

Austere EMS: Lessons from the Wilds

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1. Wilderness/austere EMS is defined by time, distance and resources.

- The time to initial care is long, as is time to definitive care – one speaks not of the “golden hour” of urban trauma care, but the “golden day” of wilderness survival. Wilderness/austere EMS has much in common with ED and inpatient hospital care; more so than on the street, diagnosis becomes important, as it drives ongoing care. A “scoop and run” trauma strategy is impossible, and every wilderness/austere prehospital EMS practitioner should be prepared to use a “stay and play” strategy.*
- Wilderness/austere patients are distant from resources – those at the patient’s side cannot reach out for the resources of a modern Emergency Department, and they can neither walk to an ambulance to get more BLS or ALS equipment, nor can they readily deliver the patient to such resources. Even more so than in “street” EMS, practitioners must do the best with what they have, and medical decisions are often constrained by lack of equipment, lack of personnel, and by the environment and the rescue situation. Practitioners commonly have to ration resources.

2. The wilderness and delayed-trans-

port/austere medical standard of care is not the same as that for “street” EMS. Situations where the standard differs include shoulder dislocations, open fractures, CPR, oral fluids and food, and patient movement and bivouac decisions.†

3. In wilderness/austere situations, estimates of the time of evacuation to “street” EMS or definitive care are famously imprecise, and times are often grossly underestimated by those without extensive domain experience.‡

4. Choosing between “street” or wilderness/austere standards of care should be made by the senior practitioner attending the patient, weighing risks and benefits. When a non-physician must make such decisions, he or she should, if possible, consult with a physician experienced in wilderness/austere medicine.

5. Medical decisions, including whether to follow a “street” or wilderness/austere standard of care, should be made in consultation with the rescue and evacuation team leader.

6. Given the delay until arrival at a definitive treatment facility, and uncertainties as to the length of such delays, high-quality wilderness/austere EMS requires a broader base of medical/nursing expertise than traditional EMT and paramedic training.

7. The single most important wilderness/austere EMS skill is decision-making, and the single most important piece of wilderness/austere EMS equipment is a practitioner:

- familiar with “street” EMS,
- familiar with a broad base of emergency, primary care and ICU medicine and nursing,
- familiar with search and rescue,
- familiar with the wilderness/austere environment, and
- practiced at applying medical skills in a variety of weather and terrain, and with limited equipment.§

8. In the wilderness/austere setting, acute primary/emergency care of team members is an appropriate role for lay medical practitioners.

9. Rigid medical protocols are of little use for the complex ongoing medical situations common in wilderness/austere settings. And, despite technical advances, practitioners must be prepared to care for patients without a consultation with a physician.

To assure **thoughts from wilderness EMS**
high-quality **to provoke**
patient care, **thought and discussion about**
we should **austere EMS**
give wilderness/austere practitioners broad guidelines for treating medical conditions, and teach them how to balance risks and benefits, and competing medical and search and rescue priorities.

Reference

1. Wilderness Medical Society, Forgey WW. *Wilderness Medical Society Practice Guidelines for Wilderness Emergency Care*. 5th ed. Guilford, Conn.: Falcon Guide; 2006.

* Practitioners inexperienced in the wilderness/austere environment may misperceive the environmental dangers as worse than they really are. Even with relatively stable patients, this can lead to hurried yet extended attempts to “scoop and run,” resulting in rescuer exhaustion and injury. Too, such a “scoop and run” mentality can lead practitioners to skimp on patient evaluation. In “street” EMS scenario, some illness or injury may be safely ignored until the patient reaches the ED, but may cause mortality or morbidity when undetected or untreated in the wilderness/austere setting. During a cave rescue in West Virginia several years ago, rescuers used a SamSplint (flexible aluminum splint) for a closed ankle fracture, instead of the sturdier but more time-consuming Ortho-Glass casting material that was available. They also allowed the patient to partially bear weight on the ankle. They did not regularly re-assess the ankle during the rescue. Until the rescue was over, they neither detected that the fracture had become open, nor had they administered the antibiotics they had with them.

† The US national Emergency Medical Technician (EMT) program evolved in the 1970s, focusing closely on medical care on the streets, likely related to EMT being a program of the US Department of Transportation. In reaction, in the late 1970s, wilderness search and rescue organizations developed parallel Wilderness EMT programs, which, to preserve compatibility, used the EMT program as a base. The developing wilderness standard of care was expressed in a variety of Position Statements produced by the National Association of EMS Physicians in the late 1970s. Later, this was combined with expertise from other sectors of wilderness medicine and published in a broad-overview curriculum and formal statements of the standard of wilderness care. These appear in the *Practice Guidelines*¹ published by the Wilderness Medical Society.

‡ Ideally, practitioners should have on-line access to an experienced physician with wilderness/austere environmental and situational awareness and who is willing to think outside of the constraints of the usual “street” scope of practice.

§ Standards for such personnel have been formulated by ASTM International, for instance, F1616, *Standard Guide for Scope of Performance of First Responders Who Practice in the Wilderness or Delayed or Prolonged Transport Settings*, which states: *This guide covers minimum performance requirements for first responders who may initially provide care for sick or injured persons in the specialized pre-hospital situations of the wilderness or delayed or prolonged transport settings, including catastrophic disasters.*