



Medicine in the Wild

April 5–29, 2010

Offered by the Wilderness Medicine Institute of NOLS
in partnership with the
Harvard Affiliated Emergency Medicine Residency Program



COURSE OVERVIEW

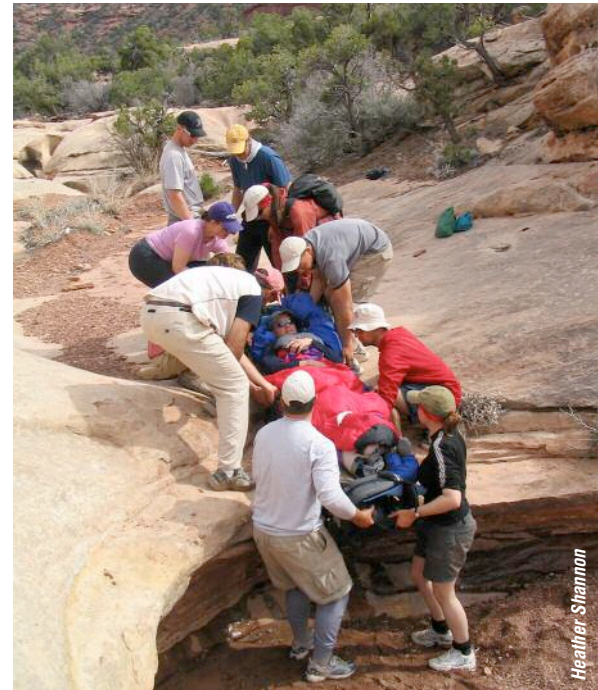
Medicine in the Wild (MED) is the ultimate combination of wilderness medicine, leadership, and medical education in a remote environment. It is ideal for the third- or fourth-year medical student looking for a uniquely challenging opportunity to practice medical decision-making in a backcountry setting. This is an unparalleled opportunity to gain proficiency in wilderness medicine; peer leadership, communication, and teamwork skills; wilderness travel and living skills; and medical education techniques. No other medical school elective offers this breadth of curriculum or a true extended wilderness expedition.

The Wilderness Medicine Institute of NOLS (WMI) and the Harvard Affiliated Emergency Medicine Residency (HAEMR) are working in partnership to provide the Medicine in the Wild Program. In addition to a team of experienced NOLS and WMI educators, a senior resident from HAEMR will accompany the expedition and provide advanced medical modules and teachings. The course begins with a five-day Wilderness Upgrade for Medical Professionals (WUMP) at a remote teaching facility. The WUMP is followed by a day of advanced clinics taught by the senior HAEMR resident. Your expedition then travels into the historic Gila Wilderness in New Mexico for nearly three weeks in order to practice your newfound skills. Your course will conclude with a visit from an HAEMR faculty member with experience as a wilderness medicine physician.

COURSE LOCATION

The WUMP course will be taught near Tucson, Arizona. This section of the MED will be facility based. You will stay in cabins near the classroom, and you will have catered meals. Course days will be spent in and out of the classroom learning and practicing the skills and decision-making that set wilderness medicine apart from its urban counterpart.

The backcountry section will take place in New Mexico's Gila Wilderness. Ranging in elevation from 6,500 to 11,000 feet, the Gila Range area is home to black bear, elk, and white-tailed deer, as well as an amazing variety of bird life. For nearly three weeks, you'll hike from pinyon, juniper, and Arizona sycamore up into aspen groves and stands of fir and spruce trees. You'll camp in steep-sided rocky canyons, wander through park-like ponderosa pine forests, and sleep under the stars in open alpine meadows. The Gila can undergo extremes in temperatures and weather. Though warm mild weather is the norm, you should expect anything from monsoon rains and extreme heat to snow, wind, and subfreezing temperatures. It is likely that you will experience a variety of extremes in weather, camping, and hiking conditions. Physical challenges on the course will include backpacking both on- and off-trail in steep, rugged terrain and numerous river crossings done by wading through ankle- to waist-deep moving water.



Medicine in the Wild students practice improvised litter building, packaging, and transport.

“Because the course included students who represented the entire spectrum of personalities in medicine, its greatest value lay in the formal opportunities to lead them, work with them, and follow them ... For having practiced all of those skills with an intensity that's almost impossible to match elsewhere, I feel better equipped to begin my internship.”

Neil Rosenberg, MED2006 student

COURSE OBJECTIVES

The Medicine in the Wild course has four primary objectives: proficiency in wilderness medicine; peer leadership, communication, and teamwork skills; wilderness travel and living skills; and medical education techniques.

The quest for proficiency in wilderness medicine begins with the five-day WUMP course. This course builds upon the skills of medical students and residents by challenging you to make diagnostic medical and evacuation decisions in remote environments. The foundational skills learned in the classroom portion of the training will be called upon during the field section to problem-solve increasingly complex scenarios. Specific topics that will be covered include remote CPR, focused spinal assessment, litter packaging and long-term patient care, improvised splinting, North American bites and stings, environmental emergencies, abdominal evacuation criteria, and backcountry medical and drug kits. Lessons learned during the WUMP will provide the foundation for continuing medical education in the backcountry section of the course.

The WUMP will also be the starting grounds for developing communication and teamwork skills. You will be called upon to work with other students in teams of two to six or more in order to take care of simulated patients in scenarios ranging from the straightforward to the complex multiple casualty incident. As the course shifts into the backcountry, these communication and leadership skills will be applied to the rigors of expeditioning.

The nearly three-week wilderness section provides an unrivaled opportunity for you to learn the NOLS core curriculum for backcountry travel: risk management and judgment, leadership and teamwork, outdoor skills, and environmental ethics. Though prior wilderness travel experience is not necessary, even students familiar with backcountry travel will find themselves challenged to rise to new levels of proficiency as members of the expedition. As you gain comfort with the daily tasks of camping, your group will again explore the ramifications of dealing with medical challenges in such a remote location.

Throughout the month, you will work towards becoming a sound medical educator. Learning theory and teaching styles will be explored, and you will be called upon to present varying topics throughout the program. Emphasis will be placed on effective educational models that can be readily transferred from the wilderness into the medical world. In addition to the curriculum provided by course faculty, you will be expected to complete and present a project focusing on global and environmental health. This project is overseen by the HAEMR faculty. No other medical school elective offers the opportunity to develop these skills in such a remote and demanding environment!

COURSE INSTRUCTORS

Your course will have instructors from the Wilderness Medicine Institute of NOLS (WMI) and the Harvard Affiliated Emergency Medicine Residency (HAEMR). Additionally, your course will conclude with a visit from an HAEMR faculty member with experience as a wilderness medicine physician.

WMI instructors are selected for their background in wilderness leadership, urban and wilderness pre-hospital care, and education. They are considered to be the best wilderness medicine educators in the country. The HAEMR faculty selects a fourth-year emergency medicine resident to contribute their knowledge of hospital-based emergency medicine and to provide transference of curriculum for students entering residency.



Students hiking in the Gila Wilderness.

COURSE SYLLABUS

4/4: Course Orientation

Shuttle from Tucson, Arizona airport to wilderness medicine teaching site. The course begins with dinner at 6:00 p.m.

4/5-9: Wilderness Upgrade for Medical Professionals (WUMP)

The WUMP course is a nationally recognized program taught by faculty from the Wilderness Medicine Institute of NOLS (WMI) that trains participants to respond to medical emergencies in remote settings. Course days run from 8:00 a.m. to 5:00 p.m. with two evening sessions. Classroom lectures (50%) are integrated with practical skills sessions, case studies, and scenarios (50%). The scenarios and practice sessions take place both inside and outside and include an evening mock rescue.

4/10: Advanced Airway Management

The senior resident from the Harvard Affiliated Emergency Medicine Residency Program (HAEMR) will offer a day of hands-on advanced airway management clinics.

4/11: Issue Equipment and Ration Food at NOLS Southwest

After breakfast you will be shuttled to NOLS Southwest in Tucson, Arizona. The day will be spent issuing gear and packing rations necessary for the wilderness expedition. Fundamental wilderness travel and living classes will begin.

4/12: Travel to Gila Wilderness

You will travel from NOLS Southwest to the Gila Wilderness (near Silver City, New Mexico) to begin the expedition in this historic wilderness area.

4/13-20: First Ration Period, Wilderness Expedition

During the first ration period the expedition will focus on camping and travel skills in a backcountry setting. Once these skills have been mastered, the WMI staff will integrate the wilderness medicine curriculum into the continued exploration of the Gila, through scenarios, clinics, and case study reviews. The HAEMR resident will continue to lead relevant discussions and offer wilderness medicine modules in addition to mentoring students. You will be introduced to the NOLS communication and leadership curriculum as it applies to working within teams in stressful situations.

4/21: Re-supply

The course will receive a re-supply of food and gear for the last week of the back-country expedition.

4/22-26: Second Ration Period, Wilderness Expedition

The final section in the Gila Wilderness will combine technical climbing skills with a continued emphasis on care of medical patients in remote environments. Evening discussions will focus on topics relevant both to upcoming residency and the opportunities available to practicing physicians within the field of wilderness and expeditionary medicine. You will be expected to present short topics to your peers as a part of the focus on providing effective medical education.

4/27-28: Visit with HAEMR Physician

After a visit to the Gila Cliff Dwellings you will rendezvous with the visiting faculty member from the HAEMR program. In addition to more wilderness medicine classes and open forums, you will present the results of your final environmental and global health project.

4/29: Return to NOLS Southwest

After an early morning shuttle back to NOLS Southwest you will de-issue course gear, shower, and celebrate with a course-end barbeque before a shuttle takes you to an airport hotel in Tucson. Official course end is at 5:00 p.m.



Brad Christensen



Shirana Taylor

Top: Students practicing spinal assessment evaluation and immobilization in a realistic scenario.
Bottom: Learning to provide a supportive tape job for a sprained ankle is a key wilderness skill.

CERTIFICATIONS AND CONTINUING EDUCATION CREDITS

- Successful completion of the course provides certification as a WMI of NOLS Wilderness First Responder.
- Active members of the Wilderness Medicine Society (WMS) may earn up to 50.5 hours of credit towards a Fellowship of the Academy of Wilderness Medicine (FAWM). You may simulate attendance of this activity at www.wms.org/fawm.
- Through joint sponsorship with WMS, physicians may earn 36 hours of Category 1 CMEs for participation in the Medicine in the Wild course.

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the Wilderness Medical Society and the Wilderness Medicine Institute of NOLS. The Wilderness Medical Society is accredited by the ACCME to provide continuing medical education for physicians. The Wilderness Medical Society designates this educational activity for a maximum 36 hours of AMA PRA Category 1 Credits™. Each physician should only claim credit commensurate with the extent of his or her participation in the activity. The Wilderness Medicine Institute of NOLS is a non-profit educational organization that is not, in any of its activities, sponsored by any proprietary entity.

COURSE COST

\$4,425 | Includes lodging April 4–28, transportation during the course, instruction and materials, visiting faculty, permit fees, field rations, and group camping gear (shelters, cook stoves). Does not include travel to Tucson or personal equipment purchase or rental.

FOR APPLICATION OR MORE INFORMATION

Contact WMI via phone from 8:00 a.m.–5:00 p.m. MST M-F: 1-866-831-9001 or via email: wmi@nols.edu. View the course description and download the application online: www.nols.edu/wmi/courses/medicineinthewild.shtml.



Doctors Stuart Harris and Brian Gee discuss use of a Gamov bag for managing altitude illness.

“Medicine in the Wild offers an unparalleled experience in learning diagnostic and therapeutic skills in a true wilderness setting through the use of small groups, well-crafted simulations, and moulage. While living and traveling in a wilderness area, students learn the intangibles of good clinical and wilderness judgment from expert instructors. Beyond tangible clinical skills, NOLS students develop leadership experience that will be of great importance in their future careers as medical leaders. I have routinely found my NOLS leadership experience to be invaluable in my daily work as the attending physician commanding a busy, urban Level I trauma center and emergency department.”

*N. Stuart Harris MD MFA, Director of Wilderness Medicine,
Department of Emergency Medicine, Massachusetts General Hospital*

HARVARD AFFILIATED EMERGENCY
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