

Docs Go Deep in the Wilderness to Test Emergency Skills

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On an unusually warm day in Michigan this past October, medical students Patrick Harvey and Conal Roche were hiking in the woods when they encountered a small plane wreck. Inside the wreckage, they found a male pilot and a woman with her infant child.

Harvey and Roche quickly determined there was nothing they could do medically for the mother.

They decompressed the pilot's collapsed lung by inserting a needle into his chest and put his leg in traction to restore blood flow to the limb. Unable to move the pilot because of his injuries, they took the baby, who appeared to be unharmed, with them to get help.

The plane wreck and critically injured victims was one of several simulated situations Harvey, a third-year student, and Roche, a fourth-year student, faced when they participated in the 2007 Midwest Medical Wilderness Adventure Race (MedWAR).

Thirty two teams competed in the unique event, which combines outdoor adventure racing with simulated medical emergencies. Harvey and Roche finished in third place.

"I think it's a pretty common fantasy among medical types to imagine being called away from their dinner in a restaurant to perform surgery with a butter knife on a dying patron," says Roche.

"For medical people who enjoy the outdoors, it's not too much of a leap to imagine helping hikers with hypothermia on a mountain."

Harvey says the race was fun and a great learning experience. "You don't usually get the opportunity to apply what you learn in med school until you're a resident.

"This race also gave us the opportunity to interact with doctors and residents to see how they would manage various medical emergencies," says Harvey.

Wilderness medicine, according to Edward Otten, MD, professor of emergency medicine at UC, is defined as the practice of medicine in a place that is at least an hour away from medical care and often with limited equipment in environmental extremes.

"Wilderness medicine covers a variety of conditions such as hypothermia, altitude-induced mountain sickness, venomous snake bites, heat illness, deep sea compression illness and many others," says Otten.

Wilderness medicine, he says, is not confined to areas that may immediately come to mind—such as the woods, mountains, desert or an isolated park.

Otten says a doctor traveling with a cruise ship, emergency medical services personnel who have to treat a car accident victim trapped in a vehicle and helping people displaced by a natural disaster are also examples of wilderness medicine.

Otten has practiced wilderness medicine numerous times over the years, including sewing lacerations for people while he was backpacking in the Grand Canyon. He has also responded to numerous hurricane disasters, including Katrina, Marilyn and Andrew, and taken care of people with no medical support or shelter and limited food and water supplies.

"You practice wilderness medicine almost every day working in the emergency department by treating people suffering from heat illness, hypothermia, infectious disease and traumatic injuries," he says.

Otten's skills and love of the outdoors led to his recent induction into the inaugural class of fellows for the Academy of Wilderness Medicine, part of the Wilderness Medical Society (WMS).

The WMS is a global organization of medical professionals dedicated to advancing clinical practice, research and education in wilderness medicine. Otten has previously served as WMS president, secretary, treasurer and board member.

"Nurses, nurse practitioners, physicians, emergency medical technicians and researchers from nearly every medical specialty belong to the WMS," he says. "Wilderness medicine is a broad specialty that requires not only medical knowledge but search and rescue techniques, as well as survival training."

In addition to applying his expertise in emergency and wilderness medicines in the hospital and "in the field" Otten has collaborated with NASA for more than five years to develop medical kits for the space shuttles.

As for Harvey and Roche, both plan on competing in the Med-WAR race again and Roche is currently applying for a spot in a national

emergency medicine residency program.