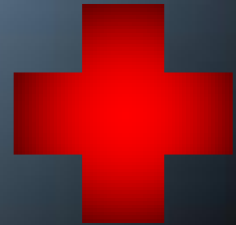


Remote & Expeditionary Medicine

5 days



Adventure Doc Education

The provision of health care in remote and austere environments is a unique and emerging medical specialization. This series of modules offers a broad overview of both remote medical skills and concepts. This education will prepare the medical provider to operate in an expeditionary environment with confidence and give appropriate medical care, regardless of location or equipment.



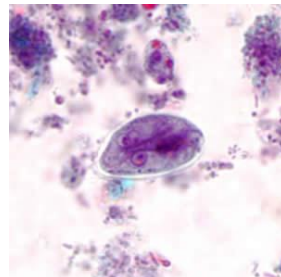
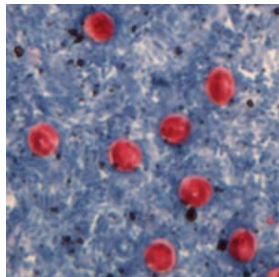
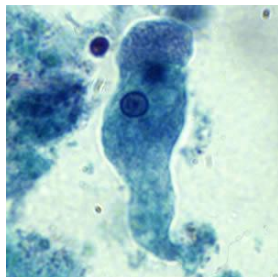
Remote and Expeditionary Medicine 5 day

5 day course	Day 1	Field Water Disinfection	1 Hour	
		Environmental Medicine	3 Hours	8 hours
		Overview of Tropical Medicine	4 Hours	
	Day 2	Sick Call Clinic and Urgent Care medicine	8 hours	8 hours
	Day 3	Medical Kit Construction	1 hour	
		Solar Radiation & Insect Bite Prevention	1 hour	8 hours
		Fluids and Dehydration	2 hours	
		Envenomation and Insects	4 hours	
	Day 4	Wound Closure	8 hours	8 hours
	Day 5	Vaccines For Travelers/Adults	1 hour	
		Extremity Injuries	3 hours	8 hours
		Eyes, Nose and Dental	4 hours	

Day 1

Field Water Disinfection (1 hour)

Health care providers often serve as public health practitioners on their team. Ensuring the group has access to potable water is vital to mission success. Surveys of common pathogens as well as multiple disinfection methods are covered. Attention is given to helping the participants know when to select the appropriate method(s) of purification and specific benefits and drawbacks of each method. In addition, participants will be comfortable with many methods of water purification for both large and small groups at the end of this class. Coursework includes scenarios and case management in remote and resource poor areas. This class is advised for those who will be responsible for water control for their personal use, team use or camp/village use. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine.

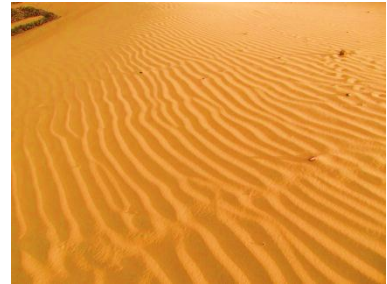


- Common pathogens (Amebiasis, Cryptosporidium, Giardia, Enterovirus)
- Methods (heat, filter, chemical, UV)
- Small and large volumes of water preparation

Environmental Medicine (3 Hours)

Operations in extreme environments require advanced training for the health care providers. This class examines commonly encountered problems in hot, cold and high altitude areas. Pathology, recognition, treatment and disposition are discussed in detail. Participants will be comfortable in management of a multitude of conditions in a variety of environments. Coursework includes scenarios and case management in remote and resource poor areas. The application of clinical skills is stressed without burdening the participants in unnecessary/non-critical information. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine.

- Hot climates (heat stroke, heat cramps, cooling techniques)
- Cold climates (hypothermia and rewarming techniques)
- Frostbite treatment and prevention
- Altitude, High Altitude Cerebral Edema (HACE), High Altitude Pulmonary Edema (HAPE), treatment and GAMOW bags
- Motion sickness treatment and prevention

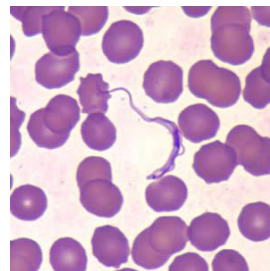


Overview of Tropical Medicine (4 Hours)

This is a survey of tropical medicine pathology, prevention and treatment. This is critical for operations in tropical environments and is best combined with our complete series of tropical medicine lectures. Our tropical medicine lectures are taught by an expert in the field and geared to the Physician, mid-level provider (PA or NP) or advanced trained paramedics. "Real-life" application is stressed and clinical tropical medicine is the primary focus. The curriculum is designed to impart critical information without burdening the partaker on academia. Upon completion, participants will be comfortable with diagnosis, treatment and disposition of common tropical illnesses and conditions. Coursework includes scenarios and case management in remote and resource poor areas. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine in addition to his post-graduate specialization in tropical medicine.



- Malaria (main types, prevention and treatment)
- Viral Illnesses (Yellow Fever, Dengue Fever, Chikungunya, Rabies, Japanese Encephalitis)
- Worms (Ascaris, Ancylostoma/Necator, Trichuris, Enterobius, Tapeworms)
- Trematodes (Schistosomiasis)
- Trypanosomiasis (American and African)



Day 2

Sick Call Clinic & Urgent Care Medicine (8 Hours)

Healthcare providers operating in a remote environment must perform many services. The operation of a “sick call” or “walk-in clinic” is one of the duties. This class prepares a provider to manage common complaints that prompt a team member to seek non-emergent care. Coursework includes scenarios and case management in remote and resource poor areas. The basic pathology, history and physical exam, differential diagnosis, treatment and disposition of these complaints are explored in detail. In addition, the provider is trained to recognize and triage potential complications of these complaints to ensure the patient gets referred to a higher level of care, as needed. Coursework focuses on provision of strong patient care and returning the patient to operational status as quickly as possible. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine in addition to being a board certified primary care physician.



- Abdominal pain (management, red flags and disposition)
- Back pain (management, red flags and disposition)
- Cellulitis (management, red flags and disposition)
- Chest pain (management, red flags and disposition)
- Colds, cough and Influenza-like-illnesses (management, red flags and disposition)
- Conjunctivitis (management, red flags and disposition)
- Constipation (management, red flags and disposition)
- Contact dermatitis (management, red flags and disposition)
- Corneal Abrasions and ulcers (management, red flags and disposition)
- Dental pain (management, red flags and disposition)
- Diarrhea (management, red flags and disposition)
- Ear infections (management, red flags and disposition)
- Fevers (management, red flags and disposition)
- Flank pain and Renal Stones (management, red flags and disposition)
- Headache (management, red flags and disposition)
- Ingrown toe nail and foot care (management, red flags and disposition)
- Joint pain (management, red flags and disposition)
- Leg swelling (management, red flags and disposition)
- Lower extremity injury and minor trauma (management, red flags and disposition)
- Muscle strain (management, red flags and disposition)
- Pneumonia (management, red flags and disposition)
- Seasonal allergies (management, red flags and disposition)
- Shortness of breath (management, red flags and disposition)
- Skin Abscess (management, red flags and disposition)
- Smoke Inhalation (management, red flags and disposition)
- Sore throat (management, red flags and disposition)
- Syncope (management, red flags and disposition)
- Testicular pain (management, red flags and disposition)
- Upper extremity injury and minor trauma (management, red flags and disposition)
- Urinary tract infections (management, red flags and disposition)

Day 3

Medical Kit Construction (1 hour)

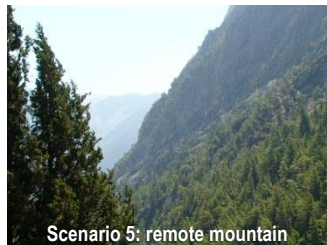
Construction of a field medical kit is vital for mission success and the health of participants. This class explores concerns, common pitfalls and concepts that providers should be considering when assembling their mission ready medical kits. Participants will feel confident to prepare a medical kit based on the needs of the mission, location and team members at the end of the class. Improvisational items and multi-use items are also explored. Participants will learn from “real life scenarios” on what has worked and what has failed in specific instances. Coursework includes scenarios and case management in remote and resource poor areas. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine.



- Location of operations
- Medical skill of operators
- Medical needs of group
- Weight of materials
- Multiple use items



Scenario 3: marching the desert



Scenario 5: remote mountain



Scenario 7: tour the ruins

Solar Radiation & Insect Bite Prevention (1 hour)

Health care providers charged with medical care of a team operating in an outdoor environment should be specifically trained to prevent and treat common issues arising from this area of operation. Insect bite prevention is critical for avoidance of insect borne illnesses such as malaria, dengue fever and leishmaniasis. "Real world application" is examined with regard to selection of proper solar protection methods. This class prepares the provider to accurately and effectively educate their team on preventative health issues related to insect bite prevention and solar radiation illness. Treatment and prevention of solar radiation illness is examined in detail. In addition, the lecture explores basic public health interventions for insect control on a camp or village level. Coursework includes scenarios and case management in remote and resource poor areas. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine in addition to his Master's Degree in International Health and Tropical Medicine.



- SPF creams/UPF fabrics
- DEET
- Permethrin
- Bed nets
- Public health insect control

Fluids and Dehydration (2 hours)

This class is targeted to the physician, mid-level provider or advanced trained paramedic looking to improve their fund of knowledge in dehydration management and fluid replacement. The multitude of Intravenous and oral solutions are examined and the participant will be comfortable with appropriate selection and administration by the end of the class. Recognition, anticipation and treatment of electrolyte abnormalities are also covered in depth. This class is ideal for health care providers working in hot and tropical environments. Curriculum is centered on clinical management and disposition of the patient from an austere and remote location. Improvisational concepts are also discussed. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine.



- Types of fluid (D5, NS, LR and D5 1/2 NS)
- Fluid replacement with PO and IV
- Hyponatremia and electrolyte abnormalities

Envenomation and Insects (4 hours)

Envenomation recognition and management are discussed from a wide variety of animals, worldwide. This class focuses on real life application of skills in the treatment of envenomation. Health care providers who might be treating either team members or indigenous locals will be served well from this class. Specific attention is given to reptiles, arachnids and insects from 6 continents. Basic venom toxicology is covered as well as systemic pathophysiology. Participants will be taught to not only recognize the venomous animals by sight but also their bite patterns. Coursework includes scenarios and case management in remote and resource poor areas. Concepts of anti-venom and venom detection kits will also be discussed. The class focuses on clinical care for the envenomed patient including prompt recognition and diagnosis of the venom type, case management and disposition of the patient. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine.



- Reptiles and types of poisons (neurotoxic, hemotoxic)
- Insects, anaphylaxis
- Scorpions and arachnids
- Marine life envenomation
- Pressure immobilization dressing



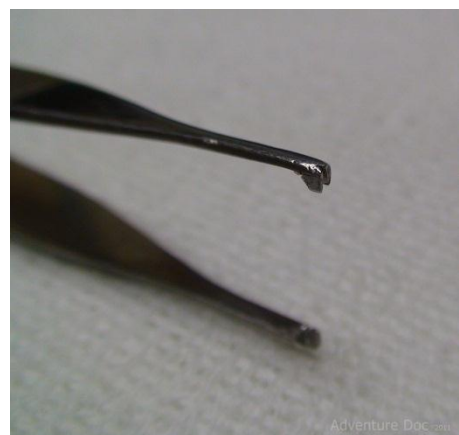
Day 4

Wound Closure (8 hours)

This enormously popular class teaches the health care provider basic laceration and wound closure techniques including the use of anesthesia and wound cleaning. Our class serves as the perfect foundation to wound management for advanced trained paramedics operating in an austere environment or as a strong refresher to physicians and mid-level providers who might not have used this skill recently. Multiple methods of wound closure are examined including improvisation techniques. By the end of class our participants are confident in proper assessment of a laceration or wound, cleaning and debridement, anesthetic selection and administration, selecting the appropriate closure method and proper closure. Our participants are also instructed on providing education to their patients on wound care and follow-up. Coursework includes scenarios and case management in remote and resource poor areas. This course is very "hands-on" and utilizes animal tissue to facilitate skill mastery. Participants will be trained in a variety of suturing methods and instrument handling. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine.



- How wounds heal
- LACERATE technique
- Anesthesia (Lidocaine and improvised)
- Dirty vs. Clean wounds; when not to close
- Simple interrupted sutures
- Octylcyanoacrylate, staples and strips
- Infections and antibiotics



Day 5

Vaccines for Travelers/Adults (1 hour)

Health care providers serving their team or a local indigenous population need to have a strong understanding of preventative health. The use of vaccines in health maintenance is critical. Coursework includes scenarios and case management in remote and resource poor areas. This class will allow the provider to assess a patient for vaccine requirements and appropriately deliver this service. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine in addition to being a board certified primary care physician and certified in travel health.

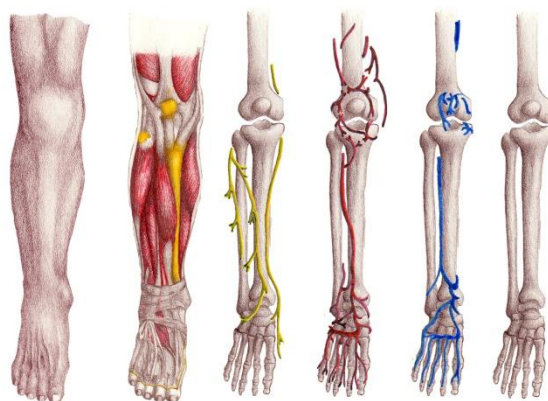
- Yellow fever
- Japanese encephalitis
- Tetanus/Boosters in adult life
- Rabies pre-exposure
- Typhoid fever
- Meningitis
- Influenza
- Polio (oral and injectable)



Extremity Injuries (3 hours)

Remote healthcare providers often have to treat extremity injuries with little or no diagnostic tools other than a strong history and physical exam. This can make the management of minor traumas or joint dislocations difficult. This class teaches joint dislocation diagnosis and reduction techniques in a remote and austere environment. The application of evidence based medicine on a case by case basis can facilitate a high standard of medical care without diagnostic tools such as radiology/x-ray. Participants will be taught the use of this evidence to assist with management of simple extremity trauma. Procedures such as improvisational splints, slings and braces are also featured. Improvisational medicine and "real-life" scenarios from resource poor areas will reinforce participant skills. Curriculum centers on diagnosis, management and disposition of patients along with triage to a higher level of care, as needed. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine.

- Shoulder dislocation and reduction (Hippocratic, Milch and Self-Reduction)
- Elbow dislocation and reduction
- Ankle injuries (Ottawa ankle rules)
- Knee Injuries
- Femur fracture and improvised traction devices
- Sam Splints

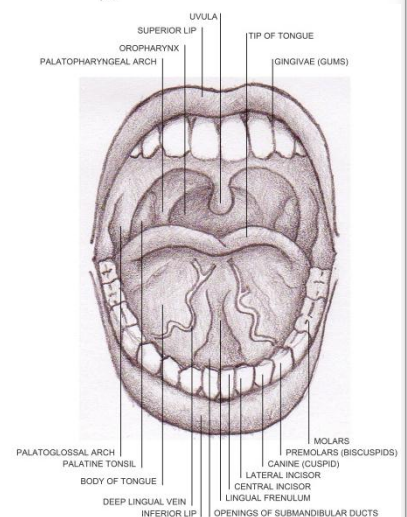
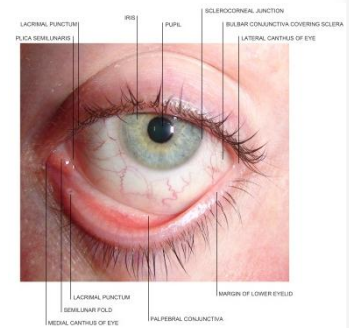


Adventure DocTM

Eyes, Nose and Dental (4 hours)

A remote health care provider is often called upon to act as a specialist in areas that they have not received training. This class examines common ENT and Ophthalmologic complaints and emergencies in remote and resource poor areas. Participants will be comfortable with diagnosis and management conditions as well as triage to a higher level of care, as needed. Coursework includes scenarios and case management in remote and resource poor areas. The course curriculum is designed and instructed by a physician who specializes in remote and expeditionary medicine.

- Eye exam (pupils, extraocular muscles, field vision test, fluorescein, eversion of lid)
- Red eye evaluation (glaucoma, corneal abrasion, foreign body, conjunctivitis)
- Loss of vision in white eye (Temporal arteritis, retinal detachment, Artery occlusion)
- Eyelid infections (blepharitis, hordeolum)
- Periorbital cellulitis
- Ultraviolet photokeratitis (snowblind)
- Ocular trauma and ruptured globe
- Toothache
- Oral abscess
- Dental fractures and avulsions
- Jaw/mandible dislocation
- Dental Anesthesia
- Epistaxis management (anterior and posterior bleed) with tampons, pinch, packing and cautery



Adventure Doc 7511