviewed clearly indicates that medical tourism is no unified phenomenon. Sub-types of travel, such as diaspora or fertility travel, travel for bariatric surgery, dental, or cosmetic work, were evident from the review. Decisions by patients to travel are not simply guided by cost considerations or even clinical outcomes. Rather, the literature points to a complex matrix of perceptions of care, waiting times, cost, and others, depending on the type of treatment sought. For example, trust appeared as a motivation for diaspora travelers but not for dental tourists, cost or availability in cosmetic procedures, and regulation in the case of fertility. However, lack of information about patients' characteristics limits deeper understanding of push and pull factors. With very few exceptions,^{16,6} the absence of in-depth interviews with more than one or two patients poses the greatest weakness of the literature reviewed and opens the potential to bias within studies reviewed.

A diverse picture of the medical tourism industry emerges. Some countries have become known for excellence in certain areas of treatment such as Spain for fertility or Hungary or Poland for dental treatment. Yet, this did not appear the case for all medical tourism destinations, eg, while India clearly is a destination for medical tourists, this is for a whole broad spectrum of treatments.

Few studies were able to quantify patient flows and calculate effect on recipient health systems and the economy. Evidence does suggest that the inflow of medical travelers can increase inequities within the recipient country health systems⁴² but that depends on the context.¹¹

Perhaps the most surprising finding was the increase in papers presenting primary research—a shortfall or gap that had been noted by the earlier literature reviews.^{5,55,56} The recent publication date of many confirms the increase in research of medical travel.

Implications for the UK NHS

Evidence demonstrates that UK patients travel abroad to receive treatment and return with complications or infections that require follow-up in the public sector. Based on papers reviewed, cosmetic procedures appear an area of growth for medical travel by UK patients

and likely to result in cost to the NHS due to resulting complications, but costs resulting from other types of travel, including fertility and dental tourism, are evident. While complications experienced by UK medical tourists were reported, these were not compared to rates of complications for similar procedures undertaken in the UK, which would have further strengthened such research. However, in individual cases of patients described, these often focused on cases so unusual or extreme that the comparison or lack thereof to the UK was implicit. Case studies also underlined the challenges relating to information and communication, with often limited patient records available for returning medical tourists.

Despite a number of studies focusing on UK patients, overall the evidence presented underlines the need for further research to ascertain the potential impact and costs arising from medical tourism on the NHS. Only one study⁴² estimated actual costs arising from complications of returning medical tourists and this was based on a small sample of patients. We found no research calculating the potential savings arising from UK patients traveling abroad for treatment. While research on risks associated with medical travel proved limited, the documented NDM1 outbreak in the UK highlighted the potential of infections that may result from medical travel.³⁶

Research focused on communication materials and websites highlights the lack of credible information about qualification and an absence of regulation and legal safeguards. This lack of clear information paired with the increasing willingness to travel of the UK public makes a greater numbers of complications a likely scenario.

Considering findings from the literature focused on the UK, these are particularly salient for the NHS at a time of reform. The lifting of the cap on private patients increases the potential for greater earning and marketing of NHS hospitals to foreign private patients. In this context, the lack of evidence on incoming tourists limits the possibility of informed decision making. Moreover, findings about complications of returning medical tourists, which highlight the need of quality control and continuity of care, are likely to mirror some of the policy challenges that will become evident in the implementation of the EU Directive on cross-border health care implemented from 2013. In this context, it seems opportune for policymakers within the EU to further explore lessons from medical travel.

Conclusion

This review of the literature highlights a growing trend in medical travel that is likely to continue and have an increasing impact on patients, and originating and recipient health systems. It shows a diverse industry and different types of tourism depending on treatment, each with a complex set of patient motivation. Evidence also highlights complications experienced by patients,

resulting in health problems and costs to originating health systems. While the review shows an increase in research over the past 2 years, it also clearly identifies limits to current knowledge and areas where the need for further research is evident:

1. A lack of information about patients' background and numbers of patients traveling abroad for treatment persists. The lack of data also restricts analysis about possible cost and benefits of medical travel.
2. Limited insights on why some patients travel when others do not.
3. Little is known about the industry beyond reviews of information materials and websites. Further research is needed to better understand how the sector operates, to ultimately understand impact on health services and outcomes of medical travelers.
4. Moreover, there is an absence of research examining the long-term health outcomes of medical tourists when compared to patients treated within their country of residence. As a result, evidence on the comparative effect of treatment received abroad is lacking. Further qualitative and quantitative research beyond immediate clinical outcomes is needed to truly understand the effect of medical travel on patients, and its cost to the health system.

As medical tourism is set to rise, addressing these gaps in the evidence is urgently required to avoid potential harm to patients and health systems by enabling more informed policymaking on aspects of medical tourism.

Acknowledgments

The authors wish to acknowledge the members of the study advisory committee for their input into the review. This project was funded by the National Institute for Health Research Health Services and Delivery Research Programme (project number HSR 09/2001/21). The views and opinions expressed herein are those of the authors and do not necessarily reflect those of the HS&DR Programme, NIHR, NHS, or the Department of Health.

Declaration of Interests

The authors state that they have no conflicts of interest to declare.

References

1. Lunt N, Carrera P. Medical tourism: assessing the evidence on treatment abroad. *Maturitas* 2010; 66:27–32.
2. Lunt N, Hardey M, Mannion R. Nip, tuck and click: medical tourism and the emergence of web-based health information. *Open Med Inform J* 2010; 4:1–11.
3. Smith RD, Chanda R, Tangcharoensathien V. Trade in health-related services. *Lancet* 2009; 373:593–601.

4. Legido-Quigley H, Passarani I, Knai C, et al. Cross-border healthcare in the European Union: clarifying patients' rights. *BMJ* 2011; 342:d296.
5. Smith R, Martínez Álvarez M, Chanda R. Medical tourism: a review of the literature and analysis of a role for bi-lateral trade. *Health Policy* 2011; 103:276–282.
6. Culley L, Hudson N, Rapport F, et al. Crossing borders for fertility treatment: motivations, destinations and outcomes of UK fertility travellers. *Hum Reprod* 2011; 26:2373–2381.
7. Ferraretti AP, Pennings G, Gianaroli L, et al. Cross-border reproductive care: a phenomenon expressing the controversial aspects of reproductive technologies. *Reprod Biomed Online* 2010; 20:261–266.
8. Connell J. Medical tourism: sea, sun, sand and ... surgery. *Tour Manage* 2006; 27:1093–1100.
9. Alsharif MJ, Labonte R, Lu Z. Patients beyond borders: a study of medical tourists in four countries. *Glob Soc Policy* 2010; 10:315–335.
10. Siddiqi S, Shennawy A, Mirza Z, et al. Assessing trade in health services in countries of the Eastern Mediterranean from a public health perspective. *Int J Health Plann Manage* 2010; 25:231–250.
11. Lautier M. Export of health services from developing countries: the case of Tunisia. *Soc Sci Med* 2008; 67:101–110.
12. Lee CG, Hung W. Tourism, health and income in Singapore. *Int J Tour Res* 2010; 12:355–359.
13. Horowitz MD, Rosensweig JA, Jones CA. Medical tourism: globalization of the healthcare marketplace. *MedGenMed* 2007; 9:33.
14. Piazzolo M, Zanca NA. Medical tourism—a case study for the USA and India, Germany and Hungary. *Acta Polytech Hungarica* 2011; 8:137–160.
15. Hudson N, Culley L, Blyth E, et al. Cross-border reproductive care: a review of the literature. *Reprod Biomed Online* 2011; 22:673–685.
16. Glinos IA, Baeten R, Helble M, Maarse H. A typology of cross-border patient mobility. *Health Place* 2010; 16:1145–1155.
17. Connell J. “Mind and matter: health tourism or cosmetic surgery?” *Medical tourism*. Wallingford: CABI, 2011:23–41.
18. Lee JY, Kearns RA, Friesen W. Seeking affective health care: Korean immigrants' use of homeland medical services. *Health Place* 2010; 16:108–115.
19. Horton S, Cole S. Medical returns: seeking health care in Mexico. *Soc Sci Med* 2011; 72:1846–1852.
20. Martínez Álvarez M, Chanda R, Smith RD. The potential for bi-lateral agreements in medical tourism: a qualitative study of stakeholder perspectives from the UK and India. *Global Health* 2011; 7:11.
21. Jones CA, Keith LG. Medical tourism and reproductive outsourcing: the dawning of a new paradigm for healthcare. *Int J Fertil Womens Med* 2006; 51:251–255.
22. Michelmann HW, Himmel W. Considering the possible and choosing the justifiable—The problem of “tourism” in infertility treatment. *J Reprod Endokrinol* 2007; 4:118–123 (in German).
23. Bergmann S. Fertility tourism: circumventive routes that enable access to reproductive technologies and substances. *Signs* 2011; 36:280–289.
24. McKelvey A, David A, Shenfield F, Jauniaux ER. The impact of cross-border reproductive care or “fertility tourism” on NHS maternity services. *BJOG* 2009; 116:1520–1523.
25. Connell J. Tummy tucks and the Taj Mahal? Medical tourism and the globalization of health care. In: Woodside A, Martin D, eds. *Tourism management: analysis, behaviour and strategy*. Wallingford: CABI, 2008:232–244.
26. Turner L. Cross-border dental care: “dental tourism” and patient mobility. *Br Dent J* 2008; 204:553–554.
27. Milosevic A. Dental tourism—a global issue? Perspectives. *J Esthetic Restorative Dent* 2009; 21:289–291.
28. Osterle A, Balazs P, Delgado J. Travelling for teeth: characteristics and perspectives of dental care tourism in Hungary. *Br Dent J* 2009; 206:425–428.
29. Snyder J, Crooks VA. Medical tourism and bariatric surgery: more moral challenges. *Am J Bioethics* 2010; 10:28–30.
30. Whiteman RG. Medical tourism and bariatric surgery. *Surg Obes Relat Dis* 2011; 7:652–655.
31. Jeevan R, Birch J, Armstrong AP. Travelling abroad for aesthetic surgery: informing healthcare practitioners and providers while improving patient safety. *J Plast Reconstr Aesthet Surg* 2011; 64:143–147.
32. Miyagi K, Auberson D, Patel AJ, Malata CM. The unwritten price of cosmetic tourism: an observational study and cost analysis. *J Plast Reconstr Aesthet Surg* 2012; 65:22–28.
33. Nassab R, Hamnett N, Nelson K, et al. Cosmetic tourism: public opinion and analysis of information and content available on the Internet. *Aesthet Surg J* 2010; 30:465–469.
34. Harling R, Turbitt D, Millar M, et al. Passage from India: an outbreak of hepatitis B linked to a patient who acquired infection from health care overseas. *Public Health* 2007; 121:734–741.
35. Chan HL, Poon LM, Chan SG, Teo JW. The perils of medical tourism: NDM-1-positive *Escherichia coli* causing febrile neutropenia in a medical tourist. *Singapore Med J* 2011; 52:299–302.
36. Rogers BA, Aminzadeh Z, Hayashi Y, et al. Country-to-country transfer of patients and the risk of multi-resistant bacterial infection. *Clin Infect Dis* 2011; 53:49–56.
37. Smith R, Lunt N, Hanefeld J. The implications of PIP are more than just cosmetic. *Lancet* 2012; 379:1180–1181.
38. Whittaker A. Challenges of medical travel to global regulation: a case study of reproductive travel in Asia. *Glob Soc Policy* 2010; 10:396–415.
39. Turner LG. Quality in health care and globalization of health services: accreditation and regulatory oversight of medical tourism companies. *Int J Qual Health Care* 2011; 23:1–7.
40. Johnston R, Crooks VA, Snyder J, et al. What is known about the effects of medical tourism in destination and departure countries? A scoping review. *Int J Equity Health* 2010; 9:24.
41. Vijaya RM. Medical tourism: revenue generation or international transfer of healthcare problems? *J Econ Issues* 2010; 44:53–69.
42. NaRanong A, NaRanong V. The effects of medical tourism: Thailand's experience. *Bull WHO* 2011; 89:336–344.
43. Melendez MM, Alizadeh K. Complications from international surgery tourism. *Aesthet Surg J* 2011; 31:694–697.

44. Mattoo A, Rathindran R. How health insurance inhibits trade in health care. *Health Aff* 2006; 25:358–368.
45. Karuppan CM, Karuppan M. Changing trends in health care tourism. *Health Care Manag* 2010; 29:349–358.
46. Snyder J, Crooks VA, Adams K, et al. The “patient’s physician one-step removed”: the evolving roles of medical tourism facilitators. *J Med Ethics* 2011; 37:530–534.
47. Leng CH. Medical tourism and the state in Malaysia and Singapore. *Glob Soc Policy* 2010; 10:336–357.
48. Whittaker A, Speier A. “Cycling overseas”: care, commodification, and stratification in cross-border reproductive travel. *Med Anthropol* 2010; 29:363–383.
49. Heung VCS, Kucukusta D, Song H. Medical tourism development in Hong Kong: an assessment of the barriers. *Tour Manage* 2011; 32:995–1005.
50. Sarojini N, Vrinda M, Anjali S. Globalisation of birth markets: a case study of assisted reproductive technologies in India. *Global Health* 2011; 7:27.
51. Shenfield F, de Mouzon J, Pennings G, et al. Cross border reproductive care in six European countries. *Hum Reprod* 2010; 25:1361–1368.
52. Deloitte. Medical tourism: consumers in search of value. Deloitte Center for Health Solutions. 2008. http://www.deloitte.com/assets/Dcom-UnitedStates/Local%20Assets/Documents/us_chs_MedicalTourismStudy%283%29.pdf. (Accessed 2014 Aug 15)
53. Confederation of Indian Industries and McKinsey & Company. Healthcare in India: the road ahead. New Delhi: CII & McKinsey & Co., 2002.
54. UN Economic and Social Commission for Asia and the Pacific (ESCAP). Medical travel in Asia and the Pacific. Challenges and opportunities. Thailand UN ESCAP. 2007. <http://www.scribd.com/doc/158181361/ESCAP-2009-Medical-Travel-in-Asia-and-the-Pacific-Challenges-and-Opportunities>. (Accessed 2014 Aug 15).
55. Crooks VA, Kingsbury P, Snyder J, et al. What is known about the patient’s experience of medical tourism? A scoping review. *BMC Health Serv Res* 2010; 10:266.
56. Hopkins L, Labonte R, Runnels V, Packer C. Medical tourism today: what is the state of existing knowledge? *J Public Health Policy* 2010; 31:185–198.