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Preface

Coming of Age in Travel Medicine and Tropical Diseases: A Need for Continued Advocacy and Mentorship

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Guest Editors

Travel medicine has come of age. In the United States, it found its start 25 years ago in a small group of like-minded individuals who gathered informally at the meetings of the American Society of Tropical Medicine and Hygiene (ASTM&H; www.astmh.org) and discussed interesting clinical cases in travel medicine and tropical disease. There is now a large, active group that is leading the way in clinical care, education, training, and certification of knowledge in the fields of travel and tropical medicine: the American Committee on Clinical Tropical Medicine and Travelers’ Health (www.astmh.org/subgroup/acctmth.asp). Many of the authors featured in this issue of the Infectious Disease Clinics of North America were instrumental in providing the early leadership and continue to do so.

Simultaneously, there was a movement on the international front to create a global body devoted to travel medicine: the International Society of Travel Medicine (ISTM; www.istm.org). Founded in 1992, again with leadership from many of the authors in this issue, the ISTM now has a global membership of nearly 2000 health professionals who span all disciplines and levels of training. The authors in this issue reflect the international membership and perspective in travel medicine.

Why has this happened? There appear to be several reasons for the growth and establishment of travel medicine. First, travel has increased dramatically: in 2003, there were 694 million visits across international
borders [1]. A total of $514 billion was spent during these trips, indicating the huge investment made in travel. This level of travel continues despite the threat of terrorism, the reality of war and conflict, and the emergence of new diseases such as severe acute respiratory syndrome, Ebola virus, and avian influenza.

Second, the type of trips and travelers has become more challenging and has required a level of expertise in giving advice to travelers that may not be available in general practice settings. People of all ages who have varied medical conditions visit all corners of the globe. The destinations of travelers who have attended a travel medicine service in Connecticut compared with all global travelers are illustrated in Fig. 1. Travelers who have HIV infection or chronic medical conditions and women who are pregnant necessitate a provider who is knowledgeable and experienced in preparing these types of patients to undertake international travel. The complex itineraries demand knowledge of disease epidemiology and changing patterns of resistance for organisms such as Plasmodium falciparum and Salmonella enterica serotype Typhi, and how to use new vaccines and chemoprophylactics in prevention.

The third reason has been the maturing of science in travel medicine. The literature has moved from descriptive to formal studies of disease risk, vaccine efficacy, and prevention methods. The field has moved from reliance upon the opinion of experts to a growing evidence base. Clinical practice of travel medicine requires that the practitioner follow the literature and apply this evidence to everyday practice. Established journals such as Clinical Infectious Diseases and The American Journal of Tropical Medicine and Hygiene have increased their coverage of both travel medicine and clinical tropical diseases. New journals have appeared; they include the Journal of Travel Medicine and Travel Medicine and Infectious Diseases and reflect the increasing literature of science in these areas.

This growth of travel medicine has been paralleled by needed clinical expertise in the United States in tropical medicine [2]. Although it is not expected that those who practice travel medicine are also experts in tropical medicine, they do need to be competent in recognizing, evaluating, and perhaps triaging such key syndromes in returned travelers as fever, diarrhea, rash, and respiratory complaints [3,4]. As a reflection of the healthy nature of these fields, there has been development of courses in travel and tropical medicine and two examinations that certify knowledge: one is administered by the ASTM&H and covers tropical and travel medicine; the other is given by the ISTM and covers travel medicine alone.

With the coming of age for travel medicine, it is now appropriate that a standard be developed [5]. It is not sufficient to dabble in travel medicine by only giving ‘shots’ and not also providing detailed advice about personal safety and responsible behavior, insect avoidance, environmental illness, travelers’ diarrhea management, malaria prevention, and access to medical care overseas. A committee of the Infectious Diseases Society of America
guidelines panel has come together to define guidelines for care in travel medicine [6]. This follows a similar Canadian initiative [7], and efforts in other countries to develop standards [8,9]. Boxes 1 and 2 outline the areas in which the guidelines committee feels expertise is needed to practice in the field.

This maturing of travel medicine can only be sustained if there is a steady flow of new clinicians who are entering the field. Travel medicine has

Fig. 1. Destinations of international travelers. (A) Destinations of travelers who received pretravel care at the University of Connecticut International Traveler’s Medical Service from 1984 to 2002 (n = 14,701). Ninety-one percent of destinations were to developing regions in Latin America, the Middle East, Africa, and Asia. (B) Arrivals for all world travelers for the year 2003 (n = 694 million). Thirty-four percent of visits were to developing regions in Latin America, the Middle East, Africa, and Asia. (Data from World Tourism Organization. International tourism receipts. World Tourism Barometer 2004;2:2–3.)
attracted a diverse group of health care providers, and not only clinicians with an interest in clinical tropical medicine, parasitology, or vector-borne diseases, but also internists, emergency medicine specialists, occupational medicine professionals, and nurses from all disciplines [10]. It is fortunate that both the ISTM and ASTM&H have attempted to keep pace with the increasing need for education through provision of formal courses and experiences in travel and tropical medicine. However, as internists with subspecialty board certification in infectious diseases, we could not let the opportunity to preface this issue of the *Infectious Disease Clinics of North America* go by without posing a question and a challenge to our infectious disease colleagues: Who will be the advocates for travel and tropical medicine in our medical schools and residency programs, and who will be the role models for careers focused on these disciplines? We believe that it

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**Box 1. Provider qualifications for travel medicine**

*Requisite knowledge of broad subject areas*

- The geography of major disease entities, including travel-associated infectious diseases and their epidemiology, transmission, and prevention.
- The use and complications of travel-related drugs and vaccines: storage and handling, indications for usage, contraindications, pharmacology, immunology, drug interactions, and adverse events.
- The noninfectious medical and environmental travel risks, including their prevention and management.
- The ability to recognize major disease patterns and syndromes in returned travelers (eg, fever, diarrhea, rash, and respiratory illnesses).
- The ability to access travel medicine resources (eg, texts, articles, Internet sites).

*Requisite experience and continuing education*

- Several months working experience in a travel clinic with at least 15 pretravel consultations per week.
- Continuing education: short or long courses in travel medicine and active membership in a specialty society dealing with travel and tropical medicine, and subscription to appropriate journals. Organizations include the American Society of Tropical Medicine and Hygiene and the International Society of Travel Medicine.

See also the body of knowledge defined by the ISTM [3].
Box 2. Services provided in a travel medicine practice

Assessment of the health of travelers and their underlying medical conditions, allergies, and immunization histories. Information should be maintained in permanent, accessible records.

Assessment of the health risk of travel, including evaluation of itineraries, duration of travel, reasons for travel, and planned activities.

Preventive advice, which should be available in verbal and written form. The following subject areas are of greatest concern:

- Vaccinations and vaccine-preventable illness
- Travelers’ diarrhea prevention and self-treatment
- Malaria prevention and insect avoidance measures
- Vector-borne and water-borne illnesses
- Personal safety, security issues, appropriate behavior
- Sexual health and sexually transmitted diseases, including HIV prevention
- Environmental illness, including altitude, heat, cold, diving, motion sickness, and jet lag
- Animal bites and their treatment; rabies avoidance
- Problems specific to long-term travelers, expatriates, and business travelers
- Travelers with special needs (eg, pregnant women, individuals who have diabetes, immunocompromised individuals, individuals who have had a transplantation)
- Travel medical kits with information on travel health maintenance, medical evacuation insurance, and access to medical care overseas.
- Posttravel assessment for returning travelers

will be infectious disease clinicians who will increasingly be needed to advocate for classroom and residency training time and to be the role models and personal mentors for our students.

In the late 1960s, many of us who now treat infectious diseases were drawn to the study of tropical disease by experienced and often charismatic mentors. In the case of one of us (F.J.B.), it was Dr. Benjamin Kean at Cornell University Medical College. In the years following World War II and the Vietnam conflict, one of the driving forces that kept this discipline alive in the medical school curriculum was the perceived need for tropical medicine expertise that followed those national experiences abroad. Although times are different, and the generation who taught us is now
retiring or has left the field, the need for expertise remains equally great for several reasons.

The first reason has been noted and includes the incredible growth of travel in a continually shrinking world. Any clinician who sees patients in a travel medicine context is aware of the vast diversity of travelers and the reasons for their trips. The second reason has been an AIDS pandemic that affects large parts of the world where HIV has a complex interaction with an environment of multiple tropical pathogens. Those of us at the level of medical student education have also seen a more subtle yet rapid change: the current generation of students has a far different perception of the world than the one in which we grew up professionally. It is a world contracted by the Internet and by rapid transit times between continents. Students have an appreciation of medicine as a universal language—one that can influence the course of individual disease and public health almost anywhere and at any time. If nineteenth- and twentieth-century missionary activity or global warfare underscored the importance of understanding complex tropical diseases, the need for understanding is now also driven by a global sense of citizenship, social justice, and responsibility.

The demand for understanding those diseases that affect persons in developing regions and including them in the curriculum is coupled with an intense interest in actually working in such a context. Some medical educators consider 1- or 2-month rotations in Africa, Asia, or Latin America to be just “safari medicine” unless there is a long-term commitment on the part of the student or resident. This attitude simply misses the point. Would one say the same about a 6-week rotation in a cardiac intensive care unit? Does this 6-week experience merely serve to make the resident a “cardiac dilettante”? For another of us (D.R.H.), a month-long medical service trip to Guatemala in 1968 led to a profound change in world view and to a commitment to a career in infectious disease, travel, and tropical medicine. The young trainees who seek such experiences are very much in need of advocates within the medical school and residency curriculum committees on which we who are established in our careers may serve. That being the case, we must set the standard in our professional schools for what is taught in the classroom and on the wards, and what constitutes a valid clinical experience abroad. We must retain and elevate the crucial roles of mentors and role models for this current generation of students and residents.

This issue of the *Infectious Disease Clinics of North America* covers many of the essential topics in travel medicine that reflect the type of consultative advice—both complex and straightforward—sought by those who seek out members of our subspecialty. In addition, we have added some of the crucial topics in tropical disease that we feel are important for persons practicing in the specialty to understand (eg, management of severe malaria). We have asked our colleagues to approach the subjects from a perspective that provides classic case examples as well as their new insights, while still delivering the key messages for those who practice. We believe they have
accomplished this most successfully, and we sincerely thank them for their efforts.

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