

Antarctic Adventure: ESP Physician Spends 4 Months at South Pole

Dr. Sean Roden just spent four months performing what might be considered the coolest job in medicine—literally. Having worked in temperatures as low as 70 degrees below zero, though, he's glad to be home.

Normally, Roden spends much of his time working for Emergency Service Partners, L.P. in an emergency department in Bryan/College Station, Texas. This year, however, the man who grew up wanting to be a professional cowboy made his home on a different wide-open range: Antarctica.

From October 2012 to February 2013, Roden served as the expeditionary physician for the Amundsen-Scott South Pole Station, named for the first two expeditions to reach the southernmost point on the planet. The current facility, dedicated in 2008, houses about 170 researchers and support staff during the austral summer, and about 50 who “winter over” during the dark winter months.

“It was a once-in-a-lifetime experience,” Roden said.



Getting There

Roden learned of the South Pole opportunity by chance when he contacted his alma mater, the University of Texas Medical Branch in Galveston, while exploring a possible position in Singapore. They asked if he knew Dr. Scott Parazynski, who is now the Director of UTMB's Center for Polar Medical Operations. Roden had worked with Parazynski, a former astronaut, while serving as a flight surgeon for NASA. Shortly thereafter, Roden accepted the challenge of working at the South Pole.

On his way to Antarctica, Roden spent three days in Christchurch, New Zealand. There, he received an orientation to living in extreme cold, was issued cold weather gear, and learned how the polar station operates. He also began a short regimen of Diamox to prepare himself for the high altitude conditions (approximately 9,300 feet) at the South Pole.

From there, he boarded a C-17 aircraft that landed on the frozen Ross Sea at the edge of Antarctica. After receiving additional medical orientation at the McMurdo Station, Roden traveled roughly 900 miles on a C-130 Hercules military transport plane that landed on skis at the South Pole Station.



Polar Medicine

and two ward beds.

"The facilities were very modern and very well-equipped," Roden said, noting that physicians have even performed an appendectomy there. Roden himself was able to thrombolyse patients and diagnosed a retinal detachment with an ultrasound device. "I had everything you'd expect in an ER."

Everything, that is, except the support personnel. The medical staff consisted of just Roden and one nurse practitioner.

"You have to draw your own blood, run the labs, evaluate the labs, and do all your own x-rays," Roden said. "You're the pharmacist, the tech, the phlebotomist—for me, growing up in West Texas and wanting to be a rural doctor, it was amazing."

The view was pretty amazing, too.

"From my doctor's office, I could look out the window and literally see the South Pole," Roden said.

There are actually two South Poles: the actual, geographic South Pole, which moves by about 10 meters every year because of shifts in the ice, and the nearby ceremonial South Pole, marked by the flags of the Antarctic Treaty signatory nations. The 2012 season was special because it marked the centennial anniversary of Amundsen and Scott's arrival at the South Pole.

In addition to his duties at his home base, Roden supported multiple outposts and a number of away-teams collecting meteorites. His emergency medicine training paid off when he was required to stabilize and then air-evacuate one researcher on a Twin Otter aircraft in the remote Transantarctic Range, about 400 miles from the South Pole Station. Oddly enough, while there, he bumped into an astronaut he had worked with in the past.



Antarctic Adventures

Aside from being prepared to handle any kind of medical or safety emergency, Roden was involved in ongoing mass casualty training, as well as performing ultrasounds and physical exams for staff who were going to spend the winter at the South Pole. But life in Antarctica wasn't all work.



"There was quite a bit of down time, but very little Internet," said Roden, whose tight living quarters measured 6 feet by 10 feet, similar to what is found on a submarine or space station. Nevertheless, he kept busy. "There are a lot of activities. You're always busy doing something, or training."

Among the activities available was the annual December 25 Race Around the World, a 2.8-km trek around the South Pole. A week later, on January 1, six people dared to run the South Pole Marathon in frigid minus 28-degree weather. Roden treated one athlete for frostbite and others for altitude sickness.

"The people who live down there are pretty dynamic," Roden said. "They were just an absolute joy to take care of."

Back to Reality

Nevertheless, "it was kind of a shock coming back," Roden said. "I'd been in perpetual daylight for four months. Plus the humidity really hits you," because it's only about 10 percent at the South Pole. Returning to New Zealand, he was also struck by the many bright colors, as most everything in Antarctica is very white, with a very subtle hint of blue.

Though he may not return to the South Pole, Roden is now helping to recruit other physicians to work there. "It's the perfect sabbatical," he said.

Before he left the South Pole, Roden received a call from NASA, who is in need of flight surgeons to support the International Space Station and needs doctors to go to Russia to support U.S. crews in space. Although he will return to work with NASA on May 20, Roden says he intends to keep working for ESP about six days per month.

"It is just such a joy to be back in College Station," Roden said. "My colleagues here are like family."



Roden checks a remote station at temperatures of 70 below zero.



Specially designed head of the staff, marking the centennial anniversary of Amundsen and Scott's expedition to the South Pole.

All photos courtesy Sean Roden, MD.

About Emergency Service Partners, L.P.

Founded in 1988, Emergency Service Partners, L.P. is a physician practice management group specializing in hospital emergency departments (EDs). The physician-owned and physician-managed company currently serves 25 EDs across Texas, including all five emergency rooms in the Bryan-based St. Joseph Healthcare System. In addition, ESP provides pulmonary, intensive care, and sleep medicine services in Central Texas.