

Chapter 4

EMERGENCY CARE



LESSON PLAN OUTLINE

PROGRAM: SMOKEJUMPER

LESSON: EMERGENCY CARE

OBJECTIVES: Upon completion of this lesson, trainees will be able to:

1. Conduct a patient survey and assess the victim's status.
2. Take measures to correct life threatening injuries.
3. Give proper emergency care for common injuries related to smokejumping and firefighting.
4. Effectively conduct a medivac operation utilizing resources normally available.
5. Effectively use the unit's trauma and rescue equipment.

INTRODUCTION: While serious injuries in smokejumping are not common (1 in 525 for the period of 1992-1998), they do occur and each smokejumper must have the training and skills to administer emergency care when necessary. The Forest Service Smokejumper Operations Guide requires that each jumper have between 8 and 24 hours of classroom and practical instruction of basic emergency care first aid. This training must include emergency care for common firefighter or smokejumper injuries outlined in this lesson plan.

I. BASIC EMERGENCY CARE

A. Introduction to basic emergency care.

1. Course requirements.
2. General course objectives.
3. Course outline.

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4. BLM/USFS/Agency accident prevention program.
5. BLM/USFS/Agency accident reporting system(s).
6. BLM/USFS/Agency roles in search and rescue.
7. Medico – legal problems.

B. Determining the extent of injury and illness.

1. Diagnostic signs and their significance.
2. Evaluating the accident victim.
3. Primary – Secondary patient survey.
4. Priority of treatment.

C. Rescue planning.

1. Accident scene management.
2. Back country planning considerations.
3. Aircraft accident management.

D. Shock.

1. Shock and the cardiovascular system.
2. Types and causes of shock.
3. Signs and symptoms of shock.
4. Emergency care for patients in shock.

E. Cardiopulmonary resuscitation.

1. Heart – lung – brain relationship.
2. Techniques of cardiopulmonary resuscitation.

F. Bleeding and wounds.

1. Blood loss and its effect on the body.

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2. Types of wounds.
3. Internal and external bleeding.
4. Care of open and closed wounds.
5. General principles of bandaging.

G. Bone related injuries.

1. Signs and symptoms of fractures, dislocations and sprains.
2. Types of fractures.
3. Emergency care of ankle and leg injuries.
4. Emergency care of spinal injuries.

H. Injuries due to heat.

1. Emergency care of thermal burns.
2. Emergency care of heat exhaustion.
3. Emergency care of heat stroke.

I. Emergencies due to cold.

1. Hypothermia

J. Demerol/morphine administration.

K. Miscellaneous injuries.

1. Convulsive disorders.
2. Poisoning
 - a. Snake bites.
 - b. Bee stings and anaphylactic shock.
 - c. Oral poisoning.
 - d. General recognition and care for drug abuse.

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3. Diabetic states.

L. Transportation techniques.

1. Selection of technique.
2. Lifts and carries.
3. Spinal injury care.
4. Improvised litters.

M. Unit rescue equipment and procedures.

1. Familiarization with unit rescue equipment.
2. Review unit rescue plan.
 - a. Unit accidents.
 - b. Smokejumper jumping accidents.
 - c. Rescue of non-Agency personnel.
3. Coordination with other resources and mission sequences.

N. Practical field exercise(s).

1. Depending upon time, financing, etc., plan at least one half day field exercise. Simulate common jumper and fireline injuries, using role players.
2. Allow the trainees to use only resources normally available to them on a fire jump (fire pack, cargo chute, etc.). Use these resources plus any “improvised” materials to care for victim, plus transport victim to medivac point. Fully critique each rescue exercise.
3. If possible, it is valuable to combine the field exercises for emergency care into a training jump. Try to arrange the use of a helicopter from a local helitack crew for medivac and transportation training.

O. Annual review.

1. All experienced smokejumper personnel shall receive a minimum of at least 8 hours of refresher emergency care training each year.

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Refresher training should include the following topics:

- a. Determining the extent of the injuries.
- b. Shock.
- c. Cardiopulmonary resuscitation.
- d. Bleeding and wounds.
- e. Use of Demerol and morphine.
- f. Bone related injuries.
- g. Heat injuries.
- h. Transportation techniques.
- i. IV Therapy.
- j. Use of specialized equipment, i.e., oxygen, mast trousers.
- k. Set up and use of all unit emergency care and rescue equipment.

II. ADVANCED EMERGENCY CARE

A. Each unit should encourage advanced training for their personnel to assure that there are specially qualified emergency medical technicians who can instruct in basic emergency care skills, supervise para-rescue operations, and be available for situations requiring advanced and specialized emergency care skills. Most of the skills listed below are taught in basic EMT courses, however in case the skill is not required in a particular course, it is recommended that advanced emergency care personnel obtain the training and become competent in the skill.

1. Skills and Training.
 - a. Successful completion of a certified paramedic or emergency medical technician core course or the equivalent.
2. Specific skills.
 - a. Administration of Demerol or morphine.
 - b. Administration of intravenous fluids.

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- c. Administration of oxygen.
 - d. Administration of cardiopulmonary resuscitation techniques.
 - e. Use of stethoscope and sphygmomanometer for taking blood pressures.
 - f. Use of an oral airway.
 - g. Use of a bag-mask for resuscitation.
3. Additional training.
- a. Set up and use of all unit emergency care and rescue equipment.
 - b. Helicopter medivac operations and techniques.
 - c. Winter survival.
 - d. Winter parachuting.
 - e. Agency search and rescue organizations and procedures.
 - f. Participate on a rescue or ambulance crew.
4. Each unit should be aware of the conflicting regulations between states regarding the use of equipment and procedures.

B. Reference materials.

- 1. Emergency care – Harvey Grant and Robert Murry.
- 2. Emergency Care and Transportation of the Sick and Injured. Third Edition – American Academy of Orthopedic Surgeons.
- 3. American Red Cross Advanced First Aid.
- 4. Emergency Care in the Street.
- 5. Local CPR training and certification.

III. EVALUATION PARAMETERS

- A. Each smokejumper will demonstrate the correct procedures in

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applying emergency care during accidents and emergencies. This will be done in a training environment and evaluated by qualified smokejumper emergency medical technicians.

IV. NARRATIVE OR REVIEW

- A. Each smokejumper unit has established emergency care procedures that may operate at different levels of expertise. The basic level requirements are from 8 to 24 hours of Emergency Care Training. The advanced Emergency Care Training involves many more hours of training with recommended completion of an Emergency Medical Technician course or equivalent. With many recognized courses available, instructors should design instructional materials to assure that the GS-5 and GS-6 smokejumpers possess the basic skills in order to care for common firefighting and smokejumping injuries and accidents.