Wilderness Medicine Elective
SOMN711
Department of Surgery
Duration: Longitudinal elective over 1 academic year
Director: David Ledrick, MD, MEd
Coordinator: Christine Hathaway
Faculty: Andrew Nyberg
          Michael Omori
          David Ledrick
Semesters: All
Number: Any
Location: (potential locations include:)
          St. Vincent Mercy Medical Center
          Miakonda Boy Scout Reservation
          Pioneer Boy Scout Reservation
          University of Toledo Medical Center
          Secor Metro Park

General Description

Effective medical education requires a combination of didactic instruction and practical experience. The challenge of providing a practical wilderness medicine experience is that students and teachers must leave the traditional hospital setting. The wilderness medicine elective will encourage students to apply their medical knowledge in non-traditional settings. This will occur through a series of workshops and lectures. We will also have the students prepare and deliver mini-skills lectures and demonstrate their knowledge in a safe but realistic wilderness medicine setting.

Contact time:
Lectures: (1 hr each)
          Introduction to Wilderness Medicine
          Hypothermia/Drowning
          Altitude illness/Diving and dysbarism
          Envenomations
          Soft tissue/wound care/infectious disease
          Hyperthermia/Toxicodendron/Sunburn
Skills Session (6 hrs)
          Mini-skills lectures, orienteering exercise, practical skills applications

Course requirements: Attendance at 4 lectures plus the Skills Session
Evaluation: Ongoing, criterion based evaluation
TOPICS TO BE COVERED:
Musculoskeletal Injury Management
Strains/Sprains
Dislocations
Fractures – Splinting, Traction
Soft Tissue Wound Management
Lacerations
Burns
Puncture – with and without embedded objects
Blister
Infection
Frostbite – Extremity Immersion
Animal Bites
Insect Bites/Stings
Fishhook Removal
Exposure Injury and Condition Management
Hypothermia – Full-Body Immersion
Hyperthermia/Heat Stroke
Altitude/Mountain Sickness
Dehydration
Hazardous Materials Exposure
Poisonings – Injections (Animals, Insects), Ingestions (Foods, Plants, Liquids)
Contaminated Water/Water Purification
Food/Electrolyte Deprivation
Lightning and Other Weather Conditions
Drowning/River Safety
Fire Issues – Smoke Inhalation, Fire Safety
Systemic Injury and Condition Management
Shock
Respiratory Conditions/Respiratory Arrest (CPR)
Cardiovascular Conditions/Cardiac Arrest (CPR)
Neurological Injuries/Conditions
Pre-existing Medical Conditions – Diabetes, Sickle Cell Anemia
Diarrhea/Fluid Loss
General
Scene Assessment Skills -- Multiple Patients (Wilderness Triage)
Patient Assessment Skills -- Multiple Injuries
Pediatric Issues in Wilderness Medicine
Orienteering
Medical Kit Planning
Expedition Gear Planning
Communication Issues
Transition-to-Hospital Issues
EDUCATIONAL OBJECTIVES:
Following the completion of the Wilderness Medicine Elective, students will be able to:
1. Recognize the importance of wilderness medicine for medical providers.
2. Identify common wilderness medical problems, conditions, and situations.
3. Describe the knowledge, skills, and techniques necessary for proper management of wilderness medicine.
4. Practice important wilderness medical skills and techniques.
5. Distinguish the importance of teamwork in the success of wilderness medicine and wilderness activities in general.
6. Recognize the importance of proper preparation, planning, and gear in the prevention and management of wilderness medical situations.
7. Identify the potential influences and complications of uncontrolled environmental conditions and settings on the management of wilderness medical situations.
8. Develop bonds of collegiality between participants from different schools, hospitals, professions, areas, and backgrounds.
9. Adapt a familiarity with references and resources for self-education and further development of wilderness medical education.
10. Develop a deeper sense of respect for the environment and the need for proper management and conservation of wilderness areas.
METHODS OF TEACHING:
Students will learn from:

1. Their own reading. The text for the course will be *Wilderness Medicine: Management of Wilderness and Environmental Emergencies* edited by Paul S. Auerbach

2. Direct contact with the instructors in small group settings. These may occur in classrooms at St. Vincent Mercy Med. Center, University of Toledo Medical Center, or any of the local Metro parks including Miakonda Boy Scout Reservation.

3. Workshops and lectures given periodically through the year to equal 12 hours.

METHODS OF STUDENT EVALUATION:
The students will be evaluated by the faculty in terms of the quality and frequency of their participation.

LINKAGE TO EDUCATIONAL PROGRAM OBJECTIVES:
The course is designed primarily to provide an experience for the students. It is expected that the students will have the opportunity to demonstrate proficiency in any of the areas of the above listed curriculum through the medical scenarios that they create for themselves over the course of the year.

ELECTIVE EVALUATION:
The students will be given feedback forms to assess faculty and course content.

PREREQUISITES (if any): None