#### Chapter 1 – EMS Systems and Research

#### I. Objectives

## Knowledge Objectives

- 1. Define the components of Emergency Medical Services (EMS) systems.
- 2. Differentiate the roles and responsibilities of the Emergency Medical Technician from other prehospital care professionals.
- 3. Define the terms certification, licensure, credentialing, and scope of practice.
- 4. Describe the benefits of EMT continuing education.
- 5. Define medical oversight and discuss the Emergency Medical Technician's role in the process.
- 6. Discuss the types of medical oversight that may affect the medical care of an EMT.
- 7. Explain quality management and the EMTs role in the quality management process.
- 8. Describe the phases of a typical EMS response.
- 9. Describe examples of professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communication, respect, time management, teamwork and diplomacy, patient advocacy, and careful delivery of service.
- 10. List the primary roles and responsibilities of the EMT.
- 11. Define the role of the EMT relative to the responsibility for personal safety, the safety of the crew, the patient, and the bystanders.
- 12. Describe the importance and benefits of research..

## Attitude Objectives

- 13. Characterize the various methods used to access the EMS system in your community.
- 14. Defend the importance of continuing education and skills retention.
- 15. Demonstrate professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service.
- 16. Accept and uphold the responsibilities of an EMT in accordance with the standards of an EMS professional.
- 17. Assess areas of personal attitude and conduct of the EMT.
- 18. Explain the rationale for maintaining a professional appearance when on duty or when responding to calls.
- 19. 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 because of that judgment.
- 20. Value the need to serve as a patient advocate.

- 21. Assess personal practices relative to the responsibility for personal safety, the safety of the crew, the patient, and the bystanders.
- 22. Advocate the need for supporting and participating in research efforts aimed at improving EMS systems.

Skill **Objectives**  There are no skill objectives identified for this lesson.

#### II. Preparation

Corresponding textbook pages: Audiovisual equipment:

EMS equipment: Course administration materials: Research before class:

- 1-27
- Chapter 1 PowerPoint® presentation
- Computer
- Multimedia projector
- None required
- Attendance sign-in sheet
- Make copies of legislation pertaining to EMS in your state and provide a copy to your students.
- Locate several examples of prehospital journals and bring them to class to show your students.

#### III. Personnel

Primary instructor qualifications:

- One Emergency Medical Technician instructor knowledgeable in administrative paperwork, certification requirements, Americans with Disabilities Act issues, and the roles and responsibilities of the EMT.
- The medical director should be present for the discussion of medical oversight.

None required Assistant instructor qualifications:

## IV. Key Terms Presented In This Lesson

Advanced Emergency Medical Technician (AEMT) EMTs with additional training in skills such as patient assessment, administering IV fluids and medications, and performing advanced airway procedures **Advocate** A person who supports others and acts in their best interests.

**Certification** A designation that ensures a person has met predetermined requirements to perform a particular activity

**Communication** The exchange of thoughts, messages, and information.

Credentialing A local process by which an individual is permitted by a specific entity to practice medical procedures and functions in a specific setting, such as an EMS agency

**Diplomacy** Using tact and skill when dealing with people

**Emergency** An unexpected illness or injury that requires immediate action to avoid risking the life or health of the person being treated

Emergency Medical Responder (EMR) A person who has the basic knowledge and skills necessary to provide lifesaving emergency care while waiting for the arrival of additional EMS help; formerly called First Responder.

Emergency Medical Services (EMS) System A network of resources that provides emergency care and transportation to victims of sudden illness or injury

Emergency Medical Technician (EMT) A member of the Emergency Medical Services team who responds to emergency calls, provides efficient emergency treatment to ill or injured patients, and transports the patient to a medical facility

Emergency Transportation The process of moving a patient from the scene of an emergency to an appropriate healthcare facility

Empathy To understand, be aware of, and be sensitive to the feelings, thoughts, and experiences of another

Enhanced 9-1-1 (E9-1-1) A system that routes an emergency call to the 9-1-1 center closest to the caller, and automatically displays the caller's phone number and address

**Extrication** To free from entrapment

Healthcare System A network of people, facilities, and equipment designed to provide for the general medical needs of the population

Integrity Honesty, sincerity, and truthfulness

Licensure The granting of a written authorization by an official or legal authority

Medical Director A physician who provides medical oversight and is responsible for ensuring that actions taken on behalf of ill or injured people are medically appropriate

Medical Oversight The process by which a physician directs the emergency care provided by Emergency Medical Services personnel to an ill or injured patient; also referred to as medical control or medical direction

Medical Practice Acts State laws that grant authority to provide medical care to patients and determine the scope of practice for healthcare professionals

National EMS Education Standards A document that specifies the competencies, clinical behaviors, and judgments that each level of EMS professional must meet when completing his or her education National EMS Scope of Practice A document that defines four levels of EMS professionals and what each level of EMS professional legally can and cannot do

Off-line Medical Direction Medical supervision of EMS personnel through use of policies, protocols, standing orders, education, and quality management review; also called *indirect*, retrospective, or prospective medical direction

On-line Medical Direction Direct communication with a physician (or his or her designee) by radio or telephone, or face-to-face communication at the scene, before a skill is performed or care is given. Paramedic Highest level of prehospital professional. Can perform skills of an AEMT plus has additional training in pathophysiology, physical exam techniques, assessing abnormal heart rhythms, and invasive procedures.

Patient Assessment The process of evaluating a person for signs of illness or injury **Prehospital Care Report (PCR)** Documentation of the emergency care provided and the patient's response to it

Prospective Medical Direction Activities performed by a physician medical director before an emergency call

Public Health The science and practice of protecting and improving the health of the community as a

Quality Management A system of internal and external reviews and audits of all aspects of an EMS

Retrospective Medical Direction Activities performed by a physician after an emergency call Scene Size-up The first phase of patient assessment that includes standard precautions, evaluation of scene safety, determining the mechanism of injury or nature of the patient's illness, determining the total number of patients, and determining the need for additional resources

Scope of Practice State laws that detail the medical procedures and functions that can be legally performed by a licensed or certified healthcare professional

**Standard of Care** The minimum level of care expected of similarly trained healthcare professionals Standing Orders Written orders that allow EMS personnel to perform certain medical procedures before making direct contact with a physician

Statutes Laws established by Congress and state legislatures

**Teamwork** The ability to work with others to achieve a common goal

Treatment Protocol A list of steps to be followed during provision of emergency care to an ill or injured

Vital signs Measurements of breathing, pulse, temperature, pupils, and blood pressure

#### V. Skills Presented in This Lesson

• There are no skills identified for this lesson.

#### VI. Lesson Outline

Slide#	Instructor Notes
1	A. EMS Systems and Research
2	B. Course Overview
	1. Paperwork – school, state, local
	2. Course description and expectations
	3. Immunizations/physical exam
	4. Review criteria for certification
	a. Successful course completion
	b. Mentally/physically meet criteria of safe and effective practice of job
	functions
	☐ Refer to end-of-chapter handouts — Emergency Medical Technician Job Description and Functional Job Analysis
	c. Written examination
	d. Practical examination
2	e. State and local provisions
3 4	C. Objectives D. Introduction
4	I. Emergency Medical Technician (EMT)
	a. A member of the Emergency Medical Services (EMS) team who
	1) Responds to emergency calls
	2) Provides efficient emergency care to ill or injured patients
	3) Transports the patient to a medical facility
5	b. May be paid or volunteer personnel
6	2. Goals of Emergency Medical Technician Training
	a. Recognize the nature and seriousness of a patient's condition or extent of
	injuries to determine the emergency medical care the patient requires
	b. Safely and efficiently provide appropriate emergency medical care based on
	your assessment findings of the patient's condition c. Lift, move, position, and otherwise handle the patient to minimize
	discomfort and prevent further injury
	d. Safely and effectively perform the expectations of the job description
7	E. Origins of Emergency Medical Services (EMS)
8	1. As an EMT, you will be giving emergency care to ill or injured patients
Ü	2. An emergency is an unexpected illness or injury that requires immediate action
	to avoid risking the life or health of the person being treated.

Emergency medical care has been given by one person to another for hundreds of years. The Egyptians splinted and dressed wounds. The ill or injured were treated at the site where the emergency happened or carried to a designated healer or helper. The Good Samaritan stopped to provide care to a man who had been beaten and left lying on the side of the road. He wrapped bandages around the injured man's wounds and then transported him by donkey to the nearest hotel.

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c) Automobile towing companies

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- 1966 b.
  - 1) Accidental Death and Disability: The Neglected Disease of Modern Society
    - a) "The White Paper"
  - 2) Exposed inadequacies of emergency care in the United States, including prehospital services
  - 3) Beginning of modern EMS

Slide # **Instructor Notes** 

> The National Academy of Sciences-National Research Council (NAS/NRC) published a paper called, "Accidental Death and Disability: The Neglected Disease of Modern Society" in 1966. This document made 29 recommendations for improving care for injured victims. Eleven of the recommendations were directly related to prehospital EMS. The White Paper exposed the inadequacies of prehospital services in the training of emergency responders (ambulance attendants, police and fire personnel), providing medical direction, vehicle transport, local government support of EMS, and citizen first aid knowledge. The paper called for more government support of prehospital services and proposed suggestions for improvement, including guidelines for EMS system development, prehospital personnel training, and upgrading of transport vehicles and their equipment.

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- c. Highway Safety Act of 1966
  - 1) Charged National Highway Traffic Safety Administration (NHTSA) with the responsibility for improving EMS
  - 2) Provided funding for programs to reduce deaths related to highway accidents
  - 3) Established national standards

In 1966, the Department of Transportation (DOT) was charged with the responsibility of improving EMS, including the EMS program and training requirements. States were required to develop regional EMS systems or risk losing part of their federal highway funding. Funding was provided by the Highway Safety Act of 1966 to create a training course for emergency care providers [Emergency Medical Technician-Ambulance (EMT-A)]. In, 1969, Glenn Hare patented the Hare Traction Splint, and in 1974 he patented the Hare Extrication Collar.

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- 8. 1988 10 EMS System Components
  - a. Regulation and policy
  - b. Resource management
  - c. Human resources and training
  - d. Communications
  - e. Transportation
  - f. Medical oversight
  - g. Trauma systems
  - h. Facilities
  - Public information and education i.
  - į. **Evaluation**

In 1988, the National Highway Traffic Safety Administration established the Technical Assistance Program. This program identified 10 essential components of an EMS system and the methods to assess these areas. States use the standards set by NHTSA to evaluate the effectiveness of their EMS system. NHTSA Technical Assistance Program Assessment Standards currently include the following: Regulation and policy, resource management, human resources and training, transportation, and facilities.

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- 9. 1996 EMS Agenda for the Future
  - a. In 1996, the National Association of EMS Physicians and National Association of State EMS Directors created the EMS Agenda for the Future.
  - b. Because it also recommended directions for future EMS development in the United States, this paper is often called a "vision" document.
  - This document reviewed the progress made in EMS over 30 years and proposed continued integration of EMS into the healthcare system.
- F. The Emergency Medical Services System 16

**Instructor Notes** Slide #

17 Objective 1

- 1. EMS system
  - a. Coordinated network of resources
  - b. Provides emergency care and transportation to victims of sudden illness or
- 2. Healthcare system A network of people, facilities, and equipment designed to provide for the general medical needs of the population
- 3. EMS is a part of the healthcare system

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- 4. EMS System Components
  - a. Legislation and Regulation
    - 1) Each state must have laws in place that govern its EMS system.
    - 2) Emergency Medical Technicians must be familiar with state and local EMS regulations and policies.

To ensure the delivery of quality emergency medical care for adults and children, each state has laws in place that govern its EMS system. Each state must make sure that all ill or injured victims have equal access to appropriate emergency care. This includes making sure there are enough vehicles, equipment, supplies, and trained personnel on hand to meet the needs of local EMS systems. As an EMT, you must know your state and local EMS regulations and policies.

Provide your students with a copy of EMS legislation specific to your state.

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- b. Public Access and Communications
  - 1) An EMS system must have an effective communications system. The EMS system must provide a means by which a citizen can reliably access the EMS system (usually by dialing 9-1-1).
  - 2) To make sure appropriate personnel, vehicles, and equipment are sent to the scene of an emergency, the communication system must allow contact between different agencies, vehicles, and personnel. For example, there must be a means for:
    - a) Citizen access to the EMS system
    - b) Dispatch center to emergency vehicle communication
    - c) Communication between emergency vehicles
    - d) Communication to and between emergency personnel
    - e) Communication to and between emergency vehicles and emergency healthcare facilities
    - f) Communication to and between emergency personnel and medical direction
    - Communication between emergency healthcare facilities
    - h) Communication between agencies, such as between EMS and law enforcement personnel
    - Methods for relaying information to the public

© Communication is particularly important during incidents that involve a large number of patients, rescuers, and equipment. An Incident Management System (IMS) is often used to control, direct, and coordinate the activities of multiple agencies in these situations. In 2003, President Bush directed the Secretary of Homeland Security to develop and administer a National Incident Management System (NIMS). NIMS provides a consistent, nationwide template to enable all government, private-sector, and nongovernmental organizations to work together during domestic incidents.

**Instructor Notes** 

3) 9-1-1

- a) Official national emergency number in the United States and Canada
- 4) Enhanced 9-1-1
  - a) Routes call to the 9-1-1 center closest to caller
  - b) Automatically displays the caller's phone number and address
  - c) Most 9-1-1 systems today are Enhanced 9-1-1 systems

□ 9-1-1 is the official national emergency number in the United States and Canada. When the numbers 9-1-1 are dialed, the caller is quickly connected to a single location called a Public Safety Answering Point (PSAP). The PSAP dispatcher is trained to route the call to local emergency medical, fire, and law enforcement agencies. Although EMS is usually activated by dialing 9-1-1, other methods of activating an emergency response include emergency alarm boxes, citizen band radios, and wireless telephones.

21 Objective 2

- c. Human Resources and Education
  - 1) An EMS system must have qualified, competent, and compassionate people to provide quality EMS care.
  - 2) Persons working in an EMS system are expected to be trained to a minimum standard.
  - 3) The National EMS Scope of Practice is a document that defines four levels of EMS professionals. This document also defines what each level of EMS professional legally can and cannot do.
    - a) Emergency Medical Responders (EMRs)
    - b) Emergency Medical Technicians (EMTs)
    - Advanced Emergency Medical Technicians (AEMTs)
    - d) Paramedics

I For many years, the minimum standard for education of EMS professionals was the DOT National Standard Curriculum (NSC) for each level. The National EMS Education Standards document is replacing the NSC. This document specifies the competencies, clinical behaviors, and judgments that each level of EMS professional must meet when completing his or her education.

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- 4) Levels of prehospital education
  - a) Emergency Medical Responder (EMR)
    - i) A person who has the basic knowledge and skills necessary to provide lifesaving emergency care while waiting for the arrival of additional EMS help
    - ii) Trained to assist other EMS professionals

☐ Emergency Medical Responders were formerly called First Responders. In some states, First Responders were called Emergency Care Attendants (ECAs). Most EMRs have a minimal amount of equipment available with which to assess a patient and provide initial emergency care.

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- b) Emergency Medical Technician (EMT)
  - i) Trained to perform a more detailed assessment and can perform more skills than an EMR
  - ii) Responds to emergency calls
  - iii) Provides efficient emergency care to ill or injured patients
  - iv) Transports the patient to a medical facility

### **Instructor Notes** Slide # c) Advanced Emergency Medical Technician (AEMT) More skilled than an EMT ii) Has additional training in skills such as patient assessment, administering intravenous (IV) fluids and medications, and performing advanced airway procedures. 25 d) Paramedic i) Can perform the skills of an Advanced EMT ii) Has had additional instruction in pathophysiology (changes in the body caused by disease), physical examination techniques, assessing abnormal heart rhythms using a heart monitor, and invasive procedures

Emergency Medical Responders and EMTs provide basic emergency care and are referred to as Basic Life Support, or BLS, personnel. Because AEMTs and Paramedics provide more advanced care than Emergency Medical Responders and EMTs, they are referred to as Advanced Life Support, or ALS, personnel.

26 Objective 3

#### d. Right to Practice

- 1) Statutes
  - a) Statutes are laws established by Congress and state legislatures.
  - b) Every state has statutes that establish an EMS regulatory body, such as a state EMS office.
  - c) Each state has the authority and responsibility to regulate EMS within its borders and determine how its EMS personnel are certified or licensed.
- 2) Certification
  - a) Certification is a designation that ensures a person has met predetermined requirements to perform a particular activity.
  - b) Certification typically involves an examination process that is designed to verify that an individual has achieved minimum competency to assure safe and effective patient care.
- 3) Licensure
  - a) Licensure is the granting of written permission by the state to perform medical acts and procedures not permitted without the authorization.
- 4) Scope of practice
  - a) State laws detail the medical procedures and functions that can be legally performed by a licensed healthcare professional, called the scope of practice.
  - b) Scope of practice is a description of what a licensed individual legally can and cannot do.
- 5) Credentialing
  - a) Credentialing is a local process by which an individual is permitted by a specific entity (such as a medical director) to practice in a specific setting (such as an EMS agency).

**Instructor Notes** 

- **EMT** certification
  - 1) To be certified as an Emergency Medical Technician, state agencies require successful completion of an EMT course that follows the DOT EMT National Standard Curriculum (or National EMS Education Standards).
  - 2) The National Registry of EMTs (NREMT) provides examinations for certification and registration that may be required by your state. Recognition as a nationally registered EMT requires successful completion of a written and practical skills examination.
  - 3) Certification as an EMT is good for a limited time, usually two years.
    - a) Maintenance of current certification and licensure is a personal responsibility and one that you must take seriously.
    - Working as an EMT without current certification and licensure has criminal implications.
    - c) Participation in CE courses or an EMT Refresher Course is required for recertification.
- Maintaining knowledge and skills
  - 1) An EMT's education does not end with completion of the EMT course
  - 2) An EMT must keep his knowledge and skills current through CE and refresher courses.
  - 3) Benefits of these courses:
    - a) Help keep current the skills and knowledge learned during initial
    - b) Provide information about advances in medicine, skills, and equipment
    - c) Provide education about changes in local protocols and national guidelines affecting EMS
  - 4) CE occurs in different forms, including:
    - a) Skill labs
    - b) Lectures and workshops
    - c) Conferences and seminars
    - d) Case reviews and/or quality management reviews
    - e) Reading professional journals
    - Reviewing videotapes and/or audiotapes

Show the class several examples of prehospital journals. Several offer free trial subscriptions for students.

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- Transportation
  - 1) Safe transport
  - 2) Appropriately staffed and equipped vehicle
    - a) Ground ambulance
    - b) Air medical service

Emergency transportation is the process of moving a patient from the scene of an emergency to an appropriate receiving facility. All patients who need transport must be transported safely in an appropriately staffed and equipped vehicle. Most patients can be moved effectively in a ground ambulance staffed by qualified emergency medical personnel. Patients with more serious injuries or illnesses may require rapid transportation by air medical services.

Slide #	Instructor Notes
30	h. Medical Oversight
Objectives 5, 6	1) Process by which a physician directs emergency patient care provided
	by EMS personnel
	2) Every EMS system must have medical oversight
	3) Physician who provides medical oversight is called the <i>medical director</i>
	A physician oversees all aspects of patient care in an EMS system. In the United States, the medical care provided to patients by physicians is closely governed by laws called medical practice acts. These laws vary greatly from state to state and may address the ability of physicians to delegate certain skills and tasks to non-physicians, including EMTs, AEMTs, and Paramedics.
31	4) On-line medical direction
31	a) Also called direct or concurrent medical direction
	b) Direct communication with a physician
	i) Radio
	ii) Telephone
	iii) Face-to-face communication at the scene
32	5) Off-line medical direction
32	a) Also called indirect, prospective, or retrospective medical direction
	b) Medical supervision through the use of:
	i) Policies
	ii) Treatment protocols
	iii) Standing orders
	iv) Education
	v) Quality management reviews
33	6) Prospective medical direction
	a) Activities performed by a physician medical director before an
	emergency call
	i) Treatment protocols
	ii) Standing orders
	7) Retrospective medical direction
	a) Actions performed by a physician after an emergency call
34	8) Terms
	a) Treatment protocols
	i) List of steps to be followed when providing emergency care to
	an ill or injured patient
	b) Standing orders
	i) Written orders authorizing EMS personnel to perform certain
	medical procedures before establishing direct communication
	*.4 4 * * *

Standing orders are used in critical situations in which a delay in treatment would most likely result in harm to the patient. They may also be used when technical or logistical problems delay establishing on-line communication. Direct communication with a physician should be made as soon as the patient's condition allows, and as soon as possible.

with a physician

**Instructor Notes** 

**Facilities** i.

- 1) An ill or injured patient receives definitive care in the hospital
- 2) Examples of specialty centers:
  - Trauma centers
  - b) Burn centers
  - c) Heart/cardiovascular centers
  - d) Hyperbaric centers
  - Pediatric centers
  - Perinatal centers
  - Poison centers
  - Spinal cord injury centers

Public Health and Injury Prevention

Stroke centers i)

Identify the distance of each of these specialty centers in your area.

- Public health is the science and practice of protecting and improving the health of a community as a whole.
  - a) Public health differs from individual patient care.
  - b) Public health (also called community health) efforts focus on the prevention of disease and promotion of health, instead of treatment of a patient's specific illness or injury.
- 2) Examples of public health accomplishments include the following:
  - a) Widespread vaccinations
  - b) Clean drinking water
  - c) Sewage systems
  - d) Declining infectious disease
  - e) Fluoridated water
  - Reduction in the use of tobacco products
  - g) Prenatal care
- 3) EMS is a public health system and provides a critical public health function.
  - a) For example, EMS professional are first line caregivers and their patient care reports may provide information on epidemics of disease that is important to public health agencies.
- 4) Every EMS system should be actively involved in public education.
  - a) EMTs are healthcare professionals and healthcare professionals have a responsibility to educate the public.
  - b) Public education and injury prevention programs often lead to more appropriate use of EMS resources.
- k. Evaluation
  - 1) Quality management
    - a) A system of internal and external reviews and audits of all aspects of an EMS system
    - b) Used to identify the areas of the EMS system needing improvement and ensure that the patient receives the highest quality medical care

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37 Objective 7

Slide #	Instructor Notes
38	2) Quality management includes:
	a) Obtaining information from the patient, other EMS professionals
	and facility personnel about the quality and appropriateness of th
	medical care provided
	b) Reviewing and evaluating documentation of an emergency call
39	3) Quality management includes evaluating:
	a) Your ability to perform skills properly
	b) Your professionalism during interactions with the patient, EMS
	professionals, and other healthcare personnel
	c) Your ability to follow policies and protocols
	d) Your participation in continuing education opportunities

Because timely care in an emergency is often a primary concern of the community, some quality management indicators look at critical times to evaluate the effectiveness of your system or your individual response. For example, turnout time (how quickly you began to respond), time to the location (how quickly you reached the scene from the time you were dispatched), and time to CPR or first defibrillation.

# 40 Objective 8

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G. Phases of a Typical EMS Response

- 1. Detection of the emergency
- 2. Reporting
  - a. Call made for assistance
  - b. Dispatch

Discuss access to the EMS system within the area that each EMT in your program will be providing care.

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#### 3. Response

a. Medical resources sent to the scene

On the way to the scene, EMTs prepare for the patient and situation based on the information given by the dispatcher. They consider the number of patients, possible problems in gaining access to the patient, scene safety, potential complications based on the patient's reported illness or injury, and the equipment and supplies that will need to be brought to the patient to begin emergency care.

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- b. On arriving at the scene, scene safety is assessed for hazards or potential hazards:
  - 1) Downed electrical lines
  - 2) Possible hazardous materials
  - 3) Traffic hazards
  - 4) Unstable vehicles or structures
  - 5) Signs of violence or potential violence
  - 6) Weather hazards

☐ Stress to your students that if the scene is not safe and they cannot make it safe, they should not enter. If a safe scene becomes unsafe, they should leave. Lives have been lost when a well-meaning rescuer has attempted to assist in an emergency without enough training, assistance, or equipment. In these cases, the rescuers should wait for the arrival of additional resources.

**Instructor Notes** 4. On-scene care a. Patient assessment is performed to determine the seriousness of the patient's condition or the extent of injuries If more highly trained medical professionals arrive at the scene, EMTs give the arriving personnel a brief description of the emergency and a summary of the care provided before transferring patient care. If the patient's condition requires further emergency care, EMTs help lift the stretcher and place the patient into an ambulance. ☐ Emphasize to your students that they must know the locations of the healthcare facilities in their area and their capabilities to determine the most appropriate facility to which the patient should be transported. 45 5. Care during transport a. During transport, EMTs assess the patient often and give additional emergency care as needed en route to an appropriate receiving facility, such as a hospital, for definitive care. 6. Transfer to definitive care 46 On arrival at the receiving facility: 1) A brief description of the emergency and a summary of the care provided are given to a healthcare professional with the same or greater level of medical training before transferring patient care 2) Documentation of the call is finished 3) Supplies are restocked 4) Emergency vehicle is prepared for the next call b. After the call is completed, post-call review 1) Discuss what went well 2) Identify opportunities for improving the patient care provided at the scene 47 H. Characteristics of Professional Behavior Objective 9 48 1. Professional Behavior: Integrity The public assumes that EMS professionals have integrity, which means honesty, sincerity, and truthfulness. Many consider integrity the single most important quality that an EMS professional can possess. c. As an EMT, it is important that you display integrity in all actions.

d. Examples of behavior demonstrating integrity include telling the truth and

providing complete and accurate documentation.

**Instructor Notes** 2. Professional Behavior: Empathy Empathy is identifying with and understanding the feelings, situations, and motives of others. b. You must demonstrate empathy to patients, families, and other healthcare professionals. c. Examples of behavior demonstrating empathy include the following: 1) Showing caring and compassion for others 2) Demonstrating an understanding of patient and family feelings 3) Demonstrating respect for others 4) Exhibiting a calm, compassionate, and helpful demeanor toward those in need 5) Being supportive and reassuring of others 3. Professional Behavior: Self-motivation 50 a. EMS professionals must be self-motivated, which requires enthusiasm and an internal drive for excellence. b. EMS professionals must also be self-directed, which means that they recognize what needs to be done and set about doing it, without having to be told to take action. Examples of behavior demonstrating self-motivation include the following: 1) Taking initiative to complete assignments 2) Taking initiative to improve and/ or correct behavior 3) Taking on and following through on tasks without constant supervision 4) Showing enthusiasm for learning and improvement 5) Demonstrating a commitment to quality management 6) Accepting constructive feedback in a positive manner 7) Taking advantage of learning opportunities 51 4. Professional Behavior: Appearance a. "You never get a second chance to make a good first impression." b. An EMT will meet individuals who are experiencing a medical emergency. 1) In 30 seconds or less, they will form an opinion about the EMT based on what they see, hear, and sense. 2) When the EMT approaches a patient and prepares to provide needed emergency care, he or she is expecting the patient to place his trust in him or her. 3) Presenting a neat, clean, and professional appearance:

- a) Invites trust
- b) Instills confidence
- c) Enhances cooperation
- d) Brings a sense of order to an emergency

**Instructor Notes** 

- 5. Professional Behavior: Hygiene
  - Good personal hygiene
    - 1) Bathing daily
    - 2) Using a deodorant or an antiperspirant
    - 3) Keeping hair, nails, and teeth clean
  - b. Good grooming
    - 1) Uniform that is clean, mended, and fits well
    - 2) Shoes that are clean, comfortable, provide support, and fit properly
    - 3) Wear a watch with a second hand or a digital watch that displays seconds
    - 4) Fragrances should not be worn
    - 5) Tattoos and piercings should not be visible

Because a patient who is confused or combative may pull at dangling jewelry or hair, dangling jewelry should not be worn and hair longer than shoulder length should be restrained. Beards and mustaches should be clean and kept short. Because they may be offensive and nauseating to patients, fragrances should not be worn. Tattoos, if present, should be covered by your uniform. Studs, rings, and bars should not be worn in visible body piercings, such as tongue, nose, and eyebrow.

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- 6. Professional Behavior: Self-confidence
  - a. An EMT will encounter situations involving:
    - 1) Minor injuries
    - 2) Life-threatening injuries
    - 3) Patients and family members who are upset
  - b. Others will look to the EMT as the person in control of the situation
  - c. An EMT must be able to:
    - 1) Adapt to these situations
    - 2) Remain calm
    - 3) Display confidence
  - d. Self-confidence requires that you honestly assess and maintain awareness of your personal and professional strengths and limitations.
  - e. Examples of behavior demonstrating self-confidence include the following:
    - 1) Demonstrating the ability to trust your personal judgment
    - 2) Demonstrating an awareness of your strengths and limitations
- 7. Professional Behavior: Communication
  - a. Communication is the exchange of thoughts, messages, and information.
  - b. As an EMS professional, you must be able to convey information to others verbally and in writing.
  - c. You must also be able to understand and interpret verbal and written
  - d. Examples of behavior demonstrating good communication skills include the following:
    - 1) Speaking clearly
    - 2) Writing legibly
    - 3) Listening actively
    - 4) Adjusting communication strategies to various situations

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**Instructor Notes** 8. Professional Behavior: Respect Respect involves feeling and showing polite regard, consideration, and appreciation for others. b. Examples of behavior demonstrating respect include being polite to others, not using insulting or demeaning terms, and showing behavior in a manner that brings credit to yourself, your employer and coworkers, and your profession. 1) For instance, when you arrive at the patient's side, begin by introducing yourself: "Hello. My name is , and I am an Emergency Medical Technician. I am here to help you. What is your name?" 2) An older adult should be addressed by his or her last name with Mr., Mrs., or Ms. In patient satisfaction surveys, patients often comment about the speed of response, the kindness and caring of the crew, and professionalism. Many patient and/or family complaints relate to perceived rudeness, a lack of caring, or a lack of speed in handling the situation. 56 9. Professional Behavior: Time Management a. EMS professionals work in high stress situations and adverse conditions. b. You must be able to prioritize tasks, while simultaneously providing patient care, and work quickly to accomplish those tasks. c. Examples of behaviors demonstrating good time management include being punctual and completing tasks and assignments on time. 57 10. Professional Behavior: Teamwork and Diplomacy a. Teamwork and diplomacy are two important traits that EMS professionals must possess. b. Teamwork is the ability to work with others to achieve a common goal. c. Diplomacy is tact and skill in dealing with people. d. Examples of behavior demonstrating teamwork and diplomacy include the following: 1) Placing the success of the team above your own self-interests 2) Not undermining the team 3) Helping and supporting other team members 4) Showing respect for all team members 5) Remaining flexible and open to change 6) Communicating with coworkers in an effort to resolve problems 58 11. Professional Behavior: Patient Advocacy a. An advocate is a person who supports another. b. You must protect the patient from further injury and act in the best interests of the patient. c. At the same time, you must accept the rights of other individuals to differ with you and not impose your beliefs (religious, ethical, political, social, legal) on others. d. Examples of behavior demonstrating patient advocacy include the following:

3) Protecting patient confidentiality

1) Not allowing personal biases to impact patient care 2) Placing the needs of patients above your own interests

Chapter 1 – EMS Systems and Research

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Slide #		Instructor Notes
59	12.	Professional Behavior: Careful Delivery of Service
		a. An EMS professional delivers the highest quality of patient care with
		careful attention to detail and critically evaluates his performance and
		attitude.
		b. Examples of behavior demonstrating a careful delivery of service include
		the following:
		1) Mastering and refreshing skills
		2) Performing complete equipment checks
		3) Careful and safe emergency vehicle operations
		4) Following policies, procedures, and protocols
		5) Following orders of superiors
60 I.	Du	ties as an Emergency Medical Technician
Objective 10		
61	1.	No matter where they work, EMTs are expected to provide the same standard of
		care in an emergency
		a. Standard of care: Minimum level of care expected of similarly trained
	_	healthcare professionals
62	2.	Obligations as an EMS Professional
		a. Respect each patient as an individual
		b. Provide emergency medical care to <u>every</u> patient to the best of your ability
		c. Listen attentively to your patients
		d. Provide clear explanations
		e. Provide patients with emotional support
63	2	f. Preserve each patient's dignity during examinations  The emergency medical core provided must be based an need and without
03	3.	The emergency medical care provided must be based on need and without regard to the patient's:
		a. Race
		b. Ethnicity
		c. National origin
		d. Religion
		e. Gender
		f. Age
		g. Mental or physical disability
		h. Sexual orientation
		i. Ability to pay for the care provided
64	4.	Primary Duties: Preparation and Safety
		a. Physical demands
		1) Stamina and endurance
		2) Walking, standing, and assisting in lifting and carrying ill or injured
		patients
		3) Climbing and balancing may be required
		4) Patients may be accessible only if you stoop, kneel, crouch, or crawl
65		b. Maintain health by exercising regularly
		1) Improves muscle tone and circulation
		2) Provides physical release for stress
		c. Get adequate sleep and rest
		d. Practice good nutrition and keep immunizations up to date
66		e. Appropriate equipment and supplies
		f. Adequate knowledge and skill maintenance

Slide #	Instructor Notes	
67	g. Safety	_
Objective 11	1) Personal, crew, patient, bystanders	
68	5. Primary Duties: Response	
	a. When notified of an emergency, prepare for the patient and situation based	
	on the information given.	
	b. Respond safely and in a timely manner to the address or location given.	
	c. Observe traffic laws and regulations regarding emergency vehicle operation.	
	d. On arrival at the scene, park the emergency vehicle in a safe location to	
	avoid additional injury.	
69	6. Primary Duties: Scene Assessment	
	a. On arrival at the scene:	
	1) Size up the scene before initiating patient care.	
	a) Determine if the scene is safe.	
	b) Identify the mechanism of injury or the nature of the illness.	
	c) Identify the total number of patients.	
	d) Request additional help if necessary.	
	b. If law enforcement personnel are not present on the scene, create a safe	
	traffic environment.	
	c. Before approaching the patient, put on appropriate personal protective	
	equipment (PPE) to minimize the risk of exposure to potentially infectious	
<b>7</b> 0	body fluid substances or other infectious agents.	
70	7. Primary Duties: Gaining Access	
	a. To perform a patient assessment and provide emergency care, you must gair	1
	access to the patient.	
	b. In some situations, additional resources may be needed at the scene, such as	
	law enforcement personnel, the fire department, the utility company, or a special rescue team.	
	1) Notify the Dispatcher as soon as possible of the need for these resources	,
	c. If the patient has been involved in a motor vehicle crash, make sure the	,
	scene is safe and provide necessary care to the patient before extrication.	
	1) Make sure that the patient is removed in a way that minimizes further	
	injury.	
	<ul><li>2) Work closely with the rescuers responsible for extrication.</li></ul>	
71	8. Primary Duties: Patient Assessment	
, 1	a. Perform a systematic patient assessment to determine what is wrong and	
	quickly identify life-threatening conditions	
	b. Your assessment will include obtaining the patient's vital signs.	
	1) Vital signs are measurements of breathing, pulse, skin temperature,	
	pupils, and blood pressure.	
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c. Gather additional information about the emergency by observing the scene and speaking with the patient and bystanders. Find out who called 9-1-1.

**Instructor Notes** 

9. Primary Duties: Emergency Care

- Give emergency medical care to adults, children, and infants based on your assessment findings.
- b. Follow local protocols and contact medical direction as needed
- c. Depending on the patient's illness or injury, you may need to perform certain skills, including:
  - 1) Performing airway management
    - a) Opening the airway using a head tilt-chin lift or jaw thrust without head tilt
    - b) Inserting an oral airway
    - c) Suctioning the upper airway
  - 2) Providing respiratory assistance
    - a) Giving oxygen when indicated
    - b) Performing bag-mask ventilation
  - 3) Providing trauma care
    - a) Manually stabilizing the cervical spine
    - b) Manually stabilizing injured limbs
    - c) Controlling bleeding
    - d) Performing emergency moves
  - 4) Providing medical care to patients with respiratory, cardiac, diabetic, allergic, behavioral, and environmental emergencies, and suspected poisonings
    - a) Performing cardiopulmonary resuscitation (CPR)
    - b) Operating an automated external defibrillator (AED; an AED delivers an electrical shock to the heart)
  - 5) Assisting in childbirth
  - 6) Assisting patients with prescribed medications, including sublingual nitroglycerin, epinephrine auto-injectors, and handheld aerosol inhalers
  - 7) Administering oxygen, oral glucose, and aspirin when indicated

Discuss with the class the possible consequences of performing skills that exceed their Emergency Medical Technician training and/or certification. Discuss consequences to the patient and to the EMT.

- d. Your help may be needed to lift and move patients. To lift and move patients safely you must know the following:
  - 1) Body mechanics
  - 2) Lifting and carrying techniques
  - 3) Principles of moving patients
- You must be also familiar with equipment used for lifting and moving
- Once you begin emergency care, you must continue that care until:
  - 1) An individual with medical training equal to or greater than your own assumes responsibility for the patient, or
  - 2) You are physically unable to continue providing care because of exhaustion, or
  - 3) There is a change in the scene that weakens or endangers your physical well-being or
  - 4) When an adult patient, of adequate mental capabilities and fully informed of the risks and benefits of treatment, elects to terminate care.

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Slide #	Instructor Notes
75	10. Primary Duties: Transport/Transfer of Care
	a. When transferring patient care to a healthcare professional with medical
	training equal to or greater than your own, be sure to include the following
	elements in your verbal report:
	1) Identify yourself as an EMT
	2) Report the patient's age, gender, primary problem (chief complaint), and current condition
	3) Describe what happened and the position in which the patient was found
	4) Describe pertinent assessment findings, including vital signs
	5) Report any medical history you obtained from the patient
	6) Describe the emergency medical care that you gave
	7) Describe the patient's response to the treatment given
	8) Orders received from medical direction (if applicable)
76	b. Remember "The Four Cs" when giving a verbal report:
	1) Courteous
	2) Clear
	3) Complete
77	4) Concise
77	11. Primary Duties: Documentation
	<ul><li>a. Documentation is an important part of prehospital care</li><li>b. Must be:</li></ul>
	1) Accurate
	2) Complete
	3) Concise
	c. Should reflect:
	1) What you saw and heard at the scene
	2) The emergency care you gave
	3) The patient's response to that care
78	12. Primary Duties: Returning to Service
	a. Your rapid preparation for the next call can be very beneficial to the entire
	EMS system.
	b. It will be your responsibility to clean equipment as needed, restock any disposable equipment that you may have used, and return equipment to its
	storage area.
	c. Know your company's policies and arrangements made with receiving
	facilities or other agencies regarding restocking of supplies.
79	13. Primary: Community Involvement
	a. Become actively involved in public education
	b. How to access the EMS system
	c. Injury prevention programs
	1) Bicycle safety
	2) Use of child safety seats
	3) Poisoning prevention
	<ul><li>4) Drowning prevention</li><li>5) CPR and first aid programs</li></ul>
	5) Of K and first and programs

## **Instructor Notes** 14. Primary Duties: Personal Professional Development 80 Healthcare professionals are responsible for their personal professional development. b. Examples of ways in which professional development occurs include the following: 1) Participating in continuing education activities 2) Mentoring individuals who are new to the profession and/or your department 3) Getting involved in professional organizations 4) Supporting and participating in research activities 81 J. EMS Research Objective 12 Scientific evidence through research is the foundation for medical practice decisions and changes in patient management. Research is essential to determine the effectiveness of new procedures. medications, and treatments in improving patient care and outcome. a. Example: CPR guidelines change at least every 5 years based on current research. 3. Research results cause a chain-reaction in EMS education and practice. Research findings drive changes in the development of the National EMS Core Content, which represents the entire domain of prehospital knowledge and skills. b. The National EMS Core Content drives the National EMS Scope of Practice, which names and defines the national levels of EMS practice. The knowledge and skill objectives for each level of practice identified in the National EMS Scope of Practice are defined by the National EMS Education Standards. d. Changes in the EMS Education Standards affect medical publishers, EMS instructors, and those participating in EMS-related programs. As an EMT, you may be asked to participate in EMS research. No matter how you are asked to participate in research, approach this responsibility seriously and complete the task assigned to the best of your The data obtained from your efforts may help improve the care of patients

82 K. Questions?

treated in the future.

#### VII. Lesson Enhancements

The materials on the following pages are provided to enhance the information presented in this lesson.

- Chapter Quiz. This quiz was created for you to copy and give to your students. These questions are also available in a computerized test bank on the McGraw-Hill OLC.
  - Chapter Quiz Answers

#### Activities

- Activity 1. Make copies of the patient situations provided. Divide the class into groups of four and have each person in each group randomly pick a scenario. Have them talk about how they would feel if they encounter these patient situations.
- o Activity 2. Case Study. Ask your students to read the case study. Then ask them how they would continue patient care or respond to the questions provided.
- o Activity 3. Crossword.

Date \_\_\_\_\_

# Chapter 1 Quiz – EMS Systems and Research

Multiple (	Choice se provided, identify the letter of the choice that best completes each statement or answers each
question.	e provided, identify the tetter of the enotee that best completes each statement of districts each
1	<ul> <li>Which level of prehospital care professional has the highest level of training?</li> <li>A. Advanced Emergency Medical Technician</li> <li>B. Emergency Medical Technician</li> <li>C. Paramedic</li> <li>D. Emergency Medical Responder</li> </ul>
2	
	body? A. The Department of Defense B. The Department of Transportation C. The Department of Health and Human Welfare D. The Department of Emergency Medical Services
2	•
3	<ul> <li>Skill labs, lectures, workshops, and quality improvement reviews are examples of</li> <li>A. continuing education.</li> <li>B. on-line medical direction.</li> <li>C. the physical demands placed on EMTs.</li> <li>D. enhanced 9-1-1 service.</li> </ul>
4	<ul> <li>You are transporting a 24-year-old man from the scene of a motor vehicle crash. While en route to the hospital, the patient suddenly becomes unresponsive. Using a cellular phone, you contact your medical direction for guidance. This is an example of</li> <li>A. standing orders.</li> <li>B. on-line medical direction.</li> <li>C. off-line medical direction.</li> <li>D. retrospective medical direction.</li> </ul>
5	<ul> <li>When transferring patient care to a healthcare professional, the verbal report given should</li> <li>A. be long and have a lot of details.</li> <li>B. detail everything you observed and heard the patient say.</li> <li>C. include all details of the patient's history and situation.</li> <li>D. quickly cover important information about the patient's history, assessment, and care given.</li> </ul>
6	<ul> <li>Which of the following statements is true about continuing education for the EMT?</li> <li>A. It is not needed if the EMT responds to a large number of calls.</li> <li>B. It is only needed for prehospital professionals certified at a level higher than Advanced EMT.</li> <li>C. It should be a regular, scheduled activity to maintain knowledge and skills.</li> <li>D. It is only important if it is required by your agency.</li> <li>Questions 7-8 pertain to the following scenario.</li> </ul>
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You are an EMT called to the home of a 56-year-old man. The patient has reportedly taken a drug overdose.

- 7. What are your responsibilities on this call in the appropriate order?
  - A. Assess the patient, provide advanced care, document care
  - B. Ensure safety, assess the patient, provide initial emergency care
  - C. Determine the patient's diagnosis, establish an intravenous line, and then prepare the patient for transport
  - D. Provide advanced care, assess the patient's baseline vital signs, prepare the stretcher
- 8. Which of the following statements is true of your role on this call?
  - A. If an Advanced EMT or Paramedic arrives, you must stop giving patient care.
  - B. You can turn over patient care to an Advanced EMT or Paramedic after you give them a brief report.
  - C. You should not turn over care of the patient to advanced life support personnel.
  - D. You have no obligation to provide care to the patient.

### Questions 9-10 pertain to the following scenario.

During the morning rush hour, your rescue crew responds to a three-car collision on a local highway. When you arrive, you find the cars still in the roadway.

- 9. In the absence of law enforcement you should
  - A. shut down the entire highway.
  - B. immediately remove all vehicles from the highway.
  - C. stay away from the scene until it is secured by law enforcement.
  - D. create a safe environment be placing the emergency vehicle between the collision and oncoming traffic.
- 10. As an EMT, your job responsibility at this scene may require
  - A. transcutaneous pacing.
  - B. electrocardiogram (ECG) interpretation.
  - C. oral glucose administration.
  - D. establishing intravenous (IV) access.

# Chapter 1 Quiz Answers – EMS Systems and Research

1. ANS: C

A Paramedic is trained in all aspects of emergency care, including advanced airway management, invasive skills, and medication administration.

OBJ: Differentiate the roles and responsibilities of an EMT from other prehospital care professionals.

2. ANS: B

The National Highway Traffic Safety Administration (NHTSA) is a branch of the Department of Transportation (DOT). The DOT is the federal body responsible for regulating and administering EMS.

OBJ: N/A

3. ANS: A

Continuing education may occur in different forms and includes skill labs, lectures and workshops, conferences and seminars, case reviews and/or quality management reviews, reading professional journals, and reviewing videotapes and/or audiotapes. It is imperative to your performance as an EMT that you maintain a high level of proficiency. Seek opportunities to challenge and enhance your knowledge. Enhanced 9-1-1 service refers to the ability of modern 9-1-1 systems to automatically provide to the call-taker the address and phone number of the calling party.

OBJ: Describe the benefits of EMT continuing education.

4. ANS: B

On-line medical direction, also called direct or concurrent medical direction, is direct communication with a physician by radio or telephone—or face-to-face communication at the scene—before performing a skill or administering care. Off-line medical direction, also referred to as indirect, prospective, or retrospective medical direction, is the medical supervision of EMS personnel using policies, treatment protocols, standing orders, education, and quality management reviews.

OBJ: Define medical direction and discuss the EMT's role in the process.

5. ANS: D

When transferring patient care to a healthcare professional with medical training equal to or greater than your own, first identify yourself as an EMT. Then report the patient's age, gender, primary problem (chief complaint), and current condition. Describe what happened and the position in which the patient was found. Describe pertinent assessment findings, including vital signs. Report any medical history you obtained from the patient. Describe the emergency medical care that you gave and the patient's response to the treatment given. Report any orders received from medical direction (if applicable). The report should be courteous, clear, concise, and complete.

OBJ: N/A

6. ANS: C

Continuing education helps to maintain current knowledge and skills and to introduce new knowledge important to the Emergency Medical Technician.

OBJ: Describe the benefits of EMT continuing education.

7. ANS: B

Advanced care and diagnosis will be performed by advanced life support EMS personnel.

OBJ: Differentiate the roles and responsibilities of an EMT from other prehospital care professionals.

8. ANS: B

Care of the patient can be transferred to someone with equal or higher medical training. OBJ: Differentiate the roles and responsibilities of an EMT from other prehospital care professionals.

9. ANS: D

After ensuring your safety and the safety of your crew, you should attempt to create a safe environment for the patient. Creating a safe environment is best accomplished by blocking traffic with your response vehicle (with the warning lights activated). Shutting down the entire road would only be necessary if all lanes of traffic posed a safety hazard. Staying away from the accident scene would leave the injured in harm's way. As with all driving issues, make sure you understand and adhere to local law and policy.

OBJ: Define the role of the EMT relative to the responsibility for personal safety, the safety of the crew, the patient, and the bystanders.

10. ANS: C

Oral glucose administration, when appropriate and approved by medical direction, is within the scope of the EMT curriculum. Electrocardiogram (ECG) interpretation, transcutaneous pacing, and establishing IV access are outside the EMT's scope of practice.

OBJ: Differentiate the roles and responsibilities of an EMT from other prehospital care professionals.

# Activity 1. EMS Systems and Research

How will you feel if ...?

Situation #1: An elderly patient calls for assistance at 3 a.m. after slipping and falling. This is the fourth day in a row she has done so. She says, "I knew you wouldn't mind because I'm a taxpayer."

Situation #2: An elderly male calls for difficulty breathing. It is difficult to get to his room because of the trash in the home. There is animal and human waste on the floor, and the smell is overwhelming.

Situation #3: A 35-year-old man is found sleeping in the garage of his mother's home. She calls to ask you to "check him out." He is known to you and the police because of his chronic alcoholism. His speech is slurred, and he is cursing at you.

Situation #4: A store clerk calls for a customer who is having chest pain. The elderly woman is pale and sweaty, and her lips are blue. She is clearly in distress but is alert and refuses to allow you to care for her because it is against her religious beliefs.

# Activity 1. Possible Answers – EMS Systems and Research

The answers to this exercise will vary by student. You may choose to guide the discussion to assist students in developing appropriate responses or ways to cope with the situation.

## Activity 2. Case Study – EMS Systems and Research

You and your paramedic partner are called to a repair shop for an injured man. When you arrive on the scene, shop workers quickly wave you to the back of the building. A worker has been injured while repairing a gear in a lawn tractor. His hand is stuck in the engine, which still roars loudly. The patient is unresponsive and soaked in sweat. Several of his fingers have been cut off. Blood is pooling on his forearm and dripping to the floor. The patient's coworkers gather around, waiting for you to take action.

1. Describe the actions you should take to provide emergency care to this patient.

2. How would the situation be altered if gasoline was leaking and pouring from the mower when you arrived on the scene?

## Activity 2. Case Study – EMS Systems and Research

3. Describe the actions you should take to provide emergency care to this patient.

After ensuring scene safety and taking appropriate standard precautions, you would open his airway and check for breathing. If he were breathing, you would roll him to the recovery position and begin attempts to control bleeding. If he were not breathing, you would deliver two breaths using a pocket mask or bag-mask device and then assess his pulse.

4. How would the situation be altered if gasoline was leaking and pouring from the mower when you arrived on the scene?

You would need to assess for immediate ignition risks. Remove the patient from the area of the gasoline and call for the appropriate resources to contain and clean up the gasoline. Make sure you have on appropriate personal protective equipment and then, if the patient has any gasoline on his skin, wash it off thoroughly so that he does not suffer a burn.

# Activity 3. Crossword – EMS Systems and Research

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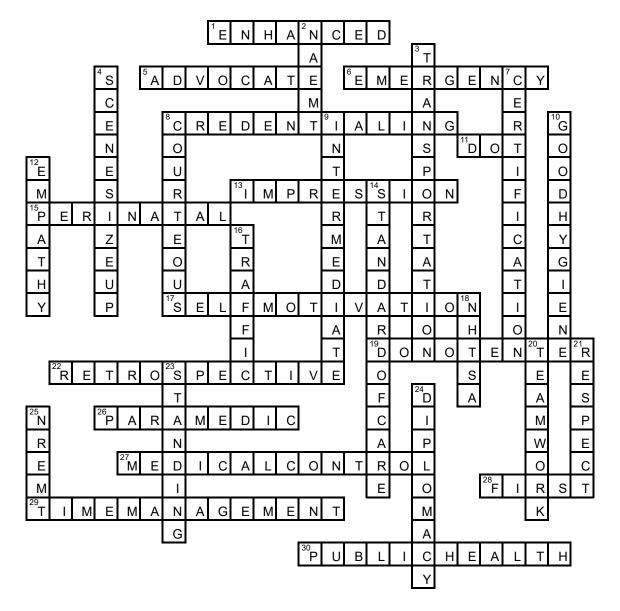
- 1. A 9-1-1 system that routes an emergency call to the 9-1-1 center closest to the caller, and automatically displays the caller's phone number and address
- **5.** A person who supports others and acts in their best interests.
- 6. An unexpected illness or injury that requires immediate action to avoid risking the life or health of the person being treated
- **8.** A local process by which an individual is permitted by a specific entity (such as a medical director) to practice in a specific setting (such as an EMS agency)
- 11. Department of Transportation
- **13.** You never get a second chance to make a good first ...
- 15. This type of center specializes in the care of women with high-risk pregnancies and infants with atrisk fetal conditions
- 17. Taking on and following through on tasks without constant supervision is an example of this professional behavior
- **19.** If the scene is not safe and you cannot make it safe,
- 22. This type of medical direction refers to activities performed by a physician after an emergency call
- **26.** Highest level of prehospital professional
- **27.** Another name for medical oversight
- **28.** An Emergency Medical Responder was formerly called a Responder.
- **29.** Being punctual is an example of good .
- **30.** The science and practice of protecting and improving the health of a community as a whole

#### Down

- 2. National Association of Emergency Medical Technicians
- is the process of moving a patient from the scene of an emergency to an appropriate **3.** Emergency healthcare facility.
- 4. This is done to find out if a scene is safe to enter
- 7. A designation that ensures a person has met predetermined requirements to perform a particular activity
- 8. One of the four Cs when giving a verbal report
- **9.** An Advanced EMT was formerly called an EMT-
- 10. Bathing daily, for example
- 12. To understand, be aware of, and be sensitive to the feelings, thoughts, and experiences of another
- 14. The minimum level of care expected of similarly trained healthcare professionals
- 16. An example of a hazard that may be found at the scene of a motor vehicle crash
- 18. National Highway Traffic Safety Administration
- **20.** The ability to work with others to achieve a common goal
- 21. The willingness to feel and show polite regard, consideration, and appreciation for others

- 23. \_\_\_\_ orders are written orders that allow EMS personnel to perform certain medical procedures before making direct contact with a physician.
- **24.** Using tact and skill when dealing with people
- 25. National Registry of Emergency Medical Technicians

Activity 3. Crossword Solution - EMS Systems and Research



# Chapter 1 Handout—Emergency Medical Technician Job Description

## **Career Requirements:**

Responds to emergency calls to provide efficient and immediate care to the critically ill and injured and transports the patient to a medical facility.

After receiving the call from the dispatcher, drives the ambulance to address or location given, using the most expeditious route, depending on traffic and weather conditions. Observes traffic ordinances and regulations concerning emergency vehicle operation.

Upon arrival at the scene of the crash or illness, parks the ambulance in a safe location to avoid additional injury. Prior to initiating patient care, the EMT-Basic will also "size up" the scene to determine that the scene is safe, the mechanism of injury or nature of the illness, the total number of patients and whether it is necessary to request additional help. In the absence of law enforcement, creates a safe traffic environment, such as the placement of road flares, removal of debris, and redirection of traffic for the protection of the injured and those assisting in the care of injured patients.

Determines the nature and extent of illness or injury and establishes priority for required emergency care. Based on assessment findings, renders emergency medical care to adult, infant and child, medical and trauma patients. Duties include but are not limited to, opening and maintaining an airway, ventilating patients, and cardiopulmonary resuscitation, including use of automated external defibrillators. Provide prehospital emergency medical care of simple and multiple-system trauma such as controlling hemorrhage, treatment of shock (hypoperfusion), bandaging wounds, and immobilization of painful, swollen, deformed extremities. Medical patients include: assisting in childbirth, management of respiratory, cardiac, diabetic, allergic, behavioral, and environmental emergencies, and suspected poisonings. Searches for medical identification emblem as a clue in providing emergency care. Additional care is provided based upon assessment of the patient and obtaining historical information. These interventions include assisting patients with prescribed medications, including sublingual nitroglycerin, epinephrine auto-injectors and hand-held aerosol inhalers. The EMT-Basic will also be responsible for administration of oxygen, oral glucose, and activated charcoal.

Reassures patients and bystanders by working in a confident, efficient manner. Avoids 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 gives all possible emergency care and protection to the entrapped patient and uses the prescribed techniques and appliances for safely removing the patient. If needed, radios the dispatcher for additional help or special rescue and/or utility services. Provides simple rescue service if the ambulance has not been accompanied by a specialized unit. After extrication, provides additional care in triaging the injured in accordance with standard emergency procedures.

Complies with regulations on the handling of the deceased, notifies authorities, and arranges for protection of property and evidence at scene.

Lifts stretcher, placing in ambulance and seeing that the patient and stretcher are secured, continues emergency medical care.

From the knowledge of the condition of the patient and the extent of injuries and the relative locations and staffing of emergency hospital facilities, determines the most appropriate facility to which the patient will be transported, unless otherwise directed by medical direction. Reports directly to the emergency department or communications center the nature and extent of injuries, the number being transported, and the destination to assure prompt medical care on arrival. Identifies assessment findings that may require communications with medical direction for advice and for notification that special professional services and assistance be immediately available upon arrival at the medical facility.

Constantly assesses patient en route to emergency facility, administers additional care as indicated or directed by medical direction.

Assists in lifting and carrying the patient out of the ambulance and into the receiving facility.

Reports verbally and in writing his or her observation and emergency medical care of the patient at the emergency scene and in transit to the receiving facility staff for purposes of records and diagnostics. Upon request, provides assistance to the receiving facility staff.

After each call, restocks and replaces used linens, blankets, and other supplies, cleans all equipment following appropriate disinfecting procedures, makes careful check of all equipment so that the ambulance is ready for the next run. Maintains ambulance in efficient operating condition. Ensures that the ambulance is clean and washed and kept in a neat orderly condition. In accordance with local, state, or federal regulations, decontaminates the interior of the vehicle after transport of patient with contagious infection or hazardous materials exposure.

Determines that vehicle is in proper mechanical condition by checking items required by service management. Maintains familiarity with specialized equipment used by the service.

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

Meets qualifications within the functional job analysis.

Source: Emergency Medical Technician National Standard Curriculum

# Chapter 1 Handout—Functional Job Analysis

#### **EMT-Basic Characteristics**

EMT-Basics work as part of a team. Thorough knowledge of theoretical procedures and ability to integrate knowledge and performance into practical situations are critical. Self-confidence, emotional stability, good judgment, tolerance for high stress, and a pleasant personality are also essential characteristics of the successful EMT-Basic at any level. EMT-Basics also must be able to deal with adverse social situations, which include responding to calls in districts known to have high crime rates.

#### **Physical Demands**

Aptitudes required for work of this nature are good physical stamina, endurance, and body condition that would not be adversely affected by lifting, carrying, and balancing, at times, patients in excess of 125 pounds (250, with assistance). EMT-Basics must be able to work twenty-four-hour continuous shifts. Motor coordination is necessary for the well-being of the patient, the EMT-B, and coworker over uneven terrain.

#### **Comments**

Driving the ambulance in a safe manner, accurately discerning street names through map reading, and the ability to correctly distinguish house numbers or business locations are essential to task completion in the most expedient manner possible. Use of the telephone for transmitting and responding to physician's advice is also essential. The ability to concisely and accurately describe orally to physicians and other concerned staff one's impression of the patient's condition is critical, as EMT-Basics work in emergency conditions in which there may be no time for deliberation. EMT-Basics must also be able to accurately summarize all data in the form of a written report. Verbal and reasoning skills are used more extensively than math. Math does play a part, however, in determining medication ratios per patient's body weight.

Source: Emergency Medical Technician National Standard Curriculum

# Chapter 1 Handout – Highlights in the History of EMS

<u>Year</u>	<u>Event</u>
1797	<ul> <li>Napoleonic Wars</li> <li>Beginning of system of service to the injured</li> <li>Light carriages are used for transporting casualties from the field to aid stations</li> <li>Medical crews operating the carriages are trained to control severe bleeding and splint fractures</li> </ul>
1860s	First civilian ambulance services in U.S. begin as hospital-based services in Cincinnati and New York City
1915	First known air medical transport occurs during retreat of the Serbian army from Albania
1922	American College of Surgeons establishes Committee on Treatment of Fractures (later becomes Committee on Trauma)
Mid-1940s	Rural communities recognize need for local fire protection and first aid and begin volunteer services to meet the need for these services
1950s	<ul> <li>MASH units use helicopters for evacuation in the Korean War; rapid evacuation of patients increases survival</li> <li>American College of Surgeons develops first training program for ambulance attendants</li> <li>Dr. Peter Safar demonstrates efficacy of mouth-to-mouth ventilation (1958)</li> </ul>
1960	<ul> <li>CPR is shown to be useful</li> <li>Ambu introduces bag-valve-mask resuscitator</li> <li>Laerdal introduces Resusci-Anne</li> </ul>
1965	PhysioControl introduces LifePak 33 heart monitor/defibrillator
1966	<ul> <li>Beginning of modern EMS</li> <li>Accidental Death and Disability, The Neglected Disease of Modern Society, published by National Academy of Sciences-National Research Council, identifies injury as a national healthcare problem</li> <li>Highway Safety Act of 1966 charges DOT NHTSA with responsibility of improving EMS, including helping states develop EMS programs; it is the first national</li> </ul>
1967	commitment to reducing highway-related injuries and deaths George Hurst invents Jaws of Life (Hurst Tool)
1968	<ul> <li>9-1-1 is designated as the universal emergency telephone number</li> <li>American Trauma Society is established</li> </ul>
1969	<ul> <li>First nationally recognized EMT-Ambulance (EMT-A) curriculum is published</li> <li>Glenn Hare patents the Hare Traction Splint</li> </ul>
1970	National Registry of Emergency Medical Technicians (NREMT) is founded
1971	Emergency! television program airs
1972	<ul> <li>Department of Labor officially recognizes EMT-A as an occupational specialty</li> <li>Demonstration projects are begun in some states to develop model regional EMS systems</li> </ul>

Year	Event
1973	EMSS Act provides federal guidelines and funding for development of regional EMS systems
1974	Glenn Hare patents Hare Extrication Collar
1975	National Association of Emergency Medical Technicians is founded
1979	<ul> <li>American College of Surgeons Committee on Trauma publishes <i>Optimal Hospital Resources for Care of the Injured Patient</i>, which identified three levels of trauma centers</li> <li>Dr. Burt Kaplan and David Clark Co. patent military anti-shock trousers</li> </ul>
1977	National standards are developed for EMT-Paramedics
1981	<ul> <li>Omnibus Budget Reconciliation Act consolidates EMS funding into state preventive block grants; EMSS Act funding is eliminated</li> <li>Rick Kendrick invents Kendrick Extrication Device</li> </ul>
1984	EMS for Children Program provides funds to improve the EMS system and better serve the needs of infants and children
1985	<ul> <li>National Research Council publishes <i>Injury in America: A Continuing Public Health Problem</i>, which describes the lack of progress in addressing the problem of accidental death and disability</li> <li>First Responder, EMT-Ambulance, EMT-Intermediate, and EMT-Paramedic National Standard Curricula revised by NHTSA</li> </ul>
1986	<ul> <li>Injury Prevention Act (followed by Injury Control Act of 1990) establishes Division of Injury Epidemiology and Control at Centers for Disease Control (changed to National Center for Injury Prevention and Control in 1992) to provide leadership for a variety of injury-related public health activities</li> <li>Life Support Products develops Automatic Transport Ventilator</li> </ul>
1988	National Highway Traffic Safety Administration establishes EMS Technical Assessment Program; 10 essential components of an EMS system are identified
1989	Rescue 911 airs on television
1990	<ul> <li>Trauma Systems Planning and Development Act creates the DTEMS within the Department of Health and Human Services, provides funding to address needs of injured patients and match them to available resources, and encourages development of trauma systems</li> <li>American College of Surgeons Committee on Trauma publishes Resources for Optimal Care of the Injured Patient, which changes the focus from trauma centers to trauma</li> </ul>
1991	systems  Commission on Accreditation of Ambulance Services sets standards and benchmarks for
1993	ambulance services Federal Communications Commission approves channels for exclusive emergency medical
1994	radio services use  EMT-Ambulance National Standard Curriculum is revised and renamed EMT-Basic National Standard Curriculum
1995	First Responder National Standard Curriculum is revised

<u>Year</u>	<u>Event</u>
1996	EMS Agenda for the Future is created by the National Association of EMS Physicians and National Association of State EMS Directors, which reviews progress made in EMS over 30 years and proposes continued development of 14 EMS attributes
1998	Paramedic National Standard Curriculum is revised
1999	EMT-Intermediate National Standard Curriculum is revised
2000	<ul> <li>Trauma System Planning and Development Act is reauthorized and funded</li> <li>Education Agenda for the Future: A Systems Approach published by NHTSA; designed to develop an integrated system of EMS regulation, certification, and licensure</li> </ul>
2002	Homeland Security Act of 2002 creates Department of Homeland Security
2003	Homeland Security develops and administers National Incident Management System
2005	National EMS Core Content document published defining the domain of knowledge of EMS personnel described within the National EMS Scope of Practice and universal knowledge and skills of EMS personnel
2006	<ul> <li>EMS at the Crossroads, Institute of Medicine Report published and contained recommendations related to EMS Education Agenda:</li> <li>State governments should adopt a common scope of practice for EMS personnel, with state licensing reciprocity</li> <li>States should require national accreditation of paramedic programs</li> <li>States should accept national certification as a prerequisite for state licensure and local credentialing of EMS professionals</li> </ul>
2006	<ul> <li>National EMS Scope of Practice published by NHTSA</li> <li>Divides EMS core content into EMS levels of practice</li> <li>Defines practices and minimum competencies for each level of EMS professional</li> <li>Guides state legislation</li> <li>Promotes reciprocity between states</li> </ul>