Global Health Electives Curriculum Overview  
Internal Medicine Residency  
University of Colorado Health Sciences Center  
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I. Educational Purpose and Goals
   Students and residents often participate in international rotations, particularly in the developing world. Unique educational opportunities include learning about diseases not encountered in the US, seeing how resourceful providers in other countries deal with scarce resources, and witnessing the varied interaction of culture and medical care. Global health experiences provide medical residents the opportunity to practice in resource poor settings, to gain experience in the use of World Health Organization algorithms for care, where appropriate, and to learn first hand about the impact of basic public health measures on the health of a population.

II. Principal Teaching Methods
   A. Supervised Direct Patient Care
      Residents spend the majority of their time in direct patient care in developing countries, supervised by a local attending physician. The clinical setting may range from rural outreach clinics with limited diagnostic capability to teaching or referral hospitals in urban conditions with access to a broad range of diagnostic capabilities. These encounters emphasize diagnosis and management of tropical and chronic disease with limited resources, as well as the impact of local culture, community infrastructure, and economics on health of the individual and community.

   B. Didactics
      Depending on site, residents may also participate in teaching rounds, educational conferences, and disease specific lectures. Where appropriate, residents also will present a didactic session to the local health care providers and trainees on topic related to tropical disease, management of chronic disease in resource poor settings, or public health.

   C. Laboratory Skills:
      Where available, residents may also spend a percentage of time learning basic laboratory preparation and interpretation of blood smears for parasites, preparation of blood and sputum for gram stain and examination for acid fast bacilli, and stool preparation for identification of ova and parasites.

III. Educational Content
   A. Mix of diseases:
      Residents will learn the basics of diagnosing and managing major tropical diseases, such as malaria, tuberculosis, and HIV; however, each resident’s experience will be dependent on regional and seasonal prevalence of
Other acute diseases that may be encountered include leprosy, dengue, typhoid, trypanosomiasis, rickettsial infections, skin and soft tissue infections, upper and lower respiratory tract infections, acute and chronic diarrhea, parasitic infections, and malnutrition and vitamin deficiencies. Residents likely will also see chronic medical conditions such as reactive airways disease and hypertension as managed in a resource poor setting, and will see disease related to local environmental exposure.

B. Patient Characteristics
Patient mix will be dependent on setting, and most often will be reflective of the community population. Some residents may see tertiary referral populations if rotating in an academic rather than community setting. Patients will vary widely in age, gender, sex, race, and cultural background.

C. Learning venues
Residents may work in a variety of settings in the developing country site. Rural or urban, community or academic, primary or tertiary, and outpatient or inpatient settings may be used. Residents will be expected to learn about the culture, basic economy, and health care system structure of the site.

D. Procedures
Residents will learn the interpretation of blood tests, microbiology, and radiology studies as applicable to the practice and available at the site. Residents may also learn to perform and interpret basic microbiology tests including blood smears, gram stains, AFB staining, and stool wet mounts.

E. Structure of Rotation
Residents are expected to have regular weekday clinical, laboratory, and didactic duties. Specific distribution of inpatient and outpatient time will be determined by the site attending supervisor. Residents are not expected to take overnight call or to have weekend clinical duties. It is understood that due to the remote location of some of the clinical sites, weekday time may be needed for travel, however it is expected that this time will be used strictly for travel between sites and altitude acclimatization, if applicable.

IV. Principle Ancillary Educational Materials
A. Curriculum and Learning Objectives
Residents will be provided with the curriculum and learning objectives for Global Health Experiences prior to the start of the rotation.

B. Suggested Reading List
Residents may choose texts from the following basic reference list:

C. Computerized Resources

Residents may have limited access to computerized resources. Suggested web sites, if available:

• [www.dpd.cdc.gov/dpdx/](http://www.dpd.cdc.gov/dpdx/), CDC’s website of parasite laboratory diagnosis
• [www.cdc.gov](http://www.cdc.gov), CDC’s website with disease specific links and traveler’s health guides
• [www.who.int](http://www.who.int), website of the World Health Organization, with evidenced based recommendations for disease and symptom management in resource poor settings
• [http://travel.state.gov](http://travel.state.gov), website of the US State Department, with up to date travel advisories based on local political climate

D. Preparatory Elective

Residents have the option of taking the University of Colorado School of Medicine elective, IDPT 8013, Intensive Introduction to Global Health, prior to their global health experience.

V. Methods of Evaluation

A. Resident Performance

1. Attending Written Evaluation. Supervising attendings will complete a resident evaluation form that is competency based. The evaluation will be shared with the resident and reviewed by the residency office. The evaluation is part of the resident’s file and is incorporated into the semiannual performance review for directed resident feedback.

2. Verbal Feedback. In-person feedback should be given to the resident both mid-month and at the completion of the elective.

B. Elective and Attending Performance

The resident will be asked to provide written feedback regarding the elective experience, the site, the patient population, variety of disease seen, didactics, attending supervision quality, and overall educational value of the elective. These evaluations will be used to strengthen the global health experiences of future residents and to provide feedback to the supervising attendings.

VI. Institutional Resources: Strengths and Limitations
A. Strengths
1. Local attending supervision. Residents are supervised by local attendings who have detailed knowledge of the diseases, culture, economics, and public health challenges of the site.
2. Institutional Support. There is growing interest in global health at the University of Colorado and residents may use the Center for Global Health and its associated faculty as resources to enrich their educational experience.
3. Elective Preparation. Residents have the opportunity to take a two week elective introduction to global health prior to travel that provides a background in disease diagnosis and management, microbiology skills, basic public health principles and epidemiology, and the interaction between culture and health.

B. Limitations
1. Duration of Electives. Due to the demands of the residency training schedule, residents often cannot complete electives of duration longer than 4 weeks.
2. Site development. Residents may work at sites that have not previously hosted a resident from the University of Colorado. The residency program will work with the resident and supervising attending prior to the start of the rotation to ensure a high quality educational experience, and the post-elective evaluations will be used to direct the ongoing development and maintenance of quality sites for the future.

VII. Rotation Specific Competency Objectives
A. Patient Care
1. History Taking. Residents will practice focused history taking in the setting of cultural and often language barriers. Histories should be hypothesis-based, and distinguish economic, regional, and cultural factors that influence diagnosis and management.
2. Physical Exam. Residents will learn to maximize the utility of physical exam findings to direct diagnosis and subsequent management in the setting of limited diagnostic capabilities and resources.
3. Medical Decision Making, Clinical Judgment, and Management Plans. Residents will learn to rely on history, physical exam, and clinical judgment in the setting of limited resources to formulate rational medical decisions and management plans. Residents will learn to incorporate environmental, cultural, and economic challenges into medical decisions, management, and counseling of patients.

B. Medical Knowledge
Residents will gain first hand knowledge of the practice of medicine in the developing world. Residents will learn the basics of diagnosing and managing disease that present a local health burden at their site, as well as
the economic and social impact of illness. Where available residents will
learn to perform and interpret basic microbiology tests.

C. Interpersonal Skills and Communication
   Residents will learn to work with a variety of care providers and support
   staff from different educational, geographic, and ethnic backgrounds.
   Residents will learn to provide care and communicate in a culturally
   sensitive manner.

D. Systems
   Residents will learn about the major public health challenges facing the
   communities where they work. They will learn to maximize the limited
   resources that are available in the health infrastructure unique to their site.