

Tufts Medical Center Travel Clinic

a) Goals, Objectives, and ACGME Competencies

Goals

- To teach ID residents the physiological basis of infectious diseases, the differential diagnosis and treatment of these diseases, and the broad array of skills required to carry out effective, timely and courteous consultation in infectious diseases.
- To learn to provide itinerary-specific pre-travel advice and immunizations.
- To develop sophisticated skill in the evaluation and management of the returning ill traveler

Objectives

First Year ID Residents: First year ID residents do not typically participate in Travel Clinic. When they have, the objectives are the same as for the Second Year ID Residents.

Second Year ID Residents:

- To possess an advanced understanding of pathophysiology, differential diagnosis, therapy and prevention of major and unusual infectious diseases encountered in travelers throughout the world.
- To be able to competently and efficiently provide sophisticated consultation of travel-related infectious diseases independently and to impart that knowledge in an understandable fashion to those seeking pre-travel counseling.
- To regularly read and critically assess the primary literature concerning tropical medicine, become familiar with published practice guidelines and apply this knowledge to patient care.
- Demonstrate ability to impart sophisticated and detailed information regarding infectious diseases to peers, patients and caregivers.

Rationale/Value

The field of travel medicine is a rapidly evolving field of medicine that requires specialized training in order for ID residents to become effective practitioners this specialty. In practice, ID attendings are frequently called upon for travel-related consultations in the inpatient and outpatient settings.

In addition, emerging infections related to travel have arisen in recent years which require the ID attending to be up-to-date on many aspects of travel medicine.

Most Important Educational Content

Disease Mix:

Patients present for pre-travel advice to prevent travel-related illnesses such as malaria, typhoid and yellow fevers, other vector-borne illnesses, altitude sickness, and food- and water-borne illnesses. Sick travelers do present for care with a variety of

illnesses. Acute or chronic diarrhea is the most common problem. Other infections encountered include schistosomiasis, myiasis, loiasis, filariasis, and Chagas disease.

Patient Characteristics:

The Traveler's Health Service is an increasingly busy travel clinic that provides pre-travel services and post-travel evaluation and management for more than 1,200 new patients per year. Pre-travel services are provided to business travelers, adventure travelers, immigrant families returning to their home countries for lengthy visits, those who are visiting friends and/or relatives abroad, and individuals who will be living as expatriates in austere medical environments. HIV positive, pregnant, and persons with other immunocompromising conditions create special challenges and educational opportunities for ID residents regarding appropriate pre-travel advice and prophylaxis. About 10-15% of our patient population is comprised of children or infants.

Approximately 10% of the patients seen in the Traveler's Health Service are returning travelers with infections acquired in the developing world.

Types of Clinical Encounters:

For pre-travel care, the interaction is a face-to-face ascertainment of risk and counseling to prevent risk. The necessity for malaria prophylaxis and type of agent(s) to employ are discerned. In addition, the need for vaccine prevention is also ascertained. Extensive teaching occurs in these sessions and includes prevention of insect bites, food and water safety and avoidance of other risks such as motor vehicle accidents and animal attacks. When necessary, a limited physical examination is performed. For post-travel care of the sick traveler, a comprehensive history, physical examination and diagnostic testing occur.

Procedures and Services:

Procedures include review of peripheral blood smears for parasites and vaccine administration. Services included a comprehensive assessment of risk associated with traveling and education on minimization or prevention of risk. For sick travelers who present for care, diagnosis and management of the infectious disease issue occurs.

ACGME Competencies

Patient care

First year ID residents – N/A

Second year ID residents

- Demonstrate care that is compassionate, appropriate, and effective for pre-travel risk reduction and post-travel evaluation and management.

Medical knowledge

First year ID residents – N/A

Second year ID residents

- Acquire knowledge regarding risks and benefits of vaccines and prophylactic medications prescribed for travelers
- Understand the role of immune suppression in HIV+ and other patients in the prevention and treatment of travel and/or tropical diseases
- Develop a sophisticated understanding of the risks, prevention, diagnosis and treatment of common travel conditions, including but not limited to:
 - Malaria
 - Typhoid fever
 - Yellow fever
 - Zika virus
 - Other vector-borne illnesses
 - Viral Hepatitis
 - Altitude sickness
 - Food- and water-borne illnesses.
 - Acute or chronic diarrhea
 - Schistosomiasis
 - Myiasis
 - Loiasis
 - Filariasis
 - Chagas disease
 - Rabies
 - Emerging infectious diseases

Practice-based learning

First year ID residents – N/A

Second year ID residents

- Regularly read and critically assess the primary literature concerning tropical medicine
- Become familiar with published practice guidelines and apply this knowledge to patient care.

Interpersonal and communication skills

First year ID residents – N/A

Second year ID residents

- Develop skills in the face-to-face ascertainment of risk and counseling to prevent risk
- Develop the ability to have effective information exchange addressing diverse patient needs including business travelers, expatriates, adventure travelers, families with children, etc.
- Can impart sophisticated and detailed information regarding infectious diseases to peers and those less experienced.

Professionalism

First year ID residents – N/A

Second year ID residents

- Manifested as commitment to carrying out professional duties, adherence to ethical principles, and sensitivity to diverse patients.

Systems-based practice

First year ID residents – N/A

Second year ID residents

- Gain a nuanced understanding of the issues which create particular infectious risks, particularly to expatriates visiting friends and family, as well as to those visiting areas with limited to no medical care available
- Understand insurance issues as they may impact patient adherence to recommended treatments
- Develop the ability to counsel medical personnel planning travel in order to deliver medical care in resource poor settings, with issues such as post-exposure prophylaxis for needlestick injury, and tuberculosis

b) Defined Methods of Teaching

Principal Teaching Method

The primary teaching method is via apprenticeship and involves direct patient contact overseen by an attending knowledgeable in travel medicine. There are also a series of didactic lectures during the course of the year given by members of the Division of Geographic Medicine and Infectious Diseases or senior ID residents (see section on the Travel Medicine Seminar).

Principal Ancillary Educational Materials

All ID residents have available to them CDC's publication entitled "Health Information for International Travel, the WHO publication "International Travel and Health", in the Travel Clinic. These materials and a number of articles on commonly encountered problems in the returning traveler serve as reference sources for the ID residents. The clinic also has Internet access to Web sites such as that of the CDC and to online texts and other resources that contain a wealth of information for travel clinics and individual All resources available for the Tufts Medical Center inpatient encounters are available for residents in Travel Clinic including digital subscriptions to medical textbooks and websites.

c) Methods of Evaluation

Methods to Evaluate ID residents

At least twice-yearly written evaluations are performed for all ID residents to assess their outpatient performance. ID residents are evaluated regarding the six ACGME core competencies of patient care, medical knowledge, practice-based learning,

interpersonal and communication skills, professionalism and systems-based practice. If specific problems arise during the course of the travel clinic, these are addressed on a case-by-case basis. In addition, the ID residents are given verbal evaluations of their performance in the travel clinic. Assessments of second year ID residents in travel clinic also include multisource evaluations by patients, nurses, peers, faculty and clerical staff, which also encompass the six ACGME core competencies (See Appendix).

Methods to Evaluate Program Performance

Formal evaluation of program content and impact on professional development of ID residents is carried out by the faculty annually through the Program Evaluation Committee. Each year, the ID residents perform an anonymous written assessment of all aspects of the fellowship program including their experiences with the travel clinic. If there are specific problems or concerns with the functioning of the program, ID residents are invited to discuss these with the clinic director either individually or as a group.

d) Strengths of Program

The Traveler's Health Service is operated by members of the Division of Geographic Medicine and Infectious Diseases, many of whom have long-standing interests in the fields of parasitology and tropical medicine, diarrheal diseases, malaria, and travel medicine. Members of the Division include two board-certified pediatricians who have been involved with numerous international public health research projects. Many of the Division members are actively involved in basic scientific research and applied clinical research in resource-poor nations of the world, including Africa, Asia, India, and Latin America. The strong international research background and extensive prior clinical experience in travel and tropical medicine help to make the learning experiences in the Traveler's Health Service of high quality. In addition, because of the large volume of the travel clinic and the diversity of patients seen, there are ample opportunities for ID residents to have exposure to a number of different clinical problems not commonly seen in the United States.

e) Limitations of Program

None have been identified in resident evaluations.