

WILDERNESS EMERGENCY MEDICINE CURRICULUM DEVELOPMENT PROJECT

Center for Emergency Medicine of Western Pennsylvania Appalachian Search and Rescue Conference

PROSPECTUS ADDENDUM

In the few short weeks since we printed the Prospectus, a lot has happened, so we put together this Addendum. It covers several topics that you should keep in mind as you read through the Prospectus. I've already begun to incorporate these into the next draft edition of the Prospectus (although, perhaps, it will appear instead as the Course *Guide*.)

Wilderness Medical Associate's Wilderness EMT Course At the 1987 National Association for Search and Rescue (NASAR) conference last month, we heard talk of an imminent contract between Wilderness Medical Associates (WMA) and NASAR, for NASAR approval and sponsorship of the WMA basic Wilderness EMT course. Dr. Peter Goth, the head of Wilderness Medical Associates, gave a slide presentation implying that the WMA Wilderness EMT course will, based on this NASAR contract, become the national standard for Wilderness EMT training.

The WMA Wilderness Emergency Medical Technician course is open to any interested person, with no prerequisites for outdoor competence, search and rescue training or affiliation, or medical background. As taught over the past 3 years, it consists of the standard curriculum D.O.T. (U.S. Department of Transportation) basic EMT course, plus 60 more hours covering the adaptation of EMT knowledge and skills to backcountry situations, with a few hours each of basic expedition medicine (use of prescription and nonprescription medications for minor problems), mountain rescue, cave rescue, and whitewater rescue. Upon completion, students may take the state and National Registry EMT tests; although they award an additional "Wilderness EMT" certificate, they do not test students on wilderness-specific material or search and rescue skills, nor, to our knowledge, does WMA set any objective standards of competence for awarding the certificates.

At the NASAR conference, Dr. Goth laid out a new plan for WMA's Wilderness EMT training, presumably in response to the prospect of the NASAR contract. This plan includes the previous EMT-A/EMT-W combination course, and a new, shorter, "wilderness module" of some 90 hours, covering just the wilderness-specific and search and rescue skills portions of the basic course, without any of the basic EMT lessons; EMTs, EMT-Intermediates, and EMT-Paramedics could take this course, and upon completion, would become certified as Wilderness EMTs Wilderness EMT-Intermediates, or Wilderness EMT-Paramedics.

Those present, including many contributors to the ASRC--CEM Project, voiced concerns about establishing a Wilderness EMT standard in this manner. Let me summarize their concerns as best I understand them.

1. The Mountain Rescue Association, National Cave Rescue Commission, and other major wilderness SAR organizations will be those most affected by any national Wilderness EMT standard, but they have not participated in planning this standard, nor have they taken part in the design of the course's mountain and cave rescue portions.

2. The WMA course is hours-based rather than competency-based, even though the competence of graduates is a major determinant of WEMT acceptance by the medical community (see below).

3. Dr. Goth advanced the idea of establishing national Wilderness EMT standards (performance, training, etc.) by involving many people and organizations in a open, democratic consensus such as the ASTM process (see below). Despite these assertions, the

objectives, content, lesson plans, and pedagogic philosophy of WMA's (almost *fait accompli*) "national standard Wilderness EMT Course" have been kept proprietary to Wilderness Medical Associates. Despite requesting information several times, we (the ASRC/CEM Project) have never received any information on the WMA Wilderness EMT Course. Even at the NASAR Medical Committee meeting last month, written materials (goals, standards, lesson plans) were still not available for our review.

4. Many search and rescue organizations have expressed to us their opinion that neither search and rescue training nor search and rescue skills orientation should form part of a Wilderness EMT course, because SAR training is a function of the Wilderness EMT's search and rescue team. Outdoors enthusiasts without search and rescue training belong, according to these SAR organizations, not in a Wilderness EMT class, but in a course designed for them rather than for search and rescue team EMT's (e.g. an *Advanced Wilderness Medicine Course* that does include an orientation to wilderness search and rescue). The mountain, cave, and whitewater search and rescue parts of any such course should be developed in close consultation with the appropriate organizations (such as the Mountain Rescue Association and the National Cave Rescue Commission.)

5. The WMA Wilderness EMT Course is willing to take anyone who has tuition money, whereas we believe that all Wilderness EMT's should have a wilderness search and rescue team affiliation. (We believe that we should reserve the term "Wilderness EMT" for those who are part of a Wilderness Emergency Medical Services (EMS) system tightly integrated with the regional SAR and EMS systems. See the *Prospectus* for more about this.)

At this point, I must say that, by all accounts, the WMA Wilderness EMT course is of high quality, though it diverges from the philosophy for Wilderness EMT training evolving through this ASRC--CEM *Wilderness Emergency Medicine Curriculum Development Project*. Let me also eliminate any impression of competition between the ASRC--CEM *Project* and Wilderness Medical Associates' course. Our Project aims to develop a high quality Wilderness EMT curriculum suited to the needs of the wilderness search and rescue community, and to develop a good Wilderness EMS system in our region. We do not want to offer our course outside the local region (it's too much work!), though we will be happy to make course materials available to those planning Wilderness EMT courses in other areas. We do not envision people regularly coming from outside the region to Pittsburgh to obtain Wilderness EMT training. Speaking for most of the participants in the Project, we want acknowledgment and academic recognition for the work we do, but we do not plan to engage in Wilderness EMT training as a regular business activity (though we see the Center for Emergency Medicine as a continuing regional training center). Thus, with such a large nationwide demand for wilderness medical and first aid training, and with WMA's dedicated instructors and well-organized training structure, Wilderness Medical Associates can fill a need that the ASRC and CEM can never hope to meet.

Consensus Standard Development: the ASTM Process Announcing: the arrival of the ASTM (previously, the American Society for Testing and Materials) and its consensus standard development process in wilderness medicine. ASTM is an independent (but extremely influential) organization that develops a wide variety of standards: for example, it sets standards for safety in alpine and Nordic skiing equipment and for implantable medical devices, not only for their construction, but also standards for the proper use of these devices.

Not long ago, ASTM has established a subcommittee, under the ASTM Emergency Medical Services Committee, to develop standards of performance and training for basic EMT's. The Department of Transportation is cooperating closely with the ASTM on this project. DOT is also funding accelerated standard development (e.g. paying for member's travel expenses). These standards will be very influential in the future course of all EMT

training. About four weeks ago, Dr. Peter Goth persuaded ASTM that Wilderness EMT training was worthy of their consideration, and he was appointed chairman of a task group, under the EMS Committee, to work on this. At the NASAR Conference, he was actively recruiting people to help with his task group.

The ASTM accepts both individual and organizational members, and I believe that any member may join any committee or vote on any proposed standard. Individual memberships are \$50/year, and organizational memberships are \$350/year, although small groups may join by paying \$50/year and appointing a single official representative. Committee and subcommittee members must be ASTM members, but a task group chairman may ask any qualified person to join his or her task group (as Dr. Goth was recruiting task group members at the NASAR Conference). As far as I know, task group members (who are not ASTM members) cannot vote on proposed standards, but I am sure they can be influential in their development.

From what I understand, the ASTM consensus development process provides a truly democratic consensus; all dissenting opinions must be heard and answered, and a proposal must secure sixty percent of the ASTM members' votes (of those voting on the proposal) to pass. ASTM standards are entirely advisory, but they are so influential that many legislatures adopt them as state or federal laws or regulations.

To obtain an information packet that describes the ASTM and how to join, call or write:

A STM
1916 Race Street
Philadelphia, PA 19103
(215) 299-5400.

Consensus Standard Development: the National Association for Search and Rescue and Mountain Rescue Association In a related move, NASAR is establishing a similar consensus development process for establishing (voluntary) NASAR standards. Steve Hudson, a long-time cave rescue person who also started the rope manufacturer Pigeon Mountain Industries (PMI), is leading this project, and sought input from many members at the NASAR Conference. I believe that the process is both good and important for NASAR, and that Steve's proposal deserves plenty of support; several of us from the Mountain Rescue Association at the NASAR Conference met and decided that a similar process might be a timely idea for MRA, too. I would like to see the NASAR consensus development process apply to Wilderness EMT training standards, and I hope the Training Committee elects to do so before sanctioning a particular program.

The ASRC--CEM *Wilderness Emergency Medicine Curriculum Development Project* is much the same as the ASTM or NASAR consensus process: we are trying to draw into the Project as many contributors as possible, making our curriculum the result of some type of consensus, even if not as broad-based as would be a NASAR or ASTM consensus.

Certification and Licensure Dr. Goth brought out some important ideas at the NASAR Conference. First, he helped us by comparing and contrasting the concepts of certification versus licensure; they are related but different in some very important ways. Those who complete a specified course of instruction or are tested and found to meet certain performance standards are certified. Any organization can issue a certificate, but the value of that certificate depends on acceptance of the standard that it represents and the prestige of the certificate-issuing body. Examples of certificates include an M.D. diploma from the George Washington University Medical School, an EMT wall certificate from the National Registry of EMTs or an American Heart Association CPR card. A certificate by itself does not entitle one to practice a particular skill; the privilege to practice the skill is regulated by the government, usually the state. A Medical Doctor (M.D.) degree is not enough to practice medicine; the graduate must meet additional

requirements and apply for a state license as a licensed physician. Practicing without a license is a criminal offense, no matter how many certificates the person might hold. The law is similar for an EMT: although one might receive an EMT certificate from the state or National Registry, one also must obtain a separate EMT license from the state. This is a bit more confusing for EMT's than for professionals like accountants and doctors, for two reasons. Unlike accountants, lawyers, nurses, or doctors, the EMT certificates and EMT licenses bear the same name (EMT and EMT instead of Medical Doctor and licensed physician). The second cause for confusion is that (as I understand it) states may simply legislate that anyone with a valid state or National Registry EMT certificate is automatically licensed as an EMT.¹ For CPR training, states simply accept that anyone with a valid Red Cross or Heart Association CPR card is licensed to perform CPR, or perhaps some simply do not see CPR as something they need to license. At any rate, the American Heart Association and the National Red Cross are very careful to stipulate that a CPR card is a certificate and not a license.

These examples bring up an interesting point that I'm sure some of you have already caught. In most states, you can fulfill the requirements for licensure with a variety of certificates: a licensed physician in Washington DC need not have a medical degree from George Washington University, Georgetown University, or Howard University (the three medical schools in DC), but can apply for a license with an M.D. from any accredited school in the country. Not only that, but doctors with degrees from non-U.S. schools may obtain a license, although sometimes they must show evidence of additional training in the U.S. Doctors with an "osteopathic" D.O. (Doctor of Osteopathy) instead of an "allopathic" M.D. degree may also become licensed to practice, after meeting similar requirements. Accountants applying for a C.P.A. (Certified Public Accountant) may present a variety of certificates, and many states will license an EMT based on certificates from the National Registry of EMT's, or from certain nearby states.

To summarize: certification implies someone has completed a prescribed course of instruction or met a set of objective performance standards. Licensure means that a governmental agency has reviewed a person's qualifications, possibly including certain essential certifications, and has granted that person permission to practice a profession within its jurisdiction. The major point is that EMT certification does not automatically confer licensure to practice as an EMT.

Do Wilderness EMT's Need Another License? If one is licensed to practice as an EMT, does one need an additional license to practice as a Wilderness EMT? The knowledge and skills of EMT's and Wilderness EMT's are different (otherwise, there is no need for Wilderness EMT's), but is the difference enough to require another license? Since Wilderness and non-wilderness EMT's are doing the same job but in different environments, can we just certify Wilderness EMT's without them needing separate licenses?

Dr. Goth argues that there is, indeed, no need for Wilderness licenses beyond the EMT's "standard" EMT-basic/-Intermediate/-Paramedic licenses. He points out that Wilderness EMT's will be performing the same level of skills as their non-wilderness counterparts, as adapted for the wilderness: basic Wilderness EMT's will be restricted to non-invasive therapy, leaving IV's and drugs for the Wilderness EMT-Intermediate and Wilderness EMT-Paramedic. Thus, there should be little concern for licensing Wilderness EMT's, provided they hold proper EMT licenses.

Let us closely examine an example Dr. Goth gives: dealing with shoulder dislocations with no detectable distal pulse. The standard prehospital treatment of such a dislocation is to "splint it as it lies" and to transport "Code 3" (lights and siren, as fast as practicable). Transporting "Code 3" is meaningless advice for Wilderness EMT's con-

1. This is not true in all states; Virginia, for example, requires EMTs to obtain a separate "blue card" EMT license before serving as a licensed EMT with an EMS agency.

fronted with such a dislocation in the backcountry; if the choice is between losing the limb and an attempt at reduction, the Wilderness EMT's should attempt reduction. Even if the distal pulse is present, reducing an anterior shoulder dislocation in the wilderness makes good sense; at the minimum, it will reduce pain and suffering, and it may well avoid the need for reduction under general anaesthesia at the hospital (when spasm has been intensifying for many hours, reduction may be impossible without general anaesthesia).² Dr. Goth points out that although the specifics of treatment for dislocations on the street and in the backcountry are different, the general type of treatment is not: EMT's routinely straighten limb fractures in the process of splinting, and reducing an anterior shoulder dislocation is not all that different.

Dr. Goth goes on to suggest that Wilderness EMT-Paramedics could follow special wilderness protocols established by their wilderness command physician(s) without any special licensure; in most states, Paramedics may perform any invasive procedure that permitted by their medical director. States could then recognize Wilderness EMT training without any licensure, or alternatively, the EMS agency could run a wilderness EMS system with no need for state EMS involvement at all.

Since we are considering a Wilderness EMT course as an add-on to basic EMT (or EMT-Intermediate/Paramedic) training, let's look at other EMT "add-on" courses, such as the National Association of EMTs/American College of Surgeons *Prehospital Trauma Life Support* course and the American College of Emergency Physicians *Basic Trauma Life Support* course. These courses offer additional training to EMTs but because the skills that they teach are all within the EMT's existing licensure, they offer certificates but have no need to offer additional licensure. Dr. Goth contends that we may view Wilderness EMT training similarly: national standards for training and certification are appropriate, but because all the skills we would teach are covered in EMT, EMT-Intermediate, or EMT-Paramedic licensure, we need not arrange for any license beyond these.

This argument is an attractive one: to get the medical and EMS communities to accept Wilderness EMT training as a reasonable extension of the present EMS system, we only need to have reputable organizations backing a certification standard, and, that we need not concern ourselves with state or federal licensure. I would like to address three arguments against this position..

First is the problem of standards. If Wilderness EMT training is to become nationally recognized as a valid extension of EMT training, then emergency medicine organizations, emergency medical services organizations, and search and rescue organizations must support the standard; anything less than the wholehearted support of these communities will doom the Wilderness EMT idea to a protracted morass of contention.³ A standard development process that slights any of these communities will be suspect. The NASAR and ASTM processes described above offer a hope of deriving a broad-based consensus, but a premature attempt to set national standards, or worse the advent of competing national standards, could prevent Wilderness EMT training from ever reaching any sort of consensus. Without a consensus national Wilderness EMT standard, we will probably not persuade states to accept and recognize Wilderness EMT certification.

2. Although the risk of death under anaesthesia is small, it is significant, especially when a simple backcountry maneuver could eliminate the need for anaesthesia altogether.

3. The national organizations that come to my mind are the National Association for Search and Rescue, the Mountain Rescue Association, the National Cave Rescue Commission, the National Association of EMTs the National Registry of EMTs the American College of Emergency Physicians, the National Association of EMS Physicians, the National Association of State EMS Coordinators, the Society of Teachers of Emergency Medicine, and the Wilderness Medical Society.

A second problem is getting states to accept that Wilderness EMTs need be licensed. Arranging a new licensing process in each of 50 states would delay the development of Wilderness EMT training and Wilderness EMS for years. The primary opponents to the licensing of "street" EMT-Paramedics were doctors who saw the use of invasive techniques by non-physicians as an infringement of their privileges and a danger to the public. The evolution of high-quality paramedic training and mechanisms for close physician supervision and good quality control have stilled most of these complaints, but they may well crop up again against a national Wilderness EMT program. These concerns are wellfounded, and the Wilderness EMT community must answer them as satisfactorily as the EMT-Paramedic community. Let's look at the example of reducing an anterior shoulder dislocation in this context. It is a skill practiced almost entirely by orthopedic surgeons and emergency physicians. Although it is a simple skill, it takes proper training to do it well, and those attempting it must understand the possible complications of both the dislocation and its reduction.⁴ Will orthopaedic surgeons and emergency physicians view teaching how to reduce dislocations to non-physicians as an infringement of their privileges and a danger to the public?

Although standards for EMT training and prehospital treatment are now well accepted, the new treatments recommended for Wilderness EMT's do not have the same backing and acceptance. States that license their EMT's, and who expect them to follow the treatment guidelines established by the Department of Transportation and American Academy of Orthopaedic Surgeons⁵, might be justifiably upset if a medical director is telling his EMT's to go against what the state EMT course teaches, especially if these EMT's are not part of an EMS system with continuing education and physician-supervised quality control. This would be less of a problem if only licensed EMT's could be taught this skill and receive Wilderness EMT certification, which brings us to a third problem.

Based on a limited and extremely informal survey, we find that many wilderness search and rescue team Wilderness EMT's (who, after all, are the main reason for Wilderness EMT training) hold EMT certificates but cannot obtain state EMT licenses. In states where EMT certificates and licenses are the same, wilderness SAR team members have great difficulty getting into EMT classes... Only a few states require wilderness search and rescue teams to be licensed as EMS agencies, and therefore most wilderness SAR teams have not sought EMS agency licensure.⁶ Many states require that certified EMT's must belong to a recognized EMS agency in order to receive an EMT license, and states where one EMT card serves both as certification and license generally require proof of EMS agency affiliation for a person to take an EMT course, or to take the test and receive an EMT card. If a standard "street" EMT license is all the license a Wilderness EMT needs, then we must ensure that Wilderness EMT's are able to obtain such a license, and this means that their search and rescue teams must be able to get an EMS agency license. As discussed in Appendix C of the Prospectus, wilderness SAR teams may find it hard to obtain an EMS agency license, but if we pursue EMS status for wilderness search and rescue teams at the same time we develop a high-quality Wilderness EMT curriculum, perhaps it will be easier than pursuing each separately.

4. E.g., axillary nerve dysfunction, radial nerve dysfunction if there is a concurrent humeral shaft fracture, Hill-Sacks deformity from the initial injury or from relocation.

5. The AAOS is the originator of the "orange EMT book" that has long been the primary standard text for EMT classes.

6. Some of the more medically-oriented search and rescue teams (such as the ASRC) are EMS agencies, but most I have talked with are not.

Standards: Hours-based Standards Versus Performance Standards Although the ASTM and NASAR consensus development processes seem appropriate for developing some sort of Wilderness EMT standard, will it be a standard set of lesson plans, a standard textbook, a standard number of classroom hours, or a standard of performance and competence? Many organizations, including the American Heart Association, the National Association of EMT's, and the Appalachian Search and Rescue Conference, believe strongly in standards of competence rather than standards of training, based on the supposition that that for certification, training time or quality matters less than the skills and competence. All of the ASRC, CEM, and other consultants with whom I have broached this topic think of Wilderness EMT standards in terms similar to those of the ASRC Basic Certification Standards (included as an Appendix to the Prospectus) rather than in terms of how the class is taught or how many minutes are devoted to tying a patient into the litter; certification of Wilderness EMT competence is thus seen as more important than certification of individual courses of instruction. A parallel exists in the medical world: licensure of M.D.s generally depends on the M.D. passing the three exams the National Board of Medical Examiners gives. However, in this medical analog, the person must have both passing scores on the NBME exams and a legitimate M.D. degree from an accredited school to be eligible for a license. Perhaps we should establish a similar system for Wilderness EMT's: an applicant must be a licensed EMT who has attended an accredited Wilderness EMT course and who has passed a rigorous written and practical exam based on the national standard of competence to receive a Wilderness EMT certificate.

To my mind, the most important new point in this Addendum is that many wilderness search and rescue teams are not considered EMS agencies by their state EMS control agency, and their medics are not licensed EMTs.⁷ If, as part of a national Wilderness EMT program, these unlicensed EMT's are going to start relocating dislocated shoulders in the field (something that potentially could arouse the ire of prominent orthopedic surgeons), state EMS agencies might revolt against the entire idea of Wilderness EMT training. We must therefore address the problem of recognition of wilderness SAR teams as EMS agencies as we deal with establishing a national Wilderness EMT program or standard.

In summary, some new and important points about Wilderness EMT training are set forth in this Addendum:

1. Certification and licensure are different. Certification means completing a standard course of instruction (e.g. obtaining a B.S. degree), or passing a test and thus meeting a standard of competence (e.g. obtaining an American Heart Association Basic or Advanced Cardiac Life Support card). Licensure is governmental permission to practice an activity or profession, such as being a lawyer, doctor, nurse, or EMT.
2. Wilderness EMT's may be able to get by with recognized certification but with no licensure above the state EMT license.
 - a. If so, the certification standard must be supported by the emergency medicine, EMS, and SAR communities, and should be achieved by a broad-based consensus process such as that of the ASTM.

7. The ASRC is an exception: all ASRC EMT's must be licensed with the state.

- b. Many present-day SAR team members who are Wilderness EMT candidates cannot easily become licensed as "street" EMT's; to depend solely on "street" EMT licenses for Wilderness EMT's, we must assure that Wilderness EMT's may become licensed, which means that wilderness SAR teams must become recognized and licensed as EMS agencies.
3. Certification may be based on passing an accredited course of instruction, passing a test of competence, or both. Majority opinion thus far seems to favor competence testing or both.

One final note: we plan to hold our first pilot course the week of the 24th-29th of August. We are looking for students with wilderness emergency medicine experience to take the course, more as a continuing education seminar (and to help us improve the course) than as an entry-level Wilderness EMT course. If you or someone you know might be interested in attending, contact us (write to the CEM address) to obtain an application and further details. We will assess a small charge to cover text materials and transportation to the field exercises, and will aid students in securing inexpensive lodgings nearby. We can also provide information on nearby vacation and outdoor recreation for those who might want to combine it with a vacation; and remember, Pittsburgh was recently voted America's most livable city! I hope that this is a useful Addendum to the Prospectus and that you find both of them interesting and useful. This Addendum, even more so than the Prospectus, is likely to be replete with errors and omissions, particularly so because it was produced without the review and commentary of ASRC members and CEM staff that was so helpful in editing the Prospectus. So, please send in your corrections and additions. Thank you.