



International Travel Health-related Challenges and Opportunities

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Foreign travel has increased exponentially over recent decades. Once a luxury for the affluent it is now a regular activity for many people. British residents for example, make over 70 million overseas visits annually, with 86% for holiday travel.¹ Tourism is a vibrant, international industry. Western Europe remains the destination for many tourists, with a considerable number now traversing the globe and visiting developing countries in Africa and Asia. Travellers are becoming more adventurous with visits to more exotic and remote places.

Health problems among travellers are common and as global travel increases, health issues in travellers are being reported more frequently.² Ageing populations bring an increasing number of elderly travellers who are more vulnerable to travel-related health incidents. Many popular tourist destinations have poor health resources and are inadequately prepared to deal with an influx of ill or injured foreigners, whereas others are developing advanced health facilities to cater for medical tourism. Global travel and medical tourism are expanding markets with potential benefit for local economies. Their further development should consider quality of health services, care provision and the impact on host country. Travel-related illness and trauma care presents institutional challenges and business opportunities for the entrepreneur.

Availability and quality of state and private resources vary at tourist destinations within Europe and more markedly in developing countries. The immediacy and efficacy of care for an injured or infected world traveller can determine whether the outcome is cure, morbidity or fatality. Many tourists with health insurance cover present to private health clinics and hospitals in emergency. They may benefit from a first rate service, or inadequate care similar to that often met in under-resourced state hospitals and clinics in undeveloped countries. There is a lack of systematic data concerning involved health services with scant robust evidence of quality of care. Research and evaluation has not kept pace with development and there is a need for governmental and international (ie. EU, OECD, WHO) surveillance.³

There are concerns, ethical dilemmas and problems relating to the commercial health industry.⁴ Potential patients can find difficulty in emergency identifying well-trained physicians and modern hospitals and units providing high-quality care. Overseas units may have

an inadequate complaints policy to deal with complaints made by dissatisfied patients. Inadequacies in medical malpractice law in some countries where treatment is sought, ensure that tourists are unlikely to receive compensation should medical injury result. Tourist destinations such as India, South Africa, or Thailand also have very different infectious disease-related epidemiology to Europe eg. patients can be exposed to mosquito-carried infection and gastro-intestinal illness.

Travel Related Health Risks

Travellers may meet a range of health risks during a trip abroad. The tourist industry and health professionals need to be aware of these, how people are affected and how to prevent or minimise them. Risk can be categorised, with actual risk to the individual dependent upon prevalence of the condition en route or at destination. Travel destination is associated with the probability of environmental hazard and contact with certain diseases. Infection and trauma are the most likely incidents to occur in fit travellers.⁵

Pre-travel health consultation can prepare the traveller for potential hazard and minimise the risk of adverse health event and private travel health clinics have proliferated. People with an awareness of travel-related diseases will take protective measures to avoid illness or injury while abroad and thus be less susceptible to their ill effects. Unfortunately, many travellers do not present for pre-travel advice and may therefore be oblivious to the potential health risks they face during their period of travel.⁶ Risk perception amongst travellers is variable and erroneous beliefs and misunderstandings exist There is therefore a need for health education concurrent with the pretravel consultation.^{7,8}

Non-infectious environmental health risk

- Traumatic accident especially road traffic accident
- Ultra violet light radiation
- Travel-related deep vein thrombosis
- Insect and animal bites
- Altitude illness

Infectious health risk

Some of the conditions which can affect the world traveller are:

Malaria	Dengue fever	Hepatitis A,B,C,D,E	HIV STD infection
Influenza	Legionnaires' disease	Lyme disease	Meningococcal meningitis
Rabies	Tetanus	Traveller's enteritis	Tuberculosis
Typhoid and paratyphoid fever	Yellow fever		

Travel related illness

The risk from infection is high during global travel and visits to many developing countries. However, disease causes just 9% of deaths in overseas travellers. 5% of travel related infectious disease is vaccine preventable. Traveller's diarrhoea is a predominant health problem in terms of frequency, personal and economic impact. It can have deleterious effects on the aged and young if there is marked fluid loss with electrolyte imbalance. Acute diarrhoea occurs most frequently in those returning from south central Asia. Malaria is one of the three most frequent causes of systemic fever-related illness among travellers from every region and it can be fatal.

The incidence of travel-related illness in a typical urban UK population was studied in patients presenting to a general practitioner within a 1-year period. 42% of travellers became ill while abroad, with 48% of ill travellers returning to consult their family doctor. Travellers to Africa had the highest rates of illness. In a sample of ill, returned travellers, malaria was the most frequent diagnosis (49.1%), encountered in patients returning from sub-Saharan Africa (95.6%), without adequate chemoprophylaxis (78.2%) 5. Adventure travel placed voyagers at added health risk from environmental hazards, important causes of morbidity and potential mortality among travellers. Injuries are common among adventurers.(6.1%) 9. Studies indicate that while most travellers seek some form of pre-travel health advice, less than 60% see a doctor prior to travel, and many travellers have poor knowledge of infectious risks, exhibit poor uptake of preventative health measures such as vaccinations and malaria prophylaxis, and poor adherence to health recommendations.

The pre-travel health consultation

Travel health education is aimed at improving travel-related health knowledge and encouraging potential travellers to adopt good health practices while abroad. Travellers often depend upon pharmacists, clinic nurses and family doctors for pretravel information, many of whom have no specialist training in the discipline and advice can be inappropriate and unnecessary vaccinations recommended. The health professional should have additional training in the discipline and courses of instruction to university degree standard are available. A prime objective of the pre-travel health consultation is to improve the traveller's' understanding of travel-related health risk diseases and hazards. Travellers' Diarrhoea for instance, merits attention with advice on avoidance, prophylaxis and treatment. Self-medication shortens the duration of the illness.

In terms of health risk, the potential world traveller is likely to fall into one of three categories:

Low risk

- Travel to low risk destinations
- short-haul journeys
- travellers free from any pre-disposing illness

Medium risk includes:

- group 1, where travel involves environmental extremes, or tropical countries;
- the frail old and very young
- those with pre-existing illness

High risk comprises:

- those with terminal illness
- people with pre-existing illness and - travelling to high-risk countries
- visiting areas with environmental extremes
- visiting the tropics
- visiting malarious areas
- back-packers and expeditioners

People from middle and high risk groups should be targeted for pretravel health consultation now increasingly provided by private health care clinics. They should be questioned on the following to identify the risk:

Age and gender	Regional destination	Season	Travel duration
Holiday type	Climate	Altitude	Latitude of venue
Transportation mode	Itinerary	Holiday activities	
Vaccination status	Smoking status	Physical status	Psychological status
Past medical history	Current health status	Pre-existing disease	
Health facilities at destination.		Travel health insurance status.	

Information should be provided the traveller about provision and quality of local health care resources at the destination.¹³ Customised advice on disease prevention, prophylaxis and vaccination should be offered. Provision of sound advice and vaccines will minimise health hazards in travel and hopefully avoid the traveller having recourse to the vagaries of emergency health care while abroad.

Summary

International traveller number increases annually.

A significant number of travellers become while abroad.

State and private emergency health services vary widely in quality of care for travellers.

Voluntary or bureaucratic surveillance of health resources used by travellers is required to improve standards of care.

Pretravel health consultation can reduce health risk in global travellers.

There is a need for the travelling public to be educated about travel health risk, prevention and prophylaxis.

Further education of health professionals who run travel health clinics is required to standardise advice.

The provision of good emergency health care for ill travellers challenges state and private resources, but provides opportunity for new providers and existing facilities to review, improve and standardise procedures.

References

1. Health Information for Overseas Travel, NaTHNaC 2010 Eds V Field. L Ford. D. Hill
2. Hill, D.R., et al., The practice of travel medicine: guidelines by the Infectious Diseases Society of America. *Clin Infect Dis*, 2006. 43(12): p. 1499-539.
3. Horowitz MD, Rosensweig JA, Jones CA Medical tourism: globalization of the healthcare marketplace. *Med Gen Med*. 2007 Nov 13;9(4):33.
4. Gan, L L. and Frederick, J R., Consumers' Attitudes Toward Medical Tourism (May 9, 2011). SSRN: <http://ssrn.com/abstract=1837062>
5. McIntosh I Reed J Power K Travel acquired illness , the world traveller and the need for pretravel education *Scot. Med J* 1994 39. 40-4
6. Genton, B. and R.H. Behrens, Specialized Travel Consultation Part I: Travellers' Prior Knowledge. *J Travel Med*, 1994. 1(1): p. 8-12.
7. McGuinness S, Spelman,T ,Johnson D, Leder K Immediate recall of health issues discussed during a pre-travel consultation. *J Travel Med* 2015;22: XX - XX.
8. Bauer, I.L., Educational issues and concerns in travel health advice: is all the effort a waste of time? *J Travel Med*, 2005. 12(1): p. 45-52.
9. McIntosh I Travel, Trauma, Risks and Health Promotion .1998 Quay Books. Mark Allan Pub.
10. Van Herck, K., et al., Knowledge, attitudes and practices in travel-related infectious diseases: the European airport survey. *J Travel Med*, 2004. 11(1): p. 3-8.
11. Johnson, J.Y., et al., Travelers' knowledge of prevention and treatment of travellers' diarrhoea. *J Travel Med*, 2006. 13(6): p. 351-5.
12. McIntosh I Health, hazard and the higher risk traveller. 1993 Mark Allan Pub. Dinton Wilts
13. Lunt,N, Smith,R,et al Med. Tourism: Treatments, Markets and Health System Implications: A scoping review. www.oecd.org/els/health-systems/48723982.pdf