Chapter 1 - Introduction to Emergency Medical Care

OBJECTIVES

1.1 Define key terms introduced in this chapter. Slides 16–18, 26–27, 42–44

1.2 Give an overview of the historical events leading to the development of modern emergency medical services (EMS). Slides 10–13, 19

1.3 Describe the importance of each of the National Highway Traffic Safety Administration standards for assessing EMS systems. Slides 14–18

1.4 Describe the components of an EMS system that must be in place for a patient to receive emergency medical care. Slides 21–27

1.5 Compare and contrast the training and responsibilities of EMRs, EMTs, AEMTs, and Paramedics. Slides 28–33

1.6 Explain each of the specific areas of responsibility for the EMT. Slides 28–29, 31–33

1.7 Give examples of the physical and personality traits that are desirable for EMTs. Slides 34–39

1.8 Describe various job settings that may be available to EMTs. Slide 40

1.9 Describe the purpose of the National Registry of Emergency Medical Technicians. Slide 41

1.10 Explain the role of the EMT in the prehospital setting. Slide 42

1.11 Discuss the challenges and responsibilities faced by EMTs in emergency situations. Slide 43

1.12 Outline the steps involved in the emergency response process. Slides 44–45
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OBJECTIVES

1.10 Explain the purpose of quality improvement programs in EMS programs. Slides 42–43
1.11 Explain EMTs’ role in the quality improvement process. Slides 42–43
1.12 Explain medical direction as it relates to EMS systems. Slide 44
1.13 List ways in which research may influence EMT practice. Slide 45.

OBJECTIVES

1.14 Give examples of how EMS providers can play a role in public health. Slide 46
1.15 Given scenarios, decide how an EMT may demonstrate professional behavior. Slides 29, 32–33, 47

MULTIMEDIA

- Slide 19 The Long and Winding Road of Ambulance Service Video
- Slide 48 Emergency Medical Services for Children Video
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CORE CONCEPTS

• The chain of human resources that forms the EMS system
• How the public activates the EMS system
• Your roles and responsibilities as an EMT
• The process of EMS quality improvement (QI)

Topics

• The Emergency Medical Services System
• Components of the EMS System

The Emergency Medical Services System
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How It Began

• 1790s—Napoleonic Wars
• Civil War
• World War I—Volunteer ambulance corps
• Korea/Vietnam—MASH-type units and helicopter transport from battlefield

continued

Non-military ambulance services began operating in early 1900s in U.S.
• Often operated by hospitals, fire departments, or funeral homes
• No requirements or standards for equipment, crew training, or ambulance design
• “You call, we haul, that’s all!”
Development of Today’s EMS

- 1966—Department of Transportation charged with developing EMS standards
- 1970—Founding of National Registry of EMTs (NREMT)
- 1973—National Emergency Medical Service Systems Act (NEMSSA)

NHTSA Standards for EMS Systems

1. Regulation and Policy
   - Each state establishes laws, policies, and regulations

2. Resource Management
   - Centralized coordination of emergency treatment and transport resources

3. Human Resources and Training
   - Assure EMS personnel are trained and certified to minimum standard by qualified instructors

4. Transportation
   - Provide safe, reliable transportation—ground, air, or other means
NHTSA Standards for EMS Systems

5. Facilities
   – Must be transported to closest appropriate facility

6. Communications
   – Universal access number (911), dispatch to ambulance, ambulance to ambulance, ambulance to hospital, hospital to hospital

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NHTSA Standards for EMS Systems

7. Trauma Systems
   – Develop trauma triage, transport, and treatment protocols

8. Evaluation
   – Establish program for assessing and improving quality of care provided (QI, QA, TQM)

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NHTSA Standards for EMS Systems

9. Public Information and Education
   – Educate public about role of EMS, increase public awareness, participate in injury prevention programs

10. Medical Direction
    – Medical director oversees, is accountable for EMS personnel within system
The Long and Winding Road of Ambulance Service Video

Click here to view a video on the topic of the history of EMS.

Components of the EMS System

• Emergency Department/Hospital
  – Doctors, nurses, allied health personnel

continued
Components of the EMS System

- Other specialized care facilities
  - Trauma centers
  - Burn centers
  - Stroke centers
  - Cardiac centers
  - Labor and delivery/pediatrics
  - Poison control

Think About It

- What medical services are available in your community?
- How important is it that EMS personnel know the capabilities of community medical facilities?
- What are the possible consequences of transporting a patient to a facility not equipped to handle the problem?
Accessing EMS System

- 911 telephone access
  - Available in most but not all areas
- Enhanced 911
  - Provides caller number and location for landline phones
- Cell phones
  - Newer models may provide location in some areas

Emergency Medical Dispatchers

- Can provide instructions to callers on how to provide emergency care until EMS personnel arrive
- EMD certification required in some jurisdictions
Critical Decision Making

- Critical decision making is very important in EMS
- Information must be gathered, patients assessed, and determination made on treatment and transport options
- Decisions often time-critical

Examples of Critical Decisions

- Is it better to take patient to closest hospital or to one farther away but more appropriate for the condition?
- Is patient stable enough for further evaluation on scene, or should patient be transported immediately?
- Will this treatment make patient better or worse?

Levels of EMS Training

- Emergency Medical Responder (formerly First Responder)
- Emergency Medical Technician (formerly EMT Basic)
- Advanced EMT (formerly EMT Intermediate)
- Paramedic (formerly EMT Paramedic)
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Roles and Responsibilities of EMTs

- Personal safety
- Safety of crew, patient, and bystanders
- Patient assessment
- Patient care
- Lifting and moving
- Transport
- Transfer of care
- Patient advocacy

Think About It

- How would it impact elderly patient if transported to the hospital without glasses, hearing aid, or dentures?
- On a routine call, would taking the time to gather these items have a negative effect on the patient’s care?
- How about assuring the home is secure and locked before leaving?

Think About It

- Could the concept of patient advocacy also extend to the community (fall prevention programs for elderly, poisoning awareness, pool and water safety programs for children)?
Physical Traits of a Good EMT

- Ability to lift and carry equipment and patients
- Good eyesight (distance and reading) and color vision
- Good communication skills (oral and written)

Personal Traits of a Good EMT

- Pleasant
- Sincere
- Cooperative
- Resourceful
- Self starter
- Emotionally stable
- Able to lead
- Neat and clean
Personal Traits of a Good EMT

- Good moral character
- Respectful of others
- Control of personal habits
- Control of conversation
- Able to communicate properly
- Able to listen to others
- Nonjudgmental and fair

Education

- Maintain up-to-date knowledge and skills
- Read EMS magazines; join EMS organizations
- Refresher courses for recertification
- Continuing education to supplement original training

Education

- Conferences, seminars, lectures, classes, videos, and demonstrations
Job Opportunities

- Ambulance services
- Fire departments
- Medical facilities
- Rural/wilderness teams
- Industrial settings

National Registry of EMTs (NREMT)

- Registration for EMRs, EMTs, AEMTs, and paramedics who successfully complete NREMT examinations
- May help in reciprocity (transferring to another state or region)
- Considered favorably when applying for employment

Quality Improvement

- Continuous self-review to identify areas for improvement
- Develop plans to address areas
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Quality Improvement

- Everyone in organization has a role
  - Prepare careful documentation
  - Involved in quality process
  - Get feedback from patients, hospital staff
  - Maintain equipment
  - Continuing education

Medical Direction

- Medical Director: ultimate responsibility for patient care aspects of EMS system
- All patient care performed under direction of Medical Director
- Oversees training; develops treatment protocols
- Off-line medical control (standing orders)
- On-line medical control

Research

- Vitally important; more needed in EMS field
- Care should be based on evidence-based research rather than tradition
- Goal is improving patient outcomes
- Form a hypothesis, review literature, evaluate evidence, and adopt practice if evidence supports it
EMS Role in Public Health

- Injury prevention for geriatric patients and youth
- Blood pressure clinics
- File of life
- Public vaccination programs
- Disease surveillance

Think About It

- How will you refresh your knowledge and stay current once you are out of the classroom?
- What qualities would you like to see in an EMT who is caring for you? How can you come closer to being this kind of EMT?

Emergency Medical Services for Children Video

Click here to view a video on the topic of emergency medical services for children.
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Chapter Review

- EMS system includes 911 or other emergency access system, dispatchers, EMTs, hospital emergency department, physicians, nurses, physician’s assistants, and other health professionals.
- EMT’s responsibilities include safety; patient assessment and care; lifting, moving, and transporting patients; transfer of care; and patient advocacy.

continued

Chapter Review

- EMT must have certain personal traits to ensure the ability to do the job.
- Education, quality improvement procedures, and medical direction are all essential to maintaining high standards of EMS care.
Remember

- EMS dates back to Napoleonic times.
- There is a chain of human resources involved in EMS. Critical decisions are made by each member of the chain.

Remember

- There are certain personal and physical traits that help you to be a successful EMS provider.
- An EMS provider should actively pursue opportunities to improve personal knowledge and abilities as well as the unit’s overall quality.

Questions to Consider

- What innovation was introduced in the Korean and Vietnam wars that is now common in many EMS systems?
- What are the four levels of EMS providers?
- Requesting orders from a physician by radio is an example of what kind of medical control?
Critical Thinking

- Your patient is hesitant to go to the hospital because she is worried about her dog. What can you do to assist in this situation? What part of your role as an EMT is this an example of?

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