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The Ethics of Medical Volunteerism 237
Geren S. Stone and Kristian R. Olson

Responding to disparities in health, thousands of health care providers volunteer annually for short-term medical service trips (MSTs) to serve communities in need as a result of environmental, geographic, historical, or sociopolitical factors. Although well intentioned, short-term MSTs have the potential to benefit and harm those involved, including participants and communities being served. The contexts, resource and time limitations, and language and cultural barriers present ethical challenges. There have been increasing requests for standardized global guidelines, transparency, and open review of MSTs and their outcomes. Principles of mission, partnership, preparation, reflection, support, sustainability, and evaluation inform and equip those engaging in medical volunteerism.

Immunizations 247
Christopher A. Sanford and Elaine C. Jong

Vaccinations are a cornerstone of the pretravel consultation. The pretravel provider should assess a traveler’s past medical history, planned itinerary, activities, mode of travel, and duration of stay and make appropriate vaccine recommendations. Given that domestic vaccine-preventable illnesses are more common in international travelers than are exotic or low-income nation-associated vaccine-preventable illnesses, clinicians should first ensure that travelers are current regarding routine immunizations. Additional immunizations may be indicated in some travelers. Familiarity with geographic distribution and seasonality of infectious diseases is essential. Clinicians should be cognizant of which vaccines are live, as there exist contraindications for live vaccines.

Travel Medical Kit 261
Anne C. Terry and N. Jean Haulman

The traveler’s medical kit is an essential tool for both the novice and expert traveler. It is designed to treat travel-related illness and injury and to ensure preexisting medical conditions are managed appropriately. Travelers are at increased risk for common gastrointestinal issues during travel. Respiratory illnesses make up approximately 8% of the ailments present in returned international travelers. Approximately 12% of travelers experience a travel-related skin condition. First aid treatment for minor injuries is essential to
Care for the Health Care Provider
Sharon Brown Kunin and David Mitchell Kanze
Pretravel care for the health care provider begins with an inventory, including the destination, length of stay, logistical arrangements, type of lodging, food and water supply, team members, personal medical needs, and the needs of the community to be treated. This inventory should be created and processed well in advance of the planned medical excursion. The key thing to remember in one’s planning is to be a health care provider during one’s global health care travel and not to become a patient oneself. This article will help demonstrate the medical requirements and recommendations for such planning.

Malaria in the Traveler: How to Manage Before Departure and Evaluate Upon Return
William O. Hahn and Paul S. Pottinger
Malaria is the clinical syndrome when a patient experiences symptoms in response to infection with one of several strains of the Plasmodium parasite. This article is intended for health care providers to become familiar with some of the basics of care of patients who are travelling to or returning from an area with ongoing malaria transmission. The specific focus is on patients from nonendemic areas who plan on travel for a finite period to an area where malaria is endemic.

Personal Protection Measures Against Mosquitoes, Ticks, and Other Arthropods
Jonathan D. Alpern, Stephen J. Dunlop, Benjamin J. Dolan, William M. Stauffer, and David R. Boulware
Arthropod-associated diseases are a major cause of morbidity among travelers. Obtaining a detailed travel itinerary and understanding traveler-specific and destination-specific risk factors can help mitigate the risk of vector-borne diseases. DEET, picaridin, PMD, and IR3535 are insect repellents that offer sufficient protection against arthropod bites. IR3535 does not provide adequate protection against Anopheles mosquitoes, and should be avoided in malaria-endemic regions. General protective measures, such as bite avoidance, protective clothing, insecticide-treated bed nets, and insecticide-treated clothing, should be recommended, especially in malaria-endemic areas. Spatial repellents may prevent nuisance biting, but have not been shown to prevent against vector-borne disease.

Traveler’s Diarrhea
Stanley L. Giddings, A. Michal Stevens, and Daniel T. Leung
Traveler’s diarrhea (TD) is the most common travel-related illness, and it can have a significant impact on the traveler. Pretravel consultation provides an excellent opportunity for the clinician to counsel the traveler and discuss strategies such as food and water hygiene, vaccinations, and medications for prophylaxis or self-treatment that may decrease the incidence and impact of TD. Postinfectious sequelae, such as
Road Traffic and Other Unintentional Injuries Among Travelers to Developing Countries

Barclay T. Stewart, Isaac Kofi Yankson, Francis Afukaar, Martha C. Hijar Medina, Pham Viet Cuong, and Charles Mock

Injuries result in nearly 6 million deaths and incur 52 million disability-adjusted life-years annually, making up 15% of the global disease burden. More than 90% of this burden occurs in low- and middle-income countries. Given this burden, it is not unexpected that injuries are the leading cause of death among travelers to low- and middle-income countries, namely, from road traffic crashes and drowning. Therefore, pretravel advice regarding foreseeable dangers and how to avoid them may significantly mitigate injury risk, such as wearing seatbelts, helmets, and personal flotation devices when appropriate; responsibly consuming alcohol; and closely supervising children.

Wilderness Medicine

Whitney Alexander, Steven Bright, Patrick Burns, and David Townes

Wilderness medicine encompasses prevention and treatment of illness and injury, education and training, emergency medical services, and search and rescue in the wilderness. Although traumatic injuries, including minor injuries, outnumber medical illness as the cause of morbidity in the wilderness, basic understanding of the prevention and management of injury and illness, including recognition, identification, treatment, initial management, and stabilization, is essential, in addition to the ability to facilitate evacuation of affected patients. An important theme throughout wilderness medicine is planning and preparation for the best- and worst-case scenarios, and being ready for the unexpected.

High-Altitude Medicine

Nicholas J. Johnson and Andrew M. Luks

Individuals may seek the advice of medical providers when considering travel to high altitude. This article provides a basic framework for counseling and evaluating such patients. After defining “high altitude” and describing the key environmental features at higher elevations, the physiologic changes that occur at high altitude and how these changes are experienced by the traveler are discussed. Clinical features and strategies for prevention and treatment of the main forms of acute altitude illness are outlined, and frameworks for approaching the common clinical scenarios that may be encountered regarding high-altitude travelers are provided.

Adventure and Extreme Sports

Andrew Thomas Gomez and Ashwin Rao

Adventure and extreme sports often involve unpredictable and inhospitable environments, high velocities, and stunts. These activities vary widely and include sports like BASE jumping, snowboarding, kayaking, and surfing. Increasing interest and participation in adventure and extreme sports...
warrants understanding by clinicians to facilitate prevention, identification, and treatment of injuries unique to each sport. This article covers alpine skiing and snowboarding, skateboarding, surfing, bungee jumping, BASE jumping, and whitewater sports with emphasis on epidemiology, demographics, general injury mechanisms, specific injuries, chronic injuries, fatality data, and prevention. Overall, most injuries are related to overuse, trauma, and environmental or microbial exposure.

Illness in the Returned International Traveler

Christopher A. Sanford and Claire Fung

Familiarity with the distribution, mode of transmission, and risk factors for acquisition of illnesses commonly transmitted to travelers to low-income nations can help guide clinicians in their work-up of an ill returned traveler. The 3 most common categories of illness in returned international travelers are gastrointestinal illness, fever, and dermatoses. Diarrhea is the most common illness reported in returned international travelers. Fever is a marker of a potentially significant illness; work-up of the ill febrile returned traveler should be conducted promptly.

Travel and Adventure Medicine Resources

Christopher A. Sanford and Paul S. Pottinger

Given the ever-changing nature of travel medicine, practitioners who provide pretravel and posttravel care are obligatorily students for the duration of their professional careers. A large variety of resources are available for medical practitioners. Providers should join at least one travel or tropical medicine professional association, attend its annual meeting, and read its journal. The largest general travel medicine association is the International Society of Travel Medicine.