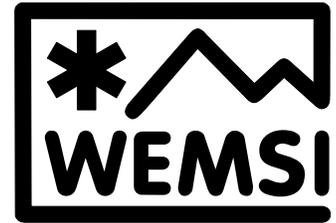


Wilderness EMS Institute

Wilderness Command Physician

Lesson Plan and Course Guide



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Overall goals for students in the Wilderness Command Physician class:

1. Understand the character and scope of the medical discipline of Wilderness EMS.
2. Understand the current status of wilderness prehospital training.
3. Understand important factors in the training and medical direction of prehospital personnel in Wilderness EMS and remote-area prehospital emergency care.
4. Identify important issues in medical oversight of Wilderness EMTs and other wilderness prehospital providers, including both direct and indirect medical control.
5. Learn details of prehospital patient management specific to the wilderness, remote-area, and delayed/prolonged transport settings.
6. Learn detailed information about specific wilderness related medical problems, e.g., hypothermia, heatstroke, bites and stings.

Key code for objectives:¹

C - Cognitive

C-1 cognitive knowledge

C-2 cognitive application

C-3 cognitive problem-solving

P - Psychomotor

P-1 psychomotor knowledge

P-2 psychomotor application

P-3 psychomotor problem-solving

A - Affective

A-1 affective knowledge

A-2 affective application

A-3 affective problem-solving

¹These codes are explained more fully in an explanatory document available from WEMSI.



I. PREPARATION

A. Reading/Reference Materials for Wilderness Command Physician Students²

1. Available via Web download as PDF files, distributed as photocopies:
 - a) WEMSI Wilderness EMT Curriculum (<http://www.wemsi.org>)
 - b) WEMSI Personal Medical Kit List (annotated) (<http://www.wemsi.org>)
 - c) WEMSI Team Medical Kit List (annotated) (<http://www.wemsi.org>)
 - d) WEMSI Operations Policy Manual (<http://www.wemsi.org>)
 - e) WEMSI Wilderness EMS Protocols (<http://www.wemsi.org>)
 - f) WEMSI Frequently-Asked Questions (FAQ) – Legal Issues (<http://www.wemsi.org>)
 - g) The History of the Wilderness EMT – A Personal View (<http://www.pitt.edu>)
 - h) *Wilderness Medicine Letter* WEMS Cases #1, 2, 3 (in process)
2. WMS Practice Guidelines (book; distributed to students; also available from amazon.com)
3. "Wilderness" [chapter]: Kuehl AE, ed. National Association of EMS Physicians' *Prehospital Systems and Medical Oversight*, 3E. St. Louis: Mosby, 2002 (available from amazon.com)

II. PRESENTATION

WCP Students shall participate in lecture presentations, interactive discussions, Socratic questioning, and case-based teaching, such that at the completion of this class, the Wilderness Command Physician (WCP) student will be able to:

A. Roles and Responsibilities/Medicolegal

1. **C-2** Discuss the implications of the following major differences between "street" and wilderness on-line/direct medical command/control:
 - a) length of time for patient care
 - b) evacuation route and hastiness
 - c) the environment
 - (1) terrain
 - (2) weather
 - d) limited resources
 - (1) personnel
 - (2) equipment
2. **C-1** Define the terms WCP and Wilderness Emergency Medical Technician (WEMT), and explain the roles of the WCP and the roles of the WEMT in the WEMSI model Wilderness Emergency Medical Services (WEMS) System.
3. **C-1** Define the following terms:
 - a) wilderness
 - b) Wilderness EMS
 - c) Medical Practice Acts

²Items with an asterisk (*) should be distributed to students prior to the class or at the class; others should be available for reference by the students during the class, and information on ordering them should be given to the students



- d) delegated practice
 - e) scope of EMS practice
 - f) Wilderness Medical Society
 - g) Wilderness EMS Institute
 - h) medical control across state and national lines
 - i) interstate (USA), inter-province (Canada) and European Union EMS and medical reciprocity agreements
4. **C-2** Give examples of when wilderness medical care protocols and guidelines are more appropriate than “street” ones, including:
- a) true wilderness
 - b) remote areas
 - c) difficult access situations
 - d) delayed transport for whatever reasons
 - e) disasters
5. **C-3** As regards extended wilderness rescues, describe the moral, ethical and legal implications of the principles of
- a) the doctrine of abandonment (North America)
 - b) duty to ensure appropriate level of continuing care
6. **C-1** Outline the current general state of authorization for a WEMT's wilderness care in your domain.
7. **A-1** Appreciate the variation in WEMT authorization in of other national systems (e.g., U.S. states and Canadian provinces, Great Britain, Northern Ireland, and the Republic of Ireland)
8. **C-1** Describe the potential role of WEMTs during catastrophic disasters
9. **C-1** Describe the legal status of the WCP when a WEMT is caring for an injured animal
10. **C-3** Discuss the wilderness EMS management implications of the following political considerations:
- a) scope of practice
 - b) "turf" (territoriality of)
 - (1) EMS agencies
 - (2) EMS command/control hospitals
 - (3) Wilderness EMT training providers
 - c) the advantages and disadvantages of different models for delivering wilderness EMS:
 - (1) through an existing ambulance EMS agency
 - (2) through an existing SAR agency
 - (3) through a new system outside the existing EMS or SAR systems

B. Medical Direction/Medical Control

1. **C-1** Describe the communications parameters which a WCP should assure before attempting to direct patient-specific medical care by a WEMT, referencing the medical communications policy in the WEMSI Operations Policy Manual



2. **C-3** Explain the moral, ethical, and legal implications of wilderness emergency and primary medical care given by WEMTs with and without physician direction
 3. **P-2** Demonstrate the ability to employ standard search and rescue radio usage, prowords, and patient Status Codes to communicate with WEMTs
 4. **P-3** Demonstrate the ability to constructively critique WEMTs in the use of the standard WEMSI radio reporting format
 5. **C-2** Describe the role, importance and frequency of various vital signs for wilderness search and rescue, and the patient-care implications of vital sign frequency
 6. **C-3** Describe various patient monitoring equipment in terms of weight-to-usefulness ratio for wilderness search and rescue
 7. **C-2** Describe the medical and psychological effects of being lost or stranded, and their implications for a WEMT's patient care
 8. **P-3** Demonstrate the ability to constructively critique a WEMT's clinical documentation
 9. **C-3** Interfacing between both “street” and wilderness command physicians, and “street” and wilderness EMTs.
- C. **The Wilderness Environment**
1. **C-1** Explain, in simple terms, four characteristics that define the wilderness context (given in the Wilderness EMS Institute Operations Policy Manual)
 2. **A-2** Appreciate how the wilderness environment impacts Wilderness Emergency Medical Technicians (WEMTs), wilderness patients, and others at the scene
 3. **A-3** Experience and appreciate the stresses and limitations of emergency care in realistic field situations, and their implications for patient care and WEMT health and safety
 4. **C-1** List specific environmental and infectious diseases to which WEMTs may be prone
- D. **Wilderness EMT Curriculum**
1. **C-2** Describe the level of training and ability of WEMTs to perform a directed history and physical exam
 2. **C-2** Outline the diseases, injuries, treatments and drugs that are presented in WEMSI Wilderness EMT training, and the depth in which these are presented.
 3. **C-2** Identify the major differences between WEMSI and other WEMT training organizations’ curricula
 4. **C-2** Outline the clinical training that is expected of WEMSI-trained WEMTs
- E. **Wilderness EMS Standard of Care**
1. **C-1** Identify the major documents, textbooks and periodicals that set the current clinical standard of care for Wilderness EMS
 2. **C-3** Make analogies between the various functions of a wilderness search and rescue team and an ambulance



3. **C-2** For each of the following situations, briefly explain the clinical standard of care for "the street," and the wilderness context if different from that on the street, and the clinical justification for any differences. (This is organized in same sequence as WEMT Curriculum.)
- a) water purification
 - b) major and minor head injury
 - c) blunt chest trauma
 - d) evisceration
 - e) wounds (including the role of tetanus immunization status)
 - f) impaled objects
 - g) potential cervical spine injury
 - h) dislocations
 - i) femur fractures
 - j) open fractures
 - k) back injury from lifting
 - l) extremity fractures and sprains
 - m) heatstroke and heat exhaustion
 - n) syncope
 - o) burns
 - p) an ileus
 - q) frostbite
 - r) hypothermia, including BCLS, ACLS, intubation, transport method, medications, and categorization for transport to a facility with full-bypass rewarming
 - s) field rewarming methods for hypothermia
 - t) altitude illness
 - u) snakebite
 - v) recluse spider bites
 - w) immobilization and packaging
 - x) headache
 - y) eye pain
 - z) sore throat, earache, sinusitis
 - aa) hypertension
 - bb) chest pain
 - cc) GI reflux
 - dd) motion sickness
 - ee) gastroenteritis
 - ff) UTIs
 - gg) vaginitis, dysmenorrhea, metrorrhagia
 - hh) stroke and seizure
 - ii) testicular pain
 - jj) skin rashes and infections
 - kk) abdominal pain
 - ll) diabetic emergencies
 - mm) compartment syndrome
 - nn) myoglobinuria



- oo) simple entrapment
- pp) crush entrapment
- qq) painful injuries
- rr) hunger
- ss) thirst
- tt) waste elimination
- uu) stress reactions

F. Wilderness EMS Pharmacology

1. **C-1** Given a list of medications, identify those with which WEMSI-trained WEMTs should be generally familiar
2. **C-1** Outline the design principles for WEMSI's standard personal and team medical kits

III. APPLICATION

A. Direct Medical Control

1. WCP students shall each individually provide direct medical control, via radio or field phone, for three (3) simulated cases,³ for which WEMT students in a WEMSI WEMT class are providing patient care.
2. WCP students shall each critique three WEMT radio/field phone reports.
3. WCP students shall each critique three of other WCP students' direct medical control of simulated WEMT cases.
4. WCP students shall hear six (6) prerecorded simulated patient reports including the following situations:
 - a) decision to abandon resuscitation attempts in the field,
 - b) poor communications quality (interference) and medically-untrained person on the radio trying to care for an injured or ill Wilderness EMT,
 - c) decision regarding which equipment to take, and which not to take, to a specific rescue site, and
 - d) forced bivouac
 - e) questions about clearing the cervical spine in a borderline situation
 - f) medical advice to WEMTs who are taking care of a patient and may go out of radio contact for an extended period

- B.** WCP students shall physically observe three (3) simulated case scenarios being managed by WEMT students in a WEMSI WEMT class, in a realistic field setting.

IV. EVALUATION

- A.** WCP students shall complete a standard WEMSI WEMT written test and meet the standard passing grade for WEMTs on that same test.
- B.** WCP students, during simulated on-line medical command situations, shall be evaluated by instructors for the following capabilities, sufficient to provide adequate care to wilderness patients:
 1. adequate general wilderness and emergency medical knowledge,

³All simulated WEMT cases shall use standard WEMSI WEMT Curriculum Scenarios, available from WEMSI.



2. adequate ability to assess Wilderness EMT student capability level over the radio, and
3. adequate judgment and tact in providing medical direction to Wilderness EMT students over the radio.

V. **REMEDIATION**

- A. WCP students who do not attain adequate performance on the written test shall be offered a chance to retake the test after additional reading assignments, and if desired by the WCP student, attending another WCP Class.
- B. WCP students who do not attain adequate performance on the instructors' evaluation shall, after attending an entire WEMSI WEMT class, be offered a chance to attend another WCP class and repeat the simulated on-line medical command practice.

VI. **ENRICHMENT**

- A. WCP students may have opportunities to converse informally with WEMT students about past search and rescue operations.
- B. WCP students may have opportunities to converse informally with Wilderness Command Physicians about past operations for which they have given medical direction.
- C. WCP students may have opportunities to interact with members of search and rescue teams and learn about personal equipment for search and rescue operations.
- D. WCP students may have opportunities to view and work with search and rescue and Wilderness EMS equipment.