First Responder: National Standard Curriculum

Idaho-Specific Enhancements Included

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First Responder: National Standard Curriculum

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Preface

The National Highway Traffic Safety Administration (NHTSA) has assumed responsibility for the development of training courses that are responsive to the standards established by the Highway Safety Act of 1966 (amended). Since these training courses are designed to provide national guidelines for training, it is NHTSA's intention that they be of the highest quality and be maintained in a current and up-to-date status from the point of view of both technical content and instructional strategy. To this end, NHTSA supported the current project which involved revision of the *Emergency Medical Services: First Responder Training Course,* deemed of high value to the states in carrying out their training programs. This course revision is being co-sponsored by the Maternal and Child Health Bureau, U.S. Department of Health and Human Services. Additional funding for this project was provided as in-kind services of the Center for Emergency Medicine and through a Grant from the Pittsburgh Emergency Medicine Foundation. This course is one of a series of courses making up a National EMS education program for out-of hospital care. The First Responder is a designated level of emergency medical care provider as outlined by the *National EMS Education and Practice Blueprint*.

The First Responder is an integral part of the Emergency Medical Services System. The term "first responder" has been applied to the first individual who arrives at the scene regardless of the individual's type of credential. It is the goal of the *First Responder: National Standard Curriculum* to provide students with the core knowledge, skills and attitudes to function in the capacity of a first responder. The First Responder uses a limited amount of equipment to perform initial assessment and intervention and is trained to assist other EMS providers. This level of provider is not intended to be utilized as the minimum staffing for an ambulance. Enrichment programs and continuing education will help fulfill other specific needs for the First Responder training.

It is recognized that there may be additional specific education that will be required of First Responders who operate in the field. It is also recognized that practice might differ from locality to locality, and that each training program, or system should identify and provide additional training requirements. Consistent with the intent and design of the *National EMS Education and Practice Blueprint*, some EMS systems will incorporate additional skills into the scope of practice of the First Responder.

Acknowledgments

From the very beginning of this revision project, the Department of Transportation relied on the knowledge, attitudes, and skills from hundreds of experts. These individuals sought their own level of involvement and contribution toward accomplishing the goals of this project. These contributions varied from individual to individual, and regardless of the level of involvement, everyone played a significant role in the development of the curriculum. It is essential that those who have assisted with the achievement of this worthy educational endeavor be recognized for their efforts. For every person named, there are 50 or more individuals who should be identified for their contributions. For all who have contributed, named and unnamed, thank you for sharing your vision. Your efforts have helped assure that the educational/training needs of First Responders are met so that they can provide appropriate and effective patient care.

Special thanks for the knowledge, expertise, and dedication given to this project by the Project Director, Co-Principal Investigators, Co-Medical Directors, and all the members of the Curriculum Development Group.

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Process

The First Responder: National Standard Curriculum was designed and developed by a Curriculum Development Group (CDG) of emergency medicine and education experts. These experts met in person and via teleconference to review, edit, and critique the developmental document. The Co-Medical Directors reviewed, critiqued, and approved the medical content of the curriculum. The Co-Principal Investigators and the Project Director actually put the "pen-to-paper" once the objectives and format were approved by the CDG.

Two pilot tests were conducted, one in Raleigh, North Carolina (representing urban/metropolitan First Responders), and the other in New Prague, Minnesota (representing rural First Responders). Eleven students participated in the North Carolina Pilot, and 39 students participated in the Minnesota Pilot. The project team was able to view and modify the content of the curriculum based on insight gathered from the pilot test process.

The National Registry of EMTs designed and developed modular examinations and the final evaluation tools that were used in the pilot test project. They also completed the tabulation and evaluation of the test scores.

Cardiopulmonary Resuscitation

This curriculum contains many of the knowledge and skill objectives of cardio-pulmonary resuscitation. In order to maintain an up-to-date curriculum, the didactic material has not been reproduced. Instructors must utilize the current American Heart Association Guidelines and teaching strategies as the basis for instruction in Module 2: Airway and Module 4: Circulation. In some states, or EMS systems, issuance of a "successful completion" card for CPR may be required to practice as a First Responder. Meeting the objectives of this program provides the First Responder with the ability to perform CPR; but the program does not contain all of the prevention and recognition material within the guidelines established by the American Heart Association. During the program, if issuance of a CPR card is desirable or required, additional information must be added to the program. Testing and/or other course requirements for issuance of a specific agency's CPR card will need to be completed within the First Responder Training Program. Requirements for issuing a successful completion card may be obtained from the local CPR training agency or your State Office of Emergency Medical Services.

Integration with the Blueprint

The National EMS Education and Practice Blueprint (Appendix BP), adopted through a national peer review and consensus process, guided the development of this curriculum. This constitutes the minimum national knowledge and skill competencies for a First Responder, who is identified in the Blueprint as an individual who:

> *"...uses a limited amount of equipment to perform initial assessment and intervention and is trained to assist other EMS providers."*

As part of a consistent, organized, state-wide approach to the education and certification/licensure of First Responders, state EMS offices may wish to supplement this minimum national standard curriculum with additional knowledge and skills. However, to be consistent with the intent and philosophy of the *National EMS Education and Practice Blueprint,* state-wide additions to the First Responder's education and scope of care should reflect the Blueprint's continuum of knowledge and skills.

Each level of knowledge and skill includes all previous levels. If knowledge or skill items are "out of synch" with the logical continuum, the utility and value of the Blueprint is significantly decreased. For example, in the Core Component of CIRCULATION, Automated Defibrillation is the next skill above First Responder and comes before Pneumatic Anti-Shock Garment (PASG). Therefore, if the PASG is a skill added by a state to the First Responder Program, consistency with the Blueprint would require that AED be included also.

When knowledge and skills are added to the First Responder's scope of care, the additional information should be consistent with the corresponding levels of the next higher level of national curriculum. For instance, if a state requires automated external defibrillation at the First Responder level, the corresponding lesson from the *1994 EMT-Basic: National Standard Curriculum* should be used thus assuring a logical, inclusive continuum of education.

Vital signs, supplemental oxygen, automated defibrillation, simple immobilization and other knowledge or skills may be added to the First Responder program and remain consistent with the Blueprint providing they are allowable by the state EMS office, occur in the same order identified in the Blueprint continuum, and reflect the content of the *1994 EMT-Basic: National Standard Curriculum.*

Medical Oversight Statement

Medical oversight should exist for the First Responder to help ensure quality care. This should occur in the context of the local EMS System's medical oversight. The primary role of the physician will be to supervise the development of patient care protocols and to respond to questions about patient care issues.

Quality improvement is also a required component of EMS training. The role of medical oversight is paramount in ensuring the highest quality out-of-hospital care. Medical directors should work with individuals and systems to review out-of-hospital cases and achieve a sound method of continuous quality improvement.

Curriculum

History

The *First Responder: National Standard Curriculum* was last reviewed in the late 1970s. The current revision came about as a result of the National Highway Traffic Safety Administration's (NHTSA) January 1990 *Consensus Workshop on Emergency Medical Services Training Programs*. Participants discussed the national training curricula needs of Emergency Medical Service (EMS) providers. Using a nominal group process, the participants identified the top priority needs for EMS training in the United States.

The top priorities identified at that meeting led to issuance of a Request for Proposal (RFP) by NHTSA to revise the *Emergency Medical Service: First Responder Training Course* based upon the 1994 *EMT-Basic: National Standard Curriculum* and the *National EMS Education and Practice Blueprint.* The following priorities from the 1990 consensus workshop recommendations played a directing role in the revision of this First Responder Curriculum:

- Review and development of a blueprint/model and core curriculum for each provider level, based upon task analysis focusing on field impact (evaluating positive/negative outcomes) and the most utilized knowledge and skill areas. Identify "need to know" versus "nice to know" content. Conduct an analysis of interventions and outcomes for both the patient and the care provider. (What are we really doing in EMS? What's making a difference? Define what we want to do).

- Establish a Physician Board to review and approve all medical curriculum content.

- Emphasize an assessment-based format rather than a diagnostic-based format for all levels and all ages.

- Ensure that there is adequate focus on primary skills of assessment and ABCs in all provider levels (with emphasis on airway).

- Include an objective assessment of all published studies in peer journals when revising curricula.

- Emphasize rescuer and patient safety components, including infection control, in all curricula.

- Ensure that out-of-hospital providers have adequate skills to care for children and infants by integrating information throughout the curricula at all levels, within the established course items.

- Build in clearly defined medical control for all levels, not just EMT-Paramedic.

- Utilize measurable educational objectives (knowledge, skills, judgement) to determine individuals' learning needs and duration of training program.
- Develop a nationally acceptable core curriculum for each provider level, with a mechanism for customizing for local needs.
- Place curriculum revision emphasis on EMT-A and First Responder courses.
- Revise basic course to be no more than 110 hours in length.
- Add automated defibrillation (fully automatic and semi-automatic) for CPR by EMTs and First Responders.
- Develop an integrated/situational (real-world) approach for EMT training.
- Develop a mechanism for consensus on EMS education among national groups.
- Evaluate delivery methods of training.
- Include sufficient information in basic EMT-A curriculum to comply with hazardous materials (HAZMAT) worker protection standard.
- Include more on medical emergencies as opposed to trauma (including airway).

Course Goals

This instructor's course guide has been designed and developed to assist the course coordinator, instructors, and others in planning, managing and teaching the First Responder: National Standard Curriculum. The goals and objectives of this curriculum are to improve the quality of emergency medical care.

This course is designed to instruct a student to the level of First Responder, who serves as a vital link in the chain of the health care team. This curriculum includes skills necessary for the individual to provide emergency medical care with a limited amount of equipment. Specifically, after successful completion of the program, the student will be capable of performing the following functions at the minimum entry level:

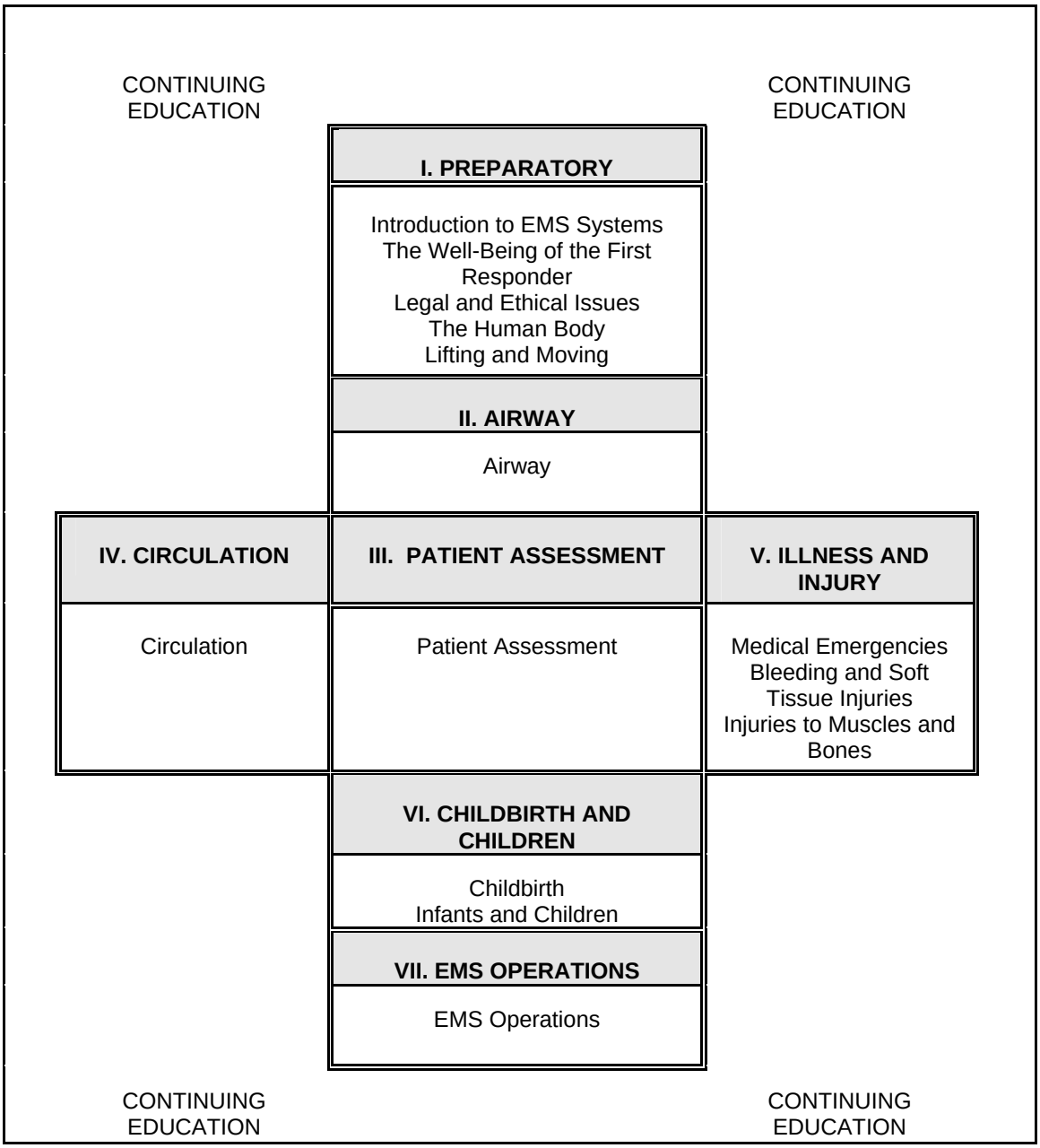
- Recognize the seriousness of the patient's condition or extent of injuries to assess requirements for emergency medical care;
- Administer appropriate emergency medical care for life threatening injuries relative to airway, breathing and circulation;
- Perform safely and effectively the expectations of the job description.

It is obvious that First Responders provide a service in an environment requiring special skills and knowledge. They also serve as liaisons with other emergency services. This course provides an introduction to these concepts. Individual orientation to the specific systems and services with which the First Responder will be affiliated is necessary to achieve a full level of competency within a specific organization.

The entire curriculum is surrounded by continuing education, which is designed to reflect two primary goals. First, during the instruction of the First Responder: National Standard Curriculum, additional continuing education in related content may be provided. Second, continuing education is an integral component of any educational process and the First Responder should be committed to continuous improvement of knowledge and skills.

FIRST RESPONDER: NATIONAL STANDARD CURRICULUM

DIAGRAM OF EDUCATIONAL MODEL



Course Design

Module 1 Preparatory

Lesson 1-1
Introduction to EMS Systems
Familiarizes the First Responder candidate with the introductory aspects of emergency medical care. Topics include the Emergency Medical Services system, roles and responsibilities of the First Responder, quality improvement, and medical oversight.

Lesson 1-2
Well-Being of the First Responder
Covers the emotional aspects of emergency medical care, stress management, introduction to Critical Incident Stress Debriefing (CISD), scene safety, body substance isolation (BSI), personal protection equipment (PPE), and safety precautions that can be taken prior to performing the role of a First Responder.

Lesson 1-3
Legal and Ethical Issues
Explores the scope of practice, ethical responsibilities, advance directives, consent, refusals, abandonment, negligence, duty to act, confidentiality, medical identification symbols, and crime scenes.

Lesson 1-4
The Human Body
Enhances the First Responder's knowledge of the human body. A brief overview of body systems, anatomy, and physiology will be given in this session.

Lesson 1-5
Lifting and Moving Patients
Provides students with knowledge of body mechanics, lifting and carrying techniques, and principles of moving patients.

Lesson 1-6
Evaluation: Preparatory
Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

Module 2 Airway

Lesson 2-1
Airway
Addresses airway anatomy and physiology, how to maintain an open airway, pulmonary resuscitation, variations for infants and children, as well as patients with laryngectomies. The use of airways, suction equipment, and barrier devices will be discussed in this lesson. Also included is the management of foreign body airway obstructions.

Lesson 2-2
Practical Lab: Airway
Provides supervised practice for students to develop the psychomotor skills of airway care. The use of airways, suction equipment, and barrier devices will be included in this lesson. Students will have an opportunity to practice the techniques of removing a foreign body airway obstruction.

Lesson 2-3
Evaluation: Airway
Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

Module 3 Patient Assessment

Lesson 3-1
Patient Assessment
Enhances the First Responder's ability to evaluate a scene for potential hazards, to determine the number of patients, whether additional help is necessary, and to evaluate the mechanism of injury or nature of illness. This lesson provides the knowledge and skills to properly perform the initial assessment. In this session, the student will learn about forming a general impression, determining responsiveness, and assessing the airway, breathing, and circulation. Students will discuss how to determine priorities of patient care. This lesson also teaches the knowledge and skills required to continue the assessment and management of the ill or injured patient.

Lesson 3-2
Practical Lab: Patient Assessment
Integrates the knowledge and skills learned thus far to assure that the student has the knowledge and skills of assessment necessary to continue with the management of patients with medical complaints and traumatic injuries.

Lesson 3-3
Evaluation: Patient Assessment
Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

Module 4 Circulation

Lesson 4-1
Circulation
This lesson provides the First Responder with the knowledge and skills of chest compressions and ventilations for adults, children, and infants.

Lesson 4-2
Practical Lab: Circulation
Draws on the knowledge and skills learned thus far in this practical lab. Students will be given the opportunity to practice CPR skills.

Lesson 4-3
Evaluation: Circulation
Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

Module 5 Illness and Injury

Lesson 5-1
Medical Emergencies
Discusses the recognition and management of general medical complaints, seizures, altered mental status, environmental emergencies, behavioral emergencies, psychological crisis, and typical patient situations.

Lesson 5-2
Bleeding and Soft Tissue Injuries
Reviews the cardiovascular system, describes the care of the patient with internal and external bleeding, and teaches the management of soft tissue injuries and burns. Techniques of dressing and bandaging wounds will also be taught in this lesson.

Lesson 5-3
Injuries to Muscles and Bones
Reviews the anatomy of and injuries to the musculoskeletal system. Presents information about injuries of the skeletal system. Reviews the anatomy of the nervous system and the skeletal system. Discusses injuries to the spine and head, including the mechanism of injury, signs and symptoms of injury, and assessment.

Lesson 5-4
Practical Lab: Illness and Injury

Provides practice in assessing and managing patients with traumatic injuries.

Lesson 5-5
Evaluation: Illness and Injury
Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

Module 6 Children and Childbirth

Lesson 6-1
Childbirth
Reviews the anatomical and physiological changes that occur during pregnancy. Demonstrates deliveries and newborn care.

Lesson 6-2
Infants and Children
Presents information concerning anatomical differences in infants and children, discusses common medical and trauma situations.

Lesson 6-3
Practical Lab: Children and Childbirth
Provides the First Responder student with the opportunity to interact with infants and children and to practice the knowledge and skills learned thus far concerning this special population.

Lesson 6-4
Evaluation: Childbirth and Children
Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

Module 7 EMS Operations

Lesson 7-1
EMS Operations
Presents an overview of the knowledge needed to function as a First Responder in the out-of-hospital environment. In addition this lesson provides the First Responder student with an overview of extrication and rescue operations and information on hazardous materials, mass casualty situations, and basic triage.

Lesson 7-2
Evaluation: EMS Operations
Evaluates the student's level of achievement of the cognitive, psychomotor, and affective objectives for this module of instruction.

How to Use the Curriculum and Lesson Plans

There are seven modules of instruction in the core content. There are 26 lessons within the seven modules. Each lesson has the following components:

Objectives

The objectives are divided into three categories: Cognitive, Affective, and Psychomotor.

Cognitive	Affective	Psychomotor
thinking--	**emotional response--**	**physical process--**
knowledge	feelings	physical movement
comprehension	emotional intensity	skilled activities
application		

To assist with the design and development of a specific lesson, each objective has a numerical value, e.g., 3-1.1. The first number is the module of instruction, followed by a hyphen and the number of the specific lesson. For example, 3-1.1 is:

Module 3:	Patient Assessment
Lesson 3-1:	Patient Assessment
Objective 3-1.1	Recognize hazards/potential hazards. (C-1)

At the end of each objective is a letter for the type of objective: C = Cognitive; A = Affective; and P = Psychomotor. (The example above is cognitive). The number following the type of objective represents the level of objective: 1 = Knowledge; 2 = Application; and 3 = Problem Solving. (The example above is knowledge).

Preparation

Motivation -- Each lesson has a motivational statement that should be read by the instructor prior to teaching the lesson. It is not the intent for the instructor to necessarily read the motivational statement to the students, but more importantly to be familiar with its content and to be able to prepare the students or explain why this lesson is important.

Prerequisites

Prior to starting a lesson, the instructor should assure that the students have completed the necessary prerequisites.

Materials

Audio Visual (AV) Equipment -- In recent years, high quality video materials have become available for the EMS community. They should be used as an integral part of the instruction in this program. The course coordinator should ensure in advance that the necessary types of AV equipment are available for the class. If possible, the course administrator should have a video library available for the student.

Emergency Medical Services (EMS) Equipment

Each lesson plan contains a list of equipment that should be available for instruction.

Personnel

Primary Instructor
Assistant Instructor

Program personnel are a primary instructor and an assistant instructor. Their roles of the program personnel are discussed in more detail under Program Personnel.

Recommended Minimum Time to Complete

Each lesson plan has a recommended minimum time for completion. Although the time for each lesson has been pilot tested, because of the varying nature of adult learners the enrichment and the need for remediation may require additional time. Time limits may be extended to bring the students to the full level of competency.

Presentation

Declarative (What) -- This is the cognitive lesson plan, the information that the instructor provides the students. This may be accomplished by various methods, including lectures, small group discussion, and the use of audio-visual materials. Demonstrations, if the instructor desires, may be used as part of the instruction. The instructor must be well versed in the entire content of the lesson plan. It is not appropriate to read the lesson plans word for word to the students. Lesson plans should be considered dynamic documents that provide guidelines for the appropriate flow of information. The instructor's lesson plans should be based upon local practice, national standards, and scientific evidence approved by the Course Medical Director. The instructor should feel free to write notes in the margins and make the lesson plan his own.

Application

Procedural (How)
This is the skills portion of the program. The students should be able to demonstrate competency in all skills listed in each section. If the declarative (what) content was presented as a lecture, the instructor should perform demonstrations prior to having the students perform the skills. If the instructor performed a demonstration as part of the declarative component, the students may begin by practicing skills in the practical setting.

When this component of the lesson is being conducted, there should be one instructor for every six students. Students should be praised for their progress. For those students having difficulty performing a skill or skills, remediation is required. It is well known that a demonstration must be followed by practice, which must be drilled to a level that assures mastery of the skill. It has been proven that demonstration followed as soon as possible by organized, supervised practice enhances mastery and successful applications.

Contextual (When, Where, and Why)
This section is designed to help the students understand the application of their knowledge and skills relating to their performance as First Responders. This section relates back to the motivational statement and represents the reasoning as to why, where, and when a First Responder would need to use the knowledge or perform the skills. It is of utmost importance that the instructor be familiar with the intent of this section and relay that intent to the students.

Student Activities

Students learn by various methods. The three learning styles are auditory, visual, and kinesthetic (A-V-K). The intent of this section is to ensure that the content of the curriculum is presented to meet the needs of the three different types of learning styles. These three areas should not necessarily be used separately from the lesson plan, but as an adjunct to it. An attempt to provide instruction to the student with these three types of modalities will enhance student learning. Instructors should feel free to add additional A-V-K experiences appropriate for each lesson.

Auditory (Hearing)

This section allows the instructor to provide material in an orally. Students who learn best by hearing will benefit from this method of instruction.

Visual (Seeing)

This section allows the instructor to provide material in a visually. Visual learners will benefit from this method of instruction.

Kinesthetic (Doing)

This section allows the instructor to teach material by having the students perform the skill. Those students who learn best by doing will benefit from this method of instruction.

Instructor Activities

This section is to remind the instructors that they should always supervise student practice and praise progress. They should reinforce student progress in cognitive, affective, and psychomotor domains. If students are having difficulty understanding the content or performing the skills, the instructor should redirect them. If additional time is needed to complete this task beyond the assigned times of the program, the instructor should complete a remediation form to schedule additional assistance for the student or group of students experiencing difficulty with the task.

Evaluation

Written --The instructor should design and develop various quizzes, verbal reviews, handouts, and any other desired materials for the students. Ideally, the instructor should provide a brief quiz after every lesson to determine if the students are comprehending the material.

Practical -- The instructor should provide students with practical evaluations when applicable. The skill sheets provided within the curriculum will assist the students in preparing for field performance and the final practical evaluation. State EMS Offices and

program personnel should work together to determine minimum performance for successful course completion.

Remediation

The intent of this section is to ensure that the instructor meets the needs of those students who are experiencing difficulty understanding the material or performing practical skills. Remediation sheets supplied in this guide will enable the instructor to keep track of those students. If a student requires remediation frequently, a decision should be reached as to whether the student should continue in the program. (see Appendix E for Remediation sheet.)

Enrichment

This section is designed to allow the instructors, the course medical director, the course coordinator, the region, or state to add additional information, or augment the curriculum. Anything that is unique to your area should be added. Refer to Appendix D for an Enrichment Lesson Plan.

Instructors

Assessing Student Achievement

This training program includes several methods for assessing student achievement. As mentioned before, quizzes of the cognitive and affective domains should be provided at the completion of each lesson. Time is allocated at the end of each module of instruction for a cognitive and psychomotor evaluation. The primary instructor in conjunction with the course coordinator, program director, and course medical director is responsible for the design, development, administration and grading of all written and practical examinations. The instructor should feel free to use outside agency-approved psychomotor evaluation instruments or those found in texts. All written examinations used within the program should be valid and reliable and conform to psychometric standards. Instructors should be encouraged to use outside sources to validate examinations and/or as a source of classroom examination items.

The primary purpose of this course is to prepare students to meet the entry-level job expectations for a First Responder. Each student, therefore, must demonstrate attainment of knowledge, attitude, and skills in each area taught in the course. It is the responsibility of the course coordinator, medical director, primary instructor, and educational institution to assure that students obtain proficiency in each module of instruction before they proceed to the next area. If after counseling and remediation a student is not able to demonstrate the ability to learn specific knowledge, attitudes, and skills, the program director should not hesitate to dismiss the student. The level of knowledge, attitude and skills attained by a student in the program will be reflected in performance on the job as a First Responder. It is not the responsibility solely of the certifying examination to assure competency over successful completion of the course. Program directors should recommend only qualified candidates for licensure, certification or registration.

Requirements for successful completion of the course are as follows:

Cognitive - Students must obtain passing grades on all module examinations and the final examination. Special remedial sessions may be utilized to assist in the completion of a lesson or module of instruction. Scores should be in accordance with accepted practices.

Affective - Students must demonstrate conscientiousness and interest in the program. Students who do not should be counseled while the course is in progress in order to provide them the opportunity to develop and exhibit the proper attitude expected of a First Responder.

Psychomotor - Students must demonstrate proficiency in all skills in each testing session of selected topic areas and mastery of skills in the final examination. Special remedial sessions may be utilized to assist in the completion of a lesson or module of instruction. Pass/fail scores should be in accordance with accepted practices. Usage of the skill measurement instruments within this curriculum or developed by way of a valid process is strongly recommended to achieve maximum results with the students.

The additional areas that should be utilized for evaluation of student achievement include:

Personal Appearance - Each student should be neat, clean, well groomed, and physically fit to perform the minimal entry-level job requirements. Students who do not exhibit good hygiene habits should be counseled while the program is in session to provide them with the opportunity to correct the habits.

Attendance - Students are required to attend all lessons. At the discretion of the program director or designee, a student missing a lesson may demonstrate the fulfillment of all cognitive, affective, and psychomotor objectives covered in the missed lesson.

Clinical or Field Rotation Experience - Prior to certification of course completion, some states may require satisfactory clinical or field experience.

Program Personnel
There are several sets of responsibilities required to present the First Responder program. These identified roles and responsibilities are a necessary part of each First Responder course. The individuals carrying them out may vary from program to program and from locality to locality as the roles may interface and overlap. In fact, one person, if qualified, may carry out all of the roles in some programs.

For clarity, the following terms are defined as they will be used throughout this document.

Program Director: The program director is responsible for course planning, operation, and evaluation. While the Program Director is responsible for the overall operation of the education experience, this person need not be qualified or involved in the actual instruction of specific course lessons. The Program Director is responsible for First Responder course planning.

Course Coordinator: The Course Coordinator is the individual responsible for coordinating and conducting the First Responder program. The Course Coordinator acts as the liaison among the students, the sponsoring agency, the local medical community, and the state-level certifying or licensing agency and is responsible for assuring that the course goals and objectives (and those set forth by any licensing, registering, or certifying agency as applicable) are met. The Course Coordinator may also serve as the Primary Instructor.

Primary Instructor: The Primary Instructor must be knowledgeable in all aspects of out-of-hospital emergency medical care, in the techniques and methods of adult education, and in managing resources and personnel. This individual should have attended and successfully completed a program in EMS instruction methodology. The Primary Instructor should be present at most, if not all, class sessions to assure program continuity and to be able to identify that the students have the cognitive, affective, and psychomotor skills necessary to function as a First Responder. This person is responsible for the teaching of a specific lesson of the First Responder course. This individual should have attended a workshop that reviews the format, philosophy, and skills of the new curriculum.

Assistant Instructor: This person assists the Primary Instructor of any lesson in the demonstration and practice designed to develop and evaluate student skill competencies.

Course Medical Director: The program should have a course Medical Director. The need for an active medical director increases as the state adds enhancements to the scope of practice as reflected in the *National EMS Education and Practice Blueprint*. When utilized, the Course Medical Director, Course Coordinator, and the Primary Instructor should work closely together in preparing and presenting the program. The Course Medical Director may also serve as the Primary Instructor for one or more or all lessons.

The Course Medical Director must be a physician knowledgeable of state EMS rules, EMS system configuration, national standards of care, and educational principles.

Philosophy Regarding Adult Learners

Individuals participating in this educational program should be considered adult learners even in those programs instructing students younger than age 18. Adult learners are responsible for their own learning. There are several characteristics regarding the adult learner as a First Responder student.

1. First Responder students usually want to utilize knowledge and skills they have learned soon after they have learned them.

2. First Responder students are interested in learning new concepts and principles; they enjoy situations that require problem-solving, not necessarily learning facts. It is less difficult for them to use the concepts and principles they have gained if they are able to participate actively in the learning process.

3. First Responder students learn best if they are able to proceed at their own pace.

4. Motivation is increased when the content is relevant to the immediate interests and concerns of the First Responder student.

5. Immediate feedback is essential to the First Responder student, who needs to be kept informed of progress continuously.

One intent of this revised curriculum is to alter the methods of instruction used by the instructor. This curriculum has been designed and developed to reduce the amount of lecture time and move towards an environment of discussion and practical skills. This way both learners and instructors are active in the process of learning.

Some Principles of Adult Education

1. Attract and maintain the attention of the First Responder student.
If instructors get off to a bad start, it is often because they are not able to successfully gain and maintain the attention of the student. In these situations, students may be enthusiastic when they arrive and disappointed when they leave.

A clear statement of the purpose of each lesson is of utmost importance in gaining the student's attention. This may be accomplished by using the information found in the motivational statement or the contextual statement of the lesson plan.

There are many methods that may be used to gain the student's attention, e.g., telling a relevant anecdote, posing a unique situation, or asking how they would solve a problem. Once the attention of the student is gained, it must be maintained throughout the entire lesson. After about 15-20 minutes of presentation, it is essential that the student be reinvolved in the learning process. Three methods are often utilized to keep the students active in the process: questioning, brainstorming, and demonstration.

Questions should be used to promote thought, to evaluate what has been learned, and to continuously move students toward their desired goal. Questioning students keeps them actively involved and keeps them thinking. It is also appropriate to ask rhetorical questions that are not meant to be answered by the student, but that encourage thinking. Questions should be open-ended, that is questions should not have "yes" or "no" answers. Questions should be a significant part of the lesson and should be used in both didactic and practical presentation.

Brainstorming is a special and different type of questioning. This process generates a wide variety of creative ideas. There is no right or wrong answer, only creative thinking. A question is posed to the students, and they are then allowed to provide as many answers as possible. After all the ideas have been presented, the students can be moved toward the appropriate and important points.

The third technique is demonstration, which bridges the gap between theory and practice. When demonstrating, it is beneficial to involve the students in the process. Demonstration should be used during the didactic component of the presentation to break up long runs of lecture material.

2. Make the presentation clear and keep it organized.
By following the lesson plans, instruction can be clear and organized. However, there are some additional tips that may assist further.

1. Tell the students what you are going to tell them
2. Tell them

3. Show them
4. Let them try
5. Observe
6. Praise progress and redirect
7. Tell them what you have told them
8. Have them summarize what they have learned

To help keep lessons clear, the students should know the objectives. The objectives should be presented to the students on the first day of class. It may be beneficial to give students the written lesson plans and allow them to write additional information in the margins.

Conducting Patient Care Simulations in the Classroom

Adults crave hands on training. One very effective method of teaching is the use of a patient care simulation in the classroom. This is actually acting out an EMS call to give the student the opportunity to respond with equipment, evaluate the scene, assess the patient, control life threats and do any of the treatments covered in the course which would be appropriate while waiting for the ambulance to arrive.

Simulations give students the opportunity to demonstrate integration of the course's cognitive, affective, and psychomotor objectives into a real life scenario while working with a team of first responders. This is an application which "puts it all together" for the student as they will find patients in the field by incorporating their ability to hear, see, and do as well as begin to emphasize teamwork and leadership skills.

Continuing Education

It will be necessary to provide updates to the primary instructor and assistant instructors regarding new curriculum material, and annual updates should be scheduled to inform instructors of current trends in out-of-hospital emergency medicine.

Students

Job Description - First Responder

The First Responder may function in the context of a broader role, i.e., law enforcement, fire rescue, or industrial response. With a limited amount of equipment, the First Responder answers emergency calls to provide efficient and immediate care to ill and injured patients. After receiving notification of an emergency, the First Responder safely responds to the address or location given.

- Functions in uncommon situations
- Has a basic understanding of stress response and methods to ensure; personal well-being
- Has an understanding of body substance isolation
- Understands basic medical-legal principles
- Functions within the scope of care as defined by state, regional and local regulatory agencies
- Complies with regulations on the handling of the deceased, protection of property and evidence at scene, while awaiting additional EMS resources

Before initiating patient care, the First Responder will "size-up" the scene to determine that the scene is safe, to identify the mechanism of injury or nature of illness, and the total number of patients, and to request additional help if necessary. In the absence of law enforcement, creates a safe traffic environment. Using a limited amount of equipment, renders emergency medical care to adults, children, and infants based on assessment findings. Duties include but are not limited to:

- Opening and maintaining an airway
- Ventilating patients
- Administering cardiopulmonary resuscitation
- Providing emergency medical care of simple and multiple system trauma such as:
  - Controlling hemorrhage
  - Bandaging wounds
  - Manually stabilizing injured extremities
- Providing emergency medical care to:
  - Assist in childbirth
  - Manage general medical complaints, altered mental status, seizures, environmental emergencies, behavioral emergencies and psychological crises
- Searching for medical identification emblems as a guide to appropriate emergency medical care
- Reassuring patients and bystanders by working in a confident, efficient manner
- Avoiding mishandling and undue haste while working expeditiously to accomplish the task

Where a patient must be extricated from entrapment, assesses the extent of injury and assists other EMS providers rendering emergency medical care and protection to the

entrapped patient. Performs emergency moves and assists other EMS providers in the use of the prescribed techniques and appliances for safely removing the patient. Under the direction and supervision of other EMS providers, assists in lifting the stretcher, placing the stretcher in the ambulance, and seeing that the patient and stretcher are secured. If needed, radios the dispatcher for additional help or special rescue and/or utility services. In cases of multiple patients, performs basic triage.

Reports directly to the responding EMS unit or communications center the nature and extent of injuries, the number of patients, and the condition of each patient. Identifies assessment findings that may require communicating with medical oversight for advice.

Constantly assesses patient while awaiting additional EMS resources. Administers additional care as indicated.

Orally reports their observations and emergency medical care of the patient to the transporting EMS unit. Upon request, provides assistance to the transporting unit staff.

After each call, restocks and replaces used supplies, cleans all equipment following appropriate disinfecting procedures, and carefully checks all equipment to ensure availability for next response.

Attends continuing education and refresher education programs as required by employers, medical oversight, and licensing or certifying agencies.

Meets qualifications within the functional job analysis. See Appendix A.

Continuing Education and Its Importance in Lifelong Learning

This curriculum is designed to provide the student with the essentials to serve as a First Responder. Employers and service chiefs are strongly encouraged to integrate new graduates into specific orientation training programs.

It is important to understand that this curriculum does not provide students with extensive knowledge in hazardous materials, blood-borne pathogens, emergency vehicle operations, or rescue practices in unusual environments. These areas are not core elements of education and practice as identified in the *National EMS Education and Practice Blueprint*. Identified areas of competency not specifically designed within the First Responder: National Standard Curriculum may be taught in conjunction with this program as a local or state option.

Environment

Classroom Environment

The intent of the revised curriculum is to allow for greater interaction between students and instructors. The instruction should be highly experiential and interactive. By using the procedural (how) section of the application area of the lesson plan as well as the kinesthetic (do) component of the student activity section, the instructor should be able to enhance the educational experience for the students.

Clinical/Field Rotations

Some states may require that the student have patient interactions in a clinical/field setting.

Maintaining Records

It is recommended that the Program Director/Course Coordinator maintain, as a minimum, information on the following:

- Student attendance and performance at each lesson, including comments as appropriate regarding need for improvement in skills, knowledge, attitudes, or personal habits
- Results of evaluation and counseling sessions
- Grades for each written examination and completed checklists for each skill evaluation
- Number and qualifications of the instructional team
- Instructor performance
- Cost: total program costs, costs for each program element, and costs per student
- Lists of enrichments and add-on courses taught in conjunction with the program
- Results of course entry examinations and qualifications as required by the certifying agency, state EMS office, course medical director, or training institution

Credentialing

In addition to course completion state regulatory agencies may require specific evaluation of cognitive and/or psychomotor performance prior to official licensure, certification, or registration as a First Responder. The National Registry of EMTs is a recognized agency that provides examinations for such certification and registration. The program director should contact the State Office of Emergency Medical Services for licensure, certification, or registration information.

Program Evaluation

On-going evaluation of the program must be conducted to identify instructional or organizational deficiencies affecting student performance. The evaluation process should be two-fold in nature, objective and subjective. Two main methods of objective evaluation generally used are:

1) How well do students measure up to standardized examination?
2) How well do First Responders practice in accordance with established standards of care?

Group and individual deficiencies may indicate problems in the training program.

Subjective evaluation should be conducted at regular intervals by providing students with written questions on their opinions of the program's strengths and weaknesses. Students should be given the opportunity to comment on the primary and assistant instructors, presentation styles and effectiveness. Students should also be asked to comment on the program's compliance with specified course of instruction, the quality and quantity of psychomotor skills labs, and the face validity of the examinations.

The purpose of this evaluation process is to strengthen future training efforts. All information obtained as part of the subjective evaluation should be reviewed for legitimacy and possible incorporation into the course. Due to the important nature of this educational program, every effort should be made to ensure instruction of the highest quality.

Facilities

The physical environment of the First Responder program is a critical component for the success of the overall program. The facility should have a large hall with sufficient space for seating all students. Abundant space should be made available for demonstrations. Additional rooms or adequate space should be available as a practice areas.

It is recommended that all the required equipment for the program be stored at the facility for ready availability. The facility should be well lit for adequate viewing of various types of visual aids and demonstrations. Heating and ventilation should assure student and instructor comfort, and the seats should be comfortable with desk tops or tables for taking notes. There should be an adequate number of tables for display of equipment, medical

supplies, and training aids. A chalkboard (flip chart or grease board) should be in the main hall. A projection screen and appropriate audio visual equipment should be located in the presentation facility. If possible, light switches should be conveniently located in the presentation area. The practice areas should be carpeted and large enough to accommodate six students, one instructor, and the necessary equipment and medical supplies. Tables should be available for practice areas, with appropriate and sufficient equipment and medical supplies.

Course Cost

The cost for the provision of the First Responder education varies widely across the nation. Training considerations provided in this section may serve as a basis for estimating costs for conducting a First Responder program. Additional costs will be incurred in the management and evaluation of the program. Specifically, the course director should consider costs associated with the following:

1. Compensation
- Program director
- Medical director
- Course coordinator
- Primary instructor
- Assistant instructors

2. Facilities
- Classroom and associated equipment (tables, chairs, audio-visual equipment)
- Field and clinical training facilities
- Office space and associated equipment (desks, chairs, files)

3. Materials
- Emergency medical care equipment and supplies
- Educational aids (slides, film, video, flip chart, projection equipment, screens, handouts)
- Documents, e.g., Instructor's Course Guide, Instructor's Lesson Plans, text material, study guides, reference books

Student and instructor recruiting materials, registration forms, data collection forms, records and reports, and postage should be considered in the formal budget.

4. Travel and per diem, as appropriate
- Medical director
- Program director
- Course coordinator
- Primary instructor
- Assistant instructors
- Students

5. Examination and certification costs

Examination and certification costs are as specified by the state emergency medical services office. If it is necessary to provide instruction to the primary instructor or assistant instructors, that cost should also be considered in calculating the overall cost of the First Responder program. In addition, it will be necessary to provide updates to the primary instructor and assistant instructors regarding new curriculum material. Annual updates should be scheduled to inform instructors of current trends in out-of-hospital emergency medicine.

Module 1: Preparatory
Lesson 1-1 Introduction to EMS Systems

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective

1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

1-1.1 Define the components of Emergency Medical Services (EMS) systems (C-1)
1-1.2 Differentiate the roles and responsibilities of the First Responder from other out-of-hospital care providers (C-3)
1-1.3 Define medical oversight and discuss the First Responder's role in the process (C-1)
1-1.4 Discuss the types of medical oversight that may affect the medical care of a First Responder (C-1)
1-1.5 State the specific statutes and regulations in your state regarding the EMS system (C-1)

Affective Objectives

1-1.6 Accept and uphold the responsibilities of a First Responder in accordance with the standards of an EMS professional (A-3)
1-1.7 Explain the rationale for maintaining a professional appearance when on duty or when responding to calls (A-3)
1-1.8 Describe why it is inappropriate to judge a patient based on a cultural, gender, age, or socioeconomic model, and to vary the standard of care rendered as a result of that judgement (A-3)

Psychomotor Objectives

No psychomotor objectives identified.

Preparation

Motivation

The field of out-of-hospital emergency medical care is an evolving profession in which the reality of life and death is confronted at a moment's notice. EMS has developed from the days when the local funeral home served as the ambulance provider to a far more sophisticated system today. First Responders work within the EMS system to help deliver professional out-of-hospital emergency medical care. This course is designed to help the new First Responder gain the knowledge, skills, and attitudes necessary to be a competent, productive, and valuable member of the emergency medical services team.

Prerequisites

None

Materials

AV Equipment

Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment

None required

Personnel

Primary Instructor

One First Responder Instructor knowledgeable in First Responder Course overview, administrative paperwork, certification requirements, Americans with Disabilities Act issues, and roles and responsibilities of the First Responder. The medical director should be present for the discussion of medical oversight.

Assistant Instructor

None required

Recommended Minimum Time to Complete

One hour

Presentation

Declarative (What)

I. Course Overview
   A. Paperwork
      1. School
      2. State
      3. Local
   B. Course description and expectations
   C. Immunizations/physical exam
   D. Review criteria for certification
      1. Successful course completion
      2. Mentally/physically meet criteria of safe and effective practice of job functions **(REFER TO APPENDIX A, Functional Job Analysis)**
      3. Written examination
      4. Practical examination
      5. State and local provisions
   E. Policy on the Americans with Disabilities Act (ADA)
      1. School policies
      2. State policies
      3. Local Policies
   F. Policy on harassment in the classroom environment
      1. School policies
      2. State policies
      3. Local Policies
   G. Advancement to the EMT-Basic Level

II. The Emergency Medical Services System and the First Responder
   A. Overview of the Emergency Medical Services system
      1. A network of resources to provide emergency care and transport to victims of sudden illness and injury
         a. Prevention of injury
         b. Occurrence of the event
         c. Recognition of the event and activation of the system
         d. Bystander care/dispatch instructions
         e. Arrival of First Responders
            (1) Fire/Rescue Personnel
            (2) Law enforcement
            (3) Industrial response teams
         f. Arrival of additional EMS resources
         g. Emergency medical care at the scene
         h. Transport to receiving facility
         i. Transfer to in-hospital care system
      2. Ten Classic Components of an EMS System
         a. Regulation and policy
         b. Resource management
         c. Human resources and training
         d. Transportation
         e. Facilities

- f. Communications
- g. Public information and education
- h. Medical oversight
- i. Trauma systems
- j. Evaluation

3. Access to the emergency medical services system
   - a. 9-1-1
     - (1) Basic
     - (2) Enhanced 9-1-1
   - b. Non 9-1-1
4. Levels of training
   - a. First Responder
   - b. EMT-Basic
   - c. EMT-Intermediate
   - d. EMT-Paramedic
5. The in-hospital care system
   - a. Emergency departments
   - b. Specialty facilities
     - (1) Trauma centers
     - (2) Burn centers
     - (3) Pediatric Centers
     - (4) Perinatal centers
     - (5) Poison centers
   - c. Hospital personnel
     - (1) Physicians
     - (2) Nurses
     - (3) Other allied health professionals
6. Overview of the local EMS system

B. Roles of the First Responder
1. Personal, crew, patient, and bystander safety
2. Gaining access to the patient
3. First Responder patient assessment to identify life threatening conditions
4. Continuation of care through additional EMS resources
5. Initial patient care based on assessment findings
6. Assisting with the additional care
7. Participation in record keeping/data collection as per local/state requirements
8. Liaison with other public safety workers
   - a. Local law enforcement
   - b. State and federal law enforcement
   - c. Fire departments
   - d. EMS Providers

C. Responsibilities of the First Responder
1. Personal health and safety

2. Maintain caring attitude - reassure and comfort patient, family, and bystanders while awaiting additional EMS resources
3. Maintain composure
4. Neat, clean, and professional appearance
5. Maintain up-to-date knowledge and skills
   a. Continuing education
   b. Refresher courses
6. Put patient's needs as a priority without endangering self.
7. Maintain current knowledge of local, state, and national issues affecting EMS

D. Medical Oversight
1. Definition
   a. A formal relationship between the EMS providers and the physician responsible for the out-of-hospital emergency medical care provided in a community
   b. This physician is often referred to as the system medical director
   c. Every EMS System must have medical oversight
2. Types of medical oversight
   a. Direct medical control
      (1) Also called "on-line", "base station", "immediate", or "concurrent"
      (2) Simultaneous physician direction of a field provider
      (3) Communication may be via radio, telephone, or actual contact with a physician on-scene
   b. Indirect medical control
      (1) Also called "off-line", "retrospective", or "prospective"
      (2) Includes everything that is not direct medical control
      (3) System elements under medical oversight include:
         (a) system design
         (b) protocol development
         (c) education
         (d) quality management
3. The relationship of the First Responder to medical oversight
   a. The First Responder may be a designated agent of the physician
   b. Care rendered may be considered an extension of the medical director's authority (varies by state law)

E. Specific statutes and regulations regarding EMS in your state

Application

Procedural (How)

None identified for this lesson.

Contextual (When, Where, Why)

The student will use this information throughout the course to enhance his understanding and provide direction for the First Responder's relationship to the individual components of the EMS system. The lesson will provide the student with a road map for learning the skill and knowledge domains of the First Responder. Additionally, this lesson will identify that not all students meet the mental and physical requirements of the career field. After completion of the course, the First Responder will use this information to understand the process of gaining and maintaining certification, as well as understanding state and local legislation affecting the profession. This lesson sets the foundation for the remaining teaching/learning process. A positive, helpful attitude presented by the instructor is *essential* to assuring a positive, helpful attitude from the student.

Student Activities

Auditory (Hearing)

1. Students will hear specifically what they can expect to receive from the training program
2. Students will hear the specific expectations of the training program
3. Students will hear actual state and local legislation relative to EMS practice and certification

Visual (Seeing)

1. Students will see audio-visual materials explaining the components of the health care system, First Responder level of care, First Responder's roles and responsibilities, professional attributes, and certification requirements
2. Students will receive a copy of the cognitive, affective, and psychomotor objectives for the entire curriculum
3. Students will receive the final skill evaluation instruments

Kinesthetic (Doing)

1. Students will complete the necessary course paperwork
2. Students will practice situations in which First Responders portray professional attributes
3. Students will indicate if they will require/request assistance during the course or certification process based on the Americans with Disabilities Act. Additionally, students will provide the necessary documentation to support the requirements/request

Instructor Activities

Facilitate discussion and supervise practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation form)

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical:

Evaluate the actions of the First Responder students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 1-2
The Well-Being of the First Responder

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

1-2.1 List possible emotional reactions that the First Responder may experience when faced with trauma, illness, death, and dying (C-1)
1-2.2 Discuss the possible reactions that a family member may exhibit when confronted with death and dying (C-1)
1-2.3 State the steps in the First Responder's approach to the family confronted with death and dying (C-1)
1-2.4 State the possible reactions that the family of the First Responder may exhibit (C-1)
1-2.5 Recognize the signs and symptoms of critical incident stress (C-1)
1-2.6 State possible steps that the First Responder may take to help reduce/alleviate stress (C-1)
1-2.7 Explain the need to determine scene safety (C-2)
1-2.8 Discuss the importance of body substance isolation (BSI) (C-1)
1-2.9 Describe the steps the First Responder should take for personal protection from airborne and bloodborne pathogens (C-1)
1-2.10 List the personal protective equipment necessary for each of the following situations: (C-1)
- Hazardous materials
- Rescue operations
- Violent scenes
- Crime scenes
- Electricity
- Water and ice
- Exposure to bloodborne pathogens
- Exposure to airborne pathogens

Affective Objectives
At the completion of this lesson, the First Responder student will be able to:
1-2.11 Explain the importance for serving as an advocate for the use of appropriate protective equipment (A-3)
1-2.12 Explain the importance of understanding the response to death and dying and communicating effectively with the patient's family
1-2.13 Demonstrate a caring attitude towards any patient with illness or injury who requests emergency medical services (A-3)
1-2.14 Show compassion when caring for the physical and mental needs of patients (A-3)
1-2.15 Participate willingly in the care of all patients (A-3)
1-2.16 Communicate with empathy to patients being cared for, as well as with family members, and friends of the patient (A-3)

Psychomotor Objectives
At the completion of this lesson, the First Responder student will be able to:
1-2.17 Given a scenario with potential infectious exposure, the First Responder will use appropriate personal protective equipment. At the completion of the scenario, the First Responder will properly remove and discard the protective garments (P-1,2)
1-2.18 Given the above scenario, the First Responder will complete disinfection/cleaning and all reporting documentation (P-1,2)

Preparation

Motivation

First Responders encounter many stressful situations when providing emergency medical care to patients. These range from death and terminal illness to major traumatic situations and child abuse. First Responders will treat angry, scared, violent, seriously injured and ill patients and family members. The First Responder is not immune to the personal effects of these situations. First Responders will learn during this lesson what to expect and how to assist the patient, patient's family, the First Responder's family, and other First Responders in dealing with the stress. This lesson discusses methods of talking to friends and family, without violating confidentiality, but as a means of helping them cope with involvement in EMS. Finally, aspects of personal safety will be discussed. It is important to realize this is only a brief overview and will be readdressed with each specific skill or topic. To put this in perspective, remember: A dead or injured First Responder is of little or no use to a patient.

Prerequisites

None

Materials

AV Equipment

Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment

Eye protection, gowns, gloves, masks, forms for reporting exposures

Personnel

Primary Instructor

One First Responder instructor knowledgeable in critical incident stress debriefing, identifying child/elderly abuse, stages of death and dying, and aspects of scene safety.

Assistant Instructor

None required

Recommended Minimum Time to Complete

One hour

Presentation

Declarative (What)

I. Emotional Aspects of Emergency Medical Care
   - A. Stressful situations
     1. Examples of situations that may produce a stress response
        - a. Mass casualties
        - b. Pediatric patients
        - c. Death
        - d. Infant and child trauma
        - e. Amputations
        - f. Violence
        - g. Infant/child/elder/spouse abuse
        - h. Death/injury of co-worker or other public safety personnel
     2. The First Responder will experience personal stress as well as encounter patients and bystanders in severe stress
   - B. Death and dying
     1. Everyone is affected by death (family, First Responder, bystanders)
     2. Response is highly individualized
     3. The grieving process helps people cope with death
     4. You will interact with people in all phases of the grieving process
     5. Familiarity with the normal grieving process may provide insight to reactions
        - a. Denial/disbelief

(1) "Not me"
(2) Defense mechanism creating a buffer between shock of dying and dealing with the illness/injury
(3) Often families will be at the denial stage, which is difficult to deal with

b. Anger
(1) "Why me?"
(2) First Responders may be the target of the anger
(a) Don't take anger or insults personally
(b) Be tolerant
(c) Do not become defensive
(d) Employ good listening and communication skills
(e) Be empathetic

c. Bargaining
(1) "OK, but first let me..."
(2)) Agreement that, in the patient's mind, will postpone the death for a short time

d. Depression
(1) Characterized by sadness and despair
(2) Patient is usually silent and retreats into his own world

e. Acceptance
(1) Does not mean the patient will be happy about dying
(2) The family will usually require more support during this stage than the patient

6. Dealing with the dying patient and family members
a. Patient needs include dignity, respect, sharing, communication, privacy, and control
b. Allow family members to express rage, anger, and despair
c. Listen empathetically
d. Do not falsely reassure
e. Use a gentle tone of voice
f. Let the patient know that everything that can be done to help will be done
g. Use a reassuring touch, if appropriate
h. Comfort the family

C. Stress management
1. Recognize warning signs
a. Irritability to co-workers, family, friends
b. Inability to concentrate
c. Difficulty sleeping/nightmares
d. Anxiety
e. Indecisiveness
f. Guilt
g. Loss of appetite
h. Loss of interest in sexual activities
i. Isolation

j. Loss of interest in work
2. Life-style changes
   a. Helpful for "job burnout"
   b. Change diet
      (1) Reduce sugar, caffeine, and alcohol intake
      (2) Avoid fatty foods
   c. Avoid alcohol
   d. Exercise
   e. Practice relaxation techniques, meditation, visual imagery
3. Balance work, recreation, family, health, etc.
4. EMS personnel and their families and friends responses
   a. Lack of understanding
   b. Fear of separation and being ignored
   c. On-call situations cause stress
   d. Frustration caused by wanting to share
5. Work environment changes
   a. Request work shifts allowing for more time to relax with family and friends
   b. Request a rotation of duty assignment to a less stressful assignment
6. Seek/refer professional help
   a. Mental health professionals
   b. Social workers
   c. Clergy

D. Comprehensive critical incident stress management includes:
1. Pre-incident stress education
2. On-scene peer support
3. One-on-one support
4. Disaster support services
5. Critical Incident Stress Debriefing (CISD)
6. Follow-up services
7. Spouse/family support
8. Community outreach programs
9. Other health and welfare programs such as wellness programs

E. Critical incident stress
1. The normal stress response to abnormal circumstances
2. A system has been developed to assist emergency workers to cope with stressful situations
3. Usually consists of a team of peer counselors and mental health professionals
4. Designed to accelerate the normal recovery process after experiencing a critical incident
5. Techniques
   a. Defusings
      (1) Much shorter, less formal and less structured version of CISD

(2) Used a few hours after the event
(3) Last 30-45 minutes
(4) Allow for initial ventilation
(5) May eliminate the need for a formal debriefing
(6) May enhance the formal debriefing

b. Debriefings
(1) Meeting is held within 24 to 72 hours of a major incident
(2) Open discussion of feelings, fears, and reactions
(3) Not an investigation or interrogation
(4) All information is confidential
(5) CISD leaders and mental health personnel evaluate the information and offer suggestions on overcoming the stress

6. When to access CISD
a. Line of duty death or serious injury
b. Multiple casualty incident
c. Suicide of an emergency worker
d. Serious injury or death of children
e. Events with excessive media interest
f. Victims known to the emergency personnel
g. Event that has unusual impact on the personnel
h. Any disaster

7. How to access the local CISD system

II. Body Substance Isolation (BSI)

A. First Responders must be aware of the risks associated with emergency medical care
1. Barrier devices or ventilation masks should be used when ventilating a patient
2. Personal protective equipment should be utilized as needed or required by the local system
3. First responders are exposed to infectious diseases when treating patients
a. Assess potential for risk
b. Take appropriate precautions

B. OSHA/state regulations regarding BSI

C. Infection Control
1. Techniques to prevent disease transmission
a. Hand-washing/personal hygiene
b. Equipment replacement, cleaning, and disinfection
2. Body substance isolation
a. Eye protection
(1) If prescription eyeglasses are worn, then removable side shields can be applied to them
(2) Goggles are NOT required
b. Gloves (vinyl or latex, synthetic)

(1) Needed for contact with blood or other body fluids
(2) Should be changed between contact with different patients

c. Gloves (utility) - needed for cleaning vehicles and equipment

d. Gowns
(1) Needed for large splash situations such as with childbirth and major trauma
(2) Change of uniform is preferred

e. Masks
(1) Surgical type for possible blood splatter (worn by care provider)
(2) High Efficiency Particulate Air (HEPA) respirator (worn by provider) if patient is suspected of or diagnosed with tuberculosis. HEPA filters are primarily used in enclosed spaces - uncommon for First Responder
(3) Airborne disease - surgical type mask (worn by patient)

f. Requirements and availability of specialty training

3. Recommended immunizations
a. Tetanus prophylaxis
b. Hepatitis B vaccine
c. Tuberculin testing
d. Others
e. Access or availability of immunizations in the community

D. Statutes/regulations reviewing notification and testing in an exposure incident

III. Scene Safety

A. Scene safety
1. Definition - an assessment of the scene and surroundings that will provide valuable information to the First Responder and will help ensure the well-being of the First Responder
2. Personal protection - Is it safe to approach the patient?
a. Crash/rescue scenes
b. Toxic substances - low oxygen areas
c. Crime scenes - potential for violence
d. Unstable surfaces: slope, ice, water
3. Protection of the patient - environmental considerations
4. Protection of bystanders - do not let the bystander become ill or injured
5. If the scene is unsafe, make it safe. Otherwise, do not enter

B. Personal Protection
1. Hazardous materials
a. Identification of potential hazards
(1) Binoculars
(2) Placards
(3) Hazardous Materials, The Emergency Response Handbook, published by the United States Department of Transportation

b. First Responders provide care only after the scene is safe and containment is completed
c. Hazardous materials scenes are controlled by hazardous materials teams
d. Requirements and availability of specialty training
e. Accessing local teams

2. Motor vehicle crashes
   a. Identify and reduce potential life threats
      (1) Electricity
      (2) Fire
      (3) Explosion
      (4) Hazardous materials
      (5) Traffic
   b. Dispatch rescue teams for extensive or heavy rescue
3. Violence
   a. Violent scenes should always be controlled by law enforcement personnel before the First Responder enters the scene and provides patient care
   b. Actions at crime scene
      (1) Do not disturb the scene unless required for medical care
      (2) Maintain a chain of evidence

Application

Procedural (How)

The First Responder will know how to access additional information on hazardous materials and infectious disease exposure, notification and follow-up.

Contextual (When, Where, Why)

1. The First Responder will use the aspects of scene safety and personal protection every day and on every emergency run.
2. While the First Responder may not be a member of a hazardous material or heavy rescue team, this lesson should provide the personal incentive to seek out and attend continuing education programs relative to personal safety during hazardous material incidents, rescue situations, and violent crime scenes.
3. If the First Responder fails to develop personal safety skills, his or her First Responder career may come to a premature end through serious injury or death.
4. The well-being of the First Responder depends upon the ability to recognize that stressful traumatic situations do occur and that the effect of those situations is felt by the patient, family members, and the First Responder. In recognizing this, the First Responder must be aware of internal and external

mechanisms to help himself or herself, the patient, the patient's family, First Responder's family, and other First Responder's deal with reactions to stress.

5. The First Responder will use proper communication techniques when dealing with the grieving process.

Student Activities

Auditory (Hearing)

1. The student should hear the instructor state methods of communicating with patients and family members of terminally ill patients.
2. The student should hear the instructor state methods of communicating with friends and family members of a dead or dying patient**.**

Visual (Seeing)

1. The student should see various audio-visual materials of scenes requiring personal protection.
2. The student should see various audio-visual materials of personal protection clothing worn by hazardous material/rescue teams.
3. The student should see the gown, gloves, masks, and eye protection associated with body substance isolation (BSI)**.**

Kinesthetic (Doing)

1. The student should role play, talking to patients in various stressful/traumatic situations.
2. The student should practice putting on and removing gowns, gloves and eye protection gear.

Instructor Activities

Facilitate discussion and supervise practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content. (Complete remediation form.)

Evaluation

Written

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical

Evaluate the actions of the First Responder students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 1-3
Legal and Ethical Issues

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

1-3.1 Define the First Responder scope of care (C-1)
1-3.2 Discuss the importance of Do Not Resuscitate [DNR] (advance directives) and local or state provisions regarding EMS application (C-1)
1-3.3 Define consent and discuss the methods of obtaining consent (C-1)
1-3.4 Differentiate between expressed and implied consent (C-3)
1-3.5 Explain the role of consent of minors in providing care (C-1)
1-3.6 Discuss the implications for the First Responder in patient refusal of transport (C-1)
1-3.7 Discuss the issues of abandonment, negligence, and battery and their implications to the First Responder (C-1)
1-3.8 State the conditions necessary for the First Responder to have a duty to act (C-1)
1-3.9 Explain the importance, necessity and legality of patient confidentiality (C-1)
1-3.10 List the actions that a First Responder should take to assist in the preservation of a crime scene (C-3)
1-3.11 State the conditions that require a First Responder to notify local law enforcement officials (C-1)
1-3.12 Discuss issues concerning the fundamental components of documentation (C-1)

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

1-3.13 Explain the rationale for the needs, benefits and usage of advance directives (A-3)
1-3.14 Explain the rationale for the concept of varying degrees of DNR (A-3)

Psychomotor Objectives

No psychomotor objectives identified

Preparation

Motivation

Legal and ethical issues are a vital element of the First Responder's daily life. Should a First Responder stop and treat an automobile crash victim when off duty? Should patient information be released to the attorney on the telephone? Can a child with a broken arm be treated even though the parents are not at home and/or only

the child care provider is around? These and many other legal and ethical questions face the First Responder every day. Guidance will be given in this lesson to answer these questions and learn how to make the correct decision when other legal and ethical questions arise.

Prerequisites

None

Materials

AV Equipment

Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment

None required

Personnel

Primary Instructor

One First Responder instructor knowledgeable in the legal aspects and ethical issues that the First Responder will encounter.

Assistant Instructor

None required

Recommended Minimum Time to Complete

One and a half hours

Presentation

Declarative (What)

I. Scope of Care
   A. Legal duties to the patient, medical director, and public
      1. Provide for the well-being of the patient by rendering necessary interventions outlined in the scope of care
      2. Defined by state law
         a. Enhanced by medical oversight through the use of protocols and standing orders
         b. Referenced to the National Standard Curricula
      3. Legal right to function as a First Responder may be contingent upon medical oversight
         a. Telephone/radio communications

b. Approved standing orders/protocols
c. Responsibility to medical oversight

B. Ethical responsibilities
1. Make the physical/emotional needs of the patient a priority
2. Practice of skills to the point of mastery
3. Attend continuing education/refresher programs
4. Review performances, seeking ways to improve response time, patient outcome, communication
5. Honesty in reporting

II. Competence
A. Competence is the ability to understand the questions of the First Responder and to understand the implications of decisions made
B. In order for a First Responder to receive consent or refusal of care, the First Responder should determine competence
C. May not be possible in certain cases
1. Intoxication
2. Drug ingestion
3. Serious injury
4. Mental incompetence

III. Consent
A. A competent patient has the right to make decisions regarding care
B. A patient must consent to emergency medical care
C. The acceptance of care based on the information provided

D. Types of consent
1. Expressed
a. Patient must be competent and of legal age
b. Patient must be informed of the steps of the procedures and all related risks
c. Must be obtained from every responsive, mentally competent adult before rendering emergency medical care
d. Methods of obtaining consent
(1) Identify yourself
(2) Inform the patient of your level of training
(3) Explain the procedures to the patient
(a) Identify the benefits
(b) Identify the risks
2. Implied
a. Consent assumed from the unresponsive patient requiring emergency intervention
b. Based on the assumption that the unresponsive patient would consent to life saving interventions
E. Children and mentally incompetent adults

1. Consent for emergency medical care must be obtained from the parent or legal guardian
   a. Emancipation issues
   b. State regulations regarding age of minors
2. When life threatening situations exist and the parent or legal guardian is not available for consent, emergency medical care should be rendered based on implied consent

IV. Advance Directives/Do Not Resuscitate (DNR) orders
- A. Patient has the right to refuse resuscitative efforts
- B. In general, requires written order from physician
- C. Review state and local legislation/protocols relative to DNR orders and advance directives
- D. When in doubt or when written orders are not present, the First Responder should begin resuscitation efforts

V. Refusals
- A. Competent adult patients have the right to refuse emergency medical care
- B. The First Responder should not make an independent decision regarding the refusal of care
- C. The patient may withdraw from emergency medical care at any time Example: an unresponsive patient regains responsiveness and refuses transport to the hospital.
- D. Refusals must be made by mentally competent adults following the rules of expressed consent
- E. The patient must be informed of and fully understand all the risks and consequences associated with refusal of emergency medical care
- F. When in doubt, err in favor of providing care
- G. The First Responder must ensure that additional EMS resources will evaluate the patient
- H. While awaiting arrival of additional EMS resources the First Responder should:
  1. Try again to persuade the patient to accept care
  2. Determine whether the patient is able to make a rational, informed decision, e.g., is not under the influence of alcohol or other drugs or illness/injury effects
  3. Inform the patient why he/she should accept care and what may happen to him if he does not
  4. Consult medical oversight as directed by local protocol
  5. Consider assistance of law enforcement
  6. Report any assessment findings and emergency medical care provided

VI. Assault/Battery
- A. Not a universal definition
- B. Unlawfully touching a patient without consent

C. Providing emergency medical care when a competent patient does not consent to the emergency medical care

VII. Abandonment - terminating care of the patient without insuring that care will continue at the same level or higher

VIII. Negligence
- A. Deviation from the accepted standard of care resulting in further injury to the patient
- B. Components of negligence
  - 1. Duty
    - a. Duty to Act
      - (1) A contractual or legal obligation must exist
      - (2) Formal - as part of First Responder's occupation, they are required to render emergency medical care
      - (3) Implied
        - (a) Patient calls for assistance and the dispatcher confirms that help is being sent
        - (b) The First Responders are dispatched as part of the EMS response
        - (c) Emergency medical care is begun on a patient
      - (4) "Legal" duty to act
        - (a) Varies according to state law
        - (b) Moral considerations
        - (c) Ethical considerations
      - (5) Specific state regulations regarding duty to act
    - b. Duty to act appropriately
      - (1) Following guidelines for standards of care
      - (2) Acting as another prudent individual would in that situation
  - 2. Breach of the duty
    - a. Failure to act
    - b. Failure to act appropriately
  - 3. Injury/damages were inflicted
    - a. Physical
    - b. Psychological
  - 4. The actions or lack of actions of the First Responder caused the injury/damage

IX. Confidentiality
- A. Confidential information
  - 1. Patient history gained through interview
  - 2. Assessment findings
  - 3. Emergency medical care rendered
- B. Releasing confidential information

1. Release of information requires a written release form signed by the patient
2. Do not release any patient information on request, unless authorized in writing
3. Release is not required when:
   a. Other health care providers need to know information to continue care
   b. State law requires reporting incidents (examples: rape, abuse or gun shot wounds)
   c. Subpoena

X. Special Situations - Medical Identification Insignia
   A. Bracelet, necklace, card
   B. Indicates a medical condition of the patient
      1. Allergies
      2. Diabetes
      3. Epilepsy

XI. Potential Crime Scene/Evidence Preservation
   A. Dispatch should notify police personnel
   B. Responsibility of the First Responder
      1. Emergency medical care of the patient is the First Responder's priority
      2. Do not disturb any item at the scene unless emergency medical care requires it
      3. Observe and document anything unusual at the scene
      4. If possible, do not cut through holes in clothing from gunshot wounds or stabbing

XII. Documentation
   A. Fundamental medical documentation
      1. System/local requirements for documentation
      2. State requirements for documentation
   B. Special reporting situations
   C. Established by state regulations or statutes and may vary from state to state
   D. Commonly required reporting situations
      1. Abuse
         a. Child
         b. Elderly
         c. Spouse
      2. Crime
         a. Wounds sustained or potentially sustained by violent crime
         b. Sexual assault
   E. Infectious disease exposure

Application

Procedural (How)

None identified for this lesson

Contextual (When, Where, Why)

Legal and ethical issues are present in every aspect of patient care. Decisions to treat or not treat a patient, to release or not release information, to report or not report an incident all require a knowledge of current state and local legislation, policy, and protocol. Up-to-date knowledge of the current legal interpretation of issues such as negligence, battery, confidentiality, consent, and refusal of emergency medical care is essential for the First Responder.

Student Activities

Auditory (Hearing)

1. Students should hear actual case law and common law decisions relative to First Responder care.

Visual (Seeing)

1. Students should see actual copies of medical identification insignia, organ donor cards, Do Not Resuscitate orders, and information release forms.
2. Students should see audio-visual materials of definitions of legal terms such as negligence, abandonment, battery, duty to act, consent, confidentiality.

Kinesthetic (Doing)

1. Students should practice making decisions while role playing the various legal and ethical situations that occur in the EMS environment (including consent, abandonment, battery, duty to act, negligence, and confidentiality).
2. Students should role play situations in which DNR orders are in effect.
3. Students should role play situations of patients refusing emergency medical care.

Instructor Activities

Facilitate discussion and supervise practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation form)

Evaluation

Written

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical

Evaluate the actions of the First Responder students during role play, practice, or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 1-4
The Human Body

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

1-4.1 Describe the anatomy and function of the respiratory system. (C-1)
1-4.2 Describe the anatomy and function of the circulatory system. (C-1)
1-4.3 Describe the anatomy and function of the musculoskeletal system. (C-1)
1-4.4 Describe the components and function of the nervous system. (C-1)

Affective Objectives

No affective objectives identified

Psychomotor Objectives

No psychomotor objectives identified

Preparation

Motivation

To perform an adequate patient assessment, the First Responder must be familiar with the normal anatomy of the human body and topographical terminology. This information will provide a solid cornerstone on which the First Responder can build the essentials of quality patient assessment and management.

Prerequisites

None

Materials

AV Equipment

Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires

careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment

Anatomy models (skeleton, respiratory system, airway, heart)

Personnel

Primary Instructor

One First Responder instructor knowledgeable in human body systems and topographical terminology

Assistant Instructor

None required

Recommended Minimum Time to Complete

One hour

Presentation

Declarative (What)

I. Body Systems
- A. The musculoskeletal system
  - 1. The skeletal system
    - a. Function
      - (1) Gives the body shape
      - (2) Protects vital internal organs
    - b. Components
      - (1) Skull - houses and protects the brain
      - (2) Face
      - (3) Spinal Column
      - (4) Thorax
        - (a) Ribs
        - (b) Breastbone (sternum)
          - i) Xiphoid process - lowest portion of the sternum
          - ii) Landmark for determining hand position for chest compressions
      - (5) Pelvis
      - (6) Lower extremities
        - (a) Thigh (femur)
        - (b) Knee cap (patella)
        - (c) Shin (tibia and fibula)
        - (d) Ankle

(e) Feet
(f) Toes
(7) Upper extremities
(a) Shoulder (collar bone and shoulder blade)
(b) Upper arm (humerus)
(c) Forearm (radius and ulna)
(d) Wrist
(e) Hand
(f) Fingers
(8) Joints - where bones connect to other bones

2. The Muscular System
a. Function
(1) Give the body shape.
(2) Protect internal organs.
(3) Provide for movement.
b. Components
(1) Voluntary (skeletal)
(a) Attached to the bones.
(b) Under control of the nervous system and brain. Can be contracted and relaxed by the will of the individual.
(c) Responsible for movement.
(2) Involuntary (smooth)
(a) Found in the walls of the tubular structures of the gastrointestinal tract and urinary system.
(b) Also in the blood vessels and bronchi.
(3) Cardiac
(a) Found only in the heart.
(b) Can tolerate interruption of blood supply for only very short periods.

B. The Respiratory system
1. Function
a. Deliver oxygen to the body
b. Remove carbon dioxide from the body
2. Components/anatomy
a. Nose and mouth
b. Pharynx
(1) Oropharynx
(2) Nasopharynx
c. Epiglottis - a leaf-shaped structure that prevents food and liquid from entering the trachea during swallowing.
d. Windpipe (trachea)
e. Voice box (larynx)
f. Lungs
g. Diaphragm
3. Physiology

a. Diaphragm moves down, chest moves out, drawing air into the lungs (inhalation)
b. Exchange of oxygen and carbon dioxide in the lungs
c. Diaphragm moves up causing air to exit the lungs (exhalation)

4. Infant and child anatomy and physiology considerations
   a. All structures are smaller and more easily obstructed than in adults.
   b. Infants' and children's tongues take up proportionally more space in the mouth than adults.
   c. The trachea is more flexible in infants and children.
   d. The primary cause of cardiac arrest in infants and children is an uncorrected respiratory problem.

C. The Circulatory system
   1. Function
      a. Deliver oxygen and nutrients to the tissues
      b. Remove waste products from the tissues
   2. Components/Anatomy
      a. Heart
         (1) Atrium

D. Right - receives blood from the veins of the body
            (a) Left - receives blood from the lungs
         (1) Ventricle
            (a) Right - pumps blood to the lungs.
            (b) Left - pumps blood to the body.
            (c) Valves prevent back flow of blood.
      a. Arteries
         (1) Carry blood away from the heart to the rest of the body.
         (2) Major arteries
            (a) Carotid
               i) Major artery of the neck.
               ii) Pulsations can be palpated on either side of the neck.
            (b) Femoral
               i) The major artery of the thigh.
               ii) Pulsations can be palpated in the groin area (the crease between the abdomen and thigh).
            (c) Radial
               i) Major artery of the lower arm.
               ii) Pulsations can be palpated at palm side of the wrist thumb-side.
            (d) Brachial
               i) An artery of the upper arm.
               ii) Pulsations can be palpated on the inside of the arm between the elbow and the shoulder.

b. Capillaries
(1) Tiny blood vessels that connect arteries to veins
(2) Found in all parts of the body
(3) Allow for the exchange of oxygen and carbon dioxide
c. Veins - vessels that carry blood back to the heart
d. Blood
(1) Fluid of the circulatory system
(2) Carries oxygen and carbon dioxide
1. Physiology
a. Left ventricle contracts, sending a wave of blood through the arteries.
b. Pulse can be felt anywhere an artery passes near the skin surface and over a bone.
(1) Carotid
(2) Femoral
(3) Radial
(4) Brachial
E. The Nervous system
1. Function
a. Controls the voluntary and involuntary activity of the body.
b. Provides for higher mental function (thought, emotion)
2. Components/Anatomy
a. Central nervous system
(1) Brain - located within the cranium.
(2) Spinal cord - located within the spinal column
b. Peripheral nervous system
(1) Sensory - carries information from the body to the brain and spinal cord.
(2) Motor - carries information from the brain and spinal cord to the body.
F. Skin
1. Function
a. Protects the body from the environment, bacteria and other organisms.
b. Helps regulate the temperature of the body.
c. Prevents dehydration
d. Senses heat, cold, touch, pressure and pain; transmits this information to the brain and spinal cord.

Application

Procedural (How)

None identified for this lesson.

Contextual (When, Where, Why)

It is of utmost importance that the First Responder have a basic level of knowledge concerning the human body. To accurately communicate to other health professionals, the First Responder must be able to identify topographic anatomy.

The First Responder must also understand the basic components of the body systems. Knowledge obtained in this lesson will be extremely beneficial in other modules throughout this curriculum.

Student Activities

Auditory (Hearing)

1. The student should hear the instructor describe the various components of the human body.

Visual (Seeing)

1. The students should see models of the human body.
2. The students should see diagrams of the human body.
3. The students should see a skeleton of the human body.

Kinesthetic (Doing)

1. The students should identify various structures of the human body.
2. The students should demonstrate their ability to identify topographic anatomy.

Instructor Activities

Facilitate discussion and supervise practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content. (Complete remediation form.)

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical:

Evaluate the actions of the First Responder students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 1-5
Lifting and Moving Patients

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

1-5.1 Define body mechanics (C-1)
1-5.2 Discuss the guidelines and safety precautions that need to be followed when lifting a patient (C-1)
1-5.3 Describe the indications for an emergency move (C-1)
1-5.4 Describe the indications for assisting in non-emergency moves (C-1)
1-5.5 Discuss the various devices associated with moving a patient in the out-of-hospital arena (C-1)

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

1-5.6 Explain the rationale for properly lifting and moving patients (A-3)
1-5.7 Explain the rationale for an emergency move (A-3)

Psychomotor Objectives

1-5.8 Demonstrate an emergency move (P-1,2)
1-5.9 Demonstrate a non-emergency move (P-1,2)
1-5.10 Demonstrate the use of equipment utilized to move patient's in the out-of-hospital arena (P-1,2)

Preparation

Motivation:

Many First Responders are injured every year because they attempt to lift or move patients improperly.

Prerequisites:

None

Materials

AV Equipment:

Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment:
None required

Personnel

Primary Instructor:
One First Responder instructor knowledgeable in the principles and techniques of lifting and moving patients

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skills practice. Individuals used as assistant instructors should be knowledgeable about lifting and moving patients.

Recommended Minimum Time to Complete:
One hour

Presentation

Declarative (What)

I. Role of the First Responder
   A. Moving patients that are in immediate danger
   B. Position patients to prevent further injury
   C. Assist other EMS responders in lifting and moving
II. Body Mechanics/Lifting Techniques
   A. Safety precautions
      1. Use legs, not back, to lift
      2. Keep weight as close to body as possible
   B. Guidelines for lifting
      1. Consider weight of patient and the need for help
      2. Know physical ability and limitations
      3. Lift without twisting
      4. Have feet positioned properly
      5. Communicate clearly and frequently with partner and other EMS providers
   C. Work with the EMS system in your area to practice the guidelines and use of equipment

III. Principles of Moving Patients
   A. General considerations
      1. In general, a patient should be moved <u>immediately</u> (emergency move) only when:
         a. There is an immediate danger to the patient if not moved

(1) Fire or danger of fire
(2) Explosives or danger of explosion
(3) Inability to protect the patient from other hazards at the scene
(4) Inability to gain access to other patients in a vehicle who need life-saving care

b. Life-saving care cannot be given because of the patient's location or position, e.g., a cardiac arrest patient sitting in a chair or lying on a bed

2. If there is no threat to life, the patient should be moved by the EMS crew when ready for transportation

B. Emergency moves

1. The greatest danger in moving a patient quickly is the possibility of aggravating a spine injury
2. In an emergency, every effort should be made to pull the patient in the direction of the long axis of the body to provide as much protection to the spine as possible
3. It is impossible to remove a patient from a vehicle quickly and at the same time provide much protection to the spine
4. If the patient is on the floor or ground, he can be moved by:
   a. Pulling on the patient's clothing in the neck and shoulder area
   b. Putting the patient on a blanket and dragging the blanket
   c. Putting the First Responder's hands under the patient's armpits (from the back), grasping the patient's forearms and dragging the patient
   d. Never pull the patient's head away from the neck and shoulders

C. Non-urgent moves - performed with other responders

1. Direct ground lift (no suspected spine injury)
   a. Two or three rescuers line up on one side of the patient
   b. Rescuers kneel on one knee (preferably the same for all rescuers)
   c. The patient's arms are placed on his/her chest if possible
   d. The rescuer at the head places one arm under the patient's neck and shoulder and cradles the patient's head. The rescuer places his/her other arm under the patient's lower back
   e. The second rescuer places one arm under the patient's knees and one arm above the buttocks
   f. If a third rescuer is available, he should place both arms under the waist and the other two rescuers slide their arms either up to the mid-back or down to the buttocks as appropriate
   g. On signal, the rescuers lift the patient to their knees and roll the patient in toward their chests
   h. On signal, the rescuers stand and move the patient to the stretcher
   i. To lower the patient, the steps are reversed
2. Extremity lift (no suspected extremity injuries)

a. One rescuer kneels at the patient's head and one kneels at the patient's side by the knees
b. The rescuer at the head places one hand under each of the patient's shoulders while the rescuer at the foot grasps the patient's wrists
c. The rescuer at the head slips his/her hands under the patient's arms and grasps the patient's wrists
d. The rescuer at the patient's foot slips his/her hands under the patient's knees
e. Both rescuers move up to a crouching position
f. The rescuers stand up simultaneously and move with the patient to a stretcher

3. Transfer of supine patient from bed to stretcher
   a. Direct carry
      (1) Position cot perpendicular to bed with head end of cot at foot of bed
      (2) Prepare cot by unbuckling straps and removing other items
      (3) Both rescuers stand between bed and stretcher, facing patient
      (4) First rescuer slides arm under patient's neck and cups patient's shoulder
      (5) Second rescuer slides hand under hip and lifts slightly
      (6) First rescuer slides other arm under patient's back
      (7) Second rescuer places arms underneath hips and calves
      (8) Rescuers slide patient to edge of bed
      (9) Patient is lifted/curled toward the rescuers' chests
      (10) Rescuers rotate and place patient gently onto cot
   b. Draw sheet method
      (1) Loosen bottom sheet of bed
      (2) Position cot next to bed
      (3) Prepare cot: Adjust height, lower rails, unbuckle straps
      (4) Reach across cot and grasp sheet firmly at patient's head, chest, hips and knees
      (5) Slide patient gently onto cot

D. Patient positioning
   1. An unresponsive patient without trauma should be moved into the recovery position by rolling the patient onto his/her side (preferably the left)
   2. A patient with trauma should not be moved until additional EMS resources can evaluate and stabilize the patient
   3. A patient experiencing pain or discomfort or difficulty breathing should be allowed to assume a position of comfort

4. A patient who is nauseated or vomiting should be allowed to remain in a position of comfort; however, the First Responder should be positioned appropriately to manage the airway

IV. Equipment familiarity
- A. The First Responder should be familiar with equipment used in the local EMS system
- B. Typical equipment used in EMS Systems
  1. Stretchers/cots
  2. Portable stretcher
  3. Stair chair
  4. Backboards
     - a. Long
     - b. Short
  5. Scoop or orthopedic stretcher

Application

Procedural (How)

1. Show examples of situations where emergency moves are appropriate.
2. Demonstrate emergency moves.
3. Demonstrate positioning patients with different conditions.
   - A. Unresponsiveness
   - B. Chest pain/discomfort or difficulty breathing
   - C. Patients who are vomiting or nauseated

Contextual (When, Where, Why)

When to move a patient is determined by both the patient's condition and the environment in which he/she is found. The determination of how to move the patient is made by considering the complaint, the severity of the condition and the location.

Student Activities

Auditory (Hearing)

1. The student should hear instructor explanations of body mechanics.
2. The student should hear the principles of lifting and moving.
3. The student should hear the indications for emergency moves.

Visual (Seeing)

1. The student should see situations where emergency moves are appropriate.
2. The student should see emergency moves.
3. The student should see non-emergency moves.
4. The student should see various lifting and moving devices.
5. The student should see patients with different conditions positioned properly.
   - A. Unresponsiveness

B. Chest pain/discomfort or difficulty breathing
C. Patients who are vomiting or nauseated

6. Students should see patients moved with various lifting and moving devices.

Kinesthetic (Doing)

1. The student should practice determining whether emergency, urgent, or non-emergency moves are appropriate.
2. The student should practice emergency moves.
3. The student should practice non-emergency moves.
4. The student should practice positioning patients with different conditions.
   A. Unresponsiveness
   B Chest pain/discomfort or difficulty breathing
   C Patients who are vomiting or nauseated
5. The student should practice using equipment for lifting and moving patients.

Instructor Activities

Facilitate discussion and supervise practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation form)

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical:

Evaluate the actions of the First Responder students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 1-6
Evaluation: Preparatory

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective

1 = Knowledge level
2 = Application level
3 = Problem solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the cognitive objectives of Lesson 1-1: Introduction to EMS System
- Demonstrate competence in the cognitive objectives of Lesson 1-2: Well-Being of the First Responder
- Demonstrate competence in the cognitive objectives of Lesson 1-3: Legal and Ethical Issues
- Demonstrate competence in the cognitive objectives of Lesson 1-4: The Human Body
- Demonstrate competence in the cognitive objectives of Lesson 1-5: Lifting and Moving Patients

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the affective objectives of Lesson 1-1: Introduction to EMS System
- Demonstrate competence in the affective objectives of Lesson 1-2: Well-Being of the First Responder
- Demonstrate competence in the affective objectives of Lesson 1-3: Legal and Ethical Issues
- Demonstrate competence in the affective objectives of Lesson 1-4: The Human Body
- Demonstrate competence in the affective objectives of Lesson 1-5: Lifting and Moving Patients

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the psychomotor objectives of Lesson 1-1: Introduction to EMS System
- Demonstrate competence in the psychomotor objectives of Lesson 1-2: Well-Being of the First Responder
- Demonstrate competence in the psychomotor objectives of Lesson 1-3: Legal and Ethical Issues
- Demonstrate competence in the psychomotor objectives of Lesson 1-4: The Human Body
- Demonstrate competence in the psychomotor objectives of Lesson 1-5: Lifting and Moving Patients

Preparation

Motivation:

Evaluation of the student's attainment of the cognitive and affective knowledge and psychomotor skills is an essential component of the First Responder's educational process. The modules are presented in a "building block" format. Once the students have demonstrated their knowledge and proficiency, the next lesson can be built upon that knowledge. This evaluation will help to identify students or groups of students having difficulty with a particular area. This is an opportunity for the instructor to evaluate their performance and make appropriate modifications to delivery of the material.

Prerequisites:

Completion of Lessons 1-1 through 1-5

Materials

AV Equipment:

Typically none required

EMS Equipment:

The EMS equipment used in the Lessons of Module 1

Personnel

Primary Instructor:

One proctor for the written evaluation

Assistant Instructor:

One practical skills examiner for each 6 students

Recommended Minimum Time to Complete:

One hour

Presentation

Declarative (What)

I. Purpose of the evaluation

II. Items to be evaluated

III. Feedback from evaluation

Application

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lessons 1-1 > 1-5

2. Practical evaluation stations based on the psychomotor objectives of Lessons 1-1 > 1-5

Contextual (When, Where and Why)

The evaluation is the final lesson in this module and is designed to bring closure to the module and to assure that students are prepared to proceed to the next module.

This modular evaluation is done to determine the effectiveness of the presentation of materials and how well students have retained the material. This is an opportunity for the students to make necessary adjustments in study habits or for the instructor to adjust the manner in which material is presented.

Instructor Activities

Supervise student evaluation
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Remediation

Identify students and/or groups of students who are having difficulty with this subject content. Complete a remediation sheet from the instructor's course guide. If students continue to have difficulty demonstrating knowledge of the cognitive and affective objectives, or demonstrating proficiency in psychomotor skills, the students should be counseled, remediated and re-evaluated. If improvements in cognitive, affective or psychomotor skills are not achieved, consideration regarding the ability of the student to progress in the program should be taken into account.

Module 2: Airway
Lesson 2-1 Airway

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

2-1.1 Name and label the major structures of the respiratory system on a diagram (C-1)
2-1.2 List the signs of inadequate breathing (C-1)
2-1.3 Describe the steps in the head-tilt chin-lift (C-1)
2-1.4 Relate mechanism of injury to opening the airway (C-3)
2-1.5 Describe the steps in the jaw thrust (C-1)
2-1.6 State the importance of having a suction unit ready for immediate use when providing emergency medical care (C-1)
2-1.7 Describe the techniques of suctioning (C-1)
2-1.8 Describe how to ventilate a patient with a resuscitation mask or barrier device (C-1)
2-1.9 Describe how ventilating an infant or child is different from an adult (C-1)
2-1.10 List the steps in providing mouth-to-mouth and mouth-to-stoma ventilation (C-1)
2-1.11 Describe how to measure and insert an oropharyngeal (oral) airway (C-1)
2-1.12 Describe how to measure and insert a nasopharyngeal (nasal) airway (C-1)
2-1.13 Describe how to clear a foreign body airway obstruction in a responsive adult (C-1)
2-1.14 Describe how to clear a foreign body airway obstruction in a responsive child with complete obstruction or partial airway obstruction and poor air exchange (C-1)
2-1.15 Describe how to clear a foreign body airway obstruction in a responsive infant with complete obstruction or partial airway obstruction and poor air exchange (C-1)
2-1.16 Describe how to clear a foreign body airway obstruction in a unresponsive adult (C-1)
2-1.17 Describe how to clear a foreign body airway obstruction in a unresponsive child (C-1)
2-1.18 Describe how to clear a foreign body airway obstruction in a unresponsive infant (C-1)

As per Idaho requirements:

At the completion of this lesson, the First Responder student will be able to:

- Define the components of an oxygen delivery system

- Identify a nonrebreather face mask and state the oxygen flow requirements needed for its use

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

2-1.19 Explain why basic life support ventilation and airway protective skills take priority over most other basic life support skills (A-3)

2-1.20 Demonstrate a caring attitude towards patients with airway problems who request emergency medical services (A-3)

2-1.21 Place the interests of the patient with airway problems as the foremost consideration when making any and all patient care decisions (A-3)

2-1.22 Communicate with empathy to patients with airway problems, as well as with family members and friends of the patient (A-3)

As per Idaho requirements:

- Explain the rationale for providing adequate oxygenation through high inspired oxygen concentrations to patients

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

2-1.23 Demonstrate the steps in the head-tilt chin-lift (P-1,2)

2-1.24 Demonstrate the steps in the jaw thrust (P-1,2)

2-1.25 Demonstrate the techniques of suctioning (P-1,2)

2-1.26 Demonstrate the steps in mouth-to-mouth ventilation with body substance isolation (barrier shields) (P-1,2)

2-1.27 Demonstrate how to use a resuscitation mask to ventilate a patient (P-1,2)

2-1.28 Demonstrate how to ventilate a patient with a stoma (P-1,2)

2-1.29 Demonstrate how to measure and insert an oropharyngeal (oral) airway (P-1,2)

2-1.30 Demonstrate how to measure and insert a nasopharyngeal (nasal) airway (P-1,2)

2-1.31 Demonstrate how to ventilate infant and child patients (P-1,2)

2-1.32 Demonstrate how to clear a foreign body airway obstruction in a responsive adult (C-1)

2-1.33 Demonstrate how to clear a foreign body airway obstruction in a responsive child (C-1)

2-1.34 Demonstrate how to clear a foreign body airway obstruction in a responsive infant (C-1)

2-1.35 Demonstrate how to clear a foreign body airway obstruction in an unresponsive adult (C-1)

2-1.36 Demonstrate how to clear a foreign body airway obstruction in an unresponsive child (C-1)

2-1.37 Demonstrate how to clear a foreign body airway obstruction in an unresponsive infant (C-1)

As per Idaho requirements:

- Demonstrate the correct operation of oxygen tanks and regulators

- Demonstrate the use of a nonrebreather face mask and state the oxygen flow requirements needed for its use
- Demonstrate oxygen administration for the infant and child patient

Preparation

Motivation:

A patient without an airway has no chance of survival. It is important for the First Responder to be able to manage an airway with and without airway adjuncts.

As per Idaho requirements:

A patient without good oxygen is a compromised patient.

Prerequisites:

Preparatory

As per Idaho requirements:

BLS and Preparatory

Materials

AV Equipment:

Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

As per Idaho requirements:

Utilize various audio-visual materials relating to oxygen administration. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure the objectives of the curriculum are met.

EMS Equipment:

Resuscitation mask, barrier devices, oral airways, nasal airways, suction units (manual and battery powered), suction catheters, tongue blade, and lubricant

As per Idaho requirements:

Oxygen tank, regulator, nonrebreather mask

Personnel

Primary Instructor:

One First Responder instructor knowledgeable in airway management

As per Idaho requirements:
One First Responder instructor knowledgeable in oxygen administration

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in airway techniques and management.

***As per Idaho requirements*:**
The instructor-to-student ration should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in oxygen administration.

Recommended Minimum Time to Complete:
Three hours

As per Idaho requirements:
Additional hour

Presentation

Declarative (What)

I. The Respiratory system
   A. Function
      1. Deliver oxygen to the body
      2. Remove carbon dioxide from the body
   B. Components/anatomy
      1. Nose and mouth
      2. Pharynx
         a. Oropharynx
         b. Nasopharynx
      3. Epiglottis - a leaf-shaped structure that prevents food and liquid from entering the trachea during swallowing
      4. Windpipe (trachea)
      5. Voice box (larynx)
      6. Lungs
      7. Diaphragm
   C. Physiology
      1. Diaphragm moves down, chest moves out, drawing air into the lungs (inhalation)
      2. Exchange of oxygen and carbon dioxide in the lungs
      3. Diaphragm moves up causing air to exit the lungs (exhalation)
   D. Infant and child anatomy and physiology considerations
      1. All structures are smaller and more easily obstructed than in adults

2. Infants' and children's tongues take up proportionally more space in the mouth than adults
3. The trachea is more flexible in infants and children
4. The primary cause of cardiac arrest in infants and children is an uncorrected respiratory problem

II. Opening the Airway

A. One of the most important actions that the first responder can perform is opening the airway of an unresponsive patient
   1. An unresponsive patient looses muscle tone, and the soft tissue and base of the tongue may occlude the airway
   2. The tongue is the most common cause of airway obstruction in an unresponsive patient
   3. Since the tongue is attached to the lower jaw, forward displacement of the jaw will lift the tongue away from the back of the throat

B. Head-tilt chin-lift
   1. The method of choice for opening the airway in uninjured patients
   2. Research has indicated that the head-tilt chin-lift consistently provides the optimal airway
   3. Used for uninjured, unresponsive patients
   4. Technique
   5. Place your hand that is closer to the patient's head on his/her forehead, apply firm backward pressure to tilt the head back
      a. Place the fingers of your hand that is closer to the patient's feet on the bony part of his/her chin
      b. Lift the chin forward and support the jaw, helping to tilt the head back
   6. Precautions
      a. Finger must not press deeply into the soft tissues of the chin as this may lead to airway obstruction
      b. The thumb should not be used for lifting the chin
      c. The mouth must not be closed

C. Jaw thrust without head tilt
   1. This technique is an alternative method of opening the airway
   2. Effective but fatiguing and technically difficult
   3. This is the safest approach to opening the airway in the patient with a suspected spinal injury
   4. Indications
      a. Used for trauma patients
      b. Used for unresponsive patients
   5. Technique
      a. Grasp the angles of the patient's lower jaw
      b. Lift with both hands displacing the mandible forward
      c. If the lips close, open the lower lip with your gloved thumb

III. Inspect the Airway

A. An unresponsive patient may have fluid or solids in the airway that may compromise the airway
B. Responsive patients who cannot protect their airway should also have their airways inspected
C. Indications
   1. All unresponsive patients
   2. Responsive patients who may not be able to protect their own airways.
D. Technique
   1. Open the patient's mouth with a gloved hand
   2. Look inside the airway
      a. Clear (patent)
      b. Blocked
         (1) Fluid
         (2) Solids
         (3) Teeth, including dentures

IV. Airway Adjuncts
A. Oropharyngeal (oral) airways
   1. Oropharyngeal (OP) airways may be used to assist in maintaining an open airway in an unresponsive patient without a gag reflex
   2. Patients with a gag reflex may vomit when this airway is placed
   3. Technique
      a. Select the proper size: Measure from the corner of the patient's lips to the tip of the earlobe or angle of jaw
      b. Open the patient's mouth
      c. Insert the airway upside down, with the tip facing toward the roof of the patient's mouth
      d. Advance the airway gently until resistance is encountered
      e. Turn the airway 180 degrees so that it comes to rest with the flange on the patient's teeth
   4. Alternate technique - For use with infants and children
      a. Select the proper size: Measure from the corner of the patient's lips to the bottom of the earlobe or angle of jaw
      b. Open the patient's mouth
      c. Use a tongue blade to press tongue down and away
      d. Insert airway in upright (anatomic) position
B. Nasopharyngeal (nasal) airways
   1. Nasopharyngeal (NP) airways are less likely to stimulate vomiting
   2. May be used on patients who are responsive but need assistance keeping the tongue from obstructing the airway
   3. Even though the tube is lubricated, this is a painful stimulus
   4. Technique
      a. Select the proper size: Measure from the tip of the nose to the tip of the patient's ear
      b. Also consider diameter of airway in the nostril. NP airways should not be so large that it causes blanching of the nostril

c. Lubricate the airway with a water soluble lubricant
d. Insert it posteriorly. Bevel should be toward the base of the nostril or toward the septum
e. If the airway cannot be inserted into one nostril, try the other nostril
f. Do not force this airway

V. Clearing the Compromised Airway and Maintaining the Open Airway
A. There are three ways that First Responders can clear or maintain an airway
B. These techniques are not sequential; the situation will dictate which technique is most appropriate
C. There are three methods of clearing the airway
1. The Recovery Position
a. The first step in maintaining an open airway
b. Uses gravity to keep the airway clear
c. The airway is likely to remain open in this position
d. Unrecognized airway obstructions are less likely to occur
e. Monitor the patient until additional EMS resources arrive and assume care
f. Allows fluids to drain from the mouth and not into the airway
g. Used in unresponsive, uninjured patient, breathing adequately
h. Technique
(1) Raise the patient's left arm above his/her head and cross the patient's right leg over the left
(2) Support the face and grasp the patient's right shoulder
(3) Roll the patient toward you onto his or her left side
(4) Place the patient's right hand under the side of his/her face
(5) The patient's head, torso, and shoulders should move simultaneously without twisting
(6) The head should be in as close to a midline position as possible
2. Finger sweeps
a. Uses your fingers to remove solid objects from the airway
b. Use body substance isolation
c. If foreign material or vomit is visible in the mouth, it should be removed
d. Do this quickly
e. Blind finger sweeps should not be performed in infants or children
f. Technique
(1) If uninjured, roll the patient to their side
(2) Liquids or semi-liquids should be wiped out with the index and middle fingers covered with a cloth
(3) Solid objects should be removed with a hooked index finger
3. Suctioning
a. Uses negative pressure to keep the airway clear
b. A patient needs to be suctioned immediately when a gurgling sound is heard during breathing or ventilation

c. Suction is only indicated if the recovery position and finger sweeps are ineffective in draining the airway or trauma is suspected and the patient cannot be placed in the recovery position
d. Purpose is to remove blood, other liquids, and food particles from the airway
e. Most suction units are inadequate for removing solid objects like teeth, foreign bodies, and food
f. Portable suction equipment is available and may be manually or electrically operated
g. Principles
    (1) Observe body substance isolation
    (2) A hard or rigid "tonsil sucker" or "tonsil tip" is preferred to suction the mouth of an unresponsive patient
    (3) The tip of the suction catheter should not be inserted deeper than the base of the tongue
    (4) Because air and oxygen are removed during suction, it is recommended that you suction for no more than 15 seconds
        (a) Decrease the time in infants and children
        (b) Infants 5 seconds
        (c) Children 10 seconds
    (5) Watch for decreased heart rate in infants
    (6) If a decrease in heart rate is noted, stop suctioning and provide ventilation

VI. Determining Presence of Breathing
A. Immediately after opening the airway, check for breathing
B. As you determine the presence of breathing, look at the effort or work of breathing
    1. Breathing should be effortless
    2. Observe the chest for adequate rise and fall
    3. Look for accessory muscle use
C. Techniques
    1. Responsive patients
        a. Ask: "Can you speak?", "Are you choking?"
        b. The ability to talk or make vocal sounds indicates that air is moving past the vocal cords
    2. Unresponsive patients
        a. Maintain an open airway
        b. Place your ear close to the patients mouth and nose
        c. Assess for three to five seconds
            (1) Look for the rise and fall of the chest
            (2) Listen for air escaping during exhalation
            (3) Feel for air coming from the mouth and nose
        d. The first responder may observe the rise and fall of the chest even if an airway obstruction is present, but will not hear or feel air movement

e. Some reflex gasping (agonal respirations) may be present just after cardiac arrest. This should not be confused for breathing

D. Inadequate breathing is characterized by the following:
1. Rate
   a. Less than 8 in adults
   b. Less than 10 in children
   c. Less than 20 in infants
2. Inadequate chest wall motion
3. Cyanosis
4. Mental status changes
5. Increased effort
6. Gasping
7. Grunting
8. Slow heart rate associated with slow respirations

As per Idaho requirements:

Oxygen

A. Oxygen cylinder
1. Different sizes
   a. D cylinder has 350 liters
   b. E cylinder has 625 liters
   c. M cylinder has 3,000 liters
   d. G cylinder has 5.300 liters
   e. H cylinder has 6,900 liters
2. Need to handle carefully since their contents are under pressure
3. Tanks should be positioned to prevent falling and blows to the valve-gauge assembly and secured during transport

B. Pressure regulators
1. Full tank approximately 2000 psi. Varies with ambient temperature
2. Dry oxygen not harmful in short term; humidifier needed only for patient on oxygen for a long time. Not generally needed for prehospital care

C. Operating procedures
1. Remove protective seal
2. Quickly open, then shut, the valve
3. Attach regulator-flowmeter to tank
4. Attach oxygen device to flowmeter
5. Open flowmeter to desired setting
6. Apply oxygen device to patient
7. When complete, remove device from patient, then turn off valve and remove all pressure from regulator

D. Equipment for oxygen delivery
1. Nonrebreather
   a. Preferred method of giving oxygen to prehospital patients
   b. Up to 90% oxygen can be delivered
   c. Nonrebreather bag must be full before mask is placed on patient

d. Flow rate should be adjusted so that when patient inhales, bag does not collapse (15 LPM)
e. Patients who are cyanotic, cool, clammy or short of breath need oxygen. Concerns about the dangers of giving too much oxygen to patents with history of chronic obstructive pulmonary disease and infants and children have not been shown to be valid in the prehospital setting. Patients with chronic obstructive pulmonary disease and infants and children who require oxygen should receive high concentration oxygen
f. Masks come in different sizes for adult, children and infants. Be sure to select the correct size mask

2. Nasal cannula - rarely the best method for delivering adequate oxygen to the prehospital patient. Should be used only when patients will not tolerate a nonrebreather mask, despite coaching from the First Responder

VII. Ventilation
- A. Once the airway has been assured, and breathing is assessed, breathing for the patient may be necessary
- B. If the patient is not breathing they only have the oxygen in their lungs and their bloodstream remaining
- C. In order to prevent death, the First Responder must ventilate the patient
- D. There are many techniques for ventilation--the first responder must be competent in the following three techniques of ventilation

VIII. Techniques of Ventilation
- A. The techniques of ventilation in order of preference are
  1. Mouth to mask
  2. Mouth to barrier device
  3. Mouth to mouth
- B. Mouth to mask ventilation
  1. Most effective First Responder technique
  2. Most masks have a one way valve to divert the patient's exhalations
  3. Masks should be transparent so that vomiting can be recognized
  4. Mouth to mask ventilation is very effective since you use two hands to seal around the mask
  5. Technique
     - a. Place the mask around the patient's mouth and nose using the bridge of the nose as a guide for correct position. Mask position is critical since the wrong size mask will leak
     - b. Seal the mask by placing the heal and thumb of each hand along the border of the mask and compressing firmly around the margin
     - c. Place your index fingers on the portion of the mask that covers the chin
     - d. Place your other fingers along the bony margin of the jaw and lift the jaw while performing a head tilt
     - e. Give one slow (1½-2 second) breath of sufficient volume to make the chest rise (usually 800-1200 ml in the average adult)
     - f. Too great a volume of air and too fast an inspiratory time are likely to allow air to enter the stomach

g. Adequate ventilation is determined by:
   (a) Observing the chest rise and fall
   (b) Hearing and feeling the air escape during exhalation
h. Continue at the proper rate
   (1) 10-12 breaths per minute for adults with 1½ - 2 second ventilation time
   (2) 20 breaths per minute for children and infants with 1 - 1½ second inspiratory time
   (3) 40 breaths per minute for newborns with 1 to 1½ second inspiratory time
i. If the ventilation cannot be delivered, consider the possibility of an airway obstruction

C. Mouth-to-barrier device
1. A barrier device should be used if available
2. Some rescuers may prefer to use a barrier device during ventilation
3. Barrier devices have no exhalation valve and air often leaks around the shield
4. Barrier devices should have low resistance to delivered ventilation
5. Technique
   a. If ventilation is necessary, position the device over the patient's mouth and nose ensuring an adequate seal
   b. Keep the airway open by the head tilt-chin lift or jaw thrust maneuver
   c. Give one slow (1½-2 second) breath of sufficient volume to make the chest rise (usually 800-1200 ml in the average adult)
   d. Too great a volume of air and too fast an inspiratory time are likely to allow air to enter the stomach
   e. Adequate ventilation is determined by:
      (1) Observing the chest rise and fall
      (2) Hearing and feeling the air escape during exhalation
   f. Continue at the proper rate
      (1) 10-12 breaths per minute for adults, with 1½ - 2 second inspiratory time
      (2) 20 breaths per minute for children and infants, with 1-1½ second inspiratory time
      (3) 40 breaths per minute for newborns, with 1 to 1½ second inspiratory time
   g. If the ventilation cannot be delivered, consider the possibility of an airway obstruction

D. Mouth to mouth
1. The First Responder must be aware of the risks of performing mouth to mouth ventilation
2. Quick, effective method of delivering oxygen to the non-breathing patient
3. Ventilating a patient with your exhaled breath while making mouth to mouth contact
4. The rescuer's exhaled air contains enough oxygen to support life

5. Barrier devices and face masks with one way valves are available for use during ventilation
6. First Responders should always use these devices rather than the mouth to mouth technique
7. Mouth to mask/barrier device does not replace training in mouth to mouth ventilation
8. The decision to perform mouth to mouth ventilation by First Responders is a personal choice. Whenever possible, a barrier device or mouth to mask should be used
9. Technique
    a. Keep the airway open by the head tilt-chin lift or jaw thrust maneuver
    b. Gently squeeze the patient's nostrils closed with the thumb and index finger of your hand on the patient's forehead
    c. When ventilating an infants, cover the infants mouth and nose
    d. Take a deep breath and seal your lips to the patient's mouth, creating an airtight seal
    e. Give one slow (1½-2 second) breath of sufficient volume to make the chest rise
        (1) Too great a volume of air and too fast an inspiratory time are likely to allow air to enter the stomach
        (2) Adequate ventilation is determined by:
            (a) Observing the chest rise and fall
            (b) Hearing and feeling the air escape during exhalation
    f. Continue at the proper rate
        (1) 12 breaths per minute for adults
        (2) 20 breaths per minute for children and infants
        (3) 40 breaths per minute for newborns
    g. If the ventilation cannot be delivered, consider the possibility of an airway obstruction

IX. Foreign Body Airway Obstructions (FBAO) in the Adult
A. Can be the cause of cardiac arrest
    1. Choking/food
    2. Bleeding into the airway
    3. Vomit
B. Can be the result of cardiac arrest
    1. Vomiting
    2. Dentures
    3. Trauma
    4. Tongue
C. Types of airway obstructions
    1. Partial
        a. Good air exchange
            (1) Patient remains responsive
            (2) May be able to speak
            (3) Can cough forcefully

(4) May be wheezing between coughs
b. Poor air exchange
(1) Weak ineffective cough
(2) High-pitched noise on inhalation
(3) Increased respiratory difficulty
(4) Possibly cyanotic
2. Complete
a. No air can be exchanged
b. Patient will be unable to speak, breathe, or cough
c. Patient may clutch the neck with thumb and fingers--the universal distress signal
d. Death will follow rapidly if prompt action is not taken
D. Management of the Obstructed Airway
Refer to the American Heart Association Guidelines for the Management of Foreign Body Airway Obstruction - SEE APPENDICES B and C.
1. Partial with good air exchange
2. Partial with poor air exchange or complete airway obstructions

X. Foreign Body Airway Obstructions in infants and Children
A. More than 90% of childhood deaths from FBAO are in children below the age of 5
B. 65% of the patients are infants
C. FBAO in children is caused by
1. Toys
2. Balloons
3. Small objects
4. Food (hot dogs, round candies, nuts, and grapes)
D. Should be suspected in infants and children who demonstrate a sudden onset of respiratory distress associated with coughing, gagging, stridor, or wheezing
E. Airway obstructions may be caused by infection
F. The First Responder should only attempt to clear a complete or partial airway obstruction with poor air exchange
G. Blind finger sweeps are not done in infants or children
H. Management of foreign body airway obstructions in infants
Refer to current American Heart Association Guidelines for Foreign Body Airway Obstruction
I. Management of foreign body airway obstructions in children
Refer to current American Heart Association Guidelines for Foreign Body Airway Obstruction

XI. Special Considerations
A. Patients with stomas
1. Persons who have undergone a laryngectomy (surgical removal of the voice box) have a permanent opening (stoma) that connects the trachea to the front of the neck
2. When such person requires rescue breathing, mouth to stoma ventilations are required

3. Technique
   a. Make an airtight seal around the stoma. Use a barrier device, if possible
   b. Deliver a ventilation slowly, allowing the chest to rise
   c. After delivering the ventilation, allow time for adequate exhalation
4. Some patients have partial laryngectomies. If, upon ventilating stoma, air escapes from the mouth or nose, close the mouth and pinch the nostrils

B. Infant and child patients
1. Place an infant's head in neutral position, but extend a little past neutral if the patient is a child
2. Avoid excessive hyperextension of the head
3. An oral airway may be considered when other procedures fail to provide a clear airway
4. Gastric distension is more common in children
5. Gastric distension may significantly impair ventilation attempts in children

C. Dental appliances
1. Dentures - ordinarily dentures should be left in place
2. Partial dentures (plates) may become dislodged during an emergency. Leave in place, but be prepared to remove it if it becomes dislodged

Application

Procedural (How)

1. Show diagrams of the airway and respiratory system of adults, children, and infants
2. Show examples of inadequate breathing
3. Demonstrate the head-tilt chin-lift method of opening the airway
4. Demonstrate the jaw thrust method of opening the airway
5. Demonstrate mouth-to-mouth ventilation of a patient
6. Demonstrate ventilation of a patient with a resuscitation mask and barrier device
7. Demonstrate insertion of an oropharyngeal (oral) airway
8. Demonstrate insertion of a nasopharyngeal (nasal) airway
9. Demonstrate how to check a suction unit
10. Demonstrate the techniques of suctioning
11. Demonstrate ventilation of a patient with a stoma
12. Demonstrate ventilation of an infant or child patient

As per Idaho requirements:

1. Demonstrate use of a nonrebreather mask
2. Demonstrate correct operation of oxygen tanks and regulators

Contextual (When, Where, Why)

Every patient must have a patent airway to survive. When the airway is obstructed, the First Responder must clear it as soon as possible using the methods described in this lesson.

Once the airway has been opened, the First Responder must determine if breathing is adequate. Patients with inadequate breathing must be ventilated using mouth-to-mouth or mouth-to-mask.

As per Idaho requirements:

If the patient has adequate breathing, the First Responder must decide if oxygen is indicated. If oxygen is necessary, the First Responder must select the appropriate device and follow the procedure for delivery.

Student Activities

Auditory (Hearing)

1. The student should hear abnormal airway sounds such as gurgling, snoring, stridor, and expiratory grunting
2. The student should hear a resuscitation mask/barrier device used on a patient
3. The student should hear suction units being operated

Visual (Seeing)

1. The student should see audio-visual materials of the airway and respiratory system
2. The student should see normal breathing in other students
3. The student should see audio-visual materials of abnormal breathing
4. The student should see audio-visual aids or materials of patients with stomas
5. The student should see different kinds of oral and nasal airways
6. The student should see different devices for ventilating patients (resuscitation masks, barrier devices)
7. The student should see different kinds of suction units
8. The student should see audio-visual materials of various dental appliances

As per Idaho requirements:

1. The student should see different kinds of oxygen tanks, regulators, and flowmeters
2. The student should see nonrebreather masks

Kinesthetic (Doing)

1. The student should practice evaluating breathing for adequacy
2. The student should practice opening the airway with the head-tilt chin-lift maneuver
3. The student should practice opening the airway with the jaw thrust
4. The student should practice mouth-to-mouth ventilation
5. The student should practice ventilation of a patient with a resuscitation mask

6. The student should practice insertion of an oropharyngeal (oral) airway (adult, child, and infant) with and without tongue blade
7. The student should practice insertion of a nasopharyngeal (nasal) airway
8. The student should practice checking a suction unit
9. The student should practice suctioning
10. The student should practice ventilating a patient with a stoma
11. The student should practice ventilating an infant or child patient

As per Idaho requirements:

1. The student should practice correct operation using a nonrebreather mask
2. The student should practice correct operation of oxygen tanks, regulators, and flowmeters

Instructor Activities

Facilitate discussion and supervise practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content. (Complete remediation form)

As per Idaho requirements:

- Same

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

As per Idaho requirements:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

As per Idaho requirements:

Evaluate the actions of the First Responder students during role play, practice or other stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

As per Idaho requirements:

Identify students or groups of students who are having difficulty with this subject content
Complete remediation sheet from the instructor's course guide

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 2-2 Practical Lab: Airway

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate the cognitive objectives of Lesson 2-1: Airway

Affective Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate the affective objectives of Lesson 2-1: Airway

Psychomotor Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate the steps in the head-tilt chin-lift (P-1,2)
- Demonstrate the steps in the jaw thrust (P-1,2)
- Demonstrate the techniques of suctioning (P-1,2)
- Demonstrate the steps in mouth-to-mouth ventilation with body substance isolation (barrier shields) (P-1,2)
- Demonstrate how to use a resuscitation mask to ventilate a patient (P-1,2)
- Demonstrate how to ventilate a patient with a stoma (P-1,2)
- Demonstrate how to measure and insert an oropharyngeal (oral) airway (P-1,2)
- Demonstrate how to measure and insert a nasopharyngeal (nasal) airway (P-1,2)
- Demonstrate how to ventilate infant and child patients (P-1,2)
- Demonstrate how to clear a foreign body airway obstruction in a responsive adult (C-1)
- Demonstrate how to clear a foreign body airway obstruction in a responsive child (C-1)
- Demonstrate how to clear a foreign body airway obstruction in a responsive infant (C-1)
- Demonstrate how to clear a foreign body airway obstruction in an unresponsive adult (C-1)
- Demonstrate how to clear a foreign body airway obstruction in an unresponsive child (C-1)
- Demonstrate how to clear a foreign body airway obstruction in an unresponsive infant (C-1)

Preparation

Motivation:

The practical lesson is designed to allow the students additional time to perfect skills. It is of utmost importance that the students demonstrate proficiency of the skill, cognitive knowledge of the steps to perform a skill, and a healthy attitude towards performing that skill on a patient.

This is an opportunity for the instructor and assistant instructors to praise progress and redirect the students toward appropriate psychomotor skills. The material from all preceding lessons and basic life support should be incorporated into these practical skill sessions.

Prerequisites:
Preparatory

Materials

AV Equipment:
Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment:
Ventilation manikins, resuscitation mask, barrier devices, oral airways, nasal airways, suction units (manual and battery powered), suction catheters, tongue blade, and lubricant

Personnel

Primary Instructor:
One First Responder instructor knowledgeable in airway management

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in airway techniques and management.

Recommended Minimum Time to Complete:
Four hours

Presentation

Declarative (What) None identified for this lesson

Application

Procedural (How)

Instructor should demonstrate the procedural activities from Lesson 2-1: Airway

Contextual (When, Where, Why)

Instructor should review contextual information from Lesson 2-1: Airway

Student Activities

Auditory (Hearing)

1. The student should hear abnormal airway sounds such as gurgling, snoring, stridor, and expiratory grunting
2. The student should hear a resuscitation mask/barrier device being used on a patient with an obstructed airway
3. The student should hear suction units being operated

Visual (Seeing)

1. The student should see audio-visual materials of the airway and respiratory system
2. The student should see normal breathing in other students
3. The student should see audio-visual materials of abnormal breathing
4. The student should see audio-visual materials of patients with stomas
5. The student should see different kinds of oral and nasal airways
6. The student should see different devices for ventilating patients (resuscitation masks, barrier devices)
7. The student should see different kinds of suction units
8. The student should see audio-visual materials of various dental appliances

Kinesthetic (Doing)

1. The student should practice evaluating breathing for adequacy
2. The student should practice opening the airway with the head-tilt chin-lift maneuver
3. The student should practice opening the airway with a jaw thrust
4. The student should practice mouth-to-mouth ventilation
5. The student should practice ventilation of a patient with a resuscitation mask
6. The student should practice insertion of an oropharyngeal (oral) airway (adult, child, and infant) with and without a tongue blade
7. The student should practice insertion of a nasopharyngeal (nasal) airway
8. The student should practice checking a suction unit
9. The student should practice suctioning
10. The student should practice ventilation of a patient with a stoma
11. The student should practice ventilation of an infant or child patient

Instructor Activities

Supervise student practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Evaluation

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skills stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

Lesson 2-3 Evaluation: Airway

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem solving level

Cognitive Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate competence in the cognitive objectives of Lesson 2-1: Airway

Affective Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate competence in the affective objectives of Lesson 2-1: Airway

Psychomotor Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate competence in the psychomotor objectives of Lesson 2-1: Airway

Preparation

Motivation:
Evaluation of the student's attainment of the cognitive and affective knowledge and psychomotor skills is an essential component of the First Responder's educational process. The modules are presented in a "building block" format. Once the students have demonstrated their knowledge and proficiency, the next lesson should be built upon that knowledge. This evaluation will help to identify students or groups of students having difficulty with a particular area. This is an opportunity for the instructor to evaluate their performance and make appropriate modifications to the delivery of material.

Prerequisites:
Completion of Lessons 2-1 through 2-2

Material

AV Equipment:
Typically none required

EMS Equipment:
The EMS equipment used in the Lessons of Module 2

Personnel

Primary Instructor:
One proctor for the written evaluation

Assistant Instructor:
One practical skills examiner for each 6 students

Recommended Minimum Time to Complete:
One hour

Presentation

Declarative (What)

I. Purpose of the evaluation

II. Items to be evaluated

III. Feedback from evaluation

Application

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lessons 2-1 > 2-2

2. Practical evaluation stations based on the psychomotor objectives of Lessons 2-1 > 2-2

Contextual (When, Where and Why)

The evaluation is the final lesson in this module and is designed to bring closure to the module and to assure that students are prepared to proceed to the next module.

This modular evaluation is done to determine the effectiveness of the presentation of materials and how well students have retained the material. This is an opportunity for the students to make necessary adjustments in study habits or for the instructor to adjust the manner in which material is presented.

Instructor Activities

Supervise student evaluation
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Remediation

Identify students and/or groups of students who are having difficulty with this subject content. Complete a remediation sheet from the instructor's course guide. If students continue to have difficulty demonstrating knowledge of the cognitive and affective objectives, or demonstrating proficiency in psychomotor skills, the students should be counseled, remediated and re-evaluated. If improvements in cognitive, affective or psychomotor skills are not achieved, consideration regarding the ability of the student to progress in the program should be taken into account.

Module 3: Patient Assessment
Lesson 3-1 Patient Assessment

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective

1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

3-1.1 Discuss the components of scene size-up (C-1)
3-1.2 Describe common hazards found at the scene of a trauma and a medical patient (C-1)
3-1.3 Determine if the scene is safe to enter (C-2)
3-1.4 Discuss common mechanisms of injury/nature of illness (C-1)
3-1.5 Discuss the reason for identifying the total number of patients at the scene (C-1)
3-1.6 Explain the reason for identifying the need for additional help or assistance (C-1)
3-1.7 Summarize the reasons for forming a general impression of the patient (C-1)
3-1.8 Discuss methods of assessing mental status (C-1)
3-1.9 Differentiate between assessing mental status in the adult, child, and infant patient. (C-3)
3-1.10 Describe methods used for assessing if a patient is breathing (C-1)
3-1.11 Differentiate between a patient with adequate and inadequate breathing (C-3)
3-1.12 Describe the methods used to assess circulation (C-1)
3-1.13 Differentiate between obtaining a pulse in an adult, child, and infant patient (C-3)
3-1.14 Discuss the need for assessing the patient for external bleeding (C-1)
3-1.15 Explain the reason for prioritizing a patient for care and transport (C-1)
3-1.16 Discuss the components of the physical exam (C-1)
3-1.17 State the areas of the body that are evaluated during the physical exam (C-1)
3-1.18 Explain what additional questioning may be asked during the physical exam (C-1)
3-1.19 Explain the components of the SAMPLE history (C-1)
3-1.20 Discuss the components of the on-going assessment (C-1)
3-1.21 Describe the information included in the First Responder "hand-off" report (C-1)

As per Idaho Requirements:

At the completion of this lesson, the *Idaho* First Responder student will be able to:

- Describe the methods to assess blood pressure
- Define systolic pressure
- Define diastolic pressure
- Explain the difference between auscultation and palpation for obtaining a blood pressure

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

3-1.22 Explain the rationale for crew members to evaluate scene safety prior to entering (A-2)
3-1.23 Serve as a model for others by explaining how patient situations affect your evaluation of the mechanism of injury or illness (A-2)
3-1.24 Explain the importance of forming a general impression of the patient (A-1)
3-1.25 Explain the value of an initial assessment (A-2)
3-1.26 Explain the value of questioning the patient and family (A-2)
3-1.27 Explain the value of the physical exam (A-2)
3-1.28 Explain the value of an on-going assessment (A-2)
3-1.29 Explain the rationale for the feelings that these patients might be experiencing (A-3)
3-1.30 Demonstrate a caring attitude when performing patient assessments (A-3)
3-1.31 Place the interests of the patient with as the foremost consideration when making any and all patient care decisions during patient assessment (A-3)
3-1.32 Communicate with empathy during patient assessment to patients as well as with family members and friends of the patient (A-3)

As per Idaho Requirements:
At the completion of this lesson, the *Idaho* First Responder student will be able to:

- Explain the value of performing the baseline vital signs.

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

3-1.33 Demonstrate the ability to differentiate various scenarios and identify potential hazards (P-1)
3-1.34 Demonstrate the techniques for assessing mental status (P-1,2)
3-1.35 Demonstrate the techniques for assessing the airway (P-1,2)
3-1.36 Demonstrate the techniques for assessing if the patient is breathing (P-1,2)
3-1.37 Demonstrate the techniques for assessing if the patient has a pulse (P-1,2)
3-1.38 Demonstrate the techniques for assessing the patient for external bleeding (P-1,2)
3-1.39 Demonstrate the techniques for assessing the patient's skin color, temperature, condition, and capillary refill (infants and children only) (P-1,2)
3-1.40 Demonstrate questioning a patient to obtain a SAMPLE history
3-1.41 Demonstrate the skills involved in performing the physical exam (P-1,2)
3-1.42 Demonstrate the on-going assessment (P-1,2)

As per Idaho Requirements:
At the completion of this lesson, the *Idaho* First Responder student will be able to:

- Demonstrate the skills associated with obtaining blood pressure

Preparation

Motivation:

Size-up is the first aspect of patient assessment. It begins as the First Responder approaches the scene. During this phase, the First Responder surveys the scene to determine if there are any threats that may cause an injury to the First Responder, bystanders, or may cause additional injury to the patient.

The initial assessment, physical exam, and patient/family questioning are used to identify patients who require critical interventions.

As per Idaho Requirements:

A First Responder *must* be able to accurately assess and record a patient's blood pressure. This must be done to record trends in the patient's condition.

Prerequisites:

Preparatory, Airway Modules

As per Idaho Requirements:

BLS (Basic Life Support)

Materials

AV Equipment:

Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

As per Idaho Requirements:

Utilize various audio-visual materials relating to blood pressure. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials could be edited to assure the objectives of the curriculum are met.

EMS Equipment:

Exam gloves, airway management equipment, suction

As per Idaho Requirements:

Exam gloves, stethoscope, blood pressure cuffs (adult, infant and child) (1:6)

Personnel

Primary Instructor:

One First Responder instructor, knowledgeable in patient assessment

As per Idaho Requirements:

One First Responder instructor knowledgeable in patient assessment

Assistant Instructor:

The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable about patient assessment.

As per Idaho Requirements:

The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in assessing blood pressure

Recommended Minimum Time to Complete:

Three hours

As per Idaho Requirements:

Additional hour (blood pressure)

Presentation

Declarative (What)

I. Scene Size-up
   - A. Body substance isolation review
     1. Eye protection if necessary
     2. Gloves if necessary
     3. Gown if necessary
     4. Mask if necessary
   - B. Scene Safety
     1. Is the scene safe?
        - a. Definition - an assessment of the scene and surroundings that will provide valuable information to the First Responder and will help ensure the well-being of the First Responder.
        - b. Personal protection - Is it safe to approach the patient?
          - (1) Crash/rescue scenes
          - (2) Toxic substances - low oxygen areas
          - (3) Crime scenes - potential for violence
          - (4) Unstable surfaces: slope, ice, water
        - c. Protection of the patient - environmental considerations
        - d. Protection of bystanders - do not let the bystander become ill or injured
        - e. If the scene is unsafe, make it safe. Otherwise, do not enter

C. What is the mechanism of injury or nature of illness?
   1. Mechanism of injury - an evaluation of the forces that caused an injury. May be beneficial in determining the presence of internal injuries
   2. Trauma - Mechanism of injury - determine from the patient, family or bystanders and inspect the scene. What is the mechanism of injury?
   3. Medical - Nature of illness - determine from the patient, family, or bystanders why EMS was called

D. How many patients are involved?
   1. Obtain additional help prior to contact with patients: law enforcement, fire, rescue, ALS, utilities
   2. First Responder is less likely to call for help if involved in patient care
   3. Begin triage

E. Are additional EMS resources en route?

II. Initial Assessment

A. The initial assessment is completed to assist the First Responder in identifying immediate threats to life

B. General Impression of the patient
   1. Based on the First Responder's immediate assessment of the environment and the patient's chief complaint
   2. Determine if ill (medical) or injured (trauma)
      a. Is this trauma?
      b. Is this medical?
      c. Is it unclear? - Treat as trauma
   3. Approximate age
   4. Sex

C. Assess responsiveness - stabilize spine if trauma
   1. Begin by speaking to the patient
      a. State your name
      b. Tell the patient that you are a first responder
      c. Explain that you are here to help
   2. Levels of responsiveness
      a. Alert
      b. Verbal - responds to verbal stimuli
      c. Painful - responds to painful stimuli
      d. Unresponsive
   3. Infant and child considerations
      a. Infants and younger children will not respond to methods used to assess responsiveness in adults
      b. Assess interaction with environment and parents

D. Assess the patient's airway status
   1. Responsive patient
      a. Can the patient speak?
      b. Is the airway patent?

2. Unresponsive patient
   a. Open the airway
      (1) Medical - Head tilt-chin lift
      (2) Trauma - Jaw-thrust without head-tilt
   b. Inspect the airway
   c. Clear the airway as needed

E. Assess the patient's breathing
1. Look at the work of breathing
2. Responsive - Can the patient speak?
3. Unresponsive
   a. Maintain an open airway
   b. Look, listen, and feel for presence of ventilations
4. Ventilate as needed

F. Assess the patient's circulation
1. Assess the patient's pulse
   a. Adults
      (1) Responsive - assess radial pulse
      (2) Unresponsive - assess carotid pulse
   b. Infants - assess brachial pulse
   c. Children
      (1) Unresponsive - assess carotid or femoral
      (2) Responsive - assess brachial or radial
2. Assess if major bleeding is present. If bleeding is present, control bleeding as described in *Module 5: Illness and Injury, Lesson 5-2 Bleeding and Soft Tissue Injuries*
3. Assess the patient's skin color and temperature

G. Update responding EMS unit with a brief Radio Report
1. Age and sex
2. Chief complaint
3. Responsiveness
4. Airway and breathing status
5. Circulation status
6. Determine estimated time of arrival of additional EMS resources

III. First Responder Physical Exam

A. The First Responder physical exam is designed to locate and begin the initial management of the signs and symptoms of illness or injury

B. The First Responder should complete a physical exam on all patients following the initial assessment

C. Patient and injury specific, e.g., cut finger would not require the complete physical exam

D. As the First Responder locates signs and symptoms of illness or injury, there may be specific questions that the First Responder should ask. This material is described in specific lessons on Illness and Injury

E. Perform a physical examination on the patient to gather additional information
1. Inspect (look) and palpate (feel) for the following signs of injury

a. Deformities
b. Open injuries
c. Tenderness
d. Swelling
e. The mnemonic D-O-T-S is helpful in remembering the signs of injury

2. Briefly assess the following body areas in a logical manner
   a. Head
   b. Neck
   c. Chest
   d. Abdomen
   e. Pelvis
   f. All four extremities

IV. Obtain History from the Patient or Family

A. Medical identification tags may be beneficial in assessing allergies, medications, or past medical history

B. For medical patients the S-A-M-P-L-E history may be completed prior to the physical exam.

C. S-A-M-P-L-E History

1. **S**igns/Symptoms
   a. "Why did you call EMS today?"
   b. Sign - Any medical or trauma condition displayed by the patient and identifiable by the First Responder
      (1) Hearing - respiratory distress
      (2) Seeing - bleeding
      (3) Feeling - skin temperature
   c. Symptom - any condition described by the patient
      (1) Difficulty breathing
      (2) Headache
      (3) Pain
2. **A**llergies
   a. "Are you allergic to anything?"
   b. Medications
   c. Environmental allergies
   d. Food
3. **M**edications
   a. "Do you take any prescription or non-prescription medicine?"
   b. Prescription
      (1) Current
      (2) Recent
   c. Non-prescription
      (1) Current
      (2) Recent
4. **P**ertinent Past History
   a. "Are you seeing a Doctor for anything?"
   b. "Have you ever been in the hospital?"

c. Medical
d. Surgical
e. Trauma

5. **L**ast oral intake: Solid or liquid
   a. "When was the last time you had anything to eat or drink?"
   b. Time
   c. Quantity
6. **E**vents leading to the injury or illness
   a. "What were you doing when this happened?"
   b. "Where there any other associated symptoms?"

As per Idaho Requirements:

Blood Pressure

1. Assess systolic and diastolic pressures
   a. Systolic blood pressure is the first distinct sound of blood flowing through the artery as the pressure in the blood pressure cuff is released. This is a measurement of the pressure exerted against the walls of the arteries during contraction of the heart.
   b. Diastolic blood pressure is the point during deflation of the blood pressure cuff at which sounds of the pulse beat disappear. It represents the pressure exerted against the walls of the arteries while the left ventricle is at rest.
   c. There are two methods of obtaining blood pressure
      (1) Auscultation: In this case the First Responder will listen for the systolic and diastolic sounds
      (2) Palpation: In certain situations, the systolic blood pressure may be measured by feeling for return of pulse with deflation of the cuff
2. Blood pressure should be measured in all patients older than 3 years of age
3. The general assessment of the infant or child patient, such as sick appearing in respiratory distress, or unresponsive, is more valuable than vital sign numbers

V. On-Going Assessment
   A. While awaiting additional EMS resources, the First Responder should continue to assess the patient
   B. The initial assessment should be repeated
      1. Repeat every 15 minutes for a stable patient
      2. Repeat every 5 minutes for an unstable patient
      3. Reassess mental status
      4. Maintain an open airway
      5. Monitor breathing for rate and quality
      6. Reassess pulse for rate and quality
      7. Monitor skin color, temperature, and condition
   C. Repeat First Responder physical exam as needed
   D. Check interventions to ensure that they are effective
   E. In addition to the continued assessments, the First Responder should calm and reassure the patient
   F. Upon arrival of EMS, the First Responder should provide a "hand-off" report
      1. Age and sex
      2. Chief complaint

3. Responsiveness
4. Airway and breathing status
5. Circulation status
6. Physical findings
7. SAMPLE history
8. Interventions provided

Application

Procedural (How)

The assessment is completed by visually inspecting, physically palpating and in some cases listening, and verbally communicating with the patient and family. The assessment is an input/output process, where assessment findings are the input and emergency medical care is the output.

1. Review of scene size-up
2. Review of the initial assessment
3. Students should be shown audio-visual materials of various trauma scenes to evaluate the mechanism of injury
4. Demonstrate an initial patient assessment
5. Review airway patency and breathing assessment
6. Review methods of assessing mental status
7. Demonstrate obtaining radial, carotid, and brachial pulses
8. Demonstrate the First Responder physical exam
9. Demonstrate an on-going assessment
10. Demonstrate a hand-off report

As per Idaho Requirements:

Demonstrate the skill of assessing blood pressure

a. Auscultation
b. Palpation

Contextual (When, Where, Why)

Size-up represents the very beginning of patient assessment. It requires the First Responder to evaluate several aspects concerning the situation in a very short period of time. It is essential for assuring the safety of the First Responder and the patient. This information may be obtained as part of dispatch, but should always be reassessed upon arrival at the scene. For some situations, size-up is an on-going process. As additional information is obtained, modification is made to the size-up of the patient and the situation overall.

Perform initial assessment on all patients after assuring scene and personal safety. If the scene is safe and the environment permits, perform the assessment before moving the patient. The initial assessment is a rapid means of understanding patient condition and priorities of care.

The physical exam and questioning the patient and family are done after the initial assessment and correction of immediate threats to life. During this process, obtain additional information regarding the patient's condition.

The on-going assessment is completed on all patients while awaiting additional EMS resources. This assessment allows the First Responder to calm and reassure the patient, and at the same time, to reassess the ABCs.

As per Idaho Requirements:

Accurate measurement and recording of vital signs over a period of time may indicate a trend in the patient's condition and be valuable in the continuum of care. There are a number of interventions that the First Responder can perform; however, these skills cannot be performed without an accurate set of baseline vital signs.

Student Activities

Auditory (Hearing)

1. The student should hear simulations of various safe and unsafe scenes
2. Students should hear recordings of various patient conditions to listen for clues concerning the general impression
3. Students should hear normal and abnormal airway noises
4. Students should hear breathing
5. Students should hear information input from a simulated responsive patient or from others regarding signs and symptoms for patients that are unresponsive
6. The students should hear the components of scene size-up
7. The students should hear the components of the initial assessment
8. The students should hear the components of the physical exam
9. The students should hear the components of the on-going assessment

As per Idaho Requirements:

Students should hear with a stethoscope and assess systolic and diastolic pressure

Visual (Seeing)

1. The student should see simulations of various safe and unsafe scenes
2. The student should see the flow charts from Appendix F
3. Students should see audio-visual materials of various injuries
4. Students should see the inspection and palpation of programmed patients for various injuries and patterns of injury
5. Students should see landmarks for palpation and inspection

Kinesthetic (Doing)

1. The student should role play actions to take at various safe and unsafe scenes
2. The student should use the flow chart from Appendix F

3. Students should practice establishing mental status on programmed patients (fellow students) with various mental statuses
4. Students should practice airway opening techniques on manikins and each other
5. Students should practice assessing breathing
6. Students should practice assessing pulses
7. Students should practice assessing for major bleeding
8. Students should practice recording assessment findings
9. Students should practice inspecting and palpating
10. Students should practice scene size-up
11. Students should practice the initial assessment
12. Students should practice the physical exam
13. Students should practice questioning the patient to obtain a SAMPLE history
14. Students should practice the on-going assessment

As per Idaho Requirements:

Students should practice methods for determining blood pressure by auscultation and palpation

Instructor Activities

Facilitate discussion and supervise practice
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (Complete remediation form)

As per Idaho Requirements:

· Supervise student practice
· Reinforce student progress in cognitive, affective, and psychomotor domains

- Redirect student having difficulty with content (complete remediation forms)

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson

As per Idaho Requirements:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

As per Idaho Requirements:
Same

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 3-2
Practical Lab: Patient Assessment

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate the cognitive objectives of Lesson 3-1: Patient Assessment

Affective Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate the affective objectives of Lesson 3-1: Patient Assessment.

Psychomotor Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate the ability to differentiate various scenarios and identify potential hazards (P-1)
- Demonstrate the techniques for assessing mental status (P-1,2)
- Demonstrate the techniques for assessing the airway (P-1,2)
- Demonstrate the techniques for assessing if the patient is breathing (P-1,2)
- Demonstrate the techniques for assessing if the patient has a pulse (P-1,2)
- Demonstrate the techniques for assessing the patient for external bleeding (P-1,2)
- Demonstrate the techniques for assessing the patient's skin color, temperature, condition, and capillary refill (infants and children only) (P-1,2)
- Demonstrate questioning a patient to obtain a SAMPLE history
- Demonstrate the skills involved in performing the physical exam (P-1,2)
- Demonstrate the on-going assessment (P-1,2)

Preparation

Motivation:

The practical lesson is designed to allow the students additional time to perfect skills. It is of utmost importance that the students demonstrate proficiency of the skill, cognitive knowledge of the steps to perform a skill, and a healthy attitude towards performing that skill on a patient.

This is an opportunity for the instructor and assistant instructors to praise progress and redirect the students toward appropriate psychomotor skills. The material from

all preceding lessons and basic life support should be incorporated into these practical skill sessions.

Prerequisites:
Preparatory Module, Airway Module

Materials

AV Equipment:
Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment:
Exam gloves, airway management equipment, suction

Personnel

Primary Instructor:
One First Responder Instructor knowledgeable in patient assessment

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in airway techniques and management.

Recommended Minimum Time to Complete:
Three hours

Presentation

Declarative (What)
None identified for this lesson

Application

Procedural (How)
Instructor should demonstrate the procedural activities from Lesson 3-1: Patient Assessment

Contextual (When, Where, Why)
Instructor should review contextual information from Lesson 3-1:

Patient Assessment

Student Activities

Auditory (Hearing)

1. The student should hear simulations of various safe and unsafe scenes
2. Students should hear recordings of various patient situations to listen for clues concerning the general impression
3. Students should hear normal and abnormal airway noises
4. Students should hear breathing
5. Students should hear information input from a responsive simulated patient or from others regarding signs and symptoms for patients that are unresponsive
6. Students should hear the presence of breath sounds on fellow students

Visual (Seeing)

1. The student should see simulations of various safe and unsafe scenes
2. The student should see the flow chart from Appendix F
3. Students should see audio-visual aids or materials of various injuries
4. Students should see the inspection and palpation of programmed patients for various injuries and patterns of injury
5. Students should see landmarks for palpation and inspection
6. Students should see the flow chart from Appendix F

Kinesthetic (Doing)

1. The student should role play the actions to take at various safe and unsafe scenes
2. The student should use the flow chart from Appendix F
3. Students should practice establishing mental status on programmed patients (fellow students) with various altered mental statuses
4. Students should practice airway opening techniques on manikins and each other
5. Students should practice assessing breathing
6. Students should practice assessing pulses
7. Students should practice assessing for major bleeding
8. Students should practice recording assessment findings
9. Students should practice inspecting and palpating

Instructor Activities

Supervise student practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Evaluation

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skills stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

Lesson 3-3
Evaluation: Patient Assessment

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem solving level

Cognitive Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate competence in the cognitive objectives of Lesson 3-1: Patient Assessment

Affective Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate competence in the affective objectives of Lesson 3-1: Patient Assessment

Psychomotor Objectives
At the completion of this lesson, the First Responder student will be able to:
- Demonstrate competence in the psychomotor objectives of Lesson 3-1: Patient Assessment

Preparation

Motivation:
Evaluation of the student's attainment of the cognitive and affective knowledge and psychomotor skills is an essential component of the First Responder's educational process. The modules are presented in a "building block" format. Once the students have demonstrated their knowledge and proficiency, the next lesson should be built upon that knowledge. This evaluation will help to identify students or groups of students having difficulty with a particular area. This is an opportunity for the instructor to evaluate their performance and make appropriate modifications to the delivery of material.

Prerequisites:
Completion of Lessons 3-1 through 3-2

Material

AV Equipment:
Typically none required

EMS Equipment:
The EMS equipment used in the Lessons of Module 3

Personnel

Primary Instructor:
One proctor for the written evaluation

Assistant Instructor:
One practical skills examiner for each 6 students

Recommended Minimum Time to Complete:
One hour

Presentation

Declarative (What)

I. Purpose of the evaluation

II. Items to be evaluated

III. Feedback from evaluation

Application

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lessons 3-1 > 3-2

2. Practical evaluation stations based on the psychomotor objectives of Lessons 3-1 > 3-2

Contextual (When, Where and Why)

The evaluation is the final lesson in this module and is designed to bring closure to the module and to assure that students are prepared to proceed to the next module.

This modular evaluation is done to determine the effectiveness of the presentation of materials and how well students have retained the material. This is an opportunity for the students to make necessary adjustments in study habits or for the instructor to adjust the manner in which material is presented.

Instructor Activities

Supervise student evaluation
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Remediation

Identify students and/or groups of students who are having difficulty with this subject content. Complete a remediation sheet from the instructor's course guide. If students continue to have difficulty demonstrating knowledge of the cognitive and affective objectives or demonstrating proficiency in psychomotor skills, the students should be counseled, remediated, and re-evaluated. If improvements in cognitive, affective, or psychomotor skills are not achieved, consideration regarding the ability of the student to progress in the program should be taken into account.

Module 4: Circulation
Lesson 4-1 Circulation

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

4-1.1 List the reasons for the heart to stop beating (C-1)
4-1.2 Define the components of cardiopulmonary resuscitation (C-1)
4-1.3 Describe each link in the chain of survival and how it relates to the EMS system (C-2)
4-1.4 List the steps of one-rescuer adult CPR (C-1)
4-1.5 Describe the technique of external chest compressions on an adult patient (C-1)
4-1.6 Describe the technique of external chest compressions on an infant (C-1)
4-1.7 Describe the technique of external chest compressions on a child (C-1)
4-1.8 Explain when the First Responder is able to stop CPR (C-2)
4-1.9 List the steps of two-rescuer adult CPR (C-1)
4-1.10 List the steps of infant CPR (C-1)
4-1.11 List the steps of child CPR (C-1)

As per Idaho requirements:

At the completion of this lesson, the *Idaho* First Responder student will be able to:

- List the indications for automated external defibrillation
- List the contraindications for automated external defibrillation
- Define the role of FR in the emergency cardiac care system
- Explain the impact of age and weight on defibrillation
- Discuss the fundamentals of early defibrillation
- Explain the rationale for early defibrillation
- Explain that not all chest pain patients result in cardiac arrest and do not need to be attached to an automated external defibrillator
- Explain the importance of prehospital ACLS intervention if it is available
- Explain the importance of urgent transport to a facility with Advanced Cardiac Life Support if it is not available in the prehospital setting
- Discuss the various types of automated external defibrillators
- Differentiate between the fully automated and the semi-automated defibrillator

- Discuss the procedures that must be taken into consideration for standard operations of the various types of automated external defibrillators
- State the reasons for assuring that the patient is pulseless and apneic when using the automated external defibrillator
- Discuss the circumstances which may result in inappropriate shocks
- Explain the considerations for interruption of CPR, when using the automated external defibrillator
- Discuss the advantages and disadvantages of automated external defibrillator
- Summarize the speed of operation of automated external defibrillation.

- Discuss the special considerations for rhythm monitoring
- Discuss the use of remote defibrillation through adhesive pads
- List the steps in the operation of automated external defibrillator
- Discuss the standard of care that should be used to provide care to a patient with persistent ventricular fibrillation and no available ACLS
- Differentiate between the single rescuer and multi-rescuer care with an automated external defibrillator
- Explain the reason for pulses not being checked between shocks with an automated external defibrillator.
- Discuss the importance of coordinating ACLS trained providers with personnel using automated external defibrillator
- Discuss the importance of post-resuscitation care
- List the components of post-resuscitation care
- Explain the importance of frequent practice with the automated external defibrillator
- Discuss the need to complete the Automated Defibrillator: Operator's Shift Checklist
- Discuss the role of the American Heart Association (AHA) in the use of automated external defibrillation
- Explain the role medical direction plays in the use of automated external defibrillation
- State the reasons why a case review should be completed following the use of the automated external defibrillator
- Discuss the components that should be included in a case review
- Discuss the goal of quality improvement in automated external defibrillation
- Define the function of all controls on an automated external defibrillator, and describe event documentation and battery defibrillator maintenance

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

4-1.12 Respond to the feelings that the family of a patient may be having during a cardiac event (A-3)

4-1.13 Demonstrate a caring attitude towards patients with cardiac events who request emergency medical services (A-3)

4-1.14 Place the interests of the patient with a cardiac event as the foremost consideration when making any and all patient care decisions (A-3)

4-1.15 Communicate with empathy with family members and friends of the patient with a cardiac event (A-3)

As per Idaho requirements:

At the completion of this lesson, the *Idaho* First Responder student will be able to:

· Defend the reasons for obtaining initial training in automated external defibrillation and the importance of continuing education

· Defend the reason for maintenance of automated external defibrillator

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

4-1.16 Demonstrate the proper technique of chest compressions on an adult (P-1,2)

4-1.17 Demonstrate the proper technique of chest compressions on a child

(P-1,2)
4-1.18 Demonstrate the proper technique of chest compressions on an infant (P-1,2)
4-1.19 Demonstrate the steps of adult one rescuer CPR (P-1,2)
4-1.20 Demonstrate the steps of adult two rescuer CPR (P-1,2)
4-1.21 Demonstrate child CPR (P-1,2)
4-1.22 Demonstrate infant CPR (P-1,2)

As per Idaho requirements:

At the completion of this lesson, the *Idaho* First Responder student will be able to:

· Demonstrate the assessment and emergency medical care of a patient experiencing chest pain/discomfort

· Demonstrate the application and operation of the automated external defibrillator
· Demonstrate the maintenance of an automated external defibrillator

· Demonstrate the assessment and documentation of patient response to the automated external defibrillator

· Demonstrate the skills necessary to complete the Automated Defibrillator: *Operator's Shift Checklist*

Preparation

Motivation:

Over 600,000 patients die each year from cardiovascular diseases; half of these deaths occur outside the hospital, with sudden death (collapse) being the first sign of cardiac disease in 50% of the cases

Cardiopulmonary Resuscitation (CPR), which will be covered in this module, is the major determinant of survival in cardiac arrest

As per Idaho requirements:

Over 600,000 patients die each year from cardiovascular diseases; half of those occur outside the hospital, with sudden death (collapse) being the first sign of cardiac disease in 50%. Rapid defibrillation, which will be covered in this module, is the major determinant of survival in cardiac arrest caused by ventricular fibrillation.

Prerequisites:

Preparatory, Airway, Patient Assessment Modules

As per Idaho requirements:

BLS, Preparatory, Airway and Patient Assessment

Materials

AV Equipment:

Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

As per Idaho requirements:

Utilize various audio-visual materials relating to cardiac emergencies. The continuous design and development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to assure meeting the objectives of the curriculum.

EMS Equipment:

CPR manikins, artificial ventilation manikins, suction equipment, airway management equipment, eye protection, exam gloves

As per Idaho requirements:

CPR manikins, artificial ventilation manikins, automated external defibrillator, NTG training bottle, defibrillation manikin

Personnel

Primary Instructor:
One instructor knowledgeable in basic life support.

As per Idaho requirements:

One advanced-level provider with knowledge and experience in out-of-hospital cardiac resuscitation

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skills practice.
Individuals used as assistants should be knowledgeable in basic life support skills.

As per Idaho requirements:

- The instructor-to-student ratio should be 1:6 for psychomotor skill practice
- Individuals used as assistant instructors should be knowledgeable in cardiac emergencies

Recommended Minimum Time to Complete:
Two hours

As per Idaho requirements:
Time to Complete: Additional two hours

Presentation

Declarative (What)

I. Review of the Circulatory System
   A. Function
      1. Deliver oxygen and nutrients to the tissues
      2. Remove waste products from the tissues
   B. Components/Anatomy
      1. Heart
         a. Atrium
            (1) Right - receives blood from the veins of the body
            (2) Left - receives blood from the lungs
         b. Ventricle
            (1) Right - pumps blood to the lungs
            (2) Left - pumps blood to the body
         c. Valves prevent back flow of blood
      2. Arteries
         a. Carry blood away from the heart to the rest of the body

b. Major arteries
   (1) Carotid
      (a) Major artery of the neck
      (b) Pulsations can be palpated on either side of the neck
   (2) Femoral
      (a) The major artery of the thigh
      (b) Pulsations can be palpated in the groin area (the crease between the abdomen and thigh)
   (3) Radial
      (a) Major artery of the lower arm
      (b) Pulsations can be palpated at palm side of the wrist thumb-side
   (4) Brachial
      (a) An artery of the upper arm
      (b) Pulsations can be palpated on the inside of the arm between the elbow and the shoulder

3. Capillaries
   a. Tiny blood vessels that connect arteries to veins
   b. Found in all parts of the body
   c. Allow for the exchange of oxygen and carbon dioxide
4. Veins - vessels that carry blood back to the heart
5. Blood
   a. Fluid of the circulatory system
   b. Carries oxygen and carbon dioxide

C. Physiology
1. Left ventricle contracts, sending a wave of blood through the arteries

2. Pulse can be felt anywhere an artery passes near the skin surface and over a bone
   a. Carotid
   b. Femoral
   c. Radial
   d. Brachial
3. A pulse is generated when the left ventricle contracts and sends a wave of blood through the arteries
4. A pulse can be felt in the major arteries
5. If the heart stops contracting, no blood will flow
6. The body cannot survive when the heart stops
   a. When the patient has lost a pulse, they are in cardiac arrest
   b. Organ damage begins quickly after the heart stops
   c. Brain damage begins 4-6 minutes after the patient suffers cardiac arrest
   d. Brain damage becomes irreversible in 8-10 minutes
   e. External chest compressions are used to circulate blood any time that the heart is not beating
   f. External chest compressions are combined with artificial ventilation to oxygenate the blood

g. The combination of artificial ventilation and external chest compressions is called cardio-pulmonary resuscitation (CPR)

7. General reasons for the heart to stop beating
   a. Sudden death and heart disease
   b. Respiratory arrest, especially in infants and children
   c. Medical emergencies (stroke, epilepsy, diabetes, allergic reactions, electrical shock, poisoning, etc.)
   d. Drowning, suffocation, congenital abnormalities
   e. Trauma and bleeding
   f. Regardless of the reason, the First Responder's emergency medical care of cardiac arrest is CPR

II. Cardiopulmonary Resuscitation

A. A combination of artificial ventilation and external chest compressions to oxygenate and circulate blood when the patient is in cardiac arrest

B. External chest compressions
   1. Depressing the sternum to change the pressure in the chest
   2. This causes enough blood to flow to sustain life for a short period of time

C. CPR is only effective for a short period of time
   1. Cannot sustain life indefinitely
   2. Must be started as early as possible
   3. Effectiveness decreases the longer you are doing CPR
   4. In many cases the patient needs to be defibrillated to survive
   5. CPR increases the amount of time that defibrillation will be effective

D. The chain of survival and the EMS system
   1. Weak links in the chain lower survival rates
   2. Early access
      a. Public education and awareness
         (1) Rapid recognition of a cardiac emergency
         (2) Rapid notification before CPR is started - "phone first"
      b. 911-pre-arrival instructions and dispatcher directed CPR
   3. Early CPR
      a. Lay public
         (1) Family
         (2) Bystanders
      b. First Responders
   4. Early defibrillation
      a. Is now an EMT-basic skill
      b. Some EMS systems have taught First Responders the use of automated external defibrillation with great success
   5. Early advanced cardiac life support (ACLS)

E. The steps of one rescuer adult CPR
   Refer to current American Heart Association Guidelines for CPR

F. The steps of two rescuer Adult CPR
   Refer to current American Heart Association Guidelines for CPR

III. Infant and Child CPR
- A. The steps of infant CPR
  Refer to current American Heart Association Guidelines for CPR
- B. The steps of child CPR
  Refer to current American Heart Association Guidelines for CPR

As per Idaho requirements:
Automated External Defibrillation

A. Importance of automated external defibrillation to the First Responder

1. Fundamentals of early defibrillation - successful resuscitation of out-of-hospital arrest depends on a series of critical interventions known as the chain of survival
   - a. Early access
   - b. Early CPR
   - c. Early defibrillation
   - d. Early ACLS
2. Rationale for early defibrillation
   - a. Many EMS systems have demonstrated increased survival outcomes of cardiac arrest patients experiencing ventricular fibrillation
   - b. This increased survival was after early defibrillation programs were implemented and when all of the links in the chain of survival were present

B Overview of automated external defibrillators

1 Types of automated external defibrillators
   - a. Fully automated - defibrillator operates without action by First Responder, except to turn on power
   - b. Semi-automated - defibrillator uses a computer voice synthesizer to advise First Responder as to the steps to take based upon its analysis of the patient's cardiac rhythm

2. Analysis of cardiac rhythms
   - a. Defibrillator computer microprocessor evaluates the patient's rhythm and confirms the presence of a rhythm for which a shock is indicated
   - b. Accuracy of devices in rhythm analysis has been high, both in detecting rhythms needing shocks and rhythms that do not need shocks
   - c. Analysis is dependent on properly charged defibrillator batteries

3. Inappropriate delivery of shocks
   - a. Human error
   - b. Mechanical error

4. Ventricular tachycardia
   - a. Attach defibrillator to only unresponsive, pulseless, nonbreathing patients to avoid delivering inappropriate shocks
   - b. Defibrillator advises shocks for ventricular tachycardia when the rate exceeds a certain value, for example, above 180 beats per minute

5. Interruption of CPR
   - a. No CPR performed at times shocks are delivered
   - b. No person should be touching patient when rhythm is being analyzed and when shocks are delivered
   - c. Chest compressions and artificial ventilations are stopped when the rhythm is being analyzed and when shocks are delivered
   - d. Defibrillation is more effective than CPR, so stopping CPR during process is more beneficial to patient outcome
   - e. CPR may be stopped up to 90 seconds if three shocks are necessary

f. Resume CPR only after up to the first three shocks are delivered

C. Advantages of automated external defibrillation

1. Initial training and continuing education

a. Easier to learn than CPR, however, must memorize treatment sequence
b. EMS delivery system should have:

(1) Necessary links in chain of survival
(2) Medical direction
(3) EMS system with audit and/or quality improvement program in place
(4) Mandatory continuing education with skill competency review for EMS providers

c. Continuing competency skill review every three months for First Responder

2. Speed of operation - first shock can be delivered within one minute of arrival at the patient's side
3. Remote defibrillation through adhesive pads

a. Defibrillation is "hands-off"
b. Safer method
c. Better electrode placement
d. Has larger pad surface area
e. Provokes less anxiety in First Responder

4. Rhythm monitoring - option on some defibrillator models

D. Use of automated external defibrillators during resuscitation attempts

1. Operational steps

a. Take infection control precautions - should be done en route to scene
b. Arrive on scene and perform initial assessment
c. Stop CPR if in progress
d. Verify pulselessness and apnea
e. Have partner resume CPR
f. Attach device
g. Turn on defibrillator power
h. Begin narrative if machine has tape recorder
i. Stop CPR
j. Clear patient
k. Initiate analysis of rhythm

(1) Machine advises shock

(a) Deliver shock
(b) Re-analyze rhythm
(c) If machine advises shock, deliver second shock
(d) Re-analyze rhythm
(e) If machine advises shock, deliver third shock
(f) Check pulse

i) If pulse, check breathing

a) If breathing adequately, give high concentration oxygen by nonrebreather mask and transport
b) If not breathing adequately, artificially ventilate with high concentration oxygen and transport

ii) If no pulse, resume CPR for one minute

a) Repeat one cycle of up to three stacked shocks
b) Transport

(2) If, after any rhythm analysis, the machine advises no shock, check pulse

(a) If pulse, check breathing

i) If breathing adequately, give high concentration oxygen by nonrebreather mask and transport
ii) If not breathing adequately, artificially ventilate with high concentration oxygen and transport

(b) If no pulse, resume CPR for one minute

i) Repeat rhythm analysis

a) If shock advised, deliver if necessary up to two sets of three stacked shocks separated by one minute of CPR
b) If no shock advised and no pulse, resume CPR for one minute
c) Analyze rhythm third time

- If shock advised, deliver, if needed, up to two sets of three stacked shocks separated by one minute of CPR
- If no shock advised, resume CPR and transport

2. Standard operational procedures

a. Assuming no on-scene ALS, the patient should be transported when one of the following occurs:

(1) The patient regains a pulse
(2) Six shocks are delivered
(3) The machine gives three consecutive messages (separated by one minute of CPR) that no shock is advised

b. One First Responder operates defibrillator, one does CPR
c. Defibrillation comes first. Don't hook up oxygen or do anything that delays analysis of rhythm or defibrillation
d. First Responder must be familiar with device used in operational EMS setting
e. All contact with patient must be avoided during analysis of rhythm
f. State "Clear the patient" before delivering shocks
g. No defibrillator is capable of working without properly functioning batteries. Check batteries at beginning of shift. Carry extra batteries

3. Age and weight guideline

a. Airway and artificial ventilation is of prime importance
b. Automated external defibrillation is not used in cardiac arrest in children under 12 years of age and less than 90 lbs

4. Persistent ventricular fibrillation and no available ALS backup

a. After six shocks on scene, (three initial, three after one minute of CPR), prepare for transport
b. Additional shocks may be delivered at the scene or en route by approval of local medical direction
c. Automated external defibrillators can not analyze rhythm when emergency vehicle is in motion. Must completely stop vehicle in order to analyze rhythm if more shocks are ordered
d. It is not safe to defibrillate in a moving ambulance

5. Recurrent ventricular fibrillation - defibrillation with no available ACLS

a. If en route with unconscious patient check pulse frequently (every 30 seconds). If pulse is not present then:

(1) Stop vehicle
(2) Start CPR if defibrillator is not immediately ready
(3) Analyze rhythm
(4) Deliver shock if indicated

(5) Continue resuscitation as per protocol

b. If en route with conscious patient having chest pain who becomes unconscious, pulseless and apneic then:

(1) Stop vehicle
(2) Start CPR if defibrillator is not immediately ready
(3) Analyze rhythm
(4) Deliver up to 3 shocks, if indicated
(5) Continue resuscitation as per protocol

c. If "no shock" message is delivered and no pulse is present

(1) Start or resume CPR
(2) Analyze rhythm until three consecutive "no shock" messages given or six shocks given or patient regains pulse
(3) Continue transport

6. Single rescuer with an automated external defibrillator

a. Follow sequence

(1) Perform initial assessment
(2) Assure pulselessness, apnea
(3) Turn on AED power
(4) Attach device
(5) Initiate analysis of rhythm
(6) Deliver shock if necessary
(7) Follow protocol

b. Defibrillation is initial step; CPR should not be performed prior to rhythm analysis
c. EMS system activation should not occur until "no shock indicated", pulse returns, three shocks are delivered, or help arrives

7. Pulse checks should not occur during rhythm analysis. Typically there will be no pulse check between stacked shocks 1 & 2 and stacked shocks 4 & 5
8. Coordination of ALS personnel or EMT-Paramedics when First Responders are using automated external defibrillators

a. EMS system design establishes protocols
b. AED usage does not require ALS on scene
c. ALS should be notified of arrest events as soon as possible
d. Considerations for First Responder transporting the patient or waiting for ALS to arrive on the scene to transport should be in local protocols established by medical direction

9. Safety considerations

a. Water - rain
b. Metal

E. Post resuscitation care

1. After automated external defibrillation protocol is completed, patient may:

a. Have pulses
b. Have no pulse with machine indicating "no shock indicated"
c. Have no pulse with machine indicating shock

2. If pulses return

a. See airway module
b. See lifting and moving patients module
c. Consider awaiting ALS backup if appropriate
d. See transportation module
e. Continue to keep defibrillator device on patient en route

f. Perform focused assessment and reassessment en route

F. Defibrillator maintenance

1. Regular maintenance for defibrillators is necessary
2. *Operators Shift Checklist for Automated Defibrillators* must be accomplished on a daily basis by First Responders
3. Defibrillator failure is most frequently related to improper device maintenance, commonly battery failure. First Responders must assure proper battery maintenance and battery replacement schedules

G. Training and sources of information - the American Heart Association publishes a variety of guidelines and additional information on automated external defibrillation

H. Maintenance of skills - most systems permit a maximum of 90 days between practice drills to reassess competency in usage of AEDs

I. Medical direction

1. Successful completion of AED training in a First Responder course does not permit usage of the device without approval by state laws/rules and local medical direction authority
2. Every event in which an AED is used must be reviewed by the medical director or his designated representative
3. Reviews of events using AEDs may be accomplished by:

a. Written report
b. Review of voice-ECG tape recorders attached to AED's
c. Solid-state memory modules and magnetic tape recordings stored in device

J. Quality improvement - involves both individuals using AEDs and the EMS system in which the AEDs are used

Application

Procedural (How)

1. Demonstrate assessment, airway management, and emergency medical care of a manikin in a simulated cardiac arrest situation.

As per Idaho requirements:

1. Demonstrate application and operation of the automated external defibrillator
2. Demonstrate maintenance checks of the automated external defibrillator
3. Demonstrate the assessment and documentation of patient response to the automated external defibrillator

Contextual (When, Where, Why)

The First Responder student must prepare to assess and manage patients with cardiac emergencies. The training laboratory must provide simulated cardiac arrest situations for the student to practice demonstrated skills. The student must be able to integrate many single skills into one simulated cardiac arrest scenario in order to perform effective practice after course completion.

As per Idaho requirements:

The First Responder will assess and manage patients with cardiac arrest

Student Activities

Auditory (Hearing)

1. The student should hear of actual cases where cardiac arrest resuscitation efforts were successful and unsuccessful and the reasons for the outcomes

As per Idaho requirements:

1. The student should hear computer voice simulations made by automated external defibrillators giving instructions on protocols or shocks
2. The student should hear of actual cases where cardiac arrest resuscitation efforts were successful and unsuccessful and the reasons for the outcomes

Visual (Seeing)

1. The student should see an instructor team appropriately resuscitate a simulated cardiac arrest patient
2. The student should see re-enactments of cardiac arrest resuscitation efforts by First Responders

As per Idaho requirements:

1. The student should see an instructor team appropriately resuscitate a simulated cardiac arrest patient using an automated external defibrillator

Kinesthetic (Doing)

1. The student should practice the assessment and emergency medical care of a patient in cardiac arrest
2. The student should practice assessment, airway management, and emergency medical care and transportation of a manikin in a simulated cardiac arrest situation outside the training laboratory

As per Idaho requirements:

1. The student should practice the application and operation of the automated external defibrillator
2. The student should practice maintenance checks of the automated external defibrillator
3. The student should practice the assessment and documentation of patient response to the automated external defibrillator

Instructor Activities

Facilitate discussion and supervise practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation form)

As per Idaho requirements:
Same

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson

As per Idaho requirements:

Same

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson

As per Idaho requirements:

Same

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

As per Idaho requirements:

Same

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 4-2
Practical Lab: Circulation

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate the cognitive objectives of Lesson 4-1: Circulation

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate the affective objectives of Lesson 4-1: Circulation

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate the proper technique of chest compressions on an adult (P-1,2)
- Demonstrate the proper technique of chest compressions on a child (P-1,2)
- Demonstrate the proper technique of chest compressions on an infant (P-1,2)
- Demonstrate the steps of adult one rescuer CPR (P-1,2)
- Demonstrate the steps of adult two rescuer CPR (P-1,2)
- Demonstrate child CPR (P-1,2)
- Demonstrate infant CPR (P-1,2)

Preparation

Motivation:

The practical lesson is designed to allow the students additional time to perfect skills. It is of utmost importance that the students demonstrate proficiency of the skill, cognitive knowledge of the steps to perform a skill, and a healthy attitude towards performing that skill on a patient.

This is an opportunity for the instructor and assistant instructors to praise progress and re - direct the students toward appropriate psychomotor skills. The material from all preceding lessons and basic life support should be incorporated into these practical skill sessions.

Prerequisites:

Preparatory

Materials

AV Equipment:
Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment:
CPR manikins, artificial ventilation manikins, suction equipment, airway management equipment, eye protection, exam gloves

Personnel

Primary Instructor:
One First Responder instructor knowledgeable in basic life support and airway management

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in basic life support and airway management techniques.

Recommended Minimum Time to Complete:
Five hours

Presentation

Declarative (What)
None identified for this lesson

Application

Procedural (How)
Instructor should demonstrate the procedural activities from Lesson 4-1: Patient Assessment

Contextual (When, Where, Why)
Instructor should review contextual information from Lesson 4-1: Patient Assessment

Student Activities

Auditory (Hearing)
1. The student should hear of actual cases where cardiac arrest resuscitation efforts were successful and unsuccessful and the reasons for the outcomes

Visual (Seeing)

1. The student should see an instructor team appropriately resuscitate a simulated cardiac arrest patient
2. The student should see re-enactments of cardiac arrest resuscitation efforts by First Responders

Kinesthetic (Doing)

1. The student should practice the assessment and emergency medical care of a patient in cardiac arrest
2. The student should practice assessment, airway management, and emergency medical care and transportation out of the training laboratory of a manikin in a simulated cardiac arrest situation

Instructor Activities

Supervise student practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Evaluation

Practical:

Evaluate the actions of the First Responder students during role play, practice or other skills stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

Lesson 4-3
Evaluation: Circulation

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the cognitive objectives of Lesson 4-1: Circulation
- Demonstrate competence in the cognitive objectives of Lesson 4-2: Circulation

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the affective objectives of Lesson 4-1: Circulation
- Demonstrate competence in the affective objectives of Lesson 4-2: Circulation

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the psychomotor objectives of Lesson 4-1: Circulation
- Demonstrate competence in the psychomotor objectives of Lesson 4-2: Circulation Practical

Preparation

Motivation:

Evaluation of the student's attainment of the cognitive and affective knowledge and psychomotor skills is an essential component of the First Responder's educational process. The modules are presented in a "building block" format. Once the students have demonstrated their knowledge and proficiency, the next lesson should be built upon that knowledge. This evaluation will help to identify students or groups of students having difficulty with a particular area. This is an opportunity for the instructor to evaluate their performance and make appropriate modifications to the delivery of material.

Prerequisites:

Completion of Lessons 4-1 through 4-2

Material

AV Equipment:

Typically none required

EMS Equipment:
The EMS equipment used in the Lessons of Module 4

Personnel

Primary Instructor:
One proctor for the written evaluation

Assistant Instructor:
One practical skills examiner for each 6 students

Recommended Minimum Time to Complete:
One hour

Presentation

Declarative (What)

I. Purpose of the evaluation

II. Items to be evaluated

III. Feedback from evaluation

Application

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lessons 4-1 > 4-2

2. Practical evaluation stations based on the psychomotor objectives of Lessons 4-1 > 4-2

Contextual (When, Where and Why)

The evaluation is the final lesson in this module and is designed to bring closure to the module and to assure that students are prepared to proceed to the next module.

This modular evaluation is done to determine the effectiveness of the presentation of materials and how well students have retained the material. This is an opportunity for the students to make necessary adjustments in study habits or for the instructor to adjust the manner in which material is presented.

Instructor Activities

Supervise student evaluation
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Remediation

Identify students and/or groups of students who are having difficulty with this subject content. Complete a remediation sheet from the instructor's course guide. If students continue to have difficulty demonstrating knowledge of the cognitive and affective objectives or demonstrating proficiency in psychomotor skills, the students should be counseled, remediated, and re-evaluated. If improvements in cognitive, affective, or psychomotor skills are not achieved, consideration regarding the ability of the student to progress in the program should be taken into account.

Module 5: Illness and Injury
Lesson 5-1 Medical Emergencies

United States Department of Transportation
National Highway Traffic Safety Administration
First Responder: National Standard Curriculum
Vers 01-10/96

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

5-1.1 Identify the patient who presents with a general medical complaint (C-1)
5-1.2 Explain the steps in providing emergency medical care to a patient with a general medical complaint (C-1)
5-1.3 Identify the patient who presents with a specific medical complaint of altered mental status (C-1)
5-1.4 Explain the steps in providing emergency medical care to a patient with an altered mental status (C-1)
5-1.5 Identify the patient who presents with a specific medical complaint of seizures (C-1)
5-1.6 Explain the steps in providing emergency medical care to a patient with seizures (C-1)
5-1.7 Identify the patient who presents with a specific medical complaint of exposure to cold (C-1)
5-1.8 Explain the steps in providing emergency medical care to a patient with an exposure to cold (C-1)
5-1.9 Identify the patient who presents with a specific medical complaint of exposure to heat (C-1)
5-1.10 Explain the steps in providing emergency medical care to a patient with an exposure to heat (C-1)
5-1.11 Identify the patient who presents with a specific medical complaint of behavioral change (C-1)
5-1.12 Explain the steps in providing emergency medical care to a patient with a behavioral change (C-1)
5-1.13 Identify the patient who presents with a specific complaint of a psychological crisis (C-1)
5-1.14 Explain the steps in providing emergency medical care to a patient with a psychological crisis (C-1)

Affective Objectives

5-1.15 Attend to the feelings of the patient and/or family when dealing with the patient with a general medical complaint (A-3)
5-1.16 Attend to the feelings of the patient and/or family when dealing with the patient with a specific medical complaint (A-3)

5-1.17 Explain the rationale for modifying your behavior toward the patient with a behavioral emergency (A-3)
5-1.18 Demonstrate a caring attitude towards patients with a general medical complaint who request emergency medical services (A-3)
5-1.19 Place the interests of the patient with a general medical complaint as the foremost consideration when making any and all patient care decisions (A-3)
5-1.20 Communicate with empathy to patients with a general medical complaint, as well as with family members and friends of the patient (A-3)
5-1.21 Demonstrate a caring attitude towards patients with a specific medical complaint who request emergency medical services (A-3)
5-1.22 Place the interests of the patient with a specific medical complaint as the foremost consideration when making any and all patient care decisions (A-3)
5-1.23 Communicate with empathy to patients with a specific medical complaint, as well as with family members and friends of the patient (A-3)
5-1.24 Demonstrate a caring attitude towards patients with a behavioral problem who request emergency medical services (A-3)
5-1.25 Place the interests of the patient with a behavioral problem as the foremost consideration when making any and all patient care decisions (A-3)
5-1.26 Communicate with empathy to patients with a behavioral problem, as well as with family members and friends of the patient (A-3)

Psychomotor Objectives
At the completion of this lesson, the First Responder student will be able to:
5-1.27 Demonstrate the steps in providing emergency medical care to a patient with a general medical complaint (C-1)
5-1.28 Demonstrate the steps in providing emergency medical care to a patient with an altered mental status (C-1)
5-1.29 Demonstrate the steps in providing emergency medical care to a patient with seizures (C-1)
5-1.30 Demonstrate the steps in providing emergency medical care to a patient with an exposure to cold (C-1)
5-1.31 Demonstrate the steps in providing emergency medical care to a patient with an exposure to heat (C-1)
5-1.32 Demonstrate the steps in providing emergency medical care to a patient with a behavioral change (C-1)
5-1.33 Demonstrate the steps in providing emergency medical care to a patient with a psychological crisis (C-1)

Preparation

Motivation:

Patients present with various medical conditions and complaints. Although some specific situations may require the First Responder to intervene with specific skills most will be listed as a common medical complaint. The First Responder must be prepared to provide appropriate emergency medical care to the various medical patients that they may encounter.

Prerequisites:
Preparatory, Airway, Patient Assessment, and Circulation Modules

Materials

AV Equipment:
Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment:
Personal protective equipment, hot and cold packs, and a space blanket

Personnel

Primary Instructor:
One First Responder instructor, knowledgeable in medical emergencies

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable about altered mental status, seizures, and environmental injuries.

Recommended Minimum Time to Complete:
One hour

Presentation

Declarative (What)

I. General Medical Complaints
   A. Patients may request emergency medical services for a variety of medical complaints
   B. The First Responder should assess each patient to determine the patient's chief complaint as well as signs and symptoms present
   C. Emergency medical care is based on the patient's signs and symptoms
   D. Role of the First Responder
      1. Complete the First Responder assessment
         a. Complete a scene size-up before initiating emergency medical care
         b. Complete an initial assessment on all patients
         c. Complete a physical exam as needed
         d. Complete on-going assessments
      2. Comfort, calm, and reassure the patient while awaiting additional EMS resources
II. Specific Medical Complaints
   A. Altered mental status

1. A sudden or gradual decrease in the patient's level of responsiveness and understanding ranging from disorientation to unresponsive
2. There are many reasons for patients having altered mental status
   a. Fever
   b. Infections
   c. Poisoning - including drugs and alcohol
   d. Low blood sugar
   e. Insulin reactions
   f. Head injury
   g. Decreased levels of oxygen in the brain
   h. Psychiatric conditions
3. Support the patient; do not worry about determining the cause of the altered mental status; maintain scene safety
4. The length of the altered mental status may be brief or prolonged
5. Role of the First Responder
   a. Complete the First Responder assessment
      (1) Complete a scene size-up before initiating emergency medical care
      (2) Complete an initial assessment on all patients
      (3) Complete a physical exam as needed
      (4) Complete on-going assessments
   b. Comfort, calm, and reassure the patient while awaiting additional EMS resources
      (1) Assure patency of airway
      (2) Place patient in the recovery position if no possibility of spine trauma
      (3) Do not put anything in the patient's mouth
      (4) Have suction available
6. Relationship to airway management
   a. Often patients with altered mental status cannot protect their own airway, consider the use of airway adjuncts
   b. The unresponsive patient should be placed in the recovery position
   c. Suction should be readily available

B. Seizures
1. A sudden attack, usually related to nervous system malfunction
2. There are many types of seizures
3. There are many causes of seizures
   a. Chronic medical conditions
   b. Fever
   c. Infections
   d. Poisoning including drugs and alcohol
   e. Low blood sugar
   f. Head injury
   g. Decreased levels of oxygen
   h. Brain tumors
   i. Complications of pregnancy
   j. Unknown causes
4. Support the patient; do not worry about determining the cause of the seizure

5. Some seizures produce violent muscle contractions called convulsions
   a. Most patients are unresponsive and may vomit during the convulsion
   b. Patients are typically tired and sleep following the attack
6. Seizures are rarely life-threatening, but a serious emergency
7. The length of the seizure may be brief (less than 5 minutes) or prolonged
8. Role of the First Responder
   a. Complete the First Responder assessment
      (1) Complete a scene size-up prior to initiating emergency medical care
      (2) Complete an initial assessment on all patients
      (3) Complete a physical exam as needed
      (4) Complete on-going assessments
   b. Comfort, calm, and reassure the patient while awaiting additional EMS resources
      (1) Protect the patient from the environment
      (2) Protect modesty - ask bystanders to leave the area
      (3) Assure patency of airway
      (4) Place patient in the recovery position if no possibility of spine trauma
      (5) Never restrain the patient
      (6) Do not put anything in the patient's mouth
      (7) Have suction available
      (8) If the patient is bluish, assure airway and artificially ventilate
      (9) Report assessment findings to EMS
      (10) Observe and describe the seizure to EMS resources
         (a) First Responder may be the only witness to seizure
         (b) May be important in determining cause of seizure
9. Relationship to airway management
   a. Often seizure patients will have significant oral secretions
   b. It is essential that these patients be placed in the recovery position when the convulsions have ended
   c. Patients who are actively seizing, bluish, and breathing inadequately should be ventilated, if possible
   d. Suction oral secretions as needed

C. Exposure to cold
1. Generalized cold emergency
   a. Contributing factors
      (1) Cold environment
      (2) Age (very old/very young)
      (3) Medical conditions
      (4) Alcohol/drugs/poisons
   b. Signs and symptoms of generalized hypothermia
      (1) Obvious exposure
      (2) Subtle exposure
         (a) Underlying illness
         (b) Overdose/poisoning
         (c) Ambient temperature decreased (e.g., cool home of elderly patient)
      (3) Cool/cold skin temperature

        (a) Place the back of your hand between the clothing and the patient's abdomen to assess the general temperature of the patient
        (b) The patient experiencing a generalized cold emergency will present with cool or cold abdominal skin temperature
    (4) Shivering
    (5) Decreasing mental status or motor function - correlates with the degree of hypothermia
        (a) Poor coordination
        (b) Memory disturbances/confusion
        (c) Reduced or loss of touch sensation
        (d) Mood changes
        (e) Less communicative
        (f) Dizziness
        (g) Speech difficulty
    (6) Stiff or rigid posture
    (7) Muscular rigidity
    (8) Poor judgment - patient may actually remove clothing
    (9) Complaints of joint/muscle stiffness
2. Role of the First Responder
    a. Complete the First Responder assessment
        (1) Complete a scene size-up before initiating emergency medical care
        (2) Complete an initial assessment on all patients
        (3) Complete a physical exam as needed
        (4) Complete on-going assessments
    b. Comfort, calm, and reassure the patient while awaiting additional EMS resources
        (1) Assess pulses for 30-45 seconds before starting CPR
        (2) Remove the patient from the cold environment
        (3) Protect the patient from further heat loss
        (4) Remove any wet clothing and cover the patient with a blanket
        (5) Handle the patient extremely gently
        (6) Do not allow the patient to walk or exert himself
        (7) The patient should not be given anything by mouth
            (a) Do not allow the patient to eat or drink stimulants
            (b) Coffee, tea, or smoking may worsen the condition
        (8) Do not massage extremities
        (9) Cover the patient with a blanket; keep the patient warm
3. Local cold emergencies
    a. Freezing or near freezing of a body part
    b. Usually occurs in fingers, toes, face, ears, and nose
    c. Signs and symptoms of local cold injuries
4. Local injury with clear demarcation
        (1) Early or superficial injury
            (a) Blanching of the skin - palpation of the skin in which normal color does not return
            (b) Loss of feeling and sensation in the injured area

(c) Skin remains soft
(d) If rewarmed, tingling sensation
(2) Late or deep injury
(a) White, waxy skin
(b) Firm to frozen feeling upon palpation
(c) Swelling may be present
(d) Blisters may be present
(e) If thawed or partially thawed, the skin may appear flushed with areas of purple and blanching or may be mottled and cyanotic

5. Role of the First Responder
   a. Complete the First Responder assessment
      (1) Complete a scene size-up before initiating emergency medical care
      (2) Complete an initial assessment on all patients
      (3) Complete a physical exam as needed
      (4) Complete on-going assessments
   b. Comfort, calm, and reassure the patient while awaiting additional EMS resources
      (1) Remove the patient from the environment
      (2) Protect the cold - injured extremity from further injury
      (3) Remove wet or restrictive clothing
      (4) If early or superficial injury
         (a) Manually stabilize the extremity
         (b) Cover the extremity
         (c) Do not rub or massage
         (d) Do not re-expose to the cold
      (5) If late or deep cold injury
         (a) Remove jewelry
         (b) Cover with dry clothing or dressings
         (c) Do not:
            i) Break blisters
            ii) Rub or massage area
            iii) Apply heat
            iv) Rewarm
            v) Allow the patient to walk on the affected extremity

D. Exposure to heat
   1. Predisposing factors
      a. Climate
         (1) High ambient temperature reduces the body's ability to lose heat by radiation
         (2) High relative humidity reduces the body's ability to lose heat through evaporation
      b. Exercise and activity - can lose more than 1 liter of sweat per hour
      c. Age (very old/very young)
      d. Pre-existing illness and/or conditions
      e. Drugs/medications
   2. Signs and symptoms

a. Muscular cramps
b. Weakness or exhaustion
c. Dizziness or faintness
d. Rapid heart rate
e. Altered mental status to unresponsive

3. Role of the First Responder
   a. Complete the First Responder assessment
      (1) Complete a scene size-up before initiating emergency medical care
      (2) Complete an initial assessment on all patients
      (3) Complete a physical exam as needed
      (4) Complete on-going assessments
   b. Comfort, calm, and reassure the patient while awaiting additional EMS resources
      (1) Remove the patient from the hot environment and place in a cool environment (air conditioned)
      (2) Cool patient by fanning, but may be ineffective in high humidity
      (3) Place in recovery position

E. Behavior
1. Behavior - manner in which a person acts or performs; any or all activities of a person, including physical and mental activity
2. Behavioral emergency
   a. A situation where the patient exhibits abnormal behavior that is unacceptable or intolerable to the patient, family, or community
   b. This behavior can be due to extremes of emotion leading to violence or other inappropriate behavior or due to a psychological or physical condition such as lack of oxygen or low blood sugar in diabetes
3. Behavioral change
   a. General factors that may alter a patient's behavior have many causes
   b. Common causes for behavior alteration
      (1) Situational stresses
      (2) Illness/injury
         (a) Low blood sugar
         (b) Lack of oxygen
         (c) Inadequate blood flow to the brain
         (d) Head trauma
         (e) Excessive cold
         (f) Excessive heat
      (3) Mind altering substances - alcohol and drugs
      (4) Psychiatric problems
      (5) Psychologic crises
         (a) Panic
         (b) Agitation
         (c) Bizarre thinking and behavior
         (d) Danger to self - self destructive behavior, suicide
         (e) Danger to others - threatening behavior, violence

F. Role of the First Responder

1. Complete the First Responder assessment
    a. Complete a scene size-up before initiating emergency medical care
    b. Complete an initial assessment on all patients
    c. Complete a physical exam as needed
    d. Complete on-going assessments
2. Comfort, calm, and reassure the patient while awaiting additional EMS resources
    a. Calm the patient - do not leave patient alone
    b. Consider need for law enforcement
    c. If overdose, give medications or drugs found to transporting EMS resources

G. Principles for assessing behavioral emergency patients
1. Identify yourself and let the person know you are there to help
2. Inform person of what you are doing
3. Ask questions in a calm, reassuring voice
4. Without being judgmental, allow the patient to tell what happened
5. Show you are listening by rephrasing or repeating part of what is said
6. Acknowledge the patient's feelings
7. Assess the patient's mental status
    a. Appearance
    b. Activity
    c. Speech
    d. Orientation for time, person, and place

H. Assessment of potential violence
1. Scene size-up
2. History - check with family and bystanders to determine if the patient has a known history of aggression or combativeness
3. Posture - stands or sits in a position which threatens self or others. May have fists clinched or lethal objects in hands
4. Vocal activity - is yelling or verbally threatens harm to self or others
5. Physical activity - moves toward caregiver, carries heavy or threatening objects, has quick irregular movements, muscles tense

I. Methods to calm behavioral emergency patients
1. Acknowledge that the person seems upset and restate that you are there to help
2. Inform the person of what you are doing
3. Ask questions in a calm, reassuring voice
4. Maintain a comfortable distance
5. Encourage the patient to state what is troubling him/her
6. Do not make quick moves
7. Respond honestly to patient's questions
8. Do not threaten, challenge, or argue with disturbed patients
9. Tell the truth; do not lie to the patient
10. Do not "play along" with visual or auditory disturbances of the patient
11. Involve trusted family members or friends
12. Be prepared to stay at scene for a long time. Always remain with the patient
13. Avoid unnecessary physical contact. Call additional help if needed
14. Use good eye contact

J. Restraining patients

1. Restraint should be avoided unless patient is a danger to self and others
2. When using restraints, have police present, if possible, and get approval from medical oversight
3. If restraints must be used, work in conjunction with the EMS providers
4. Avoiding unreasonable force
   a. Reasonable force depends on what force is necessary to keep patient from injuring himself or others
   b. Reasonableness is determined by looking at all circumstances involved
      (1) Patient's size and strength
      (2) Type of abnormal behavior
      (3) Sex of patient
      (4) Mental state of patient
      (5) Method of restraint
   c. Be aware that after a period of combativeness and aggression some apparently calm patients may cause unexpected and sudden injury to self and others
   d. Avoid acts or physical force that may cause injury to the patient
   e. EMS personnel may use reasonable force to defend against an attack by emotionally disturbed patients
   f. Police and medical oversight involvement
      (1) Seek medical oversight when considering restraining a patient
      (2) Ask for police assistance if during scene size-up the patient appears or acts aggressive or combative
   g. Protection against false accusations
      (1) Documentation of abnormal behavior exhibited by the patient is very important
      (2) Have witnesses in attendance especially during transport, if possible
      (3) Accusing First Responders of sexual misconduct is common by emotionally disturbed patients - have help, same sex attendants, and third party witnesses

K. Medical/legal considerations
   1. Emotionally disturbed patient who consents to care - legal problems greatly reduced
   2. How to handle the patient who resists treatment
      a. Emotionally disturbed patient will often resist treatment
      b. May threaten First Responders and others
      c. To provide care against patient's will, you must have a reasonable belief the patient would harm self or others
      d. If a threat to self or others, patient may be transported without consent after you contact medical oversight
      e. Usually law enforcement is required

Application

Procedural (How)

1. Demonstrate the steps in providing emergency medical care to a patient with a general medical complaint.
2. Demonstrate the steps in providing emergency medical care to a patient with an altered mental status
3. Demonstrate the steps in providing emergency medical care to a patient with seizures
4. Demonstrate the steps in providing emergency medical care to a patient exposed to cold
5. Demonstrate the steps in providing emergency medical care to a patient exposed to heat
6. Demonstrate the steps in providing emergency medical care to a patient with a behavioral change
7. Demonstrate the steps in providing emergency medical care to a patient with a psychological crisis

Contextual (When, Where, Why)

The First Responder will now be able to treat patients with general and specific medical complaints

Student Activities

Auditory (Hearing)

1. The student should hear the instructor present the signs, symptoms, and management of patients with general medical complaints
2. The student should hear the instructor present the signs, symptoms, and management of patients with altered mental status
3. The student should hear the instructor present the signs, symptoms, and management of patients with seizures
4. The student should hear the instructor present the signs, symptoms, and management of patients exposed to cold
5. The student should hear the instructor present the signs, symptoms, and management of patients exposed to heat
6. The student should hear the instructor present the signs, symptoms, and management of patients with behavior problems

Visual (Seeing)

1. The students should see audio-visual material of patients with general medical complaints
2. The students should see audio-visual material of patients with an altered mental status
3. The students should see audio-visual material of patients with seizures
4. The students should see audio-visual material of patients exposed to cold
5. The students should see audio-visual material of patients exposed to heat
6. The students should see audio-visual material of patients with behavior problems

Kinesthetic (Doing)

1. The students should role play emergency medical care of a patient with a general medical complaint
2. The students should role play emergency medical care of a patient with altered mental status
3. The students should role play emergency medical care of a patient with a seizure
4. The students should role play emergency medical care of a patient exposed to cold
5. The students should role play emergency medical care of a patient exposed to heat
6. The students should role play emergency medical care of a patient with behavior problems

Instructor Activities

Facilitate discussion and supervise practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation form)

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 5-2
Bleeding and Soft Tissue Injuries

United States Department of Transportation
National Highway Traffic Safety Administration
First Responder: National Standard Curriculum
Vers 01 - 10/96

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

5-2.1 Differentiate between arterial, venous, and capillary bleeding (C-3)
5-2.2 State the emergency medical care for external bleeding (C-1)
5-2.3 Establish the relationship between body substance isolation and bleeding (C-3)
5-2.4 List the signs of internal bleeding (C-1)
5-2.5 List the steps in the emergency medical care of the patient with signs and symptoms of internal bleeding (C-1)
5-2.6 Establish the relationship between body substance isolation (BSI) and soft tissue injuries (C-3)
5-2.7 State the types of open soft tissue injuries (C-1)
5-2.8 Describe the emergency medical care of the patient with a soft tissue injury (C-1)
5-2.9 Discuss the emergency medical care considerations for a patient with a penetrating chest injury (C-1)
5-2.10 State the emergency medical care considerations for a patient with an open wound to the abdomen (C-1)
5-2.11 Describe the emergency medical care for an impaled object (C-1)
5-2.12 State the emergency medical care for an amputation (C-1)
5-2.13 Describe the emergency medical care for burns (C-1)
5-2.14 List the functions of dressing and bandaging (C-1)

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

5-2.15 Explain the rationale for body substance isolation when dealing with bleeding and soft tissue injuries (A-3)
5-2.16 Attend to the feelings of the patient with a soft tissue injury or bleeding (A-3)
5-2.17 Demonstrate a caring attitude towards patients with a soft tissue injury or bleeding who request emergency medical services (A-3)
5-2.18 Place the interests of the patient with a soft tissue injury or bleeding as the foremost consideration when making any and all patient care decisions (A-3)
5-2.19 Communicate with empathy to patients with a soft tissue injury or bleeding, as well as with family members and friends of the patient (A-3)

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

5-2.20 Demonstrate direct pressure as a method of emergency medical care for external bleeding (P-1,2)
5-2.21 Demonstrate the use of diffuse pressure as a method of emergency medical care for external bleeding (P-1,2)
5-2.22 Demonstrate the use of pressure points as a method of emergency medical care for external bleeding (P-1,2)
5-2.23 Demonstrate the care of the patient exhibiting signs and symptoms of internal bleeding (P-1,2)
5-2.24 Demonstrate the steps in the emergency medical care of open soft tissue injuries (P-1,2)
5-2.25 Demonstrate the steps in the emergency medical care of a patient with an open chest wound (P-1,2)
5-2.26 Demonstrate the steps in the emergency medical care of a patient with open abdominal wounds (P-1,2)
5-2.27 Demonstrate the steps in the emergency medical care of a patient with an impaled object (P-1,2)
5-2.28 Demonstrate the steps in the emergency medical care of a patient with an amputation (P-1,2)
5-2.29 Demonstrate the steps in the emergency medical care of an amputated part (P-1,2)

Preparation

Motivation:

Trauma is the leading cause of death in the United States in persons between the ages of 1 and 44. Traumatic injuries and bleeding are some of the most dramatic situations that the First Responder will encounter. The early control of major bleeding has great life saving potential.

Soft tissue injuries are common and dramatic, but rarely life threatening. Soft tissue injuries range from abrasions to serious full thickness burns. It is necessary for the First Responder to become familiar with the emergency medical care of soft tissue injuries with emphasis on controlling bleeding, preventing further injury, and reducing contamination.

Prerequisites:

Preparatory, Airway, Patient Assessment, and Circulation Module

Materials

AV Equipment:

Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment:

Personal protective equipment, sterile dressings, triangular bandages, universal dressings, occlusive dressings, 4 x 4 gauze pads, self adherent bandages, roller bandages.

Personnel

Primary Instructor:
One First Responder instructor, knowledgeable in bleeding and soft tissue injuries.

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable about bleeding and soft tissues injuries.

Recommended Minimum Time to Complete:
One and a half hours

Presentation

Declarative (What)

I. Bleeding
   A. General considerations
      1. The First Responder must be aware of the risk of infectious disease from contact with blood or body fluids
      2. The severity of blood loss must be based on the patient's signs and symptoms and the general impression of the amount of blood loss
      3. The body's normal response to bleeding is blood vessel contractions and clotting
      4. A serious injury may prevent effective clotting from occurring
      5. Uncontrolled bleeding or significant blood loss leads to shock and possibly death
      6. Bleeding may be external or internal
      7. Internal and external bleeding can result in severe blood loss with resultant shock and subsequent death
   B. Types of external bleeding
      1. Arterial
         a. The blood spurts from the wound
         b. Bright, red, oxygen rich blood
         c. Arterial bleeding is the most difficult to control because of the pressure at which arteries bleed
         d. As the patient's blood pressure drops, the amount of spurting may also drop
      2. Venous
         a. The blood flows as a steady stream
         b. Dark, oxygen poor blood
         c. Bleeding from a vein can be profuse; however, in most cases it is easier to control due to the lower venous pressure
      3. Capillary

a. The blood oozes from a capillary and is dark red in color
b. The bleeding often clots spontaneously

4. Role of the First Responder
   a. Complete the First Responder assessment
      (1) Complete a scene size-up before initiating emergency medical care
      (2) Complete an initial assessment on all patients
      (3) Complete a physical exam as needed
      (4) Complete on-going assessments
   b. Comfort, calm, and reassure the patient while awaiting additional EMS resource
      (1) The First Responder must be aware of the implications of not using body substance isolation precautions
      (2) Body substance isolation
      (3) Maintain airway/artificial ventilation
      (4) Bleeding control
         (a) Apply finger tip pressure (use flat part of fingers) directly on the point of bleeding
         (b) If no injury to the muscle or bone exists, elevation of a bleeding extremity may be used secondary to and in conjunction with direct pressure
         (c) Large gaping wounds may require sterile gauze and direct hand pressure if finger tip pressure fails to control bleeding
         (d) If bleeding does not stop, remove dressing and assess for bleeding point to apply direct pressure. If more than one site of bleeding is discovered, apply additional pressure
         (e) Pressure points may be used in upper and lower extremities

C. Internal bleeding
   1. Injured or damaged internal organs commonly lead to extensive bleeding that is concealed
   2. Painful, swollen, deformed extremities may also lead to serious internal blood loss
   3. Signs and symptoms
      a. Discolored, tender swollen or hard tissue
      b. Increased respiratory and pulse rates
      c. Pale, cool skin
      d. Nausea and vomiting
      e. Thirst
      f. Mental status changes
   4. Role of the First Responder
      a. Complete the First Responder assessment
         (1) Complete a scene size-up before initiating emergency medical care
         (2) Complete an initial assessment on all patients
         (3) Complete a physical exam as needed
         (4) Complete on-going assessments
      b. Comfort, calm, and reassure the patient while awaiting additional EMS resources

(1) Body substance isolation
(2) Maintain airway/artificial ventilation
(3) Manage any external bleeding
(4) Reassure the patient
(5) Keep the patient calm and in position of comfort
(6) Keep the patient warm
(7) Treat for shock

D. Shock (hypoperfusion)
1. Condition resulting from the inadequate delivery of oxygenated blood to body tissues
2. Can be a result of
   a. Failure of the heart to provide oxygenated blood
   b. Abnormal dilation of the vessels
   c. Blood volume loss
3. Signs and symptoms
   a. Extreme thirst
   b. Restlessness, anxiety
   c. Rapid, weak pulse
   d. Rapid, shallow respirations
   e. Mental status changes
   f. Pale, cool, moist skin
4. Role of the First Responder
   a. Complete the First Responder assessment
      (1) Complete a scene size-up before initiating emergency medical care
      (2) Complete an initial assessment on all patients
      (3) Complete a physical exam as needed
      (4) Complete on-going assessments
   b. Comfort, calm, and reassure the patient while awaiting additional EMS resources
      (1) Maintain airway/ventilation
      (2) Prevent further blood loss
      (3) Keep patient calm, in position of comfort
      (4) Keep patient warm - attempt to maintain normal body temperature
      (5) Do not give food or drink
      (6) Provide care for specific injuries

II. Specific Injuries
A. Types
1. Abrasion
   a. Outermost layer of skin is damaged by shearing forces
   b. Painful injury, even though superficial
   c. No or very little oozing of blood
2. Laceration
   a. Break in skin of varying depth
   b. May occur in isolation or together with other types of soft tissue injury
   c. Caused by forceful impact with sharp object

d. Bleeding may be severe
3. Penetration/puncture
   a. Caused by sharp pointed object
   b. May be little or no external bleeding
   c. Internal bleeding may be severe
   d. Exit wound may be present

   e. Examples:
      (1) Gun shot wound
      (2) Stab wound

B. Role of the First Responder
1. Complete the First Responder assessment
   a. Complete a scene size-up before initiating emergency medical care
   b. Complete an initial assessment on all patients
   c. Complete a physical exam as needed
   d. Complete on-going assessments
2. Comfort, calm, and reassure the patient while awaiting additional EMS resources
   a. Relationship to body substance isolation
      (1) Gloves
      (2) Gown
      (3) Eye protection
      (4) Hand washing
   b. Maintain proper airway/artificial ventilation
   c. Management of open soft tissue injuries
      (1) Expose the wound
      (2) Control the bleeding
      (3) Prevent further contamination
      (4) Apply sterile dressing to the wound and bandage securely in place.

C. Special considerations
1. Chest injuries
   a. An occlusive dressing should be applied to open wounds and sealed on three sides
   b. Position of comfort if no spinal injury suspected
2. Impaled objects
   a. Do not remove the impaled object unless it is through the cheek or it would interfere with airway management or chest compressions
   b. Manually secure the object
   c. Expose the wound area
   d. Control bleeding
   e. Utilize a bulky dressing to help stabilize the object
3. Eviscerations
   a. Open injury with protruding organs
   b. Do not attempt to replace protruding organs
   c. Cover with thick moist dressing
4. Amputations
   a. Involves the extremities and other body parts

b. Massive bleeding may be present or bleeding may be limited
c. Locate and preserve the amputated part
(1) Place the part in a plastic bag
(2) Place the plastic bag containing the part in a larger bag or container with ice and water
(a) Do not use ice alone
(b) Do not use dry ice

D. Burns
1. Classification
a. According to depth
b. Superficial involves only the outer layer of the skin
(1) Reddening of the skin
(2) Swelling
c. Partial thickness involves the outer and middle layer of the skin
(1) Deep intense pain
(2) Reddening, blisters
d. Full thickness extends through all layers of the skin
(1) Characteristics of partial thickness
(2) Areas of charred skin
2. Role of the First Responder
a. Complete the First Responder assessment
(1) Complete a scene size-up before initiating emergency medical care
(2) Complete an initial assessment on all patients
(3) Complete a physical exam as needed
(4) Complete on-going assessments
b. Comfort, calm, and reassure the patient while awaiting additional EMS resources
(1) Stop the burning process initially with water or saline
(2) Remove smoldering clothing and jewelry
(a) Be aware that some clothing may have melted to the skin
(b) If resistance is met when removing the clothing, it should be left in place
(3) Body substance isolation
(4) Continually monitor the airway for evidence of closure
(5) Prevent further contamination
(6) Cover the burned area with a dry sterile dressing
(7) Do not use any type of ointment, lotion, or antiseptic
(8) Do not break blisters
3. Special Considerations
a. Chemical burns
(1) Scene safety
(2) Gloves and eye protection
(3) Brush off dry powder
(4) Flush with copious amounts of water
(5) Consider eye burns if splash injury
b. Electrical burns

(1) Scene safety
(2) Often more severe than external indications
(3) Monitor the patient closely for respiratory or cardiac arrest

c. Infant and child considerations
(1) Greater surface area in relation to the total body size
(2) Results in greater fluid and heat loss
(3) May need to keep environment warm when possible
(4) Consider possibility of child abuse

III. Dressing and Bandaging
A. Function
1. Stop bleeding
2. Protect the wound from further damage
3. Prevent further contamination and infection
B. Dressings
1. Universal dressing
2. 4 X 4 inch gauze pads
3. Adhesive-type
4. Occlusive
C. Bandages
1. Holds dressing in place
2. Types
a. Self-adherent bandages
b. Gauze rolls
c. Triangular bandages
d. Adhesive tape

Application

Procedural (How)

1. Review the methods of controlling external bleeding with an emphasis on body substance isolation
2. Demonstrate the procedure for treating an open soft tissue injury
3. Demonstrate the necessary body substance isolation when dealing with soft tissue injuries
4. Demonstrate the proper method for applying an occlusive dressing
5. Demonstrate the proper method for stabilizing an impaled object
6. Show a diagram illustrating a superficial, partial thickness, and full thickness burn
7. Demonstrate the proper emergency medical care for a superficial, partial thickness, and full thickness burn
8. Show the various types of dressings and bandages
9. Demonstrate the proper method for applying a universal dressing, a 4 X 4 inch dressing, and an adhesive type dressing
10. Demonstrate the proper method for applying bandages: self-adherent, gauze rolls, triangular, and adhesive tape

11. Demonstrate the proper method for applying a pressure dressing

Contextual (When, Where, Why)

External bleeding is assessed during the initial patient assessment after securing the scene and ensuring personal safety. After airway and breathing control of arterial or venous bleeding will be done upon immediate identification.

Soft tissue injuries, unless life threatening, will be treated after the initial assessment. Failure to treat soft tissue injuries could lead to severe bleeding, further damage to the injury, or further contamination.

Student Activities

Auditory (Hearing)

1 Students should hear simulations to identify signs and symptoms of external bleeding
2. The student should hear simulated situations in which the signs and symptoms of soft tissue injuries and procedures for treating soft tissue injuries are demonstrated
3. The student should hear the sounds made by open sucking chest wounds

Visual (Seeing)

1. The students should see audio-visual materials of the various types of external bleeding
2. The student should see audio-visual materials of the proper methods to control bleeding
3. The student should see a patient to identify major bleeding
4. The students should see, in simulated situations, the application of direct pressure, elevation, and pressure points in the emergency medical care of external bleeding
5. Show diagrams of the various types of soft tissue injuries
6. The student should see demonstrations of the treatment of an open soft tissue injury
7. The student should see demonstrations of necessary body substance isolation when dealing with soft tissue injuries
8. The student should see demonstrations of the proper method for applying an occlusive dressing
9. The student should see demonstrations of the proper method for stabilizing an impaled object
10. The student should see diagrams illustrating a superficial, partial thickness, and full thickness burn
11. The student should see demonstrations of the proper emergency medical care for superficial, partial thickness, and full thickness burns
12. The student should see the various types of dressing and bandages
13. The student should see demonstrations of the proper methods for applying a universal dressing, a 4 X 4 inch dressing, and an adhesive type dressing
14. The student should see demonstrations of the proper method for applying bandages: self-adherent, gauze rolls, triangular, and adhesive tape

15. The student should see demonstrations of the proper method for applying a pressure dressing

Kinesthetic (Doing)

1. The student should practice the steps in the emergency medical care of open soft tissue injuries
2. The student should practice the steps in the emergency medical care of a patient with an open chest wound
3. The student should practice the steps in the emergency medical care of a patient with an open abdominal wound
4. The student should practice the steps in the emergency medical care of a patient with an impaled object
5. The student should practice the steps in the emergency medical care of a patient with superficial burns
6. The student should practice the steps in the emergency medical care of a patient with partial thickness burns
7. The student should practice the steps in the emergency medical care of a patient with full thickness burns
8. The student should practice the steps in the emergency medical care of a patient with an amputation
9. The student should practice the steps in the emergency medical care of the amputated part
10. The student should practice the steps in the emergency medical care of a patient with a chemical burn
11. The student should practice the steps in the emergency medical care of a patient with an electrical burn

Instructor Activities

Facilitate discussion and supervise practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation form)

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson

Practical:

Evaluate the actions of the First Responder students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 5-3
Injuries to Muscles and Bones

United States Department of Transportation
National Highway Traffic Safety Administration
First Responder: National Standard Curriculum
Vers 01 - 10/96

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

5-3.1 Describe the function of the musculoskeletal system (C-1)
5-3.2 Differentiate between an open and a closed painful, swollen, deformed extremity (C-1)
5-3.3 List the emergency medical care for a patient with a painful, swollen, deformed extremity (C-1)
5-3.4 Relate mechanism of injury to potential injuries of the head and spine (C-3)
5-3.5 State the signs and symptoms of a potential spine injury (C-1)
5-3.6 Describe the method of determining if a responsive patient may have a spine injury (C-1)
5-3.7 List the signs and symptoms of injury to the head (C-1)
5-3.8 Describe the emergency medical care for injuries to the head (C-1)

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

5-3.9 Explain the rationale for the feeling patients who have need for immobilization of the painful, swollen, deformed extremity (A-3)
5-3.10 Demonstrate a caring attitude towards patients with a musculoskeletal injury who request emergency medical services (A-3)
5-3.11 Place the interests of the patient with a musculoskeletal injury as the foremost consideration when making any and all patient care decisions (A-3)
5-3.12 Communicate with empathy to patients with a musculoskeletal injury, as well as with family members and friends of the patient (A-3)

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

5-3.13 Demonstrate the emergency medical care of a patient with a painful, swollen, deformed extremity (P-1,2)
5-3.14 Demonstrate opening the airway in a patient with suspected spinal cord injury (P-1,2)
5-3.15 Demonstrate evaluating a responsive patient with a suspected spinal cord injury (P-1,2)
5-3.16 Demonstrate stabilizing of the cervical spine (P-1,2)

Preparation

Motivation:

Injuries to the bones and muscles are very common types of injuries encountered by the First Responder. These injuries are largely non-life threatening in nature but may be very dramatic. Prompt identification and emergency medical care of musculoskeletal injuries is crucial in reducing pain, preventing further injury and minimizing permanent damage.

Prerequisites:

Preparatory, Airway, Patient Assessment, and Circulation Modules

Materials

AV Equipment:

Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment:

Blanket, pillow, improvised splinting material, e.g. magazines, etc.

Personnel

Primary Instructor:

One First Responder Instructor knowledgeable in musculoskeletal and head and spinal injuries

Assistant Instructor:

The instructor-to-student ratio should be 1:6 for psychomotor skills practice. Individuals used as assistant instructors should be knowledgeable in musculoskeletal care and the care of head and spinal injuries.

Recommended Minimum Time to Complete:

One and a half hours

Presentation

Declarative (What)

I. Review of the Musculoskeletal system
   A. The Skeletal System
      1. Function
         a. Gives the body shape

b. Protects vital internal organs
2. Components
   a. Skull - houses and protects the brain
   b. Face
   c. Spinal Column
   d. Thorax
      (1) Ribs
      (2) Breastbone (sternum)
         (a) Xiphoid process - lowest portion of the sternum
         (b) Landmark for determining hand position for chest compressions
   e. Pelvis
   f. Lower extremities
      (1) Thigh (femur)
      (2) Knee cap (patella)
      (3) Shin (tibia and fibula)
      (4) Ankle
      (5) Feet
      (6) Toes
   g. Upper extremities
      (1) Shoulder (collar bone and shoulder blade)
      (2) Upper arm (humerus)
      (3) Forearm (radius and ulna)
      (4) Wrist
      (5) Hand
      (6) Fingers
   h. Joints - where bones connect to other bones

B. The Muscular System
1. Function
   a. Give the body shape
   b. Protect internal organs
   c. Provide for movement
2. Components
   a. Voluntary (skeletal)
      (1) Attached to the bones
      (2) Under control of the nervous system and brain. Can be contracted and relaxed by the will of the individual
      (3) Responsible for movement
   b. Involuntary (smooth)
      (1) Found in the walls of the tubular structures of the gastrointestinal tract and urinary system
      (2) Also in the blood vessels and bronchi
   c. Cardiac
      (1) Found only in the heart
      (2) Can tolerate interruption of blood supply for only very short periods

II. Injuries to Bones and Joints

A. Mechanism of injury
   1. Direct force
   2. Indirect force
   3. Twisting force
B. Bone or joint injuries
   1. Types
      a. Open - break in the continuity of the skin
      b. Closed - no break in the continuity of the skin
   2. Signs and symptoms
      a. Deformity or angulation
      b. Pain and tenderness
      c. Grating
      d. Swelling
      e. Bruising (discoloration)
      i. Exposed bone ends
      j. Joint locked into position
   3. Emergency medical care of bone or joint injuries
      a. Body substance isolation
      b. After life threats have been controlled, allow patient to remain in a position of comfort
      c. Application of cold pack to area of painful, swollen, deformed extremity to reduce swelling and pain
      d. Manual extremity stabilization
         (1) Support above and below an injury
         (2) Cover open wounds with a sterile dressing
         (3) Pad to prevent pressure and discomfort to the patient
         (4) When in doubt, manually stabilize the injury
         (5) Do not intentionally replace the protruding bones

III. Injuries to the Spine
A. Mechanism of injury
   1. Motor vehicle crashes
   2. Pedestrian - vehicle collisions
   3. Falls
   4. Blunt trauma
   5. Penetrating trauma to head, neck, or torso
   6. Motorcycle crashes
   7. Hangings
   8. Springboard or platform diving accidents
   9. Unresponsive trauma patients
B. Signs and symptoms
   1. Tenderness in the area of injury
   2. Pain associated with moving
      a. Do not ask the patient to move to try to find a pain response
      b. Do not move the patient to test for a pain response
   3. Pain independent of movement or palpation

a. Along spinal column
b. Lower legs
c. May be intermittent

4. Soft tissue injuries associated with trauma
   a. Head and neck to cervical spine
   b. Shoulders, back or abdomen - thoracic, lumbar
   c. Lower extremities - lumbar, sacral
5. Numbness, weakness or tingling in the extremities
6. Loss of sensation or paralysis below the suspected level of injury
7. Loss of sensation or paralysis in the upper or lower extremities
8. Respiratory impairment
9. Loss of bladder and/or bowel control
10. Ability of the patient to walk, move extremities or feel sensation; lack of pain to spinal column does not rule out the possibility of spinal column or cord damage

C. Assessing the potential spine injured patient
   1. Responsive patient
      a. Mechanism of injury
      b. Questions to ask
         (1) Does your neck or back hurt?
         (2) What happened?
         (3) Where does it hurt?
         (4) Can you move your hands and feet?
         (5) Can you feel me touching your fingers?
         (6) Can you feel me touching your toes?
   2. Unresponsive patient
      a. Maintain airway and breathing
      b. Stabilize head and neck manually in the position found
      c. Obtain information from others at the scene to determine mechanism of injury and patient mental status before the First Responder's arrival

D. Complications
   1. Inadequate breathing effort
   2. Paralysis

E. Emergency medical care
   1. Body substance isolation
   2. Establish and maintain manual stabilization
      a. Maintain constant manual stabilization
      b. May be released when additional EMS resources have properly secured the patient to a backboard with the head stabilized
   3. Perform initial assessment
      a. Whenever possible, airway control should be done without moving the patient's head
      b. Whenever possible, artificial ventilation should be done without moving the head
   4. Assess pulse, motor, and sensation in all extremities

IV. Injuries to the Brain and Skull
   A. Head injuries
      1. May be open or closed
         a. Open injuries may present with bleeding
         b. Closed injury may present with swelling or depression of skull bones
      2. Injuries to the scalp
         a. May bleed more than expected because of the large number of blood vessels in the scalp
         b. Control bleeding with direct pressure
      3. Injury to the brain - injury of brain tissue or bleeding inside the skull may increase pressure on the brain
   B. Emergency medical care
      1. Body substance isolation
      2. Maintain airway/artificial ventilation/oxygenation
      3. Initial assessment with manual spinal stabilization should be done on scene
      4. Closely monitor the mental status for deterioration
      5. Control bleeding
         a. Apply enough pressure to control the bleeding, without disturbing the underlying tissue
         b. Dress and bandage open wound as indicated in the emergency medical care of soft tissue injuries
      6. Be prepared for changes in patient condition

Application

Procedural (How)

1. Show diagrams of the muscular system
2. Show diagrams of the skeletal system
3. Show audio-visual materials of signs of open and closed bone and joint injuries
4. Demonstrate assessment of an injured extremity
5. Demonstrate manual stabilization techniques using the general rules of splinting

Contextual (When, Where, Why)

Injuries to bones and joints require immediate stabilization unless life-threatening injuries are present. If life-threatening injuries are present, ignore extremity injuries and address the immediate problem.

Failure to stabilize a bone or joint injury can result in: damage to soft tissue, organs, nerves, muscles; increased bleeding associated with the injury; permanent damage or disability; conversion of a closed injury to an open injury; and an increase in pain.

Student Activities

Auditory (Hearing)

1. The student should hear simulations of various situations involving musculoskeletal injuries and the proper assessment and emergency medical care

Visual (Seeing)

1. The student should see diagrams of the muscular system
2. The student should see diagrams of the skeletal system
3. The student should see audio-visual materials of open and closed bone and joint injuries
4. The student should see a demonstration of an assessment of an injured extremity
5. The student should see a demonstration of manual stabilization using general rules of stabilization

Kinesthetic (Doing)

1. The student should practice assessment of an injured extremity
2. The student should practice manual stabilization following the general rules of stabilization

Instructor Activities

Facilitate discussion and supervise practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation form)

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 5-4
Practical Lab: Illness and Injury

United States Department of Transportation
National Highway Traffic Safety Administration
First Responder: National Standard Curriculum
Vers 01 - 10/96

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate the cognitive objectives of Lesson 5-1: Medical Emergencies
- Demonstrate the cognitive objectives of Lesson 5-2: Bleeding and Soft Tissue Injuries
- Demonstrate the cognitive objectives of Lesson 5-3: Injuries to Muscles and Bones

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate the affective objectives of Lesson 5-1: Medical Emergencies
- Demonstrate the affective objectives of Lesson 5-2: Bleeding and Soft Tissue Injuries
- Demonstrate the affective of Lesson 5-3: Injuries to Muscles and Bones

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate the steps in providing emergency medical care to a patient with a general medical complaint (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with an altered mental status (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with seizures (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with an exposure to cold (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with an exposure to heat (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with a behavioral change (C-1)
- Demonstrate the steps in providing emergency medical care to a patient with a psychological crisis (C-1)
- Demonstrate direct pressure as a method of emergency medical care for external bleeding (P-1,2)
- Demonstrate the use of diffuse pressure as a method of emergency medical care for external bleeding (P-1,2)
- Demonstrate the use of pressure points as a method of emergency medical care for external bleeding (P-1,2)
- Demonstrate the care of the patient exhibiting signs and symptoms of internal bleeding (P-1,2)

- Demonstrate the steps in the emergency medical care of open soft tissue injuries (P-1,2)
- Demonstrate the steps in the emergency medical care of a patient with an open chest wound (P-1,2)
- Demonstrate the steps in the emergency medical care of a patient with open abdominal wounds (P-1,2)
- Demonstrate the steps in the emergency medical care of a patient with an impaled object (P-1,2)
- Demonstrate the steps in the emergency medical care of a patient with an amputation (P-1,2)
- Demonstrate the steps in the emergency medical care of an amputated part (P-1,2)
- Demonstrate the emergency medical care of a patient with a painful, swollen, deformed extremity (P-1,2)
- Demonstrate opening the airway in a patient with suspected spinal cord injury (P-1,2)
- Demonstrate evaluating a responsive patient with a suspected spinal cord injury (P-1,2)
- Demonstrate stabilizing of the cervical spine (P-1,2)

Preparation

Motivation:

The practical lesson is designed to allow the students additional time to perfect skills. It is of utmost importance that the students demonstrate proficiency of the skill, cognitive knowledge of the steps to perform a skill, and a healthy attitude towards performing that skill on a patient.

This is an opportunity for the instructor and assistant instructors to praise progress and redirect the students toward appropriate psychomotor skills. The material from all preceding lessons and basic life support should be incorporated into these practical skill sessions.

Prerequisites:

Completion of Lessons 5-1 through 5-3

Materials

AV Equipment:

Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment:

Hot packs, cold packs, and space blankets, sterile dressings, triangular bandages, universal dressings, occlusive dressings, 4 x 4 gauze pads, self adherent bandages,

roller bandages, blanket, pillow, improvised splinting material, e.g. magazines, umbrellas, etc.

Personnel

Primary Instructor:
One First Responder instructor knowledgeable in illness and injury

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in illness and injury management.

Recommended Minimum Time to Complete:
One and a half hours

Presentation

Declarative (What)
None identified for this lesson

Application

Procedural (How)
Instructor should demonstrate the procedural activities from Lesson 5-1: Medical Emergencies
Instructor should demonstrate the procedural activities from Lesson 5-2: Bleeding and Soft Tissue Injuries
Instructor should demonstrate the procedural activities from Lesson 5-3: Injuries to Muscles and Bones

Contextual (When, Where, Why)
Instructor should review contextual activities from Lesson 5-1: Medical Emergencies
Instructor should review the contextual activities from Lesson 5-2: Bleeding and Soft Tissue Injuries
Instructor should review the contextual activities from Lesson 5-3: Injuries to Muscles and Bones

Student Activities

Auditory (Hearing)

1. The student should hear the instructor present the signs, symptoms, and management of patients with general medical complaints
2. The student should hear the instructor present the signs, symptoms, and management of patients with altered mental status
3. The student should hear the instructor present the signs, symptoms, and management of patients with seizures
4. The student should hear the instructor present the signs, symptoms, and management of patients exposed to cold
5. The student should hear the instructor present the signs, symptoms, and management of patients exposed to heat
6. The student should hear the instructor present the signs, symptoms, and management of patients with behavior problems
7. Students should hear simulations to identify signs and symptoms of external bleeding
8. The student should hear simulated situations in which the signs and symptoms of soft tissue injuries and procedures for treating soft tissue injuries are demonstrated
9. The student should hear the sounds made by open sucking chest wounds
10. The student should hear simulations of various situations involving musculoskeletal injuries and the proper assessment and emergency medical care of the injuries

Visual (Seeing)

1. The students should see audio-visual material of patients with general medical complaints
2. The students should see audio-visual material of patients with an altered mental status
3. The students should see audio-visual material of patients with seizures
4. The students should see audio-visual material of patients exposed to cold
5. The students should see audio-visual material of patients exposed to heat
6. The students should see audio-visual material of patients with behavior problems
7. The students should see audio-visual materials of the various types of external bleeding
8. The student should see audio-visual materials of the proper methods to control bleeding
9. The student should see a patient to identify major bleeding
10. The students should see, in simulated situations, the application of direct pressure, elevation, and pressure points in the emergency medical care for external bleeding
11. The student should see diagrams of the various types of soft tissue injuries
12. The student should see demonstrations of the procedure for treating an open soft tissue injury
13. The student should see demonstrations of the necessary body substance isolation that must be taken when dealing with soft tissue injuries
14. The student should see demonstrations of the proper method for applying an occlusive dressing
15. The student should see demonstrations of the proper method for stabilizing an impaled object

16. The student should see diagrams illustrating a superficial, partial thickness, and full thickness burn
17. The student should see demonstrations for the proper emergency medical care for a superficial, partial thickness, and full thickness burn
18. The student should see the various types of dressing and bandages
19. The student should see demonstrations of the proper methods for applying a universal dressing, 4 X 4 inch dressing, and adhesive type dressing
20. The student should see demonstrations of the proper method for applying bandages: self-adherent, gauze rolls, triangular, adhesive tape, and air splints
21. The student should see demonstrations of the proper method for applying a pressure dressing
22. The student should see diagrams of the muscular system
23. The student should see diagrams of the skeletal system
24. The student should see audio-visual materials of open and closed bone and joint injuries
25. The student should see a demonstration of an assessment of an injured extremity
26. The student should see a demonstration of manual stabilization using general rules of stabilization

Kinesthetic (Doing)

1. The students should role play emergency medical care of a patient with a general medical complaint
2. The students should role play emergency medical care of a patient with altered mental status
3. The students should role play emergency medical care of a patient with a seizure
4. The students should role play emergency medical care of a patient exposed to cold
5. The students should role play emergency medical care of a patient exposed to heat
6. The students should role play emergency medical care of a patient with behavior problems
7. The student should practice the emergency medical care for open soft tissue injuries
8. The student should practice the emergency medical care of a patient with an open chest wound
9. The student should practice the emergency medical care of a patient with open abdominal wounds
10. The student should practice the emergency medical care of a patient with an impaled object
11. The student should practice the emergency medical care of a patient with superficial burns
12. The student should practice the emergency medical care of a patient with partial thickness burns
13. The student should practice the emergency medical care of a patient with full thickness burns
14. The student should practice the emergency medical care of a patient with an amputation
15. The student should practice the emergency medical care of an amputated part

16. The student should practice the emergency medical care of a patient with a chemical burn
17. The student should practice the emergency medical care of a patient with an electrical burn
18. The student should practice assessing of an injured extremity
19. The student should practice manual stabilization following the general rules of stabilization

Instructor Activities

Supervise student practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Evaluation

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skills stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

Lesson 5-5 Evaluation: Illness and Injury

United States Department of Transportation
National Highway Traffic Safety Administration
First Responder: National Standard Curriculum
Vers 01-10/96

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective

1 = Knowledge level
2 = Application level
3 = Problem solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the cognitive objectives of Lesson 5-1: Medical Emergencies
- Demonstrate competence in the cognitive objectives of Lesson 5-2: Bleeding and Soft Tissue Injuries
- Demonstrate competence in the cognitive objectives of Lesson 5-3: Injuries to Muscles and Bones

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the affective objectives of Lesson 5-1: Medical Emergencies
- Demonstrate competence in the affective objectives of Lesson 5-2: Bleeding and Soft Tissue Injuries
- Demonstrate competence in the affective objectives of Lesson 5-3: Injuries to Muscles and Bones

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the psychomotor objectives of Lesson 5-1: Medical Emergencies
- Demonstrate competence in the psychomotor objectives of Lesson 5-2: Bleeding and Soft Tissue Injuries
- Demonstrate competence in the psychomotor objectives of Lesson 5-3: Injuries to Muscles and Bones

Preparation

Motivation:

Evaluation of the student's attainment of the cognitive and affective knowledge and psychomotor skills is an essential component of the First Responder's educational process. The modules are presented in a "building block" format. Once the students have demonstrated their knowledge and proficiency, the next lesson should be built

upon that knowledge. This evaluation will help to identify students or groups of students having difficulty with a particular area. This is an opportunity for the instructor to evaluate their performance and make appropriate modifications to the delivery of material.

Prerequisites:
Completion of Lessons 5-1 through 5-4

Material

AV Equipment:
Typically none required

EMS Equipment:
The EMS equipment used in the Lessons of Module 5

Personnel

Primary Instructor:
One proctor for the written evaluation

Assistant Instructor:
One practical skills examiner for each 6 students

Recommended Minimum Time to Complete:
One hour

Presentation

Declarative (What)

I. Purpose of the evaluation

II. Items to be evaluated

III. Feedback from evaluation

Application

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lessons 5-1 > 5-4

2. Practical evaluation stations based on the psychomotor objectives of Lessons 5-1 > 5-4

Contextual (When, Where and Why)

The evaluation is the final lesson in this module and is designed to bring closure to the module and to ensure that students are prepared to proceed to the next module

This modular evaluation is given to determine the effectiveness of the presentation of materials and how well students have retained the material. This is an opportunity for the students to make necessary adjustments in study habits or for the instructor to adjust the manner in which material is presented.

Instructor Activities

Supervise student evaluation
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Remediation

Identify students and/or groups of students who are having difficulty with this subject content. Complete a remediation sheet from the instructor's course guide. If students continue to have difficulty demonstrating knowledge of the cognitive and affective objectives or demonstrating proficiency in psychomotor skills, the students should be counseled, remediated, and re-evaluated. If improvements in cognitive, affective, or psychomotor skills are not achieved, consideration regarding the ability of the student to progress in the program should be taken into account.

Module 6: Childbirth and Children
Lesson 6-1 Childbirth

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

6-1.1 Identify the following structures: birth canal, placenta, umbilical cord, amniotic sac (C-1)
6-1.2 Define the following terms: crowning, bloody show, labor, abortion (C-1)
6-1.3 State indications of an imminent delivery (C-1)
6-1.4 State the steps in the pre-delivery preparation of the mother (C-1)
6-1.5 Establish the relationship between body substance isolation and childbirth (C-3)
6-1.6 State the steps to assist in the delivery (C-1)
6-1.7 Describe care of the baby as the head appears (C-1)
6-1.8 Discuss the steps in delivery of the placenta (C-1)
6-1.9 List the steps in the emergency medical care of the mother post-delivery (C-3)
6-1-10 Discuss the steps in caring for a newborn (C-1)

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

6-1.11 Explain the rationale for attending to the feeling of a patient in need of emergency medical care during childbirth (A-2)
6-1.12 Demonstrate a caring attitude towards patients during childbirth who request emergency medical services (A-3)
6-1.13 Place the interests of the patient during childbirth as the foremost consideration when making any and all patient care decisions (A-3)
6-1.14 Communicate with empathy to patients during childbirth, as well as with family members and friends of the patient (A-3)

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

6-1.15 Demonstrate the steps to assist in the normal cephalic delivery (P-1,2)
6-1.16 Demonstrate necessary care procedures of the fetus as the head appears (P-1,2)
6-1.17 Attend to the steps in the delivery of the placenta (P-1,2)
6-1.18 Demonstrate the post-delivery care of the mother (P-1,2)
6-1.19 Demonstrate the care of the newborn (P-1,2)

Preparation

Motivation:
Childbirth in an out-of-hospital setting rarely occurs. Because of the infrequency, taking care of an anxious mother and newborn infant is a stressful emergency call for the First Responder. Knowledge and practice in simulated situations can decrease stress and lead to better mother and child care.

Prerequisites:
Preparatory, Airway, and Patient Assessment Modules

Materials

AV Equipment:
Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment:
Childbirth kit, airway management equipment, eye protection, gloves

Personnel

Primary Instructor:
One First Responder Instructor familiar with childbirth

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in childbirth.

Recommended Minimum Time to Complete:
One hour

Presentation

Declarative (What)

I. Childbirth
   A. Reproductive anatomy, physiology and terminology
      1. Birth canal - vagina and lower part of the uterus
      2. Placenta (afterbirth) - organ through which fetus exchanges nourishment and waste products during pregnancy
      3. Umbilical cord - cord which is an extension of the placenta through which fetus receives nourishment while in the uterus

4. Amniotic sac (bag of water) - the sac that surrounds the fetus inside the uterus
5. Crowning - the bulging-out of the vagina which is opening as the fetus's head or presenting part presses against it
6. "Bloody show" - mucus and blood that may come out of the vagina as labor begins
7. Labor - the time and process (defined in 3 or 4 stages) beginning with the first uterine muscle contraction until delivery of the placenta
   a. Delivery is imminent
   b. Crowning
   c. In the process of delivering
8. Abortion (miscarriage) - delivery of products of conception early in pregnancy
   a. Assess and treat for shock
   b. Retain products of conception

B. Delivery
1. Is delivery imminent?
   a. Questions
      (1) What is your due date?
      (2) Any chance of multiple births?
      (3) Any bleeding or discharge?
      (4) Does the patient feel as if she is having a bowel movement with increasing pressure in the vaginal area?
   b. Examine for crowning if the patient answers yes to the preceding questions
2. If crowning is present, prepare for delivery
   a. Use body substance isolation
   b. Do not touch vaginal areas except during delivery and when your partner is present
   c. Do not let the mother go to bathroom
   d. Do not hold mother's legs together
3. If the head is not the presenting part this may be a complicated delivery
   a. Tell the mother not to push
   b. Update responding EMS resources
   c. Calm and reassure the mother
4. Delivery procedures
   a. Ensure body substance isolation
   b. Have mother lie on her back with knees drawn up and legs spread apart
   c. Place absorbent, clean materials (sheets, towels, etc.) under the patient's buttocks
   d. Elevate buttocks with blankets or pillow
   e. When the infant's head appears, place the palm of your hand on top of the delivering baby's head and exert very gentle pressure to prevent explosive delivery
   f. If the amniotic sac does not break or has not broken, tear it with your fingers and push it away from the infant's head and mouth

g. As the infant's head is being born, determine if the umbilical cord is around the infant's neck
   (1) Attempt to slip the cord over the baby's shoulder
   (2) If unsuccessful, attempt to alleviate pressure on the cord
h. After the infant's head is born, support the head
i. Suction the mouth and then the nostrils two or three times with the bulb syringe
   (1) Use caution to avoid contact with the back of the baby's mouth
   (2) If a bulb syringe is not available, wipe the baby's mouth and then the nose with gauze
j. As the torso and full body are born, support the infant with both hands
k. Do not pull on the infant
l. As the feet are delivered, grasp the feet
   (1) Keep the infant level with the vagina
   (2) You may place the infant on the mothers abdomen for warmth
m. When the umbilical cord stops pulsating, it should be tied with gauze between the mother and the newborn and the infant may be placed on the mother's abdomen
n. Wipe blood and mucus from the baby's mouth and nose with sterile gauze; suction mouth, then the nose again
o. Dry the infant
p. Rub the baby's back or flick the soles of its feet to stimulate breathing
q. Wrap the infant in a warm blanket and place the infant on its side, head slightly lower than trunk
r. There is no need to cut the cord in a normal delivery. Keep the infant warm and wait for additional EMS resources who will have the proper equipment to clamp and cut the cord
s. Record time of delivery
t. If there is a chance of multiple births, prepare for second delivery
u. Observe for delivery of placenta. This may take up to 30 minutes
v. If the placenta is delivered, wrap it in a towel with 3/4 of the umbilical cord and place in a plastic bag, and keep the bag at the level of the infant
w. Place sterile pad over vaginal opening, lower mother's legs, help her hold them together

5. Vaginal bleeding following delivery
   a. Up to 300 - 500 ml blood loss is well tolerated by the mother following delivery
   b. The First Responder must be aware of this loss so as not to cause undue psychological stress on himself or the new mother
   c. With continued blood loss, massage the uterus
      (1) Use hand with your fingers fully extended
      (2) Place the palm of your hand on lower abdomen above the pubis
      (3) Massage (knead) over area
      (4) If bleeding continues, check massage technique

C. Initial care of the newborn
   1. Assessment of infant - normal findings

a. Pulse - greater than 100/min
   (1) Pulse can be assessed at the umbilical cord
   (2) May also assess at brachial artery
b. Respiratory status - >40 breaths per minute, crying

2. The most important care is to position, dry, keep warm, and stimulate the newborn to breathe
3. Wrap newborn in blanket and cover its head
4. Repeat suctioning if necessary
5. Continue to stimulate newborn if not breathing
   a. Flick soles of feet
   b. Rub infant's back
6. If newborn does not begin to breathe or continues to have breathing difficulty after one minute, the First Responder must consider the need for additional measures
   a. Ensure open and patent airway
   b. Ventilate at a rate of 40 breaths per minute
   c. Reassess after one minute
   d. If heart rate is less than 80 beats per minute, a second rescuer should perform chest compressions

D. Post delivery care of the mother
1. Keep contact with the mother throughout the process.
2. Monitor respirations and pulse
3. Keep in mind that delivery is an exhausting procedure
4. Replace any blood soaked sheets and blankets while awaiting transport.

Application

Procedural (How)

1. Demonstrate a normal delivery
2. Demonstrate necessary care of the fetus as the head appears
3. Demonstrate initial care of the newborn
4. Demonstrate post-delivery care of the mother
5. Demonstrate emergency medical care of the mother with continued bleeding

Contextual (When, Where, Why)

Knowledge and skills practice in the laboratory setting, particularly for out-of-hospital childbirth, help the students maintain professionalism, understand these uncommon emergency medical care situations, and support the patient until additional EMS providers arrive at the scene.

Student Activities

Auditory (Hearing)

1. The student should hear a video tape of a mother in the final stages of labor, providing a sample of the mother's actions during this painful process

Visual (Seeing)

1. The student should see audio-visual materials of labor and delivery showing:
   A. Late stages of labor and normal delivery
   B. Suctioning the infant's mouth and nose during delivery
   C. Assessment and care of the newborn
   D. Normal bleeding during delivery

Kinesthetic (Doing)

1. Student should practice assisting in a normal delivery
2. Student should practice necessary care of the fetus as the head appears during delivery
3. Student should practice post-delivery care of mothers and neonates

Instructor Activities

Facilitate discussion and supervise practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation form)

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 6-2 Infants and Children

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

6-2.1 Describe differences in anatomy and physiology of the infant, child, and adult patient (C-1)
6-2.2 Describe assessment of the infant or child (C-1)
6-2.3 Indicate various causes of respiratory emergencies in infants and children (C-1)
6-2.4 Summarize emergency medical care strategies for respiratory distress and respiratory failure/arrest in infants and children (C-1)
6-2.5 List common causes of seizures in the infant and child patient (C-1)
6-2.6 Describe management of seizures in the infant and child patient (C-1)
6-2.7 Discuss emergency medical care of the infant and child trauma patient (C-1)
6-2.8 Summarize the signs and symptoms of possible child abuse and neglect (C-1)
6-2.9 Describe the medical - legal responsibilities in suspected child abuse (C-1)
6-2.10 Recognize need for First Responder debriefing following a difficult infant or child transport (C-1)

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

6-2.11 Attend to the feelings of the family when dealing with an ill or injured infant or child (A-1)
6-2.12 Understand the provider's own emotional response to caring for infants or children (A-1)
6-2.13 Demonstrate a caring attitude towards infants and children with illness or injury who require emergency medical services (A-3)
6-2.14 Place the interests of the infant or child with an illness or injury as the foremost consideration when making any and all patient care decisions (A-3)
6-2.15 Communicate with empathy to infants and children with an illness or injury, as well as with family members and friends of the patient (A-3)

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

6-2.16 Demonstrate assessment of the infant and child (P-1,2)

Preparation

Motivation:
Infant and child patients often cause anxiety for the First Responder. This is caused by a lack of dealing with this special population as well as a fear of failure. Understanding the special considerations in dealing with pediatric patients is important in their emergency medical care.

Prerequisites:
Airway, Patient Assessment, and Circulation Modules

Materials

AV Equipment:
Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to enure that the objectives of the curriculum are met.

EMS Equipment:
None

Personnel

Primary Instructor:
One First Responder instructor knowledgeable with infants and children

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skills practice. Individuals used as assistant instructors should be knowledgeable in infant and child emergencies.

Recommended Minimum Time to Complete:
Two hours

Presentation

Declarative (What)(1) Anatomical and Physiological Concerns

A. Small airways are easily blocked by secretions and airway swelling
B. Tongue is large relative to small mandible and can block airway in an unresponsive infant or child
C. Positioning the airway is different in infants and children, do not hyperextend the neck
D. Infants are nose breathers, so suctioning a secretion - filled nasopharynx can improve breathing problems in an infant

E. Children can compensate well for short periods of time for respiratory problems and shock
   1. Compensate by increasing breathing rate and increasing effort of breathing
   2. Compensation is followed rapidly by decompensation due to rapid respiratory muscle fatigue and general fatigue
F. Risk of hypothermia; keep them warm

I. Airway
   A. Essential skills - review from module 2-1, Airway, with emphasis on infants and children
      1. Airway opening
         a. Position to open airway is different - head-tilt chin-lift - do not hyperextend
         b. Place a folded towel under the shoulders to assist in maintaining position
         c. Jaw thrust with spinal stabilization
      2. Suctioning
         a. Sizing
         b. Depth
         c. Technique
         d. Use of the bulb syringe
      3. Clearing complete obstructions
         Follow the American Heart Association guidelines of Foreign Body Airway Obstructions in the Infant and Child
   B. Airway adjuncts
      1. Oral airways
         a. Adjunct, not for initial artificial ventilation
         b. Patient should not have a gag reflex
         c. Sizing - corner of the mouth to the tip of the ear
         d. Techniques of insertion - use tongue depressor
            (1) Insert tongue blade to the base of tongue
            (2) Push down against the base of tongue while lifting upward
            (3) Insert oropharyngeal airway following the anatomic curve (upright) without rotation
      2. Nasal airways are usually not used in children by First Responders

II. Assessment
   A. Be sure to involve the parents in your assessment and management of infants and children
      1. Agitated parents = agitated child
      2. Calm parents = calm child
   B. General impression of well versus sick child can be obtained from overall appearance
      1. Assess mental status
      2. Effort of breathing
      3. Color
      4. Quality of cry/speech
      5. Interaction with environment and parents

a. Normal behavior for child of this age
b. Playing
c. Moving around
d. Attentive versus non-attentive
e. Eye contact
f. Recognizes parents
g. Responds to parents calling

6. Emotional state (crying, upset, scared)
7. Response to the First Responder
8. Tone/body position

C. Approach to evaluation

1. Begin assessment from across the room
   a. Observe for mechanism of injury
   b. Assess the surroundings
   c. Respiratory assessment includes:
      (1) Chest expansion/symmetry
      (2) Effort of breathing
      (3) Nasal flaring
      (4) Stridor (high pitched inspiratory sound), crowing, or noisy
      (5) Retractions
      (6) Grunting
      (7) Respiratory rate
2. Hands-on approach to infant or child patient assessment
   a. Palpate brachial or femoral pulse
   b. Compare central and distal pulses
   c. Assess skin color, temperature, and condition

III. Common Problems in Infants and Children

A. Airway obstructions

1. Partial airway obstruction - infant or child who is alert and sitting
   a. Stridor (high pitched inspiratory sound), crowing, or noisy
   b. Retractions on inspiration
   c. Pink
   d. Good peripheral perfusion
   e. Still alert, not unresponsive
   f. Emergency medical care
      (1) Allow position of comfort; assist younger child to sit up; do not lay down. May sit on parent's lap.
      (2) Do not agitate child
2. Complete obstruction and altered mental status or cyanosis and partial obstruction
   a. No crying or speaking and cyanosis
      (1) Child's cough becomes ineffective
      (2) Increased respiratory difficulty accompanied by stridor (high pitched inspiratory sound)
      (3) Patient loses responsiveness

        (4) Altered mental status
    b. Clear airway
        (1) Infant foreign body procedures
        (2) Child foreign body procedures
    c. Attempt artificial ventilations with mouth-to-mask technique

B. Respiratory emergencies
    1. Respiratory distress precedes respiratory failure and is indicated by any of the following:
        a. Respiratory rate >60 in infants
        b. Respiratory rate > 30/40 in children
        c. Nasal flaring
        d. Intercostal retraction (between the ribs), supraclavicular (neck muscles), subcostal retractions (below the margin of the rib)
        e. Stridor (high pitched inspiratory sound)
        f. Cyanosis
        g. Altered mental status (combative, decreased mental status, unresponsive)
        h. Grunting
    2. Respiratory failure/arrest
        a. Breathing rate less than 10 per minute in a child
        b. Breathing rate of less than 20 per minute in an infant
        c. Limp muscle tone
        d. Unresponsive
        e. Slower, absent heart rate
        f. Weak or absent distal pulses
        g. Cyanosis and a slow heart rate
    3. Role of the First Responder
        a. Complete the First Responder assessment
            (1) Complete a scene size-up before initiating emergency medical care
            (2) Complete an initial assessment on all patients
            (3) Complete a physical exam as needed
            (4) Complete on-going assessments
        b. Provide mouth-to-mask or barrier device ventilations
        c. Observe heart rate

C. Circulatory failure
    1. Circulatory failure that is uncorrected is also a common cause of cardiac arrest in infants and children
    2. Signs and symptoms of circulatory failure
        a. Increased heart rate
        b. Unequal central and distal pulses
        c. Poor skin perfusion
        d. Mental status changes
    3. Role of the First Responder
        a. Complete the First Responder assessment
            (1) Complete a scene size-up before initiating emergency medical care
            (2) Complete an initial assessment on all patients
                (a) Support oxygenation and ventilation

(b) Observe for signs of cardiac arrest

D. Seizures
1. Seizures, including seizures caused by fever (febrile), should be considered potentially life-threatening
2. May be brief or prolonged
3. Assess for injuries which may have occurred during seizures
4. Caused by a variety of conditions
   a. Fever
   b. Infections
   c. Poisoning
   d. Low blood sugar
   e. Trauma
   f. Decreased levels of oxygen
   g. Could be the result of an unknown cause in children
5. History of seizures. Ask the following questions:
   a. Has the child had prior seizure(s)?
   b. If yes, is this the child's normal seizure pattern?
   c. Is the child on a seizure medication?
   d. Could the child have ingested any other medications?
6. Role of the First Responder
   a. Complete the First Responder assessment
      (1) Complete a scene size-up before initiating emergency medical care
      (2) Complete an initial assessment on all patients
      (3) Complete a physical exam as needed
      (4) Complete on-going assessments
      (5) Observe and describe the seizure
   b. Comfort, calm, and reassure the patient while awaiting additional EMS resources
      (1) Protect the patient from the environment
      (2) Ask bystanders (except parents) to leave the area
      (3) Assure patency of airway
      (4) Place patient in the recovery position if no possibility of spine trauma
      (5) Never restrain the patient
      (6) Do not put anything in the patient's mouth
      (7) Have suction available
      (8) If the patient is bluish, assure airway and artificially ventilate
      (9) Report assessment findings to additional EMS responses
7. Relationship to Airway Module
   a. Often seizure patients will have significant oral secretions
   b. It is essential that these patients be placed in the recovery position when the convulsions have ended
   c. Patients who are actively seizing, bluish, and breathing inadequately should be ventilated, if possible

E. Altered mental status
1. Caused by a variety of conditions
   a. Low blood sugar

b. Poisoning
c. Post seizure
d. Infection
e. Head trauma
f. Decreased oxygen levels

2. Role of the First Responder
   a. Complete the First Responder assessment
      (1) Complete a scene size-up before initiating emergency medical care
      (2) Complete an initial assessment on all patients
      (3) Complete a physical exam as needed
      (4) Complete on-going assessments
   b. Comfort, calm, and reassure the patient while awaiting additional EMS resources
      (1) Assure patency of airway
      (2) Be prepared to artificially ventilate/suction
      (3) Place in recovery position

F. Sudden infant death syndrome (SIDS)
   1. Signs and symptoms
      a. Sudden death of infants in the first year of life
      b. Many causes are not clearly understood
      c. Baby is most commonly discovered in the early morning
   2. Role of the First Responder
      a. Complete the First Responder assessment
         (1) Complete a scene size-up before initiating emergency medical care
         (2) Complete an initial assessment on all patients
      b. Comfort, calm, and reassure the parents while awaiting additional EMS resources
         (1) Try to resuscitate unless the baby is stiff
         (2) Parents will be in agony from emotional distress, remorse, and guilt
         (3) Avoid any comments that might suggest blame to the parents

IV. Trauma
   A. Injuries are the leading cause of death in infants and children
   B. Blunt injury is most common
   C. The pattern of injury may be different from adults
      1. Motor vehicle crashes
         a. Motor vehicle passengers
            (1) Unrestrained passengers have head and neck injuries
            (2) Restrained passengers have abdominal and lower spine injuries
            (3) Infant and booster seats are often improperly fastened, resulting in head and neck injuries
         b. Struck while riding bicycle - head injury, spinal injury, abdominal injury
         c. Pedestrian struck by vehicle - abdominal injury with internal bleeding, possibly painful, swollen, deformed thigh, head injury
      2. Falls from height, diving into shallow water - head and neck injuries
      3. Burns

4. Sports injuries - head and neck
5. Child abuse and neglect

D. Specific body systems
1. Head
   a. Proportionally larger and more easily injured
   b. The single most important maneuver is to ensure an open airway by means of the jaw thrust
2. Chest
   a. Children have very soft pliable ribs
   b. There may be significant injuries without external signs
3. Abdomen
   a. More common site of injury in children than adults
   b. Often a source of hidden injury
4. Extremities - extremity injuries are managed in the same manner as for adults
5. Role of the First Responder
   a. Complete the First Responder assessment
      (1) Complete a scene size-up before initiating emergency medical care
      (2) Complete an initial assessment on all patients
      (3) Complete a physical exam as needed
      (4) Complete on-going assessments
   b. Comfort, calm, and reassure the patient while awaiting additional EMS resources
      (1) Assure airway position and patency. Use jaw thrust
      (2) Suction as necessary with large bore suction catheter
      (3) Provide spinal stabilization
      (4) Manually stabilize extremity injuries

V. Child Abuse and Neglect
A. Definition of abuse - improper or excessive action so as to injure or cause harm
B. Definition of neglect - giving insufficient attention or respect to someone who has a claim to that attention
C. First Responder must be aware of condition to be able to recognize the problem
D. Physical abuse and neglect are the two forms of child abuse that the First Responder is likely to suspect
E. Signs and symptoms of abuse
1. Multiple bruises in various stages of healing
2. Injury inconsistent with mechanism described
3. Patterns of injury
   a. Cigarette burns
   b. Whip marks
   c. Hand prints
4. Repeated calls to the same address
5. Fresh burns
   a. Not just any burns
      (1) Scalding
      (2) Glove, dip pattern

        b. Burns inconsistent with the history presented
        c. Untreated burns
    6. Parents seem inappropriately unconcerned
    7. Conflicting stories
    8. Fear on the part of the child to discuss how the injury occurred
    9. CNS injuries - shaken baby syndrome
        a. Unresponsive/seizure
        b. Severe internal injuries
        c. No evidence of external injuries
F. Signs and symptoms of neglect
    1. Lack of adult supervision
    2. Malnourished appearing child
    3. Unsafe living environment
    4. Untreated chronic illness; e.g., asthmatic with no medications
    5. Untreated soft tissue injuries
G. Do not accuse in the field
    1. Accusation and confrontation delays transportation
    2. Report objective information to the transporting unit
H. Reporting required by state law
    1. Local regulations
    2. Remain objective
        a. Report what you see and what you hear
        b. Do not comment on what you think

VI. Need for First Responder Debriefing
A. Especially in cases of abuse/neglect
B. Serious injury/death of a child

Application

Procedural (How)

1. Demonstrate the techniques of opening the airway of an infant or child
2. Demonstrate the techniques of suctioning an infant or child
3. Demonstrate the techniques for removing a foreign body airway obstruction in an infant or child
4. Demonstrate ventilating infants and children
4. Demonstrate assessment of the infant and child
5. Demonstrate the management of partial and complete airway obstructions in infants and children
6. Demonstrate the management of respiratory distress and respiratory arrest in infants and children
7. Demonstrate the management of seizures, altered mental status, and sudden infant death syndrome (SIDS)

Contextual (When, Where, Why)

The First Responder must have an understanding of the unique aspects of dealing with infants and children. In addition, the First Responder must realize the aspect of having multiple patients. A child cannot be cared for isolated from the family. A calm, professional, reassuring First Responder may help to minimize psychological impact of transport to parent and child.

Student Activities

Auditory (Hearing)

1. Students should hear various infant and child airway sounds
2. Students should hear parent information

Visual (Seeing)

1. Students should see audio-visual materials of infant and child patients with common medical or traumatic complaints
2. Students should see various infant or child equipment

Kinesthetic (Doing)

1. Students should practice the techniques of opening the airway of an infant or child
2. Students should practice the techniques of suctioning an infant or child
3. Students should practice the techniques for removing of a foreign body airway obstruction in an infant or child
4. Students should practice ventilating infants and children
5. Students should practice the assessment of the infant and child
6. Students should practice the management of partial and complete airway obstructions in infants and children
7. Students should practice the management of respiratory distress and respiratory arrest in infants and children
8. Students should practice the management of seizures, altered mental status, and sudden infant death syndrome (SIDS)

Instructor Activities

Facilitate discussion and supervise practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation form)

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 6-3
Practical Lab: Childbirth and Children

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective

1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate the cognitive objectives of Lesson 6-1: Childbirth
- Demonstrate the cognitive objectives of Lesson 6-2: Infants and Children

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate the affective objectives of Lesson 6-1: Childbirth
- Demonstrate the affective objectives of Lesson 6-2: Infants and Children

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate the steps to assist in the normal cephalic delivery (P-1,2)
- Demonstrate necessary care procedures of the fetus as the head appears (P-1,2)
- Attend to the steps in the delivery of the placenta (P-1,2)
- Demonstrate the post-delivery care of the mother (P-1,2)
- Demonstrate the care of the newborn (P-1,2)
- Demonstrate assessment of the infant and child (P-1,2)

Preparation

Motivation:

The practical lesson is designed to allow the students additional time to perfect skills. It is of utmost importance that the students demonstrate proficiency of the skill, cognitive knowledge of the steps to perform a skill, and a healthy attitude towards performing that skill on a patient.

This is an opportunity for the instructor and assistant instructors to praise progress and redirect the students toward appropriate psychomotor skills. The material from all preceding lessons and basic life support should be incorporated into these practical skill sessions.

Prerequisites:

Completion of Lessons 6-1 through 6-2

Materials

AV Equipment:
Utilize various audio-visual materials relating to emergency medical care. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure that the objectives of the curriculum are met.

EMS Equipment:
Childbirth manikin, sheets and towels, pillow or blanket, gloves, eye protection, bulb syringe

Personnel

Primary Instructor:
One First Responder instructor knowledgeable in childbirth and children

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in infants, children, and childbirth.

Recommended Minimum Time to Complete:
One hour

Presentation

Declarative (What)
None identified for this lesson.

Application

Procedural (How)
Instructor should demonstrate the procedural activities from Lesson 6-1: Childbirth
Instructor should demonstrate the procedural activities from Lesson 6-2: Infants and Children

Contextual (When, Where, Why)
Instructor should review contextual activities from Lesson 6-1: Childbirth
Instructor should review the contextual activities from Lesson 6-2: Infants and Children

Student Activities

Auditory (Hearing)
1. The student should hear a video tape of a mother in the final stages of labor, providing a sample of the mother's actions during this painful process
2. Students should hear various infant and child airway sounds

3. Students should hear parent information

Visual (Seeing)

1. The student should see audio-visual materials of labor and delivery showing:
   A. Late stages of labor and normal delivery
   B. Suctioning the infant's mouth and nose during delivery
   C. Assessment and care of the newborn
   D. Normal bleeding during delivery
2. Students should see audio-visual materials of infant and child patients with common medical or traumatic complaints
3. Students should see various infant or child equipment

Kinesthetic (Doing)

1. Student should practice the steps to assist in the normal delivery
2. Student should practice necessary care of the fetus as the head appears during delivery
3. Student should practice post-delivery care of mothers and neonates
4. Demonstrate the techniques of opening the airway of an infant or child
5. Demonstrate the techniques of suctioning an infant or child
6. Demonstrate the techniques for removing a foreign body airway obstruction in an infant or child
7. Demonstrate ventilating for infants and children
8. Demonstrate the assessment of the infant and child
9. Demonstrate managing partial and complete airway obstructions in infants and children
10. Demonstrate managing respiratory distress and respiratory arrest in infants and children
11. Demonstrate the management of seizures, altered mental status, and sudden infant death syndrome (SIDS)

Instructor Activities

Supervise student practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Evaluation

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skills stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from the instructor's course guide and attach with lesson plan.

Lesson 6-4
Evaluation: Infants and Children

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the cognitive objectives of Lesson 6-1: Childbirth
- Demonstrate competence in the cognitive objectives of Lesson 6-2: Infants and Children

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the affective objectives of Lesson 6-1: Childbirth
- Demonstrate competence in the affective objectives of Lesson 6-2: Infants and Children

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the psychomotor objectives of Lesson 6-1: Childbirth
- Demonstrate competence in the psychomotor objectives of Lesson 6-2: Infants and Children

Preparation

Motivation:

Evaluation of the student's attainment of the cognitive and affective knowledge and psychomotor skills is an essential component of the First Responder's educational process. The modules are presented in a "building block" format. Once the students have demonstrated their knowledge and proficiency, the next lesson should be built upon that knowledge. This evaluation will help to identify students or groups of students having difficulty with a particular area. This is an opportunity for the instructor to evaluate their performance and make appropriate modifications to the delivery of material.

Prerequisites:

Completion of Lessons 6-1 through 6-3

Material

AV Equipment:

Typically none required

EMS Equipment:
The EMS equipment used in the lessons of Module 6

Personnel

Primary Instructor:
One proctor for the written evaluation

Assistant Instructor:
One practical skills examiner for each 6 students

Recommended Minimum Time to Complete:
One hour

Presentation

Declarative (What)

I. Purpose of the evaluation

II. Items to be evaluated

III. Feedback from evaluation

Application

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lessons 6-1 > 6-3

2. Practical evaluation stations based on the psychomotor objectives of Lessons 6-1 > 6-3

Contextual (When, Where and Why)

The evaluation is the final lesson in this module and is designed to bring closure to the module and to assure that students are prepared to proceed to the next module.

This modular evaluation is done to determine the effectiveness of the presentation of materials and how well students have retained the material. This is an opportunity for the students to make necessary adjustments in study habits or for the instructor to adjust the manner in which material is presented.

Instructor Activities

Supervise student evaluation

Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Remediation

Identify students and/or groups of students who are having difficulty with this subject content. Complete a remediation sheet from the instructor's course guide. If students continue to have difficulty demonstrating knowledge of the cognitive and affective objectives, or demonstrating proficiency in psychomotor skills, the students should be counseled, remediated, and re-evaluated. If improvements in cognitive, affective, or psychomotor skills are not achieved, consideration regarding the ability of the student to progress in the program should be taken into account.

Module 7: EMS Operations
Lesson 7-1 EMS Operation

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem-solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

7-1.1 Discuss the medical and non-medical equipment needed to respond to a call (C-1)
7-1.2 List the phases of a out-of-hospital call (C-1)
7-1.3 Discuss the role of the First Responder in extrication (C-1)
7-1.4 List various methods of gaining access to the patient (C-3)
7-1.5 Distinguish between simple and complex access (C-3)
7-1.6 Describe what the First Responder should do if there is reason to believe that there is a hazard at the scene (C-1)
7-1.7 State the role the First Responder should perform until appropriately trained personnel arrive at the scene of a hazardous materials situation (C-1)
7-1.8 Describe the criteria for a multiple-casualty situation (C-1)
7-1.9 Discuss the role of the First Responder in the multiple-casualty situation (C-3)
7-1.10 Summarize the components of basic triage (C-1)

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

7-1.11 Explain the rationale for having the unit prepared to respond (A-3)

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

7-1.12 Given a scenario of a mass casualty incident, perform triage (P-2)

Preparation

Motivation:

A First Responder will be functioning as part of the EMS System. This lesson is designed to provide the student with a brief overview of some of the operational aspects of out-of-hospital care.

The First Responder should be familiar with the medical and non-medical equipment for use in patient care. The First Responder should also be aware of the phases of a response and his/her role in each.

Although the First Responder is not usually responsible for rescue and extrication, a fundamental understanding of the process is required.

Prerequisites:
Preparatory, Airway, Patient Assessment, Circulation, and Illness and Injuries Modules

Materials

AV Equipment:
Utilize various audio-visual materials relating to EMS operations. The continuous development of new audio-visual materials relating to EMS requires careful review to determine which best meet the needs of the program. Materials should be edited to ensure meeting the objectives of the curriculum.

EMS Equipment:
Triage Tags, Emergency Response Guidebook

Personnel

Primary Instructor:
One First Responder instructor, knowledgeable in EMS operations

Assistant Instructor:
The instructor-to-student ratio should be 1:6 for psychomotor skill practice. Individuals used as assistant instructors should be knowledgeable in EMS operations procedures.

Recommended Minimum Time to Complete:
Two hours

Presentation

Declarative (What)

I. Phases of a response
   A. Preparation for the call
      1. Recommended equipment
         a. Medical
            (1) Basic supplies
            (2) Airways
            (3) Suction equipment
            (4) Artificial ventilation devices
            (5) Basic wound care supplies
         b. Non-medical
            (1) Personal safety equipment per local, state, and federal standards
            (2) Planned routes or comprehensive street maps
      2. Personnel
         a. Available for response

3. Equipment
    a. Checked and maintained
    b. Restocked and repaired
4. Utilization of safety precautions and seat belts

B. Dispatch
1. Central access
2. 24-hour availability
3. Trained personnel
4. Dispatch information
    a. Nature of call
    b. Name, location, and callback number of caller
    c. Location of patient
    d. Number of patients and severity
    e. Other special problems

C. En route to scene
1. Seat belts
2. Notify dispatch
3. Essential information
    a. Nature of the call
    b. Location of the call

D. Arrival at scene
1. Notify dispatch
2. Size-up
    a. Body substance isolation
        (1) Should be a consideration before patient contact
        (2) Use gloves, gowns, and eye wear when appropriate
    b. Scene safety - assess the scene for hazards
        (1) Is the emergency vehicle parked in a safe location?
        (2) Is it safe to approach the patient?
        (3) Does the patient require immediate movement because of hazards?
    c. Mechanism of injury/nature of illness
        (1) Medical
            (a) Mass casualty incident
            (b) Number of patients
            (c) Obtain additional help
            (d) Begin triage
            (e) Spine stabilization if necessary
        (2) Trauma
            (a) Mass casualty incident
                i) Number of patients
                ii) Obtain additional help
                iii) Begin triage
            (b) Spine stabilization if necessary
    d. Total number of patients
    e. Need for additional help or assistance
3. Actions at scene

        a. Organized
        b. Rapid/efficient
    E. Transferring the patient to the ambulance
        1. Assist the ambulance crew in preparing the patient for transport
        2. Assist the ambulance crew with lifting and moving using the guidelines of the lifting/moving module
    F. Post run
        1. Prepare for the next call
            a. Clean and disinfect equipment
            b. Restock the disposable supplies
            c. Refuel unit
        2. File reports
        3. Notify dispatch

II. Air Medical Consideration
    A. Utilization
    B. Patient preparation
    C. Landing zones
    D. Safety

III. Fundamentals of Extrication
    A. Role of the First Responder
        1. Administer necessary care to the patient before extrication and assure that the patient is removed in a way to minimize further injury
        2. Patient care precedes extrication unless delayed movement would endanger life of the patient or rescuer
        3. Working with others
            a. In some instances, First Responders are also the rescue providers
            b. A chain of command should be established to ensure patient care priorities
    B. Equipment
        1. Personal safety
            a. The number one priority for all First Responders
            b. Protective clothing that is appropriate for the situation should be utilized

        2. Patient safety - after safety of the First Responder, the next priority is safety of the patient
            a. The patient should be informed of the unique aspects of extrication
            b. The patient should be protected from broken glass, sharp metal and other hazards, including the environment
    C. Getting to the patient
        1. Simple access - does not require equipment
            a. Try opening each door
            b. Roll down windows
            c. Have patient unlock doors

2. Complex access - requires use of tools, special equipment. These are separate programs that should be taken (Trench Rescue, High Angle Rescue, Vehicle Rescue)

D. Removing the patient
1. Work under the direction of the EMS providers
2. Maintain spine stabilization
3. Complete initial assessment
4. Provide critical interventions

IV. Hazardous Materials
A. Common problem
B. Actual extent unknown
C. Safety is the primary concern
1. First Responder and crew
2. Patient
3. Public

D. Approaching the scene
1. Identification
a. Occupancy
b. Containers - size/shape
c. Placards
d. Shipping papers
e. Senses
2. General procedures
a. Park upwind/uphill from the incident, at a safe distance
b. Keep unnecessary people away from area
c. Isolate the area
(1) Keep people out
(2) Do not enter unless properly trained and fully protected
d. Avoid contact with material
e. Remove patients to a safe zone, if no risk to First Responder
f. Do not enter a HazMat area unless you are trained as a HazMat Technician

E. Environmental hazards
F. Resources
1. Local hazardous materials response team
2. *Hazardous Materials, The Emergency Response Handbook*, published by the United States Department of Transportation

G. Review Occupational Safety and Health Administration (OSHA) and National Fire Protection Association (NFPA) HazMat Requirements for EMS Providers Including First Responders

V. Mass casualty incidents
A. Basic triage

1. Sorting multiple casualties into priorities for emergency medical care or transportation to definitive care
2. Priorities are given in three levels
3. Triage categories
   a. Highest priority
      (1) Airway and breathing difficulties
      (2) Uncontrolled or severe bleeding
      (3) Decreased mental status
   b. Second priority
      (1) Burns without airway problems
      (2) Major or multiple painful, swollen, deformed extremities
      (3) Back injuries

   c. Lowest priority
      (1) Minor painful, swollen, deformed extremities
      (2) Minor soft tissue injuries
      (3) Death

B. Procedures for First Responder arrival to a mass casualty incident
   1. Most knowledgeable EMS provider arriving on-scene first becomes triage officer, until relieved by a responder with a higher level of training
   2. Confirms incident and establishes a command post
   3. Additional help should be requested
   4. Perform initial assessment on all patients first
   5. Start triage tag for each patient
   6. Assign available personnel and equipment to priority one patients
   7. Triage officer remains at scene to assign and coordinate personnel, supplies, and vehicles

C. Procedures for responding to a mass casualty incident where incident command has been established
   1. Report to command post
   2. Identify the Incident Commander, identify yourself and your level of training
   3. Follow directions from the Incident Commander

Application

Procedural (How)

None identified for this lesson

Contextual (When, Where, Why)

The knowledge of EMS operations is applied throughout the career of the First Responder.

Gaining access is intended to be an overview of the actions required to extricate a patient. It is not the intent of this lesson to teach the First Responder the techniques of extrication. A number of special classes are available to teach such specialized

knowledge and skills. This lesson should emphasize the safety and medical aspects of this process.

Student Activities

Auditory (Hearing)

1. Students should hear audio tapes of actual dispatch conversations with callers to the 9-1-1 system
2. Students should hear audio tapes of actual dispatch information

Visual (Seeing)

1. Students should see actual equipment or audio-visual materials of ambulance equipment
2. Students should see audio-visual materials depicting an actual ambulance run
3. Students should see various crash scenes to determine if additional help will be necessary to remove the patient
4. Students should see the various options of personal protective equipment

Kinesthetic (Doing)

1. Students should practice receiving and sending information to dispatch
2. Students should practice evaluating crash scenes to determine the need for complex rescue

Instructor Activities

Facilitate discussion and supervise practice
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation form)

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson

Practical:

Evaluate the actions of the First Responder students during role play, practice, or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide

Enrichment

What is unique in the local area concerning this topic? Complete enrichment sheets from instructor's course guide and attach with lesson plan.

Lesson 7-2 Evaluation: EMS Operations

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective

1 = Knowledge level
2 = Application level
3 = Problem solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the cognitive objectives of Lesson 7-1: EMS Operations

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the affective objectives of Lesson 7-1: EMS Operations

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

- Demonstrate competence in the psychomotor objectives of Lesson 7-1: EMS Operations

Preparation

Motivation:

Evaluation of the student's attainment of the cognitive and affective knowledge and psychomotor skills is an essential component of the First Responder's educational process. The modules are presented in a "building block" format. Once the students have demonstrated their knowledge and proficiency, the next lesson should be built upon that knowledge. This evaluation will help to identify students or groups of students having difficulty with a particular area. This is an opportunity for the instructor to evaluate their performance and make appropriate modifications to the delivery of material.

Prerequisites:

Completion of Lesson 7-1

Material

AV Equipment:

Typically none required

EMS Equipment:

The EMS equipment used in the Lessons of Module 7

Personnel

Primary Instructor:
One proctor for the written evaluation

Assistant Instructor:
One practical skills examiner for each 6 students

Recommended Minimum Time to Complete:
One hour

Presentation

Declarative (What)

VI. Purpose of the evaluation

VII. Items to be evaluated

VIII. Feedback from evaluation

Application

Procedural (How)

1. Written evaluation based on the cognitive and affective objectives of Lesson 7-1

2. Practical evaluation stations based on the psychomotor objectives of Lesson 7-1

Contextual (When, Where and Why)

The evaluation is the final lesson in this module and is designed to bring closure to the module and to assure that students are prepared to move to the next module.

This modular evaluation is given to determine the effectiveness of the presentation of materials and how well students have retained the material. This is an opportunity for the students to make necessary adjustments in study habits or for the instructor to adjust the manner in which material is presented.

Instructor Activities

Supervise student evaluation
Reinforce student progress in cognitive, affective, and psychomotor domains
Redirect students having difficulty with content (Complete remediation forms)

Remediation

Identify students and/or groups of students who are having difficulty with this subject content. Complete a remediation sheet from the instructor's course guide. If students continue to have difficulty demonstrating knowledge of the cognitive and affective objectives, or demonstrating proficiency in psychomotor skills, the students should be counseled, remediated, and re-evaluated. If improvements in cognitive, affective, or psychomotor skills are not achieved, consideration regarding the ability of the student to progress in the program should be taken into account.

APPENDIX A

FUNCTIONAL JOB ANALYSIS

APPENDIX AFUNCTIONAL JOB ANALYSIS

The attached Functional Job Analysis was developed at the request of the Board of Directors of the National Registry of EMTs. This job analysis should be used to assist in meeting the requirements of the Americans with Disabilities Act. Readers and persons interested in utilizing this functional job analysis should refer questions related to specific indicators to occupational health rehabilitation specialists for interpretation.

Functional Job Analysis

First Responder Characteristics

The First Responder must be a person who can remain calm while working in difficult and stressful circumstances, as well as one who is capable of combining technical skills, theoretical knowledge, and good judgment to insure optimal level of fundamental emergency care to sick or injured patients while adhering to specific guidelines within the given scope of practice.

The First Responder is expected to be able to work alone, but must also be a team player. Personal qualities such as the ability to "take charge" and control the situation are essential, as are the maintaining of a caring and professional attitude, controlling one's own fears, presenting a professional appearance, staying physically fit, and keeping one's skills and abilities up to date. The First Responder must be willing to adhere to the established ongoing medical control and evaluation required for the maintenance of quality medical care.

Self-confidence, a desire to work with people, emotional stability, tolerance for high stress, honesty, a pleasant demeanor, and the ability to meet the physical and intellectual requirements demanded by this position are characteristics of the competent First Responder. The First Responder also must be able to deal with adverse social situations which include responding to calls in districts known to have high crime rates. The First Responder ideally possesses an interest in working for the good of society and has a commitment to doing so.

Physical Demands

Aptitudes required for work of this nature are good physical stamina, endurance, and body condition that would not be adversely affected by having to walk, stand, lift, carry, and balance at times, in excess of 125 pounds. Motor coordination is necessary because over uneven terrain, the patient's and the First Responder's well being, as well as other workers' well being must not be jeopardized.

Comments

Use of the telephone or radio dispatch for coordination of prompt emergency services is essential. Accurately discerning street names through map reading, and correctly distinguishing house numbers or business addresses are essential to task completion in the most expedient manner. Concisely and accurately describing orally to dispatcher and other concerned staff, one's impression of patient's condition, is critical as the First Responder works in emergency conditions where there may not be time for deliberation. The First Responder must also be able to accurately report all relevant patient data, which is generally, but not always, outlined on a prescribed form. Verbal and reasoning skills are used extensively. The ability to perform mathematical tasks is minimal, however, it does play a part in activities such as taking vital signs, making estimates of time, calculating the number of persons at scene, and counting the number of persons requiring specific care.

Job Analysis Schedule

1. ESTABLISH JOB TITLE: First Responder

2. CODE 079026 WTA GROUP: Occupations in medicine and health

3. JOB SUMMARY: Activates the EMS system, surveys the scene for hazards, contains those hazards, gains access to the injured or sick, gathers relevant patient data, provides immediate emergency medical care using a limited amount of equipment, controls the scene, and prepares for the arrival of the ambulance.

4. WORK PERFORMED ESTIMATES:

Worker Functions	Data	People	Things
	3	7	4

3. Compiling
7. Serving
4. Manipulating

Work Field: 294 Health, Caring, and Medical
M.P.S.M.S. 920 (**M**aterials, **P**roducts, **S**ubject **M**atter, and **S**ervices) Medical and other health services.

5. WORKER TRAITS RATINGS:

GENERAL EDUCATION DEVELOPMENT (GED) encompasses three broad areas which are rated independently in relation to the occupation being assessed: Reasoning development, Mathematical development, and Language development.

General Educational Development (GED) embraces those aspects of education (formal and Informal) which contribute to the worker's reasoning development, and ability to follow instructions, and to acquisition of "tool" knowledge such as language and mathematical skills. This is education of a general nature which does not have a recognized, fairly specific occupational objective. Ordinarily, such education is obtained in elementary school, high school, or college. However, it may be obtained from experience and self study.

Description of rating on the GED Scale: Level 1 - lowest level; Level 6 - highest level.

Lowest Highest

GED	1	M1, L2	3	R4	5	6

Reasoning development (R)
Level 4 - Apply principles of rational systems to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Interpret a variety of instructions furnished in written, oral, diagrammatic, or schedule form.

Mathematical development (M)
Level 2 - Add, subtract, multiply and divide all units of measure. Complete ratio, rate, and percent. Perform the four operations with like on common decimals, fractions. Perform arithmetic operations involving all American monetary units.

NOTE: In the analyst's opinion, the degree of math skills required for this position is minimal, however, reducing the mathematical component to a level 1, the lowest level, appears slightly too low. For example, in Level 1, a person would only be required to add and subtract up to two digit numbers. There could be instances where higher level skills are required, such as the total number of persons with slight injuries compared to those with more serious injuries.

Language development (L)
Level 2 - Reading: Passive vocabulary of 5000-6000 words; read at rate of 190-215 words per minute; read adventure stories and comic books; looking up unfamiliar words in dictionary for meaning, spelling and pronunciation; and read instructions for assembling model cars and airplanes.

Writing: Write compound and complex sentences using cursive style, proper end punctuation, and employing adjectives and adverbs.

Speaking: Speak clearly and distinctly with appropriate pauses and emphasis, correct pronunciation, variation in word order, using present, perfect, and future tenses.

SPECIAL VOCATIONAL PREPARATION (SVP) (Time requirement of 40 classroom hours)

SVP	1	2	3	4	5	6	7	8	9

Explanation of scale:

Level	Time[1]
1	Short demonstration only
2	Anything beyond short demonstration up to and including one month
3	Over one month up to and including three months
4	Over three months up to and including six months
5	Over six months up to and including one year
6	Over one year up to and including two years

7 Over two years up to and including four years
8 Over four years up to and including ten years
9 Over ten years
NOTE: The levels of this scale are mutually exclusive and do not overlap
[1]Time that applies to General Educational Development is not considered in estimating SVP

Level 2.

NOTE: In the analyst's opinion, the requirement of 40 hours of formal classroom study, and competency based on formal written and practical examination, when judged only by a time perspective, appear to qualify the preparation time as less than 30 days. While this may be true in some instances, preparation time may vary and span a longer period of calendar time, depending upon the student, the instructor, and the locality of training. First Responder applicants typically make application in writing at least thirty days before the start of the training program. This requirement will vary depending upon locality. Because First Responder program guidelines can permit a student up to six months for course completion, the SVP could, in essence, be as high as a Level 4.

APTITUDE LEVELS: G 3 V 3 N 4 S 3 P 2 Q 3 K 2 F 2 M 2 E 2 C 1

Scale: Level 1 - indicates the highest degree of particular aptitude; Level 5 indicates the lowest degree of an aptitude.

Lowest				Highest
5	4	3	2	1

G - Intelligence
Level 3
Level G-3:1 Renders general nursing care to patients in hospital, infirmary, sanitarium, or similar institution

Intelligence is required to learn and apply principles of anatomy, physiology, and patient care used in emergency medical care; to make independent judgments in absence of doctor; and to determine methods and treatments to use when caring for patients with varying illnesses or injuries, and to exercise judgment concerning ethical and legal considerations within scope of practice.

V - Verbal Aptitude
Level 3

Level V-3:9 Questions patients to obtain their medical history, personal data, and to determine if they are allergic to dental drugs or have any complicating illnesses.
Converses with patient in reassuring manner; explains post-operative care, oral hygiene, and importance of preventive dentistry to patients.

N - Numerical Aptitude (Perform arithmetic operations quickly and accurately)

Level 4 Lower degree of aptitude required. No illustrations in medical area. Closely related skills appear comparable to 4:7 Records business transactions in journals, ledgers, on special forms, and transfers entries from one accounting record to another. Adds totals of entries and original record and compares to check for posting errors.

S - Spatial Aptitude (Comprehend forms in space and understand relationships to plane and solid objects)

Level 3

Level S-3:1 Spatial aptitude is required to visualize anatomic and the relationship between the point of application of forces and the area affected (as in traction); and to place treatment devices or administer manual treatment in relationship to the affected body part.

P - Form Perception (Ability to make visual comparisons and discriminations and see slight differences in shapes and shadings of figures and widths and lengths of lines)

Level 2

P - 2:6 High degree of aptitude required. Form perception is required to perceive pertinent details of size, shape, and form in skeletal structure, organs, tissue, and specimens of various animals.

Q - Clerical Perception (Ability to perceive pertinent detail in verbal or tabular material-proof read)

Level 3

Q - 3:13 Assists in care of hospital patients under direction of nursing and medical staff. Clerical perception is required to read and report such data as temperatures, pulse rate and respiration rate, to report patient's food and fluid intake and output, and to read charts and instructions accurately. Generally completes documentation of relevant data on pre-printed form. Must be able to read form accurately and report patient information in appropriate allocated space. Occasionally, may be required to submit short narrative report.

K - Motor Coordination (Ability to make a movement response quickly and accurately and coordinate eye-hand)

Level 2
K - 2:5 Renders general nursing care to patients in hospital, infirmary, sanitarium, or similar institution. Aptitude and ability are required to coordinate vision, finger and hand movements, to take vital signs, to assist with freeing airway, and to balance self when lifting/moving or stabilizing patients.

F - Finger Dexterity (Ability to move fingers and manipulate small objects rapidly and quickly)
Level 2 No illustrations in medical field. Recommended due to necessity of ability to open and maintain airway, ventilate patient, control hemorrhage, bandage wounds, and manually stabilize painful swollen and deformed extremities.

M - Manual Dexterity (Ability to move the hands easily and skillfully)
Level 2 No illustrations given. Manual dexterity is required during emergency situations to control and extinguish fires, protect life and property, and maintain equipment as volunteer or employee of city, township, or industrial plant. Manual dexterity is also required in positioning ladders and nets, clasping rungs to climb ladders, giving artificial respiration, and in lifting of patient.

E - Eye-Hand-Foot Coordination (Ability to coordinate these)
Level 2 No illustrations given. Recommended as job may require balancing on ladders, stairs, or walking on uneven terrain while assisting in carrying patients. In the interest of time and safety, may be required to move quickly.

C - Color Discrimination (Ability to perceive difference in colors, shades, or harmonious combinations, or to match colors)
Level 1 High degree of aptitude and ability required.
C-1:4 Uses color discrimination and color memory in making diagnosis of patients' affliction or condition, by recognizing any deviations in color of diseased tissue from healthy tissue; evaluating color characteristics such as hue and saturation of affected body parts; and making determination as to extent or origin of condition
.

TEMPERAMENT

Temperament	A	D	F	I	J	M	P	R	S	V

Explanation of terms:

A -Working alone or apart in physical isolation from others

D -Directing, controlling or planning the activities of others.

I - Influencing Adaptability to influencing people in their opinions, attitudes, or judgments about ideas or things.

J -Adaptability to making generalizations, evaluations or decisions based on sensory or judgmental criteria.

M -Adaptability to making generalizations, judgments, or decisions based on measurable or verifiable criteria.

P -Adaptability to dealing with people beyond giving and receiving instructions.

S -Adaptability to performing under stress when confronted with emergency, critical, unusual, or dangerous situations; or in situations in which working where speed and sustained attention are make or break aspects of the job.

V -Adaptability to performing a variety of duties, often changing from one task to another of a different nature without loss of efficiency or composure.

INTERESTS

Interests	1a	1b	2a	2b	3a	3b	4a	4b	5a	5b

4a - A preference for working for the presumed good of the people.

PHYSICAL DEMANDS

Physical Demands	S	L	M	H	V	2	3	4	5	6

Explanation of terms:

1. Strengths
   S - Sedentary (10 pounds maximum)
   L - Light work (10 pounds frequently, 20 pounds maximum)
   M - Medium work (25 pounds frequently, 50 pounds maximum)
   H - Heavy work (50 pounds frequently, 100 pounds maximum)
   V - Very heavy work (50 pounds frequently, no maximum)
2. Climbing and/or balancing
3. Stooping, kneeling, crouching and crawling
4. Reaching, handling, fingering and/or feeling
5. Talking and hearing
6. Seeing

ENVIRONMENTAL CONDITIONS

Environmental	I	O	B	2	3	4	5	6	7

Conditions									

Explanation of terms:

1. Work location (I = Indoors, O = Outdoors, B = Both)
2. Extreme cold, with or without temperature changes.
3. Extreme heat, with or without temperature changes.
4. Wet and or/humid.
5. Noise and/or vibration
6. Hazards.
7. Atmospheric Conditions

NOTE: In the analyst's opinion, the general environmental conditions in which the First Responder works cannot be adequately assessed in an indoor evaluative environment. First Responders in actual situations are exposed to a variety of hot and cold temperatures and may be, at times, exposed to hazardous fumes and areas which are unsafe. Because of the variance in climate in the United States and because of the infinite possibilities to which a First Responder may be expected to respond, it must be assumed that some environments may be extremely hazardous, i.e., mine shafts, high exposed places, explosives, radiation, toxic chemicals, close proximity to moving vehicles or mechanical parts. First Responders may be required to walk, climb crawl, bend, pull, push, or lift and balance over less than ideal terrain, and are also exposed to a variety of noise levels, which at times can be quite high, particularly when multiple sirens are sounding, and crowds/bystanders are upset and may be screaming or crying hysterically.

U. S. Department of Labor
Manpower Administration

Analyst: Cathy Cain, Ph.D. **Date:** 1/27/95

Physical Demands and Environmental Conditions

ESTAB. JOB TITLE First Responder **ESTAB. & SCHED. NO.**
DOT TITLE & CODE 079.010
GOE CODE & TITLE 100302 Medical services; SOC 3690
Code: F = Frequently
O = Occasionally
NP = Not Present
C = Constantly

Job Summary: Activates the EMS system, surveys the scene for hazards, contains those hazards, gains access to the injured or sick, gathers relevant patient data, provides immediate emergency medical care using a limited amount of equipment, controls the scene, and prepares for the arrival of the ambulance.

Physical Comments

Demands

1. Strength

a.	**Standing**	47%	1a	Walking and standing are major components of this job. Sitting is necessary for for transportation to and from scene of emergency.
	Walking	50%		
	Sitting	3%		
b.	**Lifting**	F	1b	First Responders are required to assist in lifting and carrying injured or sick persons to ambulance. May be required to engage in pushing and/or pulling to assist other EMS providers to extricate patient from scenes to include but not limited to closed upright vehicles, patient in closed overturned vehicle, patient pinned beneath vehicle, pinned inside vehicle, in vehicles with electrical hazards.
	Carrying	F		
	Pushing	O		
	Pulling	O		
2.	**Climbing**	F	2	Climbing and balancing may be required for First Responder to gain access to site of emergency, i.e., stairs, hillsides, ladders, and
	Balancing	F		

in safely assisting in transporting patient.

3. **Stooping** F 3 Patients are often found injured or sick in
Kneeling F locations where assessment of patient is
Crouching F possible only through the First Responder's
Crawling F stooping, kneeling, crouching, or crawling.

4. **Reaching** F 4 Required for assessing pulse, assessing
Handling F breathing, blocking nose and cheek for
Fingering F ventilation, lifting chin, head, or jaw for
Feeling F opening airway, following angle of ribs to
determine correct position for hands after each ventilation, compressing sternum, and assisting in lifting of patient. Extension of arms to use hands and fingers to assess vital signs, feeling and touching of patient's skin to assess body warmth, handling limited equipment, and transporting of patient are important aspects of this position.

5. **Talking** 5 Responding to patients, physicians, and
Ordinary F co-workers through hearing is necessary in
Other transmitting patient information and following directions.

May be required to shout for help and additional assistance.

Hearing 5 Verbally responding to dispatcher's
Ord. Conv. F messages on phone or radio is necessary for **Other** F quick efficient service that can be vital to life in emergency situations. Communication on scene is critical for interviewing patient and in some instances, significant others, and in relaying this information in most expedient manner. Sounds of vehicles may alert First Responder that additional help is on the way. Other sounds can alert First Responder that other persons may be hurt or injured, i.e., someone thrown behind a bush in a vehicle accident who cannot be seen and whose voice may be barely audible.

6. **Seeing** 6 Sight is used to drive self, or in some cases,
Acuity, Near F ambulance to scene of injury or illness, to
Acuity, Far F visually inspect patient and area, and to
Depth Perception F administer treatment using limited
Accomodat F equipment.

Color Vision F
Field of Vision F

7. **General Education:** High school graduation or equivalency is not required.

8. **Vocational Preparation:**
   a. **College:** None

   b. **Vocational Education Courses:** Forty hours of specialized training at the First Responder Level

   c. **Apprenticeship:** None

   d. **In-plant Training:** None

   e. **On-the-Job-Training:** None

   f. **Performance on Other Jobs:** None

9. **Experience:** None

10. **Orientation:** Must be affiliated with public safety personnel such as a law enforcement agency, fire department (either as an employee or as a non-paid volunteer), and/or as industrial safety personnel, athletic trainers, ski patrol members, emergency management personnel, disaster team personnel, first aid section attendants, lifeguards, teachers, hotel employees, and others responsible for the safety of others where there are gatherings of people. As such, the First Responder will receive orientation relevant to tasks and scope of practice.

11. **Licenses, Etc.:** Certification or licensure.

12. **Relation to Other Jobs and Workers:**

Promotion: In some locations, First Responders may take bridge courses which will permit them, upon successful completion of written and practical examination, to progress to higher level EMS providers. First Responders may also take additional course hours which will permit them to become trainers of First Responders.

Transfers: None

Supervision Received: Physicians

Supervision Given: None

13. Machines, Tools, Equipment, and Work Aids:
Radio/telephone, oral airway device, suction equipment, and resuscitation mask.

14. Materials and Products: Disposable latex gloves, bandages, universal dressings such as gauze pads, tape, blankets, and pillows.

Description of tasks

Answers verbally to telephone or radio emergency calls from dispatcher to provide efficient and immediate care to critically ill and injured persons using a limited amount of equipment. Responds safely to the address or location as directed by radio dispatcher, Visually inspects and assesses or "sizes up" the scene upon arrival to determine if scene is safe, to determine the mechanism of illness or injury, and the total number of patients involved. Directly reports verbally to the responding EMS unit or communications center as to the nature and extent of injuries, the number of patients, and the condition of each patient, and identifies assessment findings which may require communication with medical direction for advice.

Assesses patient constantly while awaiting additional EMS resources, administers care as indicated. Requests additional help if necessary. Creates a safe traffic environment in the absence of law enforcement. Renders emergency care to adults, children and infants based on assessment findings, using a limited amount of equipment. Opens and maintains patient airway, ventilates patient, performs cardiopulmonary resuscitation. Provides pre-hospital emergency care of simple and multiple system trauma such as controlling hemorrhage, bandaging wounds, manually stabilizing painful, swollen and deformed extremities. Provides emergency medical care to include assisting in childbirth, management of respiratory problems, altered mental status, and environmental emergencies.

Searches for medical identification as clue in providing emergency care. Reassures patients and bystanders while working in a confident and efficient manner, avoids misunderstandings and undue haste while working expeditiously to accomplish the task. Extricates patients from entrapment, assesses extent of injury, assists other EMS providers in rendering emergency care and protection to the entrapped patient. Performs emergency moves, assists other EMS providers in the use of prescribed techniques and appliances for safe removal of the patient.

Assists other EMS providers in lifting patient onto stretcher, placing patient in ambulance, and insuring that patient and stretcher are secured. Radios dispatcher for additional help or special rescue and /or utility services. Reports verbally all observations and medical care of the patient to the transporting EMS unit, provides assistance to transporting staff. Performs basic triage where multiple patient needs exist. Restocks and replaces used supplies, uses appropriate disinfecting procedures to clean equipment, checks all equipment to insure adequate working condition for next response. Attends continuing education and refresher courses as required by employers, medical direction, and licensing or certifying agencies. Meets qualifications within the functional job analysis.

Qualifications

Must be at least 18 years of age. Ability to communicate verbally; via telephone and radio equipment; ability to lift, carry, and balance up to 125 pounds (250 with assistance); ability to interpret and respond to written, oral, and diagnostic form instructions; ability to use good judgment and remain calm in high-stress situations; ability to work as the most basic fundamental unit of a team with personal recognition of limitations within the scope of practice of the First Responder.

Must have the ability to read road maps; drive vehicle, accurately discern street signs and address numbers; ability to communicate verbally to interview patient, family members, and bystanders; ability to document, in writing, all relevant information in prescribed format in light of legal ramifications of such; ability to converse with dispatcher and EMS providers via phone or radio as to status of patient. Proof of driver's license. Good manual dexterity with ability to perform all tasks related to level of care being provided. Ability to bend, stoop, balance, and crawl on uneven terrain; and the ability to withstand varied environmental conditions such as extreme heat, cold, and moisture. Ability to perform basic arithmetic.

Must have successful completion of approved curriculum, with achievement of passing scores on written and practical certification examinations as defined by programmatic guidelines, and be certified in cardiopulmonary resuscitation (CPR) by the American Heart Association or its equivalent. Reauthorization for certification is dependent upon an individual's currently being active as a pre-hospital emergency care provider, successful completion of an inter-agency approved First Responder refresher course, or successful completion of all requirements of a higher level training course such as EMT-B, EMT-I or EMT-P. Conditional reciprocity may be granted to individuals who have completed a First Responder program in another state. Documentation of course completion of a DOT First Responder course, current recognition as a First Responder in the state in which the individual was originally trained, a resident of the state to which the individual is applying and successful completion of an inter-agency approved written and practical examination.

Activates EMS system and provides immediate emergency medical care to sick and injured persons using a limited amount of equipment. Controls the scene, and prepares for the arrival of the ambulance. Receives call from dispatcher, responds verbally to emergency calls, reads maps, uses most expeditious route, and observes traffic ordinances and regulations. Uses own vehicle to arrive at site of emergency or designated public safety facility, drives ambulance to emergency site when called upon to do so. Works alone as well as member of team. Determines nature and extent of illness or injury, takes pulse, blood pressure, visually observes changes in skin color, establishes priority for emergency care, renders appropriate emergency care (based on the competency level required of a First Responder). Uses limited equipment to

open airways and ventilate patient, and improve patient's blood circulation until higher skilled EMS providers arrive on scene. Assists in lifting, carrying, and transporting patient to ambulance. Reassures patients and bystanders, avoids mishandling patient and undue haste, searches for medical identification emblem to aid in care. Extricates patient from entrapment, assesses extent of injury, uses prescribed techniques and appliances, radios dispatcher for additional assistance or services, provides light rescue service if required, provides additional emergency care. Complies with regulations in handling deceased. Reports verbally and in writing observations about and care of patient at the scene, provides assistance to emergency staff as required. Checks and sanitizes all equipment for future readiness.

APPENDIX B

BLS HEARTSAVER INFORMATION AND SKILL SHEETS

APPENDIX C

ADULT AND PEDIATRIC BASIC CARDIAC LIFE SUPPORT GUIDELINES REPRINTED FROM JAMA

APPENDIX D

ENRICHMENT LESSON PLAN

APPENDIX D

The following enrichment lesson sheets should be copied and used as needed to assist with augmenting the core curriculum.

These sheets are designed to be used as a template to ensure that added materials are presented in format and similar style to the other lessons. These sheets may be added to any of the lessons in the core curriculum.

Objectives

Objectives Legend

C=Cognitive P=Psychomotor A=Affective
1 = Knowledge level
2 = Application level
3 = Problem solving level

Cognitive Objectives

At the completion of this lesson, the First Responder student will be able to:

•
•
•

Affective Objectives

At the completion of this lesson, the First Responder student will be able to:

•
•
•

Psychomotor Objectives

At the completion of this lesson, the First Responder student will be able to:

•
•
•

Preparation

Motivation:

Prerequisites:

Material

AV Equipment:

EMS Equipment:

Personnel

Primary Instructor:

Assistant Instructor:

Recommended Minimum Time to Complete:

Presentation

Declarative (What)

Application

Procedural (How)

Contextual (When, Where and Why)

Student Activities

Auditory (Hearing)

1.
2.
3.

Visual (Seeing)

1.
2.
3.

Kinesthetic (Doing)
1.
2.
3.

Instructor Activities

Supervise student practice.
Reinforce student progress in cognitive, affective, and psychomotor domains.
Redirect students having difficulty with content (complete remediation forms).

Evaluation

Written:

Develop evaluation instruments, e.g., quizzes, oral reviews, and handouts, to determine if the students have met the cognitive and affective objectives of this lesson.

Practical:

Evaluate the actions of the First Responder students during role play, practice or other skill stations to determine their compliance with the cognitive and affective objectives and their mastery of the psychomotor objectives of this lesson.

Remediation

Identify students or groups of students who are having difficulty with this subject content. Complete remediation sheet from the instructor's course guide.

APPENDIX E

REMEDIATION SHEET

APPENDIX E

The following remediation sheet should be completed after every class for individual students or groups of students having difficulty with knowledge, skills, and/or attitude. The primary instructor or an assistant instructor should work with the individual or group as soon as possible to ensure that they achieve success in the program.

First Responder National Standard Curriculum
Remediation Sheet

Date:	Student:
Area of Difficulty:	
Action Plan:	
Completed:	

Date:	Student:
Area of Difficulty:	
Action Plan:	
Completed:	

Date:	Student:
Area of Difficulty:	
Action Plan:	
Completed:	

Date:	Student:
Area of Difficulty:	
Action Plan:	
Completed:	

APPENDIX F

PATIENT ASSESSMENT FLOW CHARTS

APPENDIX F

The flow chart has been developed to assist in the assessment of all patients, regardless of age or chief complaint. The five components of assessment (scene size-up; initial assessment; focused history and physical exam - medical and trauma; detailed assessment; and on-going assessment) should be appropriately conducted. The flow chart should be used in conjunction with the lesson plan for each specific area and should be copied and given to each student before the lesson.

APPENDIX G

NATIONAL EMS EDUCATION AND PRACTICE BLUEPRINT

APPENDIX H

FINAL PRACTICAL SKILLS EXAM

ORIENTATION TO THE PRACTICAL SKILLS EXAMINER

You should read and understand the following orientation information before entering the specific skill station you will be evaluating. If there is any information within this orientation that you do not understand, you should contact the examination coordinator for clarification.

On behalf of the training institute I would like to thank you for donating your valuable time to assist with the evaluation of candidates in the practical examination. Your role as a skill station examiner is critically important. You are to serve as an observer and recorder of the candidate's actions based on the criteria listed on the score sheet. There are a number of ways to successfully perform a skill. You should always remember that the way you were taught to perform a skill is not the only correct way to perform the skill. The ultimate criterion for successful completion of a skill is: "Was effective patient therapy rendered?"

This is a formal examination and not a teaching situation. We discourage excessive dialogue between the examiner and the candidate. Peripheral or "nice to know" areas of prehospital EMS should not be discussed. Situations or questions that require you to demonstrate a procedure should be avoided. You should not ask leading questions. Do not condemn or condone a candidate's actions by expression, gesture, tone of voice, or attitude. Often, candidates interpret a word or action delivered in jest as being indicative of pass or fail, a value judgment, or a non-caring attitude. Pay special attention to verbal and non-verbal language.

The reason you were asked to be an examiner for this station is that your expertise adds to the credibility of the examination and gives you the knowledge to ask the candidates related questions to substantiate or define an action. If qualifying questions are necessary, they should be asked at the end of the station. At no time should you discuss any phase of the candidate's performance with the candidate.

Candidates are allowed to perform each skill once. If they appear overly nervous when first starting the exam, you may stop them and allow them to collect themselves before starting again. However, once a candidate initiates a course of action the candidate must be evaluated on the merits of that singular performance, as would happen in the field. You must provide qualifying information in the comments section of the score sheet for any performance that is identified as a mandatory failure item.

Visitors are not allowed in the station while testing is being conducted. The examination coordinator and the medical director may be in the station if they are not obstructive to the testing.

You should meet the candidate at the door and introduce yourself. Print the candidate's name, your name, and the date at the top of the score sheet. Next, you should read aloud the "Instructions to the Candidate" and ask if there are any questions. If there are no questions, start the time clock and observe the candidate as he/she progresses through the procedure.

The score sheets were designed to be generic so that the brand name of the particular equipment used in the skill station would have no effect on the scoring process. Points should be awarded on a full point increment basis and fractions of a point are not allowed. Each task is given a point value of one. If there are two tasks indicated in one step, one point should be awarded for each individual task. If a task is not completed or is completed improperly, place a zero in the "points awarded" column.

You must document in the comments section the reason you marked a mandatory failure item. Additional comments are welcome, but remember to be specific. Instead of writing "He did a poor job", write exactly what the candidate did right or wrong. At no time should you discuss the performance with the candidate. You should never condemn or condone the candidate's actions by verbal or nonverbal means.

If the candidate reaches the time limit indicated on the score sheet before completing the procedure, you must stop the candidate and direct him/her to return to the staging area and wait for instructions to report to the next station. All tasks not completed should be scored a zero in the "points awarded" column.

Be very aware of the importance of consistency in giving instructions, setting up scenarios, and making and recording observations. Every effort should be made to ensure that all details of the examination scenario are identical for each candidate. Be aware of your own fatigue and if necessary take a break after notifying the examination coordinator.

You should have received individual written instructions concerning the specific skill and/or skill station you will be evaluating. If you do not understand any part of these instructions, do not start

the evaluation process. Contact the examination coordinator for clarification.

Some of the skill stations require the presence of a simulated victim (i.e., - Trauma Assessment/Management). The simulated victim should be trained at the level of the First Responder or higher. He should be thoroughly briefed on the actions expected from him during the candidate's performance. This will help ensure that the scenario and skill station are identical for each candidate. Once a candidate has successfully passed a skill station, he/she may be used as a simulated victim in that skill station.

INSTRUCTIONS TO THE PRACTICAL SKILLS EXAMINER
BLEEDING CONTROL/SHOCK MANAGEMENT

This station is designed to test the candidate's ability to treat a life threatening hemorrhage and subsequent hypoperfusion. This station will be scenario based and will require some dialogue between the candidate and the examiner. The candidate will be required to properly treat a life threatening hemorrhage.

The victim will present with an arterial bleed from a severe laceration of the extremity. The examiner will prompt the actions of the candidate at predetermined intervals as indicated on the skill sheet. The candidate will be required to provide the appropriate intervention at each interval when the patient's condition changes. It is essential, due to the purpose of this station, that the patient's condition not deteriorate to a point where CPR would be initiated. This station is not designed to test CPR.

The equipment and supplies needed at this station include field dressings and bandages and a blanket.

The scenario in the "Instructions to the Candidate" is an example of an acceptable scenario for this station. It is not intended to be the only possible scenario for this station. Variations of the scenario are possible and should be utilized in order to reduce the possibility of a candidate knowing the scenario before entering the test. If the scenario is to be changed, the following guidelines must be used:

- An isolated laceration to an extremity producing an arterial bleed must be present.

- The scene must be safe.

- As the scenario continues the victim must present signs and symptoms of hypoperfusion.

It is essential that once a scenario is established for a specific test, it remain the same for all candidates being tested on that date. This will ensure a consistent examination for all candidates.

Appendix H
Final Practical Skills Examination

Due to the scenario format of this station, you are required to prompt the student at various places during the exam. Controversy exists in the national EMS community concerning the removal of dressings by First Responders when controlling hemorrhage. This station does not require the First Responder to remove any dressing once applied. When the bleeding is initially managed with a pressure dressing and bandage, you should inform the student that the wound is still bleeding. If the candidate places a second pressure dressing over the first, you should again state that the wound continues to bleed. After the candidate uses an appropriate arterial pressure point to control the hemorrhage, you should say that the bleeding is controlled. If the candidate attempts to remove the initial dressing to apply direct finger tip pressure, you should inform him/her, that for the purposes of this station, this step is not required. Additionally, you should indicate to the candidate that the victim is in a hypoperfused state by indicating signs and symptoms appropriate for this level of shock (example: cool clammy skin, restlessness, P 118, R 30).

This skill station requires the presence of one examiner and a victim. The victim may be an appropriate mannequin or a live person. The mannequin must be a hard shell anatomically accurate mannequin.

INSTRUCTIONS TO THE CANDIDATE
BLEEDING CONTROL/SHOCK MANAGEMENT

This station is designed to test your ability to control hemorrhage. This is a scenario based testing station. As you progress through the scenario, you will be offered various signs and symptoms appropriate for the patient's condition. You will be required to manage the patient based on these signs and symptoms. A scenario will be read aloud to you; and you will be given an opportunity to ask clarifying questions about the scenario; however, you will not receive answers to any questions about the actual steps of the procedures to be performed. You may use any of the supplies and equipment available in this room. You have 15 minutes to complete this skill station.

SCENARIO (sample)
BLEEDING CONTROL/SHOCK MANAGEMENT

You respond to a stabbing and find a 25 year old male victim. Upon examination you find a 2-inch stab wound to the inside of the right arm at the anterior elbow crease (antecubital fascia). Bright red blood is spurting from the wound. The scene is safe and the patient is conscious and alert. His airway is open and he is breathing adequately. Do you have any questions?

BLEEDING CONTROL/SHOCK MANAGEMENT

	Points Possible	Points Awarded
Takes or verbalizes body substance isolation precautions	1	
Applies direct pressure to the wound	1	
Elevates the extremity	1	
Note: The examiner must now inform the candidate that the wound continues to bleed.		
Applies an additional dressing to the wound	1	
Note: The examiner must now inform the candidate that the wound still continues to bleed. The second dressing does not control the bleeding.		
Locates and applies pressure to appropriate arterial pressure point	1	
Note: The examiner must now inform the candidate that the bleeding is controlled		
Applies a dressing to the wound	1	
Bandages the wound	1	
Note: The examiner must now inform the candidate that the patient is showing signs and symptoms indicative of hypoperfusion.		
Properly positions the patient	1	
Initiates steps to prevent heat loss from the patient	1	
Indicates need for immediate transportation	1	
TOTAL:	10	

CRITICAL CRITERIA

_____ Did not take or verbalize body substance isolation precautions
_____ Applies tourniquet before attempting other methods of bleeding control
_____ Did not control hemorrhage in a timely manner
_____ Did not indicate a need for immediate transportation

INSTRUCTIONS TO THE PRACTICAL SKILLS EXAMINER
PATIENT ASSESSMENT/MANAGEMENT
TRAUMA

This station is designed to test the candidate's ability to integrate patient assessment and intervention skills on a victim with multi-systems trauma. Since this is a scenario based station, it will require some dialogue between the examiner and the candidate. The candidate will be required to physically accomplish all assessment steps listed on the skill sheet. However, all interventions should be spoken instead of physically accomplished. Because of the limitations of moulage, you must establish a dialogue with the candidate throughout this station. If a candidate quickly inspects, assesses, or palpates the patient in a way that makes you uncertain of the areas or functions being assessed, you must immediately ask the candidate to explain the actions. For example, if the candidate stares at the patient's face, you must ask what he/she is assessing to precisely determine if he/she was checking the eyes, facial injuries, or skin color. Any information pertaining to sight, sound, touch, smell, or an injury that cannot be realistically moulaged but would be immediately evident in a real patient encounter, must be supplied by the examiner as soon as the candidate exposes or assesses that area of the patient.

The victim will present with a minimum of an airway, breathing, or circulatory problem and one associated injury or wound. The mechanism and location of the injury may vary, as long as the guidelines listed above are followed. It is essential that once a scenario is established for a specific test site, it remain the same for all candidates being tested at that site. This will ensure a consistent examination for all candidates.

This skill station requires the presence of one victim and one candidate. The victim should be briefed on his/her role in this station as well as on how to respond while being assessed by the candidate. Additionally, the victim should have read thoroughly the "Instructions to the Simulated Trauma Victim." Trauma moulage should be used as appropriate. Moulage may range from commercially prepared moulage kits to theatrical moulage. Excessive/dramatic use of moulage must not interfere with the candidate's ability to expose the victim for assessment.

Once the scene size-up and initial assessment are completed, the exact location of vital signs within a prehospital assessment is dependent upon the patient's condition. As an examiner, you should award one point for vital signs as long as they are accomplished according to the patient's condition.

The scenario format of a multi-trauma assessment/management testing station requires that the examiner provide the candidate with essential information throughout the examination process. Since this station uses a simulated patient, the examiner must supply all information pertaining sight, sound, smell, or touch. This information should be given to the candidate **when the area of the patient is exposed or assessed**.

The examiner must present assessment findings that are appropriate for the patient and the treatment that has been rendered. In other words, if a candidate has correctly treated for hypoperfusion, do not offer assessment findings that deteriorate the patient's condition. This may cause the candidate to assume he/she has rendered inadequate or inappropriate care. The examiner should not offer information that overly improves or deteriorates a patient. Overly improving a patient invites the candidate to discontinue treatment and may lead to the candidate failing the examination. Overly deteriorating the patient may lead to the candidate initiating C.P.R. This station was not designed to test C.P.R.

Due to the scenario format and voiced treatments, a candidate may forget what he/she has already done to the patient. This may result in the candidate attempting to do assessment/intervention steps on the patient that are physically impossible. As an examiner should remind the candidate that previous treatment prevents assessing the area. This same situation may occur with bandages.

Each candidate is required to complete a full patient assessment. The candidate must complete all components of the physical examination with the exception of those areas which are covered by dressings and bandages.

NOTE: You may choose to write the exact steps the candidate follows during this station as the sequence is performed. You may then use

this documentation to fill out the score sheet after the candidate completes the station. This documentation may then be used to validate the score on the skill sheet if questions arise later.

INSTRUCTIONS TO THE SIMULATED TRAUMA VICTIM

The following should be reviewed by the skill station examiner with the person serving as victim.

When serving as a victim for the scenario today, make every attempt to be consistent with every candidate in presenting the symptoms. The level of respiratory distress acted out by you and the degree of pain you describe at injury sites must be consistent for all candidates. As the candidate progresses with the examination, be aware of any period in which the candidate touched a simulated injured area. If the scenario indicates that you are to respond with deep painful stimuli and the candidate only lightly touches the area, do not respond. Only respond in the situation as you feel a real victim would in a multiple trauma situation. Do not give the candidate any clues while you are acting as a victim. For example, it is inappropriate to moan that your wrist hurts after you become aware that the candidate has not found that injury. Please remember what areas have been assessed and treated because we may need to discuss the candidate's performance after the candidate leaves the room.

The skill station examiner may utilize information provided by the First Responder trained and well coached victim as data in determining the awarding of points for specific steps in the evaluation instrument.

INSTRUCTIONS TO THE CANDIDATE
PATIENT ASSESSMENT/MANAGEMENT
TRAUMA

This station is designed to test your ability to perform a patient assessment of a victim of multi-system trauma and "voice" treat all conditions and injuries discovered. You must conduct your assessment as you would in the field including communicating with your patient. As you approach the patient you should assume the scene is clear of safety hazards. You may remove the patient's clothing down to shorts or swimsuit if you feel it is necessary. As you conduct your assessment, you should state everything you are assessing. Clinical information not obtainable by visual or physical inspection, will be given to you after you demonstrate how you would normally gain that information. You may assume that you have two First Responders working with you and that they are correctly carrying out the verbal treatments you indicate. You have (10) ten minutes to complete this skill station. Do you have any questions?

TRAUMA SITUATION #1 - PATIENT ASSESSMENT/MANAGEMENT

Mechanism of Injury. You are called to the scene of a motor vehicle accident where you find a victim who was ejected from the car. You find severe damage to the front end of the car. The victim is found lying face down in a field 30 feet from the upright car.

Injuries All injuries will be moulaged. Each examiner should program the patient to respond appropriately throughout the assessment and should assure that the victim has read the "Instructions to the Simulated Trauma Victims". The patient will present with the following injuries.

1. Unresponsive
2. Left side flail chest
3. Decreased breath sounds, left side
4. Cool, clammy skin; no distal pulses
5. Distended abdomen
6. Pelvis stable
7. Open injury of the left femur with capillary bleeding

PATIENT ASSESSMENT/MANAGEMENT
TRAUMA

		Points Possible	Points Awarded
Takes or verbalizes body substance isolation precautions		1	
SCENE SIZE-UP			
Determines the scene is safe		1	
Determines the mechanism of injury		1	
Determines the number of patients		1	
Requests additional help if necessary		1	
Considers stabilization of spine		1	
INITIAL ASSESSMENT			
Verbalizes general impression of patient		1	
Determines chief complaint/apparent life threats		1	
Determines responsiveness		1	
Assesses airway and breathing	Assessment Assures adequate ventilation Injury management	1 1 1	
Assesses circulation	Assesses for and controls major bleeding Assesses pulse Assesses skin (color, temperature and condition)	1 1 1	
Identifies priority patients/makes transport decision		1	
Obtains S.A.M.P.L.E. history		1	
PHYSICAL EXAMINATION			
Assesses the head	Inspects and palpates the head	1	
Assesses the neck	Inspects and palpates the neck	1	
Assesses the chest	Inspects Palpates	1 1	
Assesses the abdomen/pelvis	Assesses the abdomen Assesses the pelvis	1 1	
Assesses the extremities	1 point for each extremity	4	
Manages secondary injuries and wounds appropriately **1 point for appropriate management of the secondary injury/wound**		1	
Verbalizes on-going assessment		1	
		29	

TOTAL:

CRITICAL CRITERIA
____Did not take or verbalize body substance isolation precautions
____Did not assess for spinal protection
____Did not provide for spinal protection when indicated
____Did not evaluate and find conditions of airway, breathing, circulation (hypoperfusion)
____Did not manage/provide airway, breathing, hemorrhage control or treatment for shock (hypoperfusion)

INSTRUCTIONS TO THE PRACTICAL SKILLS EXAMINER

UPPER AIRWAY ADJUNCTS AND SUCTION

This station is comprised of three separate skills. The candidate will be required to measure, insert, and remove an oropharyngeal and a nasopharyngeal airway and to suction the patient's upper airway.

The oropharyngeal airway, nasopharyngeal airway, and suction are in one skill station for scoring purposes only. It should not be inferred, nor are we implying, that there is a sequential connection between the three skills. You should not test these as sequential skills but as three distinct, isolated skills.

The technique for opening a patient's mouth and inserting an oropharyngeal airway varies from text to text, i.e., - 90 degree rotation, 180 degree rotation, direct insertion. Since concern for spinal immobilization is not required at this station, the criteria for appropriately opening the patient's mouth and inserting the oropharyngeal airway should be that the tongue is not pushed posteriorly.

The equipment needed at this station includes various sizes of oropharyngeal nasopharyngeal airways and a suction device (manual or battery operated device). Additionally, this station requires the presence of a mannequin that can accept the insertion of an oropharyngeal and nasopharyngeal airway. The mannequin may be an intubation head; however, it should be life size and have anatomically correct airway structures.

Once the candidate has the oropharyngeal airway in place, advise the candidate that the patient is vomiting. If the candidate fails to immediately remove the oropharyngeal airway, place a zero in the "points awarded" column. Once the candidate has finished the procedure for oropharyngeal airway insertion and removal, direct him/her to demonstrate the proper procedure for suctioning a patient's upper airway. Finally the candidate instruct the candidate to insert a nasopharyngeal airway into the mannequin.

INSTRUCTIONS TO THE CANDIDATE
UPPER AIRWAY ADJUNCTS AND SUCTION

This station is designed to test your ability to properly measure, insert, and remove an oropharyngeal and a nasopharyngeal airway as well as to suction a patient's upper airway. This is an isolated skills test comprised of three separate skills. You may use any equipment available in this room. Do you have any question?

UPPER AIRWAY ADJUNCTS AND SUCTION

OROPHARYNGEAL AIRWAY

	Points Possible	Points Awarded
Takes or verbalizes body substance isolation precautions	1	
Selects appropriate size airway	1	
Measures airway	1	
Inserts airway without pushing the tongue posteriorly	1	
NOTE: The examiner must advise the candidate that the patient is gagging and becoming conscious		
Removes oropharyngeal airway	1	

SUCTION

NOTE: The examiner must advise the candidate to suction the patient's oropharynx/nasopharynx		
Turns on/prepares suction device	1	
Assures presence of mechanical suction	1	
Inserts suction tip without suction	1	
Applies suction to the oropharynx/nasopharynx	1	

NASOPHARYNGEAL AIRWAY

NOTE: The examiner must advise the candidate to insert a nasopharyngeal airway		
Selects appropriate size airway	1	
Measures airway	1	
Verbalizes lubrication of the nasal airway	1	
Fully inserts the airway with the bevel facing toward the septum	1	
TOTAL:	13	

CRITICAL CRITERIA

____ Did not take or verbalize body substance isolation precautions
____ Did not obtain a patent airway with the oropharyngeal airway
____ Did not obtain a patent airway with the nasopharyngeal airway

INSTRUCTIONS TO THE PRACTICAL SKILLS EXAMINER
MOUTH-TO-MASK

This station is designed to test the candidate's ability to effectively ventilate a patient using a mouth-to-mask technique. This station is testing an isolated skill. The candidate will be advised that the patient is already being ventilated, mouth-to-mouth, by another first responder. Upon entering the skill station, the candidate will be required ventilate the patient using a mouth-to-mask technique. The candidate may assume that the patient has a central pulse and that the only patient management required is ventilation.

When ventilating the patient, the candidate must provide a minimum of 800 ml volume per breath. This equals the current standards established for appropriate rescue breathing volumes during basic and advanced life support.

This station requires a mannequin capable of being ventilated with volumes of 800 ml or more. It must also be able to register successful lung inflations of 800 ml to 1200 ml per breath. This may be accomplished by using a system that lights up when successful volumes are reached or a system that graphs successful volumes. The mannequin must be life size, possess anatomically correct airway structures, and meet the criteria listed above.

Due to the nature of this station, infection control measures must be enforced. You should follow the current infection control measures established by the American Heart Association for mannequin disinfection.

You should observe the candidate ventilating the mannequin for a period of 30 seconds. During this time you should pay close attention to volumes. The volumes should be in the range of 800 ml - 1200 ml per breath. If you observe one ventilation error or less in 30 seconds (volume only), you should award 1 point. No point should be awarded if you observe two ventilation errors or more in 30 seconds.

INSTRUCTIONS TO THE CANDIDATE
MOUTH-TO-MASK

This station is designed to test your ability to ventilate a patient using a mouth-to-mask technique. This is an isolated skills test. You may assume that mouth-to-mouth ventilation is in progress and that the patient has a central pulse. The only patient management required is ventilator support using a mouth-to-mask technique. You must ventilate the patient for at least 30 seconds. You will be evaluated on the appropriateness of ventilatory volumes. You may use any equipment available in this room. Do you have any questions?

MOUTH-TO-MASK

	Points Possible	Points Awarded
Takes or verbalizes body substance isolation precautions	1	
Connects one-way valve to mask	1	
Opens airway (manually or with adjunct)	1	
Establishes and maintains a proper mask to face seal	1	
Ventilates the patient at the proper volume and rate *(800-1200 ml per breath/10-20 breaths per minute)*	1	
NOTE: the examiner must witness ventilations for at least 30 seconds		
TOTAL:	5	

CRITICAL CRITERIA

_____ Did not take or verbalize body substance isolation precautions

_____ Did not provide proper volume per breath
(more than 2 ventilations per minute are below 800 ml)

_____ Did not ventilate the patient at 10-20 breaths per minute

_____ Did not allow for complete exhalation