Medical tourism

Background
Medical tourism is a burgeoning industry in our region. It involves patients travelling outside of their home country for medical treatment.

Objective
This article provides an outline of the current research around medical tourism, especially its impact on Australians.

Discussion
Patients are increasingly seeking a variety of medical treatments abroad, particularly those involving cosmetic surgery and dental treatment, often in countries in South-East Asia. Adverse events may occur during medical treatment abroad, which raises medico-legal and insurance issues, as well as concerns regarding follow-up of patients. General practitioners need to be prepared to offer advice, including travel health advice, to patients seeking medical treatment abroad.

Keywords
cosmetic surgery; dentistry; medical tourism; preventive medicine; travel

The United Nations World Tourism Organization estimated that there were 1.087 billion international tourist arrivals around the world in 2013, which was an increase of 5% on the previous year. One of the strongest growth areas was Southeast Asia, which had a 10% increase in international tourist arrivals. An increasingly popular reason for travel abroad is for medical tourism, where patients travel outside of their home country for medical treatment. Dental tourism is included in this definition, but not wellness tourism, which usually refers to visiting spas, homeopathy treatments or traditional therapies. Medical tourism is a burgeoning industry estimated to be growing at 20–30% per year and worth an estimated $100 billion per year. It is not known exactly how many medical tourists there are, but there could be up to 750,000 each year globally. It is also not known exactly how many Australians travel abroad, but an Australian Broadcasting Corporation program indicated that there were more than 15,000 Australians travelling abroad just for cosmetic surgery. It is thought that up to $300 million is being spent overseas by Australians abroad for medical treatment every year.

In Australia, general practitioners (GPs) are the most important sources of travel health advice for their patients, when pre-travel health advice is sought. The most recent Australian studies have suggested that only about 50% of travellers are seeking travel health advice from any source before they go abroad. It is important that GPs are able to advise their patients about medical tourism, particularly as it is a growing phenomenon, and encourage their patients to discuss this issue and the risks with them, as well as to seek travel health advice well before departure. It is not surprising that patients are looking further afield, given increasing costs of healthcare locally and difficulties in accessing this medical treatment, especially when they can perhaps combine this with a recuperative holiday. In Australia, private health insurers are starting to offer plans for medical treatment abroad. An Organization for Economic and Cooperation and Development (OECD) report underlined one of the main reasons for medical tourism, which was the significantly cheaper costs for elective surgical procedures.
in countries such as India, Thailand and Malaysia, compared with countries such as the USA and the UK. For example, a hip replacement valued at US$75,000 ($92,017) in the USA was only US$9000 ($11,045) in India and US$12,000 ($14,726) in Thailand.11

**Medical tourism industry**

Medical tourism is a well-established industry. There is a large number of countries, companies, health services and health professionals involved and a considerable amount of information available online. As for all information on the web, it is difficult for health professionals, and patients, to sift through and answer questions about quality and accuracy. In some countries, medical tourism is actively supported and promoted by governments, such as in Thailand12 and Malaysia.13

In these countries, official websites provide detailed information on medical treatment and providers, as well as the usual destination guides and lists of travel providers, for potential medical tourists heading to those countries. Some countries, such as Singapore, Thailand and Malaysia, have been able to capitalise on linking their well-developed private healthcare systems and tourism attractions to develop comprehensive packages for the medical tourist.14

The range of medical treatments being marketed internationally has been collated by the OECD (Table 1).11 There are, of course, difficulties that may arise for the GP where non-substantiated medical treatment, such as stem cell therapy, is marketed online15 and where medical tourists become embroiled in the legal and regulatory mire of assisted reproductive techniques, such as surrogacy.16 In Australia, the recent media focus on medical tourism has largely been on a small number of case studies in Asia and has featured cosmetic surgery, as well as experimental and other therapies unavailable locally. The media has often highlighted a narrow range of medico-legal, geographic and ethical concerns.17 This was certainly the case when recent media attention was focused on Australians involved in a Thai surrogacy dilemma.18

There are a number of Australian brokers in the medical tourism industry for outgoing and incoming tourists. Among providers found through website search engines, an Australian private health insurer, NIB, was recently launched on the medical tourism stage and is promoting itself, at least on Google.19 Their website discusses cosmetic surgery options in Phuket, Thailand, done by a qualified plastic surgeon, with treatment in an accredited medical facility, as well as dental care in Phuket or Bangkok, Thailand, by a qualified dentist in an accredited dental facility.15 They guide prospective patients through the procedures, make appointments and organise travel and accommodation.18 NIB’s offerings may reflect the medical treatment Australian medical tourists are seeking abroad and one of their preferred destinations. This is consistent with a recent UK study of medical tourists going to Thailand, where about 80% of residents were having small elective procedures, such as cosmetic surgery, although a significant minority also travelled for major orthopaedic and cardiothoracic procedures.20

The flip side of medical tourism is that Australia is also a player in this market. It has been reported that Australia attracted about 10,000 medical tourists in 2013, contributing about $26 million to the national economy.21 Australia is surrounded by a number of low-and middle-income countries. These countries tend to have limited medical resources.22 More well-to-do individuals, or employees of corporations, living in the region may seek medical treatment in countries such as Australia, where there is also a strong system of accreditation of both health personnel and health services, and where they are able to receive medical treatment not available in their home country.22

**Adverse events**

There is a small but quantifiable incidence of adverse events or complications associated with any medical or surgical treatment and/or anaesthetic procedure, even in the best of centres internationally. This may range from anaesthetic recovery and surgical healing to impairment/disability or, rarely, death from complications of the medical or surgical treatment. Complications can often be minimised by adequate follow-up, but this may be limited in the treatment centre abroad. It is possible that complications may only manifest once the patient returns to Australia; however, there is limited evidence in the literature and only a number of case examples, such as ‘arthroplasty tourism’23 and ‘LASIK tourism’.24 LASIK (laser in situ keratomileusis) is one of a number of laser eye surgery options available for treatment of refractive errors.25 The main problem identified in these case reports is that any complications often have to be sorted out in Australia, often at a significant cost to the public healthcare system.23

The public health consequences of medical tourism are poorly described but include the potential for the spread of pathogenic microorganisms via the patient from the overseas provider to medical services at home, as well as the spread of resistant strains of microorganisms and, occasionally, the spread of emerging infectious diseases.11 Infection is a common complication of surgical treatment

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**Table 1. Medical treatments being marketed for medical tourism**

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Treatment</th>
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<tbody>
<tr>
<td>Cosmetic surgery</td>
<td>(eg breast augmentation, facelifts and liposuction)</td>
</tr>
<tr>
<td>Dentistry</td>
<td>(eg dental implants, dentures, crowns and whitening)</td>
</tr>
<tr>
<td>Cardiology/cardiac surgery</td>
<td>(eg bypass and valve replacement)</td>
</tr>
<tr>
<td>Orthopaedic surgery</td>
<td>(eg hip replacements, resurfacing, knee replacement and joint surgery)</td>
</tr>
<tr>
<td>Bariatic surgery</td>
<td>(eg gastric bypass and gastric banding)</td>
</tr>
<tr>
<td>Fertility/reproductive system</td>
<td>(eg in vitro fertilisation and gender reassignment)</td>
</tr>
<tr>
<td>Organ, cell and tissue transplantation</td>
<td>(eg organ transplantation and stem cell therapy)</td>
</tr>
<tr>
<td>Ophthalmological procedures</td>
<td>(eg laser eye surgery and lens implants)</td>
</tr>
<tr>
<td>Diagnostics, check-ups and other treatments</td>
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1. Ophthalmological procedures (eg laser eye surgery (eg LASIK: *laser in situ keratomileusis*))
2. Organ, cell and tissue transplantation (eg organ transplantation and stem cell therapy)
3. Fertility/reproductive system (eg *in vitro* fertilisation and gender reassignment)
4. Diagnostics, check-ups and other treatments
and may be localised in the surgical wound or be a systemic infection. Patients may also be at risk of exposure to infectious diseases that are more prevalent in countries such as South-East Asia with potential exposure to hepatitis B and C and human immunodeficiency virus through percutaneous needlestick injuries involving local health staff.9,26

The scope of resistance in microorganisms is very broad. Most physicians will be familiar with the perennial problem of hospital- and community-acquired methicillin resistant Staphylococcus aureus, but medical tourism has raised the issue of emerging resistance in enterobacteriaceae.27 The New Delhi metallo-ß-lactamase gene (NDM-1) also confers almost complete ß-lactam resistance. NDM-1 is highly transferable and has been identified in a broad range of Gram-negative bacteria including Actinobacter spp and Klebsiella pneumoniae.27 Almost all isolates are also resistant to aminoglycosides, fluoroquinolones and other classes of antimicrobials. Of concern, some isolates showed resistance to the drugs representing the last line of defence, tigecycline and colistin.28 In a couple of cases, so-called legacy, often toxic antibiotics (eg fosfomycin in Australia), were used to treat NDM-1 harbouring Enterobacteriaceae infections.29 The NDM-1 gene was first described in Sweden30 and the United Kingdom,31 and was strongly associated with healthcare received on the Indian subcontinent. Subsequently, imported cases associated with healthcare contact in India and Bangladesh have been reported in a number of countries and regions, including Australia.27

Medical tourists should not overlook the destination and medical treatment risks associated with travel. For example, deep venous thrombosis and venous thromboembolism (DVT/VTE) are potential risks for those having major surgery, especially for procedures such as joint replacement surgery.26 GPs will also need to make the patients aware of the general travel health risks to the medical tourism destinations in the region.

Insurance, legal and ethical issues
Medical tourists require special travel insurance policies as regular travel insurance may preclude medical tourism.11 Website search engines reveal a number of Australian and overseas companies now offering travel insurance for medical tourism, which may also assist in the event of any adverse events or complications of treatment. Overseas medical treatment is unlikely to be covered by Medicare Australia or private health insurance, although private health insurers are entering the market with such options.10,13 Reciprocal healthcare agreements concerning medical treatment abroad are limited to 10 European countries, as well as New Zealand, and are designed mainly for emergency treatment only.33 Travellers should always be advised to check that their travel insurance policy will provide medical care, emergency assistance, aeromedical retrieval and repatriation of remains in the event of a major complication of medical treatment at their destination(s).

A patient would need to navigate medical complaints and legal systems abroad if they wished to take action against a healthcare provider or facility in the event of malpractice and/or a serious complication of medical treatment. They may find that foreigners have limited or no protection or support in such a system and there may be significant differences in the medical complaints and legal systems.11 At present there are no agreed medical complaints or legal frameworks internationally to cover medical tourism, except for organ transplantation. The World Health Assembly resolved its objection to organ trafficking and transplant tourism in the form of the Declaration of Istanbul in 2004.34 A number of unethical practices have been described subsequently. In 2006, for example, 4000 prisoners in China were executed to provide 8000 kidneys and 3000 livers, mainly for foreign patients purchasing these organs. Such issues have been addressed after notification of these practices under this Declaration.35

There is a well-established framework of healthcare ethics promoting the importance of autonomy, including giving informed consent, non-maleficence (benefits should outweigh the risks) and beneficence (promoting patients’ welfare and justice).11 It is likely that medical tourism adds to a two-tiered health system and there may be debates around whether medical tourism benefits the people in the host country, but it is ethical to ensure that patients are as well cared for as possible through the entire continuum of healthcare.11 In the circumstance of the medical tourist, the normal continuum of medical care may be interrupted, particularly in relation to the GP in the pre-hospital care referral by the provider and also in the post-hospital care and follow-up, which may not be seen through by the provider. The use of experimental, unproven or even illegal treatments in medical tourism also raises ethical issues, such as described in relation to stem cell therapy, and often involves terminally ill patients. It would be useful if the GP were involved in all health tourism steps, in terms of the referral of care providing medical details of their patients, as well as receiving a summary of the medical treatment that has occurred, including the requirements for any ongoing care or follow-up.

Travel health advice
Only about 40% of Australians seek health advice from a qualified source before travelling abroad, but when they do the GP is the preferred avenue.8 It is not clear from the literature what proportion of these travellers will be seeking advice, either before deciding on having medical treatment abroad or before they go abroad. It is important, however, that GPs are prepared to provide advice on medical tourism to their patients as well as providing travel health advice and other assistance before their patients travel abroad for a procedure or treatment. While the GP may or not be able to influence the patient’s decision to become a medical tourist, potentially useful advice that can be provided as part of the travel health consultation might include:

- discussion concerning the risks of the procedure and having treatment abroad
- provision of travel health and safety advice for the destination
- outlining the insurance, legal and ethical issues of medical care abroad
- discussion concerning the quality of care and what to look for in terms of providers and medical treatment facilities.
The pre-travel health consultation is discussed elsewhere; however, there are important considerations for the destination, which may have significantly higher health and safety risks for the traveller, as well as for the procedure or treatment that the patient may undergo.

Hepatitis B immunisation would be an important consideration for travel to many of the host countries, where medical tourism is booming, especially in Asia. There are a number of sources of advice concerning medical tourism online (Table 2), including that provided by Smartraveller.

**Quality of care**

Various authors have suggested checklists of questions that GPs or patients could ask of medical tourism providers; for example, a checklist for professionals investigating a foreign medical facility might include:38

- Hospital/medical/dental facilities: are they accredited? Are the facilities and infrastructure well maintained and up to date?
- Health staff: are they appropriately qualified and credentialed?
- Morbidity and mortality data: are morbidity and mortality data available? How do they compare with the rates at home?
- Care: is continuity of care provided throughout the pre-, during and post-medical treatment phases?
- Due diligence: who exactly are you dealing with? Can you visit the hospital, tour its facilities and meet the staff?

Other professional colleges and societies also produce useful advice on medical tourism for providers and information sheets useful for patients,40,41 which may help them provide informed consent in the overseas context. It would seem important for GPs to provide expert advice to reinforce informed decision making by patients, as a recent study suggests that patients’ informal networks, including website fora, personal recommendations and support groups, were the most important in deciding to seek medical treatment abroad.42 Factors considered by patients in this decision were found to include ‘expertise, availability, cost, cultural reasons and the desire to go on holiday’.42 In addition to these classic push–pull factors that influence medical tourists’ decision-making processes, other themes identified include ‘motivations related to procedure, travel and cost’; ‘risks associated with patients’ health, travel, and pre- and post-operative conditions in the home country’ and ‘first-hand accounts of the positive and negative components of medical tourism’.43

A range of independent accreditation schemes has been established to review clinical governance and quality assurance procedures, and accredit hospitals that receive medical tourists. These agencies include:

- Joint Commission International (JCI) from the USA,44 which is the international arm of the Joint Commission,45 accrediting and certifying more than 20 500 healthcare organisations and programs in the USA
- Quality Healthcare Advice Trent Accreditation from the UK, which accredits more widely in Europe and internationally.46

Accreditation of hospitals and medical facilities provides some comfort as they are carried out by a third party, normally using a combination of self-assessment and external peer review.11 JCI, for example, has accredited hospitals in various countries in the region, including Thailand, Malaysia, Singapore, India, Vietnam, Indonesia, China and others. Table 2 provides some relevant websites that may be useful for the pre-travel health consultation.

Accreditation and credentialling of health professionals is also important and often there are strong traditions of overseas training and/or board and/or college certification of doctors, dentists and other health professionals on scholarship programs in many low- and middle-income countries. Hence, a number of health professionals will have overseas certifications, and a strong private healthcare system supported by medical tourism may help retain this health workforce in the country, although medical tourism may place an additional focus on lucrative medical specialities. It will be important that medical tourism operators inform patients about the credentials of their treating health professionals.

### Table 2. Useful websites for medical tourism and issues related to travel health*

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<tr>
<th>General websites</th>
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<tr>
<td>Centers for Disease Control and Prevention (CDC, USA). Medical tourism</td>
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<tr>
<td>National Travel Health Network and Centre (NaTHNaC; UK). Travelling for treatment.</td>
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<tr>
<td>World Health Organization. International Travel and Health.</td>
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<th>Position papers</th>
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*All websites accessed 4 November 2014
Conclusion
While there is a dearth of research on the epidemiology of medical tourism, it is known to be a growing industry for Australia and a number of countries in our region. GPs may be required to give advice to patients who elect to become medical tourists for a selected range of procedures, to help overcome cost, access or other issues in relation to their healthcare.

Key points
• Medical tourism is a burgeoning industry abroad.
• Patients are seeking a variety of medical treatments abroad, particularly those involving cosmetic surgery and dental treatment.
• Patients seeking healthcare abroad may consult their GP concerning this option and for pre-travel health advice.
• Adverse events may occur during medical treatment abroad, which raises medico-legal and insurance issues, as well as concerns regarding follow-up.
• The impact of medical tourism on host countries has raised ethical issues, particularly on the impact on local health services.

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References