

Emporiatics: The growing area of concern

The increase in the number of travellers and the speed at which they travel has not only had economic, cultural, and social repercussions, but medical, epidemiological, and medico-legal consequences as well.^[1] But while travel can indeed be interesting and exciting, and good for mental and physical wellbeing, all too often it can be harmful to a traveler's health.^[2] More than 900 million international journeys are undertaken every year. Global travel on this scale exposes many people to a range of health risks.^[3]

This increase in global travel has led to more frequent illness during travel and to instances of disease that is imported back to the country of origin;^[4] disease that may spread to susceptible contacts (e.g. measles imported to the United States by returned travelers and migrants,^[5] Severe acute respiratory syndrome, sexually transmitted infections, tuberculosis, and multidrug-resistant bacteria). The failure of health care professionals to accurately advise the traveler of health risks and the failure of the traveler to either seek or follow pretravel advice may lead to excess morbidity and mortality from diseases.^[6,7]

In a cumulative review of studies of Scottish travellers, the overall illness attack rate was 36%; 24% of those who were unwell were confined to bed, 14% required the services of a doctor and 2% required hospital admission. Gastrointestinal problems were the predominant complaint accounting for 28% of reported problems. In Swedish travellers, 49% experienced illness, 30% were confined to bed, 19% consulted a doctor and 1% required hospital admission. Diarrhoea (36%) and respiratory problems (21%) were most frequently reported.^[8]

Shifts in the distribution of infections, such as West Nile virus and dengue fever, underscore the need for up-to-date information. Well-known infectious diseases, such as polio, meningococcal meningitis, and influenza are appearing in unexpected ways and settings. It is increasingly clear that travelers, while at risk for infections, also play a role in the global dispersal of pathogens, such as certain serogroups of *Neisseria meningitidis* and influenza. Increasing drug resistance affects the choice of drugs for treatment and chemoprophylaxis, and decisions about use of vaccines.^[9]

Travel medicine or Emporiatics is the branch of medicine that deals with the prevention and management of health problems of international travelers.^[10] It is an interdisciplinary specialty concerned not only with

prevention of infectious diseases during travel but also with the personal safety of travelers and the avoidance of environmental risks.^[11] The major content areas of travel medicine include the global epidemiology of the health risks to the traveler, vaccinology, prevention of disease and pretravel counseling.^[12] Many of these risks can be minimized by precautions taken before, during and after travel.^[3]

Before departure, travellers should be advised about the risk of disease in the country or countries they plan to visit and the steps to be taken to prevent illness. There is no single vaccination schedule that fits all travellers. Each schedule must be individualized according to the traveller's previous immunizations, countries to be visited, type and duration of travel, and the amount of time available before departure. A medical consultation before departure is a good opportunity for the health care provider to review the immunization status of travellers and to offer missing routine vaccinations in addition to vaccines needed for the actual travel.^[3] Education about risk avoidance is a key component of travel medicine, and for low-risk disease, it may be a more cost-effective approach than vaccination.^[13]

Accessing medical care can be difficult, and travelers should be given guidelines as to how to locate reliable care. Travel health insurance companies will often have preferred providers in foreign countries, and they can arrange for payment for medical services and air evacuation, if necessary. Travelers should be encouraged to take out supplemental travel health and evacuation insurance. Travelers who have a history of anaphylaxis to medications, foods, or insect bites should carry with them antihistamine preparations and an injectable epinephrine product.^[5]

According to the World Health Organisation, people who plan to travel need to contact a physician specialized in travel medicine, at least 4-6 weeks prior to departure. An important aspect of travel medicine is pretravel advice for travelers who are at the extremes of age, those with complex medical conditions, and the large group of ethnic travelers who travel to their country of birth to visit friends and relatives (VFRs). VFRs are travelers who were born in a resource-poor region of the world, who now live in industrialized nations, and who return to their country of birth to VFRs. They present unique challenges in providing pretravel health care.^[14]

It is not uncommon for illness to occur overseas and as many as 8% of travelers will seek medical care for

these events.^[15,16] The important elements practice of travel medicine are as follows: Provider knowledge, training, and experience in the field, risk assessment of the traveler, provision of advice about prevention and management of travel-related diseases (both infectious and noninfectious), ability to advise travelers of all ages and with diverse health conditions, administration of vaccines and recognition of key syndromes in returned travelers.^[5]

Accidents are the second most common cause of death in travelers (after cardiovascular disease), accounting for as many as one-third of deaths.^[17] Several studies indicate road accidents are the major cause of accidental death, but also significant are drowning and air crashes. Travelers should be advised that transportation in developing countries is often more dangerous than at home. Seaside vacationers should be aware of the dangers of riptides and other threats to swimmers and should obey warnings posted at beaches.

The active measures should not be confined to the period of travel. Rather, all travelers, after return, must undergo medical examination if they have spent >3 months in a developing country, they suffer from a chronic disease or the existing disease condition has worsened, they consider that they have been exposed to a serious infection during the travel, and they experience illnesses like fever, persistent diarrhea, jaundice, skin or genital infections, in the weeks following their return.^[3]

DISCUSSION AND CONCLUSIONS

Interventions at an individual level and the contribution to protect public health put the issue in a high priority in both medical and the nursing science. In low-resource countries where there are constraints on availability of resources (viz., healthcare services), there is an immense need for advocacy by the policy makers and facilitation of travel medicine as a separate specialty by the government. Clinicians and private medical practitioners should be made acquainted with the travel medicine/diseases which may occur in patients with a history of foreign travel so that they should be aware of the risks when treating them.^[18]

Meeting the health needs of these travellers who are moving rapidly between countries and continents is a responsibility shared by the medical profession, by the travellers themselves, by travel organizations, by airline and shipping companies, and by host governments.^[19] The art of travel medicine is selecting the necessary prevention strategy without unnecessary adverse events, cost or inconvenience.^[9]

Travel medicine is an emerging discipline maturing as a respected area of clinical medicine, with good research and an emerging science. Emporiatrics has a key role in coming years

for identification of new risks and also establishment of new methods of therapy and prophylaxis for the travelers' benefit.

Sukhvinder Singh Oberoi

Department of Public Health Dentistry, Sudha College of Dental Sciences and Research, Faridabad, Haryana, India

Address for correspondence: Dr. Sukhvinder Singh Oberoi,
Flat No. 20, Triveni Apartments, H-block, Vikas Puri,
New Delhi - 110 018, India. E-mail: drsukhvinder@gmail.com

REFERENCES

- Burchard GD. Travel medicine – The next 10 years. *Eur J Med Res* 1999;4:399-402.
- Schwartz E. Travel medicine: An emerging discipline in medicine. *Harefuah* 2010;149:556-8.
- International Travel and Health. ITH 2012 Edition. Available from: <http://www.who.int/ith/en>. [Last accessed on 2014 Apr 03].
- Freedman DO, Weld LH, Kozarsky PE, Fisk T, Robins R, von Sonnenburg F, *et al.* Spectrum of disease and relation to place of exposure among ill returned travelers. *N Engl J Med* 2006;354:119-30.
- Centers for Disease Control and Prevention (CDC). Epidemiology of measles – United States, 2001-2003. *MMWR Morb Mortal Wkly Rep* 2004;53:713-6.
- Kain KC, MacPherson DW, Kelton T, Keystone JS, Mendelson J, MacLean JD. Malaria deaths in visitors to Canada and in Canadian travellers: A case series. *CMAJ* 2001;164:654-9.
- Newman RD, Parise ME, Barber AM, Steketee RW. Malaria-related deaths among U.S. travelers, 1963-2001. *Ann Intern Med* 2004;141:547-55.
- Patel D. Occupational travel. *Occup Med (Lond)* 2011;61:6-18.
- Chen LH, Wilson ME. Recent advances and new challenges in travel medicine. *Curr Infect Dis Rep* 2002;4:50-58.
- Page SJ. Current issue in tourism: The evolution of travel medicine research: A new research agenda for tourism? *Tourism Manage* 2009;30:149-57.
- Hill DR, Ericsson CD, Pearson RD, Keystone JS, Freedman DO, Kozarsky PE, *et al.* The practice of travel medicine: Guidelines by the Infectious Diseases Society of America. *Clin Infect Dis* 2006;43:1499-539.
- The International Society of Travel Medicine. Available from: <http://www.istm.org>. [Last accessed on 2014 Apr 03].
- Joint United Nations Programme on HIV/AIDS. HIV-related travel restrictions. Available from: http://www.unaids.org/en/KnowledgeCentre/Resources/FeatureStories/archive/2008/20080304_HIVrelated_travel_restrictions.asp. [Last accessed on 2014 Apr 03].
- Angell SY, Cetron MS. Health disparities among travelers visiting friends and relatives abroad. *Ann Intern Med* 2005;142:67-72.
- Hill DR. Health problems in a large cohort of Americans traveling to developing countries. *J Travel Med* 2000;7:259-66.
- Steffen R, Rickenbach M, Wilhelm U, Helminger A, Schär M. Health problems after travel to developing countries. *J Infect Dis* 1987;156:84-91.
- Behrens RH, Roberts JA. Is travel prophylaxis worth while? Economic appraisal of prophylactic measures against malaria, hepatitis A, and typhoid in travellers. *BMJ* 1994;309:918-22.
- Heywood AE, Watkins RE, Iamsirithaworn S, Nilvarangkul K, MacIntyre CR. A cross-sectional study of pre-travel health-seeking practices among travelers departing Sydney and Bangkok airports. *BMC Public Health* 2012;12:321.
- Haworth J. Travel and Health. *World Health* 1982; p. 3-5.