EDITORS' NOTE

Wilderness Medicine and Working Knowledge

We are excited to present two new Wilderness Medical Society Practice Guidelines in this issue of *Wilderness & Environmental Medicine*. Practitioners in both the urban and backcountry environment will appreciate the direction of both the Exercise Associated Hyponatremia and Spine Guidelines.

Since the development of emergency medical services in the 1970s, out-of-hospital crews have operated under the dogma: trauma = cervical collar and hard backboard. This traditional teaching may work well in the urban environment, where transport logistics are fairly easy and times to hospitals are usually short. However, this practice can prove problematic in the backcountry. Imagine the scenario of a healthy climber that trips and falls 5 feet in talus breaking his clavicle and straining his neck. The urban out-of-hospital provider might choose to apply a cervical collar and strap this patient to a rigid backboard for transport. In the backcountry, however, applying these same principles would necessitate a litter evacuation. Litter evacuations employ a large number of rescuers and move slowly, at a rate averaging ¼ mile/hr during the carry out. Backcountry protocols need to be modified to allow for the possibility of a self-evacuation/walk-out if at all possible. This practice will facilitate appropriate care and place fewer people at risk for the carry out. The WMS Spine Guidelines give practical and evidence-based advice to apply to these scenarios, allowing for ambulatory evacuation in many cases, and giving providers the research and evidence to support this decision. The Guidelines also discuss different methods of immobilizing the spine when the situation dictates so, and advance our practice for backcountry trauma patients.

The WMS Exercise Associated Hyponatremia (EAH) Guidelines similarly provide medical providers of long-distance events with important information and evidence necessary to evaluate and care for this category of patients. Hyponatremia can be a surreptitious diagnosis. One of the *WEM* Editors took care of a rafter in Utah who began having seizures while on the river. After being evacuated by helicopter from the remote location, the differential diagnoses included epilepsy, hypoglycemia, alcohol/drug withdrawal, hyponatremia, and many others. Ultimately, hyponatremia was diagnosed and treated effectively, but as discussed by the EAH

Guidelines authors, its nonspecific and variable presentation can misguide basic and advanced providers alike. These guidelines attempt to provide an evidence based diagnostic and treatment algorithm for providers in settings where EAH may be present.

As these are the first such practice guidelines published on these topics, we hope that they will stimulate discussion of current wilderness medicine practices and generate further research to support or refute what we currently know. Many wilderness medicine topics lack the research and evidence to make such practice guideline statements. The risk of anti-coagulation while participating in wilderness activities is one such unstudied question. In this issue Hawkins et al present an illustrative case of a patient on warfarin who was initially refused participation in an outdoor education course. They apply data from non-wilderness settings to make practical recommendations for this patient, and provide a clinically useful framework for others to assess the risks of wilderness activities in individual anti-coagulated patients.

Finally, preparation is vitally important in outdoor expeditions. But what composes ideal preparation is very much up for debate. Common sense and anecdotes support the dogma of the Ten Essentials for outdoor recreation, but little evidence exists. In this issue, the authors of the article “An Analysis of Hiker Preparedness: A Survey of Hiker Habits in New Hampshire” attempted to identify hiker preparedness as measured by which hikers carried the “Ten Essentials” for outdoor travel:

1. Map
2. Compass
3. Extra Clothing
4. Rain Gear
5. Fire Starter
6. Light
7. Extra Food/Water
8. Knife
9. First Aid Kit
10. Whistle

Only 17% of hikers surveyed by the study group carried all ten items. If all hikers carried these items then they would avoid a rescue, yes? Not quite. Carrying this equipment is similar to carrying a global positioning system

(GPS) but not knowing how to use it. Knowledge and preparedness, including the Ten Essentials, are what likely will avoid a rescue, but we do not have the evidence to say that for certain. Until we do, *WEM* will continue its tradition as your source for sound evidence based on practical wilderness medicine advice and research.

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