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Editorial

Where the road ends

In this issue of the *Journal of Wilderness Medicine*, Bowman describes the development and status of wilderness prehospital emergency care in the United States. The importance of prehospital care (traditionally, 'care in the streets') upon the outcomes we measure in emergency departments and surgical units cannot be overemphasized. The medicine is often straightforward, while the search, extrication and rescue are complex.

We have seen considerable changes in prehospital emergency medical care over the past decade. What were previously volunteer-driven concepts of rescue squads and search parties evolved into a paramedical *profession*; that is, a career rather than an avocation. Search and rescue is still largely volunteer; but it is highly organized, technical and under the scrutiny of well-trained supervisors.

Mobile prehospital coronary care in Europe and the US, combined with wartime trauma experiences, have focused attention on the benefits of rapid response, discrete algorithmic interventions, and transport to definitive medical or surgical care. Because there have been relatively scant data collected to settle issues of benefit versus risk, many of the controversies regarding field intervention are argued anecdotally, albeit with great fervor. If I interpret the trends correctly, prehospital care was introduced in the late 1950s and early 1960s with a 'load and go' philosophy, which was abandoned for more sophisticated protocols and the technological imperative between the late 1960s and the early 1980s. As regulations were imposed on paramedics and emergency medical technicians, physicians became critical of the *laissez-faire* attitude with which prehospital services were supervised. The backlash has been increasing sentiment among a subset of physicians that many of the interventions promulgated in the prehospital setting (such as application of the MAST garment or intravenous crystalloid administration for hypotension associated with hemorrhage) are of unproven efficacy, and might even be harmful.

Yet, despite the fact that the medical scientific issues beg resolution and that paramedics and emergency medical technicians are our eyes and ears outside of the hospital, physicians devote precious little time to prehospital education, regulation and quality control. This is reflected in a general lack of appreciation for the paramedic/EMT scope of practice, continuing education needs and professional peer review process. Surgeons and emergency physicians have always taken the lead in this regard, and thus is the case with the National Association of EMS Physicians.

Warren Bowman has not taken a stand, but I think we should read between the lines. Patient management in a wilderness setting can be markedly different than care applied in the city. It is one thing to perform endotracheal intubation in a hospital with fifteen pairs of hands and quite another to maintain cervical spine immobilization and a patent airway while being hoisted in a Stokes litter during a high angle technical rescue. The weather reigns supreme in the back country, hardly the case in our air-conditioned or heated offices. The wilderness can be wild, inhospitable, uncontrollable and dangerous. By definition, it is isolated from the urban support systems that lend us control, and so must be approached with both a realistic and innovative attitude.

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It is hard to argue for the prehospital administration of intravenous antibiotics for an open fracture in an urban system with ten minute transport time to the hospital. It is equally hard to argue against antibiotic administration when the victim cannot be brought out of the woods for 48 hours. There is little need to reposition a dislocated humerus when the orthopedist will be with the patient in 30 minutes; there is no excuse for prohibiting an attempt at relocation when a victim is in pain, a trained rescuer is at hand and no physician will be available for days. Even beyond our obligation to the professional medical community, we have an obligation to dedicated professionals such as wilderness guides, expedition leaders, park rangers and most importantly, the lay public. We can fulfill our obligation by entering into a mind set of cooperation and becoming superb teachers as well as practitioners.

It may be easier to teach paramedics extended or modified procedures than to teach medical procedures to nonmedical rescuers, which highlights the need for a wide variety of educational programs. Members of the lay public who participate in wilderness ventures, and particularly in rescues, need one level of training, while advanced paramedics who are flown to the site of an accident need enhanced rescue skills. Furthermore, each region of a country may have unique training requirements based upon the local terrain, distance from medical care, availability of helicopters, and so forth.

At the very least, if we are going to send paramedics and EMTs into rugged environments as part of the team, then we should prepare them to the limits of their abilities. As we expect them to become masters of improvisation, we must provide them with the educational and legal support to implement reasonable medical procedures. In bracing the reputable and accountable wilderness prehospital emergency care programs, we are consistent and act in the victims' best interests.

PAUL S. AUERBACH, MD