

# UNIVERSITY OF COLORADO HEALTH SCIENCES CENTER

## IDPT 8013 GLOBAL HEALTH ELECTIVE November 2006

### Course Directors Contact Information

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### Introduction

This course prepares residents for international electives and future global health work, so that participants may maximize their learning and contribute most effectively when on location. This annual course was initiated in 2005, thanks to the interest and enthusiasm of residents and faculty.

### Background

Policy makers and public health experts alike have emphasized the growing need for global health literacy and global health capacity among US healthcare professionals. In a 2005 report, "Healer's Abroad" the Institute of Medicine proposes the creation of a global health service corps and highlights the importance of developing and supporting medical school curricula in global health. The same need is outlined in a 2006 editorial in the New England Journal of Medicine by Coates and Panosian, describing the push by several organizations, including the American Association of Medical Colleges and the Global Health Education Consortium to expand and improve global health curricula at US academic institutions. The Institute of Medicine defines global health as "health problems, issues, and concerns that transcend national boundaries, may be influenced by circumstances or experiences in other countries, and are best addressed by cooperative actions and solutions." Global health thus differs from international health, in that it emphasizes the interconnectedness of health in all regions of the world, including the US, and that it de-emphasizes the conceptual division of domestic and international health issues. To stay at the forefront of curricular innovation and to provide rigorous academic training in an area of growing importance, the University of Colorado, Department of Internal Medicine is now offering a Global Health Elective for Internal Medicine Residents.

Students and residents often participate in international rotations in the developing world. According to the American Association of Medical Colleges, 22% of 2004 graduates and 16% of 2005 graduates reported they had participated in an international health experience during medical school. The vast majority of participants in these electives find the experience extremely rewarding. 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. On the other hand global health work presents challenges, and in some cases can be detrimental to the communities that one intends to help. It is therefore critical that all healthcare professionals approach any global health endeavor with sensitivity toward culture, economic realities, and existing healthcare systems with an emphasis on sustainability.

### Course Content

- Selected topics in tropical medicine, with emphasis both on field laboratory diagnosis and algorithmic management when diagnostics are limited or non-existent.
- Selected topics in public health, including nutrition, maternal-child health, sanitation and basic epidemiology.

### **Teaching Goals**

- To deliver practical information to participants that will enable them to better identify problems and treat individuals with tropical disease and non-tropical disease in resource-poor settings.
- To deliver practical public health knowledge that will enable participants to better understand the health of communities in which they work and to consider measures which will address the health of a community as a whole.

### **Learning Objectives**

- Students will learn to diagnose and treat a selection of major tropical diseases, including malaria, dengue, typhoid, and intestinal parasites
- Students will learn how to perform basic lab tests applicable to the tropical setting, including blood smears, sputum smears, and stool wet mounts.
- Students will learn about the major public health issues facing communities in the developing world.
- Students will learn about the impact and management of TB, HIV, and chronic disease in the developing world.

### **Audience**

- Fourth year medical students planning international electives
- Residents on elective from programs in internal medicine, pediatrics, emergency medicine, and family medicine.

### **Course Format & Requirements**

- Two week intensive course, Monday through Friday, 8 am to 5 pm, with breaks.
- The format of the course includes lectures, small group case discussions, laboratory sessions, and skill sessions.
- Attendance: 100% attendance is desired. Participants should notify the course directors by e-mail ahead of missing any sessions.
- Class Participation: Learning is a two-way process between faculty and students.
- Pre and post-course knowledge and attitude surveys about global health, including repeated post-course survey after the student's international experience.
- Final Exam: All those attending class regularly are expected to pass without difficulty.
- Completion of Course and Instructor Evaluation: Feedback is crucial in improving the course.

### **Competency Based Goals & Objectives**

- Patient care: The resident will demonstrate proficiency in the laboratory skills as described above
- Medical Knowledge: The resident will demonstrate knowledge about international health conditions as described above with an emphasis on patient evaluation and management.
- Systems Based Practice: The resident will learn the importance of healthcare professionals approaching any global health endeavor with sensitivity toward culture, economic realities, and existing healthcare systems with an emphasis on sustainability.
- Practice Based Learning and Improvement: Locate, evaluate and apply information for solving international health problems and make decisions relevant to the care of individuals and populations

### **Clinical Experience**

- Internal Medicine Residents will choose a relevant clinical experience for the remaining 2 weeks of the month. Clinical sites include Denver Health TB, STD and Travel Medicine clinics, Rose Hospital Travel Medicine Clinic and University of Colorado Travel Medicine Clinic.

- Residents may also request help from the course directors in finding an international clinical work experience. Course faculty have access to a vast network of international contacts, although placement is not guaranteed.
- Internal Medicine Residents will continue their regular weekly/biweekly continuity clinics throughout the elective.

### **Suggested Reading Materials**

- Selected updated review articles on major disease and public health issues facing the developing world (CD with PDF of all suggested articles is provided.)
- Centers for Disease Control DPDx CD (provided)
- Eddleston M and Pierini S, **Oxford Handbook of Tropical Medicine**, Oxford University Press, 1999
- Gill GV and Beeching NJ, **Lecture Notes on Tropical Medicine**, Fifth Edition, Blackwell Publishing, 2004.
- Harries JR, Harries Ad, and Cook GC, **Clinical Problems in Tropical Medicine**, Second Edition, W.B Saunders, 1998. (out of print, available on Amazon)

### **Course Faculty**

- University of Colorado: Instructors from various schools of UCHSC (Dentistry, Medicine/Department of Infectious Diseases, CLAS-Anthropology). School of Medicine departments contributing include: Surgery, Medicine, Pediatrics, Anesthesiology, Orthopedics, Dermatology, Ophthalmology, and Family Medicine.
- Guest Faculty: Members of the Denver community with global health experience, as well as visiting instructors from the Centers for Disease Control, the London School of Hygiene and Tropical Medicine, the University of Washington, the University of Texas at San Antonio, and Walter Reed Army Medical Center.

Please see November 2006 course schedule below.

Please see attached: Global Health Elective Reading List

**6-Nov Room 0952, SON**

- 8:00 Course Introduction, Course Directors
- 9:00 Introduction to Global Health and Global Burden of Disease, Andrew Kestler, MD  
Lopez et al, Global and regional burden of disease and risk factors, 2001: systematic  
analysis of population health data, Lancet 2006; 367: 1747–57
- 10:00 Interactions of Culture, Society, and Health, Jean Scandlyn, PhD
- 11:00 Maternal Health, Kathy Kennedy, PhD  
Ransmans, Maternal mortality: who, when, where, & why, Lancet 2006;368:1189–2000
- 12:00 LUNCH BREAK
- 13:00 Introduction to Child Survival and Pediatric Malnutrition, Richard Gustafson, MD  
Bryce et al, Tracking intervention coverage for child survival, Lancet 2006;368:1067–76
- 14:00 Travel Medicine: Pre-travel Considerations, Margaret McLees, MD  
Kirkpatrick & Alston, Current Immunizations for Travel, Cur Op in ID 2003;16:369-74.
- 15:00 Introduction to Community Health: Ecuadorian Case Study, Cal Wilson, MD
- 16:00 Micronutrients, Michael Hambidge, MD
- 17:00 END

**7-Nov Room 0952, SON**

- 8:00 HIV: Essential of Anti-Retroviral Therapy, Ed Gardner, MD
- 9:00 TB: Diagnosis and Treatment: Illustrative Case Conference, Robert Belknap, MD  
Required Reading: TB Review Materials, Robert Belknap, MD
- 10:00 HIV: Global Burden of Disease, David Cohn, MD
- 11:00 TB: Global Burden of Disease, David Cohn, MD
- 12:00 LUNCH BREAK
- 13:00 HIV: Strategies for Diagnosis, Tom Campbell, MD  
Kimmel et al, Diagnostic Tests in HIV Management, WHO Bulletin 2006, 84:581-88.
- 14:00 HIV: Review of Opportunistic Infections, Tom Campbell, MD
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| Lab Groups 1-4, Nancy Madinger, MD       | Lab Groups 5-8                         |
| 15:00 Gram Stains & AFB Stains           | Neurological Cases, Andrew Kestler, MD |
| 15:30 Blood Smears                       |  |
| 16:00 Gram & AFB Microscopy              | Case Studies, Margaret McLees, MD      |
| 16:30 Respiratory Case, Mary Kestler, MD |  |
| 17:00 END                                |  |

**8-Nov Room 0952, SON**

- 8:00 Obstetrics in Remote Settings, Mark Deutshman, MD
- 9:00 Obstetric Skills Sessions, Mark Deutshman, MD & Staff
- 10:00 Alphabet Soup of International Aid, Erin Sorce, Concern International
- 11:00 Environmental Health, Gary Krieger, Neufields International, (To be confirmed)  
Suggested Reading: Rehfuess et al, Indoor Air Pollution: 4000 deaths a day must no longer be ignored, Bulletin of the World Health Organization 2006, 84:508-9.
- 13:00 Arboviruses, Eileen Farnon, MD, CDC  
Suggested Reading: Monath TP, Yellow Fever: an update, Lancet Infectious Diseases 2001;1:11-20
- 14:00 Case Study: EIS Outbreak Investigation, Eileen Farnon, MD, CDC
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| Lab Groups 5-8, Nancy Madinger, MD       | Lab Groups 1-4                         |
| 15:00 Gram Stains & AFB Stains           | Neurological Cases, Andrew Kestler, MD |
| 15:30 Blood Smears                       |  |
| 16:00 Gram & AFB Microscopy              | Case Studies, Margaret McLees, MD      |
| 16:30 Respiratory Case, Mary Kestler, MD |  |
| 17:00 END                                | END                                    |

**9-Nov Room 0952, SON**

- 8:00 Malaria: Public Health Impact, Alan Magill, MD, Walter Reed Army Medical Center  
Suggested Reading: Greenwood BM et al, Malaria, Lancet 2005; 365: 1487-98
- 9:00 Malaria: Clinical Considerations Alan Magill, MD, Walter Reed Army Medical Center
- 10:00 Leishmaniasis, Alan Magill, MD, Walter Reed Army Medical Center
- 11:00 Malaria: Notes from the Field, Sarah Staedke, MD (To be Confirmed)
- 12:00 LUNCH BREAK
- 13:00 Malaria: The Next Steps, Sarah Staedke, MD (To be Confirmed)
- 14:00 Hematology in the Tropics, Taru Hays, MD
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| Lab Groups 1-4, Nancy Madinger, MD          | Lab Groups 5-8  |
| 15:00 Malaria Microscopy                    | Splenomegaly Case Presentation,<br>Mary Kestler, MD   |
| Blood Smear Slide Review                    |   |
| Fever Clinical Case,<br>Margaret McLees, MD | Selected Case Studies,<br>Drs David & Kim Leonard, MD |
| 17:00 END                                   | END   |

**10-Nov Room 0952, SON**

8:00 Enteric Fevers, Taylor Sandison, MD, University of Washington  
Suggested Reading: Parry CM et al, Typhoid Fever, N Engl J Med 2002, 347:1770-82.

9:00 Dengue Fever, Taylor Sandison, MD, University of Washington  
Suggested Reading: Guzman & Kouri, Dengue: an update, Lancet Infectious Diseases 2001;2:33-42

Chagas Disease and African Trypanosomiasis,  
10:00 Paul Pottinger, MD, University of Washington  
Suggested Reading: Barrett MP et al, The Trypanosomiasis, Lancet 2003; 362: 1469-80

11:00 Tropical Medicine Case Studies, Paul Pottinger, MD, University of Washington

12:00 LUNCH BREAK

13:00 Neonatal Survival, Beena Kamath, MD

14:00 Oral Rehydration, Lou Hampers, MD

15:00 Pediatric Small Group Case Studies  
Drs. Gustafson, Hampers, Kamath, and Staff

17:00 END

**13-Nov Room 0952, SON**

8:00 Water & Sanitation, Barry Karlin, PhD

9:00 Water & Sanitation Case Study, Barry Karlin, PhD

10:00 Polio, Tista Gosh, MD, Tri-County Health Department

11:00 Sexually Transmitted Diseases, Cases & Algorithmic Management, Cal Wilson, MD

12:00 LUNCH BREAK

13:00 Oral Health, Jeff Astroth, DDM

14:00 Oral Health Skills Session, Jeff Astroth, DDM & Staff

HIV: Maternal to Child Transmission,  
15:00 Ruth Berggren, MD, University of Texas at San Antonio

HIV Case Study: Tulane March Program in Rural Haiti,  
16:00 Ruth Berggren, MD, University of Texas at San Antonio

17:00 END

**14-Nov Room 0952, SON**

- 8:00 Intestinal Round Worms, David Leonard, MD
- 9:00 Onchocerciasis, David Leonard, MD
- 10:00 Acute Respiratory Infections, Ed Janoff, MD
- 11:00 Diarrheal Diseases, Ed Janoff, MD
- 12:00 LUNCH BREAK
- 13:00 Programs for Nutrition & Health, Gretchen Berggren, MD
- 14:00 Economic Development & Health: A Case Study in Micro-Credit, Ted Ning, MD
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|------------------------------------|---|
| Lab Groups 5-8, Nancy Madinger, MD | Lab Groups 1-4<br>Splénomegaly Case Presentation,<br>Mary Kestler, MD |
| 15:00 Malaria Microscopy           |   |
| 15:30 Blood Smear Slide Review     |   |
| Fever Clinical Case,               | Selected Case Studies,  |
| 16:00 Margaret McLees, MD          | Drs David & Kim Leonard, MD   |
| 17:00 END                          | END   |

**15-Nov Room 0952, SON**

- 8:00 Cestodes, Kim Leonard MD
- 9:00 Surgical Care in the Tropics, Ravi Morchi, MD
- 10:00 Ophthalmology: Preventable Causes of Blindness, Darren Gregory, MD
- 11:00 Integrated Management of Childhood Illness, Eric Simoes, MD
- 12:00 LUNCH BREAK
- 13:00 Humanitarian Aid & Disaster Relief, Neena Jain, MD
- 14:00 Humanitarian Aid: A Post-tsunami Case Study, Linda Williams, MD
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| Lab Groups 1-4, Nancy Madinger, MD | Lab Groups 5-8<br>Cases Studies in Relief Work,<br>Neena Jain, MD |
| 15:00 Stool Microscopy             |   |
| Iodine Stool Prep                  |   |
| Intestinal Parasite Slide Review   | Cardio-Respiratory Case Studies,<br>Mary Kestler, MD              |
| Diarrhea Case, Andrew Kestler, MD  |   |
| 17:00 END                          | END   |

**16-Nov Room 0952, SON**

- 8:00 Poor & Crowded: Urban Health Considerations, David Richards, MD
- 9:00 The Global Trauma Epidemic, Matthew Roberts, MD  
Suggested Reading: Amertunga et al, Road-traffic injuries: confronting disparities to address a global-health problem, Lancet 2006; 367: 1533–40
- 10:00 Orthopedic Care in the Developing World, Richard Fisher, MD
- 11:00 Trauma Cases Studies Drs. Richards, Jain, Roberts, and Fisher
- 12:00 LUNCH BREAK
- 13:00 Leprosy, Whitney High, MD
- 14:00 Tropical Dermatology, Whitney High, MD
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|       | Lab Groups 5-8, Nancy Madinger, MD | Lab Groups 1-4                   |
| 15:00 | Stool Microscopy                   | Cases Studies in Relief Work,    |
|       | Iodine Stool Prep                  | Neena Jain, MD                   |
|       | Intestinal Parasite Slide Review   | Cardio-Respiratory Case Studies, |
|       | Diarrhea Case, Andrew Kestler, MD  | Mary Kestler, MD                 |
| 17:00 | END                                | END                              |

**17-Nov Room 0952, SON**

- 9:00 Final Exam **PLEASE NOTE: NOT AN 8 AM START**
- 10:30 Feedback Session and Course Debrief
- 12:00 LUNCH BREAK
- 13:00 Framing Ethical Principles of Global Health Work, Kelly Bookman, MD
- 13:30 Small Group Ethics Case Discussion, Course Directors & Staff
- 14:30 Global Health Careers and Planning International Work Experiences  
Course Directors and Course Faculty Panel
- 15:30 END
- 19:00 End of Course Reception & Party