Medical Mission Overview: An Orientation to International Aide Work

September 17-24, 2016

Bocas del Toro, Panama
Floating Doctors HQ

Presented by: RemoteCare Education

Summary of Presentations:

1. Running a Successful Mobile Clinic  
   Dr. Benjamin La Brot
   A summary of fundamental and specific pre-mission, intra-mission, and post-mission deployment considerations for ensuring successful and safe medical aid work. This leadership review includes mission due diligence, logistics, team dynamics and clinic organization, important roles, and patient flows in mobile clinic work. Participants should develop improved mission planning and administration skills and be better prepared for executive-level mission decisions and leadership.

2. Medico-Legal Aspects of Mission Work  
   Dr. Benjamin La Brot
   Explore the complex medico-legal considerations surrounding mission work in developing regions. Learn how to avoid placing you or your team in legal trouble while far from home, how to license and ensure the security of your team, and how to make best-practice decisions in resource limited settings. Also review the ethical considerations for mission work and handling medical errors. Participants should develop an appropriate ethical framework to guide their behavior during medical aid work, reduce their liability on missions, ensure better informed consent, and work more smoothly with local services.

3. Maximizing the Scope of Service in Resource-Limited Settings  
   Dr. Benjamin La Brot
   Review the fundamental ways that any mission’s scope of service can be improved. Learn to do more with less: a critical skill for functioning in resource-limited environments. Includes planning skills to maximize the impact of medical aid work. Participants learn to add more value to medical aid deployments in the planning stages and during the mission.
4. Mobile Clinic Pharmacy & Supplies

Dr. Benjamin La Brot

Learn how to assemble the most appropriate mobile pharmacy for your mission needs, safely get it all through customs, and use it effectively during your deployment. Participants learn how to choose the best medications for different setting needs and assemble the most powerful and portable diagnostic tool kit their mission resources allow. Participants develop skills to increase patient compliance and decrease prescribing errors.

5. Infectious Disease in tropical & Resource-Limited Settings

Dr. Holly Gettings

An overview of common infectious disease fundamentals in resource-limited settings and a review of conditions that may be rare in developed nations but commonly encountered in medical aid settings, with an emphasis on clinical diagnoses. Participants should gain confidence approaching the diagnosis and treatment of a variety of specific infectious disease issues.

6. Cultural Competency

Dr. Benjamin La Brot

Review common but often-unexpected cultural issues that arise during consults across wide religious, ethnic, geographic, language, and socio-economic gulfs. Learn skills to communicate more effectively with patients, utilize translators, and reduce medical error related to miscommunication. Participants should gain confidence when approaching consults in unfamiliar cultural settings and using cultural competency skills to improve clinical outcomes.

7. Maternal Health

A review of the burden of maternal health issues and common presentations in developing regions, as well as protocols for rapid assessment of maternal health emergencies and the role of pre-natal care in preventive health. Participants should gain confidence with the assessment and treatment of maternal health conditions, and improve patient outcomes through high-value preventative interventions.

8. Births in Remote Rural Settings

Learn what to do when one of your patients goes into labor, especially in remote settings or otherwise without access to advanced services. Learn tips to make sensitive pre-natal consults a positive experience for you and your patients and their families. Review normal progression of labor and common birth emergencies, as well as neonatal care needs and resuscitation. Participants should gain
increased confidence approaching maternal health consults in resource-limited settings, and improve maternal outcomes in medical aid settings.

9. Pediatrics in Developing Regions I: Neonates and Infants

Review the common medical mission issues that arise early in life, and preventive and acute approaches to diagnoses and treatments. Also learn how to promote successful breastfeeding and management of breastfeeding issues. Participants should be more motivated to highlight neonatal and infant health in medical aid due to greater physician appreciation of neonatal and infant health as high-value intervention targets in resource limited settings. Participants should also develop improved breastfeeding promotion ability both in and out of mission settings.

10. Pediatrics in Developing Regions II: Children and Adolescents

Review of general child and teen health issues in the developing world, and approach to common specific conditions, including problems of growth and development, abuse and mental health, and infectious conditions. Participants will gain improved confidence in resource-limited pediatric primary care consults, and improve outcomes in medical aid deployments.

11. Nutrition

Review of the principles of nutrition in health care applications, especially as applied to resource-limited settings and the non-medical management of chronic disease. Includes a review of common malnutritive conditions encountered in mission settings and the barriers to nutrition in developing regions. Participants gain competence assessing acute and chronic nutritional status in resource-limited populations, recognizing and managing nutritional deficiencies, and utilizing recourse-limited nutritional knowledge to improve patient outcomes.

12. Neurologic Disorders in the Developing World  Dr. George La Brot

A summary of neurologic health in mission settings, with an emphasis on tropical & developing world causes of neurologic pathologies and a review of some common mission neurology presentations such as stroke, epilepsy, neurologic pain, infectious neurology conditions, and movement disorders, with an emphasis on management in resource-limited settings. Participants should gain increased confidence and competence approaching neurologic health issues in tropical and developing settings.

13. Mental Health in the Developing World
A summary of mental health in mission settings. Burdens of mental illness in the developing world are highlighted, as well as common barriers to effective care. Specific mental health conditions common to mission settings are reviewed, as well as conditions that require different approaches in resource-limited settings. Participants should gain increased confidence and competence approaching mental health issues in tropical and developing settings.

14. Genitourinary & Breast

Review of men’s and women’s genitourinary health issues including lithiasis, masses, infections, functional disorders, and special tropical manifestations of genitourinary disease such as quartan malaria, filariasis, and envenomation. Breast health is included, with an emphasis on primary prevention and diagnosis in remote settings. Participants should gain confidence and competence recognizing and managing genitourinary and breast health issues in remote or resource-limited settings.

15. Approach to Fever in the Tropics Dr. Holly Gettings

A summary of strategies for treating fevers in mission deployments utilizing clinical signs (such as skin signs), fever pattern recognition, and a systemic approach to differentiate fevers in resource-limited settings, with an emphasis on tropical presentations. Includes a review of common acute and chronic, as well as infectious and non-infectious causes of fever. Algorithms for general and empiric treatment of fevers are included. Participants should gain confidence and competence recognizing and managing febrile presentations in remote or resource-limited settings, as well as in their home country in returning travellers.

16. Parasites Dr. George La Brot

A comprehensive review of parasitic organisms that prey on vulnerable populations, including protozoa, blood parasites, worms, arthropods, and mammals. A special emphasis is placed on malaria, and regional knowledge of parasite burdens to improve clinical diagnoses. Management of parasite in resource-limited settings—especially without access to laboratory diagnosis—are emphasized, as well as primary prevention. Participants should gain confidence and competence recognizing and managing parasite presentations in remote or resource-limited settings, as well as in their home country in returning travellers.
17. Gastroenterology in the Medical Mission Setting  
Dr. George La Brot  

A review of gastrointestinal issues in mission settings, ‘from stem to stern.’ Infectious and non-infectious issues are covered, with special emphasis on unique tropical and developing region-specific conditions. Management in resource-limited settings and empiric treatment strategies are included, as well as symptom-based and clinical exam-based diagnoses. Participants should gain confidence and competence recognizing and managing gastrointestinal presentations in remote or resource-limited settings.

18. Diarrhea Management  
Dr. Holly Gettings  

This ubiquitous medical mission issue receives special attention. Common causes are reviewed, with an emphasis on pattern recognition and clinical diagnosis, common causes, dehydration, public health and primary prevention. Management strategies in remote settings are included, as well as regional barriers and strategies for larger scale interventions. Participants should gain confidence and competence recognizing and managing diarrheal presentations in remote or resource-limited settings.

19. Respiratory Medicine in the Medical Mission Setting  
Dr. George La Brot  

A review of respiratory medicine in mission settings, including infectious and non-infectious conditions. Tuberculosis and approach to chronic conditions such as asthma receive special attention, as well as tropical conditions such as tropical pulmonary eosinophilia. Participants should gain confidence and competence recognizing and managing respiratory presentations in remote or resource-limited settings.

20. Cardiology in the Medical Mission Setting  
Dr. George La Brot  

This introduction to medical mission cardiology includes a summary of the specific burdens of cardiology disease in developing regions, and barriers to effective care. Diagnosis and management of common conditions including tropical cardiology presentations such as Chagas, with an emphasis on diagnosis and management where advanced laboratory and imaging facilities may not be available. Participants should gain confidence and competence recognizing and managing cardiology presentations in remote or resource-limited settings.

21. Musculoskeletal Issues  
Dr. Holly Gettings  

Common musculoskeletal conditions in mission settings are reviewed, including tropical conditions such as mycetoma and polio. Special discussion is made about improved performance on orthopedic specialty missions, as well as non-pharmaceutical approaches to chronic musculoskeletal issues and primary
prevention. Participants should gain confidence and competence managing musculoskeletal issues presentations in remote or resource-limited settings.

22. Envenomations  
Dr. Benjamin La Brot

A review of different types of venom, modes of envenomation and snake, arthropod, and marine vectors. Management of acute envenomation and primary prevention are emphasized, as well as the regionality of venomous organisms and diagnoses by clinical signs. Participants should gain greater diagnostic and management skills to be able to provide better care more rapidly in venomous encounters, and experience reduced exposure risk while travelling in endemic regions.

23. Allergies in the Medical Mission Setting  
Dr. Holly Gettings

A discussion of fundamentals of allergy treatment and review of common causes of allergic conditions encountered in tropical and remote mission work. Food, cutaneous, respiratory, and systemic allergies are discussed and effective management in resource-limited settings is emphasized. Including a review of anaphylaxis management. Participants should gain confidence and competence managing allergy-related issues presenting in remote or developing regions.

24. Dermatology  
Dr. Benjamin La Brot

A introduction to medical aid dermatology for non-dermatologists. Included are dermatology packing tips for remote deployments, a review of infectious and non-infectious with an emphasis on tropical presentations such as leishmaniasis or Buruli ulcers, and a review of the regionality of dermatology presentations in developing regions. Dermatology as a diagnostic tool for systemic disease and a review of clinical diagnostic algorithms and empiric treatments are also discussed. Participants should gain confidence and competence approaching dermatology issues in resource-limited settings and improve their overall mission performance, utilizing increased dermatology skill to augment the management of non-dermatatologic conditions.

25. Endocrinology  
Dr. Holly Gettings

The emergent chronic endocrine diseases such as diabetes, and acute endocrine conditions encountered in remote settings are reviewed. Added risk factors and barriers to effective primary prevention and treatment in marginalized populations are discussed, as well as strategies for overcoming these barriers and the management of endocrine conditions in developing regions. Cultural context relating to thyroid and other endocrine diseases, as well as primary prevention strategies are included. Participants should gain increased understanding of the contextual nature of endocrinology in developing regions and more effective management in medical aid settings.
26. Geriatrics and End-of-Life Care  
Dr. Benjamin La Brot

The burden of geriatric conditions in developing regions is reviewed, and a resource-limited approach to geriatric and end-of-life care is discussed. Non-pharmaceutical strategies, especially for palliative care, are emphasized. Handling of patient deaths in different cultural contexts is included. Participants should gain greater awareness of the scope of approaches to geriatric and end-of-life issues in mission settings.

27. Ophthalmology & Dental Care In Mission Settings  
Dr. Benjamin La Brot

An overview of ophthalmology and dental burden in mission settings, and empiric approaches to these issues in rural primary care. Ophthalmology and oral health indicators for clinical diagnosis of systemic disease, ocular parasitoses in developing regions, visual assessment algorithms, managing squints, and ophthalmologic exam as a clinical indicator for HIV status are included. Special dental considerations for developing region aid work are also discussed. Participants should gain confidence and competence at managing ophthalmologic and oral health issues in unfamiliar, resource-limited settings and improve their effectiveness on mission trips.

28. Surgical Procedures in Medical Mission Work  
Dr. Benjamin La Brot

An overview of fundamental surgical considerations in medical aid work, with an emphasis on strategies for remote field settings. Participation in dedicated surgical specialty missions is discussed, as well as surgical procedures in the field, review of anesthesia and sedation techniques in remote settings, developing the most appropriate surgical tool kit for your mission needs, different wound closure strategies, review of common procedure techniques in the field, and the ethical considerations for surgical interventions in mission settings. Participants should gain increased contextual understanding of the requirements for effective and safe surgical work in medical aid, and increased confidence and competence at planning for surgical mission work and management of specific surgical presentations.

Practical Hands-on Sessions:

Ultrasound in the Mission Setting I:  Pre-Natal and Genito-Urinary/Breast (lecture)

Lecturer:  Dr. Benjamin La Brot

- Short lecture introduction to basic pre-natal and genitourinary/breast ultrasound diagnoses in medical aid settings, including a discussion of the expanding role of portable ultrasound in remote primary care settings. Review of basic techniques and appropriate checklists for ultrasound in remote medical work. Participants should gain improved diagnostic ultrasound skill for more effective mission performance.
**Ultrasound Practical Session I: Pre-Natal and Genito-Urinary/Breast**

**Instructors: Dr. Benjamin La Brot, Dr. Holly Gettings**

- In small groups of 2-4, physicians will have the opportunity to practice pre-natal and genitourinary/breast ultrasound techniques on patients from our mission communities, under guidance from a skilled mission ultrasonographer. Placenta praevia, twins, fetal gender identification, external ultrasound techniques for ovarian and uterine exam, and breast mass ultrasound are emphasized. Participants will gain increased confidence and technical skill, and develop a foundation from which further self-directed ultrasonography improvement can take place.

**Ultrasound in the Mission Setting II: Cardiac, Hepato-Biliary & FAST Scan**

**Lecturer: Dr. Holly Gettings**

- Short lecture introduction to basic cardiac, hepato-biliary, and FAST ultrasound diagnoses in medical aid settings, including a discussion of the expanding role of portable ultrasound in remote primary care settings. Review of basic techniques and appropriate checklists for ultrasound in remote medical work. Participants should gain improved diagnostic ultrasound skill for more effective mission performance.

**Ultrasound Practical Session II: Cardiac, Hepato-Biliary & FAST Scan**

**Instructors: Dr. Benjamin La Brot, Dr. Holly Gettings**

- In small groups of 2-4, physicians will have the opportunity to practice basic cardiac, hepato-biliary, and FAST ultrasound techniques on patients from our mission communities, under guidance from a skilled mission ultrasonographer. Sequelae of rheumatic fever, Chagas, congenital heart defects, lithiasis and liver masses, cirrhosis, and acute abdominal screening are emphasized. Participants will gain increased confidence and technical skill, and develop a foundation from which further self-directed ultrasonography improvement can take place.

**Clinical Deployments:**

Participants will be broken into groups of ten physicians, and merged with ten Floating Doctors volunteers and leadership to deploy on 2 remote mobile clinics for a full day of field work in rural Ngabe-Bugle indigenous communities in the jungles of western Panama. All participants will serve as medical providers on a live mission, with a translator if required, and under the guidance of experienced RemoteCare and Floating Doctors mission doctors.

Participants will engage in all aspects of the deployment to develop complete context for the specific logistic needs and solutions of a successful, efficient mobile clinic. This will include packing clinical field gear and the mobile pharmacy, setting up the clinic on arrival, and rotating through all clinic stations: Medical Provider Station, Patient Intake station, Administration station, and Pharmacy station.
Rotation through all stations is critical to complete understanding of the needs mobile medical deployments and all participants will receive one-on-one support from Floating Doctors medical and logistic leadership during the clinic.

Each day will involve travel to a remote community, the first day by small boat through mangrove mazes and open water to remote island communities, and the second day by boat and then overland travel to communities on the mainland in the foothills of Panama’s central Cordillera mountain range. In general, approximately 90-150 patients are seen during a typical deployment, with a wide range of conditions including common presentations and tropical & developing world health issues.

Ultrasound capability will be included in all deployments and there are almost always multiple pre-natal ultrasounds and a variety of other ultrasounds to be done; participants will take turns being included in these live ultrasounds with personal instruction and supervision by our mission leaders. If available, a Dental station will also be staffed and physicians will assist Floating Doctors dentists with extractions and other dental care.

House call requests are also common—a community member requesting a home visit for a patient unable to come to the clinic location. When available, participants will be included in these home visits—a delightful return to a much older style of medicine, when most of it happened in a patient’s home, and a unique opportunity to conduct a consult that transcends outward cultural differences

At the end of the clinical deployments, participants should have a greatly increased understanding of the fundamental context in which most medical aid takes place, and the approach necessary for effective and safe mission performance. After two guided deployments, participating doctors will have greatly increased ability and confidence to effectively assist in planning missions, leading missions in the field, and performing as a provider in rural medical aid work.

Curriculum and scheduled presenters may change due to unforeseen circumstances.

July, 2015