PERCOMONLINE, INC.

EMT-BASIC CLASS AND BEYOND

EMERGENCY MEDICAL SERVICES ACADEMY

EMT Course Syllabus

2023-2024

TARGET AUDIENCE: Candidates for this program must be graduated from High School, or hold a GED, or have a college transcript showing completion of some college credit hours. If the student is in High School and will turn 18 years of age within 6 months, he/she may be accepted. However, the parents or legal guardian will be required to co-sign all enrollment paperwork and documents and rotations will be withheld until the student turns 18 years of age. Students will also be required to produce and maintain evidence on file of a current American Heart Association BLS card. Cards from other providers (or that just say they meet standards set by the American Heart Association will not be accepted).

PROGRAM GOALS AND EXPECTED OUTCOMES: PERCOMOnline, Inc. strives to ensure that competent, entry-level students graduate, become certified or licensed and move into patient care jobs and volunteer positions that continue to be desperately needed in the community. Students who wish to be eligible for EMT certification must successfully complete the EMT didactic segment of the course, as well as associated Skills Labs and Clinical and Field Experiences. The following outcomes and objectives have been adopted and must be demonstrated by each student prior to successful completion of the program.

Objectives

The program prepares its graduates to:

- Demonstrate individual professional behaviors consistent with employer and community expectations of an entry-level EMT.
- Demonstrate technical proficiency in all of the skills identified for the role of an entry-level EMT.
- Comprehend, apply, and evaluate information relative to the expected duties, roles and responsibilities of the entry-level EMT.

Expected Outcomes

Students in the program will demonstrate:

1. Cognitive knowledge level expected of an entry level EMT and as necessary to function in a healthcare setting.

2. General medical knowledge expected of an entry level EMT and as necessary to function in a healthcare setting.
3. The ability to collect data from charts and patients and appropriately interpret that data at an entry level.
4. The ability to thoroughly assess a patient utilizing various diagnostic tools and procedures using EMT level tools and equipment.
5. The ability to recommend appropriate therapeutic procedures and make sound patient care judgments as expected of an entry level EMT.
6. The ability to perform a broad range of clinical skills, procedures and equipment consistent with entry level EMT.
7. The ability to communicate and interact effectively with non-clinical and clinical persons in various healthcare and scene environments.
8. The ability to present oneself in an ethical and professional manner.
9. The ability to manage time efficiently while functioning in a healthcare setting.
10. The ability to use critical thinking skills to assess and treat patients in emergency settings.

METHODS OF EVALUATION: To graduate from the EMT program, students must demonstrate minimum levels of competency in the following areas: cognitive (knowledge), psychomotor (skills and hands-on type performances) and affective (behavior and attitude). The last area, affective, involves the student's ability to demonstrate the following characteristics throughout the program, and students will be graded on each at various stages and throughout the entire course: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service.

Students proceed through the didactic portion of the program, which is delivered in various methods but not limited to textbook reading, online presentations, videos, "hand-outs", links to outside sources of learning, instructor led chat rooms, forums and other means. Students are required to submit homework assignments or quizzes (some may be essay or fill in the blank in nature) that demonstrate a minimum level of cognitive "grasp" of the material covered. The Lead Instructor may return the assignment to the student one or more times with feedback and instructions for improvement prior to assigning a final grade. Students will also complete a series of "Research Exams", which are designed to allow the student to research material as necessary and help guide learning, prior to submitting the exam for grading. During this process, students are required to maintain a minimum course average of 80%. Once all didactic requirements are met and graded, students are required to take a proctored webinar based multiple choice Final Exam and must pass with a minimum of 70%. If the student fails the first attempt, he/she is allowed a second attempt after paying a retest fee, but the grade that must be attained on the retest will be a minimum of 80% to pass. If the student fails the second attempt on the Final Exam, he/she will be required to seek outside tutoring from a state or nationally certified EMS instructor per policy and at the student's expense, be cleared by this instructor for retest, pay the retest fee and schedule and pass the retest with a minimum grade of 80% by the deadline designated by the Program Director or designee to pass this component of the course.

Students will also be required to practice and successfully demonstrate minimum levels of

competency on designated psychomotor skills and skills competencies to include summative scenario practice and testing. This segment of the Program is called the EMT Exit Session. This Session is typically scheduled as a 2-day session but may be finished in less time depending on volume of students in the session.

Following passing the EMT Exit Session skills components and competencies, students who have turned in ALL necessary clinical paperwork requirements will schedule and complete the Clinical and Field Rotation requirements segment of the course. These requirements target not only hours, departments, and types of agencies or services, but also have minimum requirements for certain patient age categories and conditions, as well as minimum skills requirements. The subset is a minimum of 100 total hours. More hours may be necessary to complete other minimum requirements. The minimum requirements are:

Hours Required:	**EMS – 48 Hours**
	Hospital ER – 36 Hours
	***Hospital OB – 8 Hours (or alternate location)**
	***Hospital Respiratory Dept. – 8 Hours (or alternate location)**

***Note:** PERCOM Clinical Faculty reserves the right to allow some substitution of hours from EMS to other clinical/hospital departments. However, this is only for special situations and exceptions when the student has attempted to complete those clinical/hospital hours through affiliated sites or if sites are reduced, restricted or unavailable as per the judgment of the Clinical Coordinator. Students MUST be willing to travel to sites that are available and within reason but, if the student is unable to complete all departments, contacts, assessments or skills within reasonable scheduled hours at those sites, the Clinical Coordinator may choose to substitute HOURS from EMS rotation overages by the student. No substitutions can be made, however, for patient ages, conditions, assessments or skills. The non-completed contacts and skills may be completed during EMS rotations but if the student is not able to achieve these during those hours, more hours will be required or other acceptable options may be discussed with the Medical Director for individual approval.

	Total Required Hours – 100 Hours
Contacts Required:	**EMS – Ten (10) EMS transports**
	1 Medical patient contacts
	4 Trauma patient contacts
	4 Cardiac patient contacts
Skills Required:	**O^2 administration – 5 times**
	Vital signs taken – 20 times
	Respiratory medication administration – 2 times

Students who pass each above component (didactic through final exam, skills practice and testing, and all rotations requirements) will be granted course completion and cleared to test for NREMT-EMT certification.

DISABILITIES OR HANDICAPS: Students who enter the program with a disability or handicap must notify the course coordinator or lead instructor by the beginning of the third class.
Any alterations in testing or clinical rotations during the course do not ensure that the same alteration will be made for the student in the national-testing situation. If a student needs accommodation for a disability at a national-testing site, the student must notify the coordinator by the beginning of the third class. Any accommodation for disability at the national-testing site must be pre-arranged with the national examination program. It is not the responsibility of PERCOM to arrange or make decisions regarding the national approval of any disability or handicap that might affect the candidate during the testing process, nor does PERCOM take any

responsibility for any refusal or denial of lack of acceptance by the national examination or state certifying organizations. Disabilities and Handicaps that are to receive an accommodation at the national-testing site shall be confirmed by a physician's statement of disability/handicap or any other requirements as listed by the national testing or state certifying organizations or agencies.

SCHOLASTIC DISHONESTY: Students are responsible for adhering to the PERCOM policy on academic dishonesty on Pgs. 37-38 of the online Student Handbook located at the web address below:

https://www.percomcourses.com/percom-policies

Students should also read this entire Handbook for all general Rules and Policies governing the Program and its students.

CLASS DATES AND TIMES: Didactic class times vary and are student dependent except for chat sessions, which are typically offered on Monday evenings with times posted on the Course Events Calendar inside percomcourses.com. Students are required to log in and do coursework once each week minimum as "roll call" throughout the program and may be dropped from the course for non-participation for not meeting this standard. Students are required to read ALL Blogs, Newsfeed and School Announcements Archives Posts and watch these spots regularly for additional postings. Skills sessions are scheduled and posted on the Course Events Calendar. Start times for scheduled sessions vary by site but will be distributed to confirmed students in advance. Students who cannot fit the posted skills sessions into their busy schedules may request "one on one" skills sessions but they are based on site/instructor availability and have associated fees not covered in base tuition. Rotation dates and times are site dependent as scheduled through the appropriate scheduling system and through the Clinical Coordinator.

Recommended Textbook: "Emergency Care and Transportation of the Sick and Injured" by AAOS latest edition recommended

Primary Instructors: Christopher Gibson, A.A.S, LP, NRP, TDSHS Coordinator (chris.gibson@percomonline.com)

Hours	Didactic Schedule Topics
2	***Reading Assessments/Pretest MANDATORY Please let instructor know when you have completed them all and do them BEFORE any other coursework!***
3.5	***Intro to Emergency Care***
	Introduction to EMS
	Research in EMS
	Public Health Issues in EMS
3.0	***Well Being***
	Well-Being of the EMT
	Taking Care of Yourself and Others
0.75	**Research Exam 1**
3	***Medical/Legal***
	Medical/Legal Issues
	HIPAA
0.75	**Research Exam 2**
5.5	***Human Body***
	Anatomy and Physiology Part 1
	Anatomy and Physiology Part 2
	Life Span Development
2	**A&P/Terms and Abbrev. Assignment**
2.0	**Vital Signs and SAMPLE History**
	SAMPLE History
	Taking Vital Signs
1.5	***Lifting/Moving***
	Lifting and Moving Patients
0.75	**Research Exam 3**
13	**Airway**
	Mechanical Aids and Airway Control
10	***Patient Assessment***
	Patient Assessment Part 1
	Patient Assessment Part 2
	Patient Assessment Part 3
	Patient Assessment Part 4
6.0	***Communications/Documentation***
	Communications and Documentation
	Communicating with Non-English Speaking Patients
1.5	**Research Exam 4**
14.5	***Pharmacology for EMT's***
	Pharmacology for the EMT
	Pharmacology Drug Cards Assignment
30	***Medical Emergencies/Cardiac Emergencies***
	Respiratory Emergencies
	Cardiac Emergencies

3	**Research Exam 5**
	Hematologic Emergencies
	General Resuscitation

	Altered Mental Status
	The Acute Abdomen
	Genitourinary and Renal Emergencies
1.25	**Research Exam 6**
	Diabetic Emergencies
	Allergic Reactions and Anaphylaxis
	Substance Abuse, Overdose and Poisoning
	Environmental Emergencies
	Infectious Diseases
	Behavioral Emergencies
2	**Behavioral Emergencies Assignment**
1.25	**Research Exam 7**
5.25	**Childbirth**
	Emergency Childbirth and Neonatal Care
	Gynecological Emergencies
1.25	**Research Exam 8**
4.75	***Kinematics***
	Kinematics of Trauma
	National Trauma Triage Protocol
4.5	***Bleeding and Shock***
	Bleeding and Shock
	Shock
1.25	**Research Exam 9**
30	***Traumatic Injuries***
	Soft Tissue Injuries
	Eye Injuries
	Face and Throat Injuries
	Chest Trauma
	Injuries to the Abdomen or Genitalia
	Musculoskeletal Trauma
	Head and Spine Injuries
1.5	**Research Exam 10**
14	***Infants/Children/Geriatrics/Other***
	Infants and Children
	Pediatric Assessment and Management
	Geriatric Emergencies
	Geriatric Assessment and Management
1.25	**Research Exam 11**

17	***EMS Operations/Driving/START Triage/NIMS***
	Ambulance Operations
	Emergency Driving
	National TIM Responder Training
	Gaining Access
	START
	JumpSTART
	NIMS 100a, 200a and 700a
8	**Haz-Mat I - V**
1	**START Triage Paper Drill Assignment**
5	***Terrorism***
	Terrorism and WMD
	Waterloo Document
	FEMA Terrorism Handbook
2	**Terrorism Quiz Assignment**
1.25	**Research Exam 12**
1	**Jeopardy Review Game**
1	***Assisting with IV Therapy***
1	***Assisting with ECG Placement***
1.5	***Juris Prudence and Mandatory Quiz***
2.5	**Review Exam for Final – Not for Grade**
2.5	**Final Exam**
8	**Skills Practice on All EMT Level Skills/Testing Begins**
8	**Skills Testing Completion**
Total	**229 Didactic/Skills hours + 100 rotation hours = 329 total minimum hours**

At the discretion of the instructor, individual class session topics may be changed, however all objectives from this curriculum will be taught.

Competencies and Objectives

National EMS Education Standard Competencies

Preparatory

Applies fundamental knowledge of the emergency medical services (EMS) system, safety/well-being of the emergency medical technician (EMT), and medical/legal and ethical issues to the provision of emergency care.

EMS Systems

- EMS systems
- History of EMS
- Roles/responsibilities/professionalism of EMS personnel
- Quality improvement
- Patient safety

Research

- Impact of research on emergency medical responder care
- Data collection
- Evidence-based decision making

Public Health

Uses simple knowledge of the principles of illness and injury prevention to emergency care.

Knowledge Objectives

1. Define EMS systems.
2. Discuss the four levels of EMT training and licensure.
3. Describe EMT licensure criteria, and understand that the Americans with Disabilities Act (ADA) applies to employment as an EMT.
4. Discuss the historic background of the development of the EMS system.

5. Describe the levels of EMT training in terms of skill sets needed for each of the following: EMR, EMT, advanced emergency medical technician (AEMT), and paramedic.
6. Understand the possible presence of other first responders at a scene with EMR training, some knowledge of first aid, or merely good intentions, and their need for direction.
7. Name the 14 components of the EMS system.
8. Understand how medical direction of an EMS system works, and the EMT's role in the process.
9. Discuss the purpose of the EMS continuous quality improvement (CQI) process.
10. Characterize the EMS system's role in prevention and public education in the community.
11. Describe the roles and responsibilities of the EMT.
12. Describe the attributes that an EMT is expected to possess.
13. Understand the impact of the Health Insurance Portability and Accountability Act (HIPAA) on patient privacy.

Skills Objectives

There are no skills objectives for this module.

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Infectious Diseases

- Awareness of how to decontaminate equipment after treating a patient
- Assessment and management of how to decontaminate the ambulance and equipment after treating a patient

Preparatory

Applies fundamental knowledge of the emergency medical services (EMS) system, safety/well-being of the emergency medical technician (EMT), and medical/legal and ethical issues to the provision of emergency care.

Workforce Safety and Wellness

- Standard safety precautions
- Personal protective equipment (PPE)
- Stress management
- Dealing with death and dying
- Prevention of response-related injuries
- Prevention of work-related injuries
- Lifting and moving patients
- Disease transmission
- Wellness principles

Knowledge Objectives

1. Define *infectious disease* and *communicable disease*.
2. Describe the routes of disease transmission.
3. Understand the standard precautions that are used in treating patients to prevent infection.
4. Describe the steps to take for personal protection from airborne and bloodborne pathogens.
5. Understand the mode of transmission and the steps to prevent and/or deal with an exposure to hepatitis, meningitis, tuberculosis, and HIV/AIDS.
6. Understand how immunity to infectious diseases is acquired.
7. Explain postexposure management of exposure to patient blood or body fluids, including completing a postexposure report.
8. Understand the physiologic, physical, and psychological responses to stress.

9. Describe posttraumatic stress disorder (PTSD) and steps that can be taken, including critical incident stress management (CISM), to decrease the likelihood that PTSD will develop.
10. State the steps that contribute to wellness and their importance in managing stress.
11. Discuss workplace issues such as cultural diversity, sexual harassment, and substance abuse.

12. Understand the emotional aspects of emergency care.

13. Describe issues concerning care of the dying patient, death, and the grieving process of family members.
14. Understand the care of critically ill and injured patients.
15. Recognize the stress inherent in many situations, such as mass-casualty scenes.
16. Describe the steps necessary to determine scene safety and to prevent work-related injuries at the scene.
17. Discuss the different types of protective clothing worn to prevent injury.
18. Recognize the possibility of violent situations and the steps to take to deal with these situations.
19. Describe how to handle behavioral emergencies.

Skills Objectives
1. Demonstrate proper handwashing techniques.
2. Demonstrate how to properly remove gloves.
3. Demonstrate the necessary steps to take to manage a potential exposure situation.

Preparatory

Applies fundamental knowledge of the emergency medical services (EMS) system, safety/well-being of the emergency medical technician (EMT), and medical/legal and ethical issues to the provision of emergency care.

Medical/Legal and Ethics

- Consent/refusal of care
- Confidentiality
- Advance directives
- Tort and criminal actions
- Evidence preservation
- Statutory responsibilities
- Mandatory reporting
- Ethical principles/moral obligations
- End-of-life issues

Knowledge Objectives

1. Define consent, and describe how it relates to decision making.
2. Differentiate expressed consent, implied consent, and involuntary consent.
3. Discuss the giving of consent by minors for treatment or transport.
4. Describe local EMS system protocols for using forcible restraint.
5. Discuss the EMT's role and obligations if a patient refuses treatment or transport.
6. Understand that communication with patients is confidential, protected by the Health Insurance Portability and Accountability Act (HIPAA).
7. Discuss the importance of do not resuscitate (DNR) orders (advance directives) and provisions in the locality regarding EMS application.
8. Describe the physical, presumptive, and definitive signs of death.
9. Understand that organ donors are treated the same way as any other patients needing treatment and that local protocols are followed with such patients.
10. Recognize the importance of medical identification insignia in treating the patient.
11. Understand the scope of practice and standards of care.

12. Describe the EMT's legal duty to act.
13. Discuss the issues of negligence, abandonment, assault and battery, and kidnapping and their implications for the EMT.
14. Explain the reporting requirements for special situations, including abuse, drug- or felony-related injuries, childbirth, and crime scenes.
15. Define ethics and morality, and discuss their implications for the EMT.
16. Understand the role and comportment of the EMT in court.

Skills Objectives

There are no skills objectives in this chapter.

Preparatory

Applies fundamental knowledge of the emergency medical services (EMS) system, safety/well-being of the emergency medical technician (EMT), and medical/legal and ethical issues to the provision of emergency care.

Therapeutic Communication

Principles of communicating with patients in a manner that achieves a positive relationship:

- Interviewing techniques
- Adjusting communication strategies for age, stage of development, patients with special needs, and differing cultures
- Verbal defusing strategies
- Family presence issues

EMS System Communication

Communication needed to:

- Call for resources
- Transfer care of the patient
- Interact within the team structure
- EMS communication system

- Communication with other health care professionals
- Team communication and dynamics

Documentation

- Recording patient findings
- Principles of medical documentation and report writing

Medical Terminology

Uses foundational anatomical and medical terms and abbreviations in written and oral communication with colleagues and other health care professionals.

Knowledge Objectives

1. Describe factors and strategies to consider for therapeutic communication with patients
2. Discuss the techniques of effective verbal communication.
3. Explain the skills that should be used to communicate with family members, bystanders, people from other agencies, and hospital personnel.
4. Understand special considerations in communicating with older people, children, hearing-impaired patients, visually impaired patients, and non-English-speaking patients.
5. Describe the use of written communication and documentation.
6. Identify the information required in a patient care report (PCR).
7. Explain the legal implications of the patient care report.
8. Understand how to document refusal of care, including the legal implications.
9. Discuss state and/or local special reporting requirements, such as for gunshot wounds, dog bites, and abuse.
10. Understand the basic principles of the various types of communications equipment used in EMS.
11. Describe the use of radio communications, including the proper methods of initiating and terminating a radio call.

12. List the correct radio procedures in the following phases of a typical call: initial receipt of call, en route to call, on scene, arrival at hospital (or point of transfer), and return to service.

13. Give the proper sequence of information to communicate in radio delivery of a patient report.

Skills Objectives

1. Demonstrate the techniques of successful cross-cultural communication.

2. Demonstrate completion of a patient care report.

3. Demonstrate how to make a simulated, concise radio transmission with dispatch.

Preparatory

Applies fundamental knowledge of the emergency medical services (EMS) system, safety/well-being of the emergency medical technician (EMT), and medical/legal and ethical issues to the provision of emergency care.

Anatomy and Physiology

Applies fundamental knowledge of the anatomy and function of all human systems to the practice of EMS.

Pathophysiology

Applies fundamental knowledge of the pathophysiology of respiration and perfusion to patient assessment and management.

Knowledge Objectives

1. Understand the body's topographic anatomy, including the anatomic position and the planes of the body.

2. Explain the following directional terms: anterior (ventral), posterior (dorsal), right, left, superior, inferior, proximal, distal, medial, lateral, superficial, and deep.
3. Describe the prone, supine, Fowler's, Trendelenburg's, and shock positions of the body.
4. Identify the anatomy and physiology of the skeletal system.
5. Describe the physiology of the musculoskeletal system.
6. Discuss the anatomy and physiology of the respiratory system.
7. Discuss the anatomy and physiology of the circulatory system.
8. Discuss the anatomy and physiology of the nervous system.
9. Describe the anatomy and the physiology of the integumentary system.
10. Explain the anatomy and physiology of the digestive system.
11. Discuss the anatomy and physiology of the endocrine system.
12. Describe the anatomy and physiology of the urinary system.
13. Discuss the anatomy and physiology of the genital system.
14. Describe the life support chain, aerobic metabolism, and anaerobic metabolism.
15. Define pathophysiology.

Skills Objectives

There are no skills objectives in this chapter.

Life Span Development

Preparatory

Applies fundamental knowledge of the emergency medical services (EMS) system, safety/well-being of the emergency medical technician (EMT), and medical/legal and ethical issues to the provision of emergency care.

Life Span Development

Applies fundamental knowledge of life span development to patient assessment and management.

Knowledge Objectives

1. Understand the terms used to designate the following stages of life: infants, toddlers, preschoolers, school-age children, adolescents (teenagers), early adults, middle adults, and late adults.
2. Describe the major physiologic and psychosocial characteristics of an infant's life.
3. Describe the major physiologic and psychosocial characteristics of a toddler and preschooler's life.
4. Describe the major physiologic and psychosocial characteristics of a school-age child's life.
5. Describe the major physiologic and psychosocial characteristics of an adolescent's life.
6. Describe the major physiologic and psychosocial characteristics of an early adult's life
7. Describe the major physiologic and psychosocial characteristics of a middle adult's life
8. Describe the major physiologic and psychosocial characteristics of a late adult's life.

Skills Objectives

There are no skills objectives for this chapter.

Pharmacology

Applies fundamental knowledge of the medications that the EMT may assist/administer to a patient during an emergency.

Principles of Pharmacology

- Medication safety
- Kinds of medications used during an emergency

Medication Administration

- Self-administer medication
- Peer-administer medication
- Assist/administer medications to a patient

Emergency Medications

- Names
- Effects
- Actions
- Indications
- Contraindications
- Complications
- Routes of administration
- Side effects
- Interactions
- Dosages for the medications administered

Knowledge Objectives

1. Explain the actions of medications on the body, and define the terms pharmacodynamics, intended effects, and indications.
2. Explain and give examples of medication contraindications, and define the terms side effects, unintended effects, and untoward effects.
3. Discuss the differences between a generic medication name and a trade medication name, and provide an example of each.
4. Describe the enteral and parenteral routes of medication administration, and explain how they differ.
5. Describe the following routes of medication administration and discuss their individual rates of absorption: rectal, oral, intravenous, intraosseous, subcutaneous, intramuscular, inhalation, sublingual, and transcutaneous.
6. Explain the solid, liquid, and gas forms of medication, provide examples of each, and discuss how the form of a medication dictates its route of administration.

7. Explain the “six rights” of medication administration, and describe how each one relates to EMS.
8. Describe the role of medical direction in medication administration, and explain the difference between direct orders (online) and standing orders (off-line).
9. Discuss the circumstances surrounding the administration of medication, including peer-assisted medication, patient-assisted medication, and EMT-administered medication.
10. Give the generic and trade names, actions, indications, contraindications, routes of administration, side effects, interactions, and doses of 10 medications that may be administered by an EMT in an emergency as dictated by state protocols and local medical direction.
11. Describe the medication administration considerations that must be applied to special populations, including pediatric, geriatric, and pregnant patients.
12. Describe the steps an EMT should follow when dispensing epinephrine to a patient using an auto-injector.
13. Explain why determining what prescription and OTC medications a patient is taking is a critical aspect of patient assessment during an emergency.

Skills Objectives

1. Demonstrate the process an EMT should follow when following the six rights of medication administration.
2. Demonstrate how to administer oral medication to a patient.
3. Demonstrate the administration of aspirin to a patient with chest pain.
4. Demonstrate the administration of oral glucose to a patient with hypoglycemia.
5. Demonstrate how to assist a patient with the sublingual administration of a medication.
6. Demonstrate how to administer epinephrine by injection.
7. Demonstrate how to administer naloxone via inhalation device.

Assessment

Applies scene information and patient assessment findings (scene size-up, primary and secondary assessment, patient history, and reassessment) to guide emergency management.

Scene Size-up

- Scene safety
- Scene management
  - Impact of the environment on patient care
  - Addressing hazards
  - Violence
  - Need for additional or specialized resources
  - Standard precautions
  - Multiple patient situations

Primary Assessment

- Primary assessment for all patient situations
  - Level of consciousness
  - ABCs
  - Identifying life threats
  - Assessment of vital functions
  - Initial general impression
- Begin interventions needed to preserve life
- Integration of treatment/procedures needed to preserve life

History Taking

- Determining the chief complaint
- Mechanism of injury/nature of illness
- Associated signs and symptoms
- Investigation of the chief complaint
- Past medical history
- Pertinent negatives

Secondary Assessment

- Performing a rapid full-body scan
- Focused assessment of pain
- Assessment of vital signs
- Techniques of physical examination:
  - Respiratory system
    - Presence of breath sounds
  - Cardiovascular system
  - Neurologic system
  - Musculoskeletal system
  - All anatomic regions

Monitoring Devices

- Obtaining and using information from patient monitoring devices including (but not limited to):
  - Pulse oximetry
  - Noninvasive blood pressure

Reassessment

- How and when to reassess patients
- How and when to perform a reassessment for all patient situations

Knowledge Objectives

1. Identify the components of the patient assessment process, and explain how the different causes and presentations of emergencies will affect how each step is performed by the EMT
2. Discuss some of the possible environmental, chemical, and biologic hazards that may be present at an emergency scene, ways to recognize them, and precautions to protect personal safety.
3. Discuss the steps EMTs should take to survey a scene for signs of violence and to protect themselves and bystanders from real or potential danger.
4. Describe how to determine the mechanism of injury (MOI) or nature of illness (NOI) at an emergency and the importance of differentiating trauma patients from medical patients.

5. List the minimum standard precautions that should be followed and personal protective equipment (PPE) that should be worn at an emergency scene, including examples of when additional precautions would be appropriate.
6. Explain why it is important for EMTs to identify the total number of patients at an emergency scene and how this evaluation relates to determining the need for additional or specialized resources, implementation of the incident command system (ICS), and triage.

7. Describe the principal goals of the primary assessment process: to identify and treat life threats and to determine if immediate transport is required.
8. Explain the process of forming a general impression of a patient as part of primary assessment and the reasons why this step is critical to patient management.
9. Explain the importance of assessing a patient's level of consciousness (LOC) to determine altered mental status, and give examples of different methods used to assess alertness, responsiveness, and orientation.
10. Describe the assessment of airway status in patients who are both responsive and unresponsive, and give examples of possible signs and causes of airway obstruction in each case as well as the appropriate EMT response.
11. Describe the assessment of a patient's breathing status, including the key information the EMT must obtain during this process and the care required for patients who have both adequate and inadequate breathing.
12. List the signs of respiratory distress and respiratory failure.
13. Describe the assessment of a patient's circulatory status, including the different methods for obtaining a pulse and appropriate management depending on the patient's status. Explain the variations required to obtain a pulse in infant and child patients as compared with adult patients.
14. Describe the assessment of a patient's skin color, temperature, and condition, providing examples of both normal and abnormal findings and the information this provides related to the patient's status.
15. Discuss the process of assessing for and methods for controlling external bleeding.
16. Discuss the steps used to identify and subsequently treat life-threatening conditions that endanger a patient during an emergency.
17. List the steps the EMT should follow during the rapid scan of a trauma patient, including examples of abnormal signs and appropriate related actions.

18. Explain the process for determining the priority of patient care and transport at an emergency scene, and give examples of conditions that necessitate immediate transport.
19. Discuss the importance of protecting a trauma patient's spine and identifying fractured extremities during patient packaging for transport.
20. Discuss the process of taking a focused history, its key components, and its relationship to the primary assessment process.
21. Describe examples of different techniques an EMT may use to obtain information from patients during the history-taking process.
22. Discuss different challenges EMTs may face when taking a patient history on sensitive topics and strategies they may use to facilitate each situation.
23. Explain the purpose of performing a physical exam during secondary assessment, its components, special patient considerations, and methods for determining which aspects of the physical examination will be used.
24. Describe the purpose of a full-body scan, and list the steps used during this process.
25. Explain situations in which patients may receive a focused assessment, and then give examples by body system of what each focused assessment should include based on a patient's chief complaint.
26. List normal blood pressure ranges for adults, children, and infants.
27. Explain the importance of performing a reassessment of the patient and the steps in this process.

Skills Objectives

1. Demonstrate how to use the AVPU scale to test for patient responsiveness.
2. Demonstrate how to evaluate a patient's orientation and document his or her status correctly.
3. Demonstrate how to test pupil reaction in response to light in a patient and how to document his or her status correctly.
4. Demonstrate the techniques for assessing a patient's airway and correctly obtaining information related to respiratory rate, rhythm, quality/character of breathing, and depth of breathing.
5. Demonstrate how to assess a radial pulse in a responsive patient and an unresponsive patient.
6. Demonstrate how to assess a carotid pulse in an unresponsive patient.

7. Demonstrate how to palpate a brachial pulse in a child who is younger than 1 year (or a manikin).
8. Demonstrate how to obtain a pulse rate in a patient.
9. Demonstrate how to assess capillary refill in an adult or child older than 6 years.
10. Demonstrate how to assess capillary refill in an infant or child younger than 6 years; explain variations that would be required when assessing a newborn.
11. Demonstrate how to perform a rapid scan of a patient.
12. Demonstrate the use of a pulse oximetry device to evaluate the effectiveness of oxygenation in the patient.
13. Demonstrate the use of electronic devices to assist in determining the patient's blood pressure in the field.
14. Demonstrate how to perform a full-body scan.
15. Demonstrate how to measure blood pressure by auscultation.
16. Demonstrate how to measure blood pressure by palpation.

Airway Management, Respiration, and Artificial Ventilation

Applies knowledge of general anatomy and physiology to patient assessment and management in order to assure a patent airway, adequate mechanical ventilation, and respiration for patients of all ages.

Airway Management

- Airway anatomy
- Airway assessment
- Techniques of assuring a patent airway

Respiration

- Anatomy of the respiratory system
- Physiology and pathophysiology of respiration
    - Pulmonary ventilation
    - Oxygenation
    - Respiration

    - External
    - Internal
    - Cellular
- Assessment and management of adequate and inadequate respiration
- Supplemental oxygen therapy

Artificial Ventilation

- Assessment and management of adequate and inadequate ventilation
- Artificial ventilation
- Minute ventilation
- Alveolar ventilation
- Effect of artificial ventilation on cardiac output

Pathophysiology

Applies fundamental knowledge of the pathophysiology of respiration and perfusion to patient assessment and management.

Knowledge Objectives

1. Describe the major structures of the respiratory system.
2. Discuss the physiology of breathing.
3. Give the signs of adequate breathing.
4. Give the signs of inadequate breathing.
5. Describe the assessment and care of a patient with apnea.
6. Understand how to assess for adequate and inadequate respiration, including the use of pulse oximetry.
7. Understand how to assess for a patent airway.
8. Describe how to perform the head tilt–chin lift maneuver.
9. Describe how to perform the jaw-thrust maneuver.
10. Explain how to measure and insert an oropharyngeal (oral) airway.
11. Describe how to measure and insert a nasopharyngeal (nasal) airway.
12. Understand the importance and techniques of suctioning.

13. Describe how to suction a patient.
14. Explain the use of the recovery position to maintain a clear airway.
15. Describe the importance of giving supplemental oxygen to patients who are hypoxic.
16. Understand the basics of how oxygen is stored and the various hazards associated with its use.
17. Describe the use of a nonrebreathing mask, and state the oxygen flow requirements for its use.
18. Understand the indications for using a nasal cannula rather than a nonrebreathing face mask.
19. Describe the indications for use of a humidifier during supplemental oxygen therapy.
20. Explain the steps to take to perform mouth-to-mouth or mouth-to-mask ventilation
21. Describe the use of a one-, two-, or three-person bag-mask device, and a manually triggered ventilation (MTV) device.
22. Describe the signs associated with adequate and inadequate artificial ventilation.
23. Describe the indications, contraindications and steps for using a supraglottic airway.
24. Describe the use of continuous positive airway pressure (CPAP).
25. Understand how to recognize and care for a foreign body airway obstruction.

Skills Objectives

1. Demonstrate use of pulse oximetry.
2. Demonstrate how to position the unconscious patient.
3. Demonstrate the steps in performing the head tilt–chin lift maneuver.
4. Demonstrate the steps in performing the jaw-thrust maneuver.
5. Demonstrate the insertion of an oral airway.
6. Demonstrate the insertion of an oral airway with a 90° rotation.
7. Demonstrate the insertion of a nasal airway.
8. Demonstrate how to operate a suction unit.
9. Demonstrate how to suction a patient's airway.
10. Demonstrate how to place a patient in the recovery position.
11. Demonstrate how to place an oxygen cylinder into service.
12. Demonstrate the use of a partial rebreathing mask in providing supplemental oxygen

therapy to patients.

13. Demonstrate the use of a Venturi mask in providing supplemental oxygen therapy to patients.
14. Demonstrate the use of a humidifier in providing supplemental oxygen therapy to patients.
15. Demonstrate how to assist a patient with ventilations using the bag-mask device for one and two rescuers.
16. Demonstrate mouth-to-mask ventilation.
17. Demonstrate the use of CPAP.
18. Demonstrate proper use and placement of a supraglottic airway device.

Shock and Resuscitation

Shock and Resuscitation

Applies a fundamental knowledge of the causes, pathophysiology, and management of shock, respiratory failure or arrest, cardiac failure or arrest, and post-resuscitation management.

Pathophysiology

Applies fundamental knowledge of the pathophysiology of respiration and perfusion to patient assessment and management.

Knowledge Objectives

1. Understand the pathophysiology of shock (hypoperfusion).
2. Recognize the causes of shock.
3. Describe the various types of shock.
4. Describe the signs and symptoms of shock.

5. Discuss patient assessment for shock.
6. Describe the steps to follow in the emergency care of the patient with signs and symptoms of shock.

Skills Objectives

1. Demonstrate how to control shock.
2. Demonstrate how to complete an EMS patient care report for a patient with bleeding and/or shock.

BLS Resuscitation

Shock and Resuscitation

Applies a fundamental knowledge of the causes, pathophysiology, and management of shock, respiratory failure or arrest, cardiac failure or arrest, and post-resuscitation management.

Knowledge Objectives

1. Explain the elements of BLS, how it differs from advanced life support (ALS), and the urgency surrounding its rapid application.
2. Explain the goals of cardiopulmonary resuscitation (CPR) and when it should be performed on a patient.
3. Explain the system components of CPR, the links in the American Heart Association chain of survival, and how each one relates to maximizing the survival of a patient.
4. Discuss guidelines for circumstances that require the use of an automated external defibrillator (AED) on both adult and pediatric patients experiencing cardiac arrest.

5. Explain three special situations related to the use of automated external defibrillation.
6. Describe the proper way to position an adult patient to receive BLS.
7. Describe the two techniques an EMT may use to open an adult patient's airway and the circumstances that would determine when each technique would be used.
8. Describe the recovery position and circumstances that would warrant its use as well as situations in which it would be contraindicated.
9. Describe the process of providing artificial ventilations to an adult patient using a barrier device, ways to avoid gastric distention, and modifications required for a patient with a stoma.
10. Describe the purpose of external chest compressions.
11. Explain the steps in providing one-rescuer adult CPR.
12. Explain the steps in providing two-rescuer adult CPR, including the method for switching positions during the process.
13. Describe the different mechanical devices that are available to assist emergency responders in delivering improved circulatory efforts during CPR.
14. Describe the different possible causes of cardiopulmonary arrest in children.
15. Explain the four steps of pediatric BLS procedures and how they differ from procedures used in an adult patient.
16. Describe the ethical issues related to patient resuscitation, providing examples of when not to start CPR on a patient.
17. Explain the various factors involved in the decision to stop CPR once it has been started on a patient.
18. Explain common causes of foreign body airway obstruction in both children and adults and how to distinguish mild or partial airway obstruction from complete airway obstruction
19. Describe the different methods for removing a foreign body airway obstruction in an infant, child, and adult, including the procedure for a patient with an obstruction who becomes unconscious.

Skills Objectives

1. Demonstrate how to reposition an unconscious adult for airway management.
2. Demonstrate how to perform a head tilt–chin lift maneuver on an adult patient.
3. Demonstrate how to perform a jaw-thrust maneuver on an adult patient.
4. Demonstrate how to look, listen, and feel for signs of breathing on a patient.
5. Demonstrate how to place a patient in the recovery position.
6. Demonstrate how to perform rescue breathing in an adult with a simple barrier device
7. Demonstrate how to check for a pulse at the carotid artery in an unresponsive patient
8. Demonstrate how to perform external chest compressions in an adult.
9. Demonstrate how to perform one-rescuer adult CPR.
10. Demonstrate how to perform two-rescuer adult CPR.
11. Demonstrate the use of mechanical devices that assist emergency responders in delivering improved circulatory efforts during CPR.
12. Demonstrate placement of a supraglottic airway device in the cardiac arrest patient.
13. Demonstrate how to perform a head tilt–chin lift maneuver on a pediatric patient.
14. Demonstrate how to perform a jaw-thrust maneuver on a pediatric patient.
15. Demonstrate how to perform rescue breathing on a child.
16. Demonstrate how to perform rescue breathing on an infant.
17. Demonstrate how to perform external chest compressions on an infant
18. Demonstrate how to perform CPR in a child who is between 1 year of age and the onset of puberty.
19. Demonstrate how to remove a foreign body airway obstruction in a conscious adult patient using abdominal thrusts (Heimlich maneuver).
20. Demonstrate how to remove a foreign body airway obstruction in a conscious pregnant or obese patient using chest thrusts.
21. Demonstrate how to remove a foreign body airway obstruction in a conscious child older than 1 year using abdominal thrusts (Heimlich maneuver).
22. Demonstrate how to remove a foreign body airway obstruction in an unconscious child
23. Demonstrate how to remove a foreign body airway obstruction in an infant.

Medical Overview

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Medical Overview

Assessment and management of a:

- Medical complaint

Pathophysiology, assessment, and management of medical complaints to include:

- Transport mode
- Destination decisions

Infectious Diseases

Awareness of:

- A patient who may have an infectious disease Assessment

and management of:

- A patient who may have an infectious disease

Knowledge Objectives

1. Differentiate between medical emergencies and trauma emergencies, remembering that some patients may have both.
2. Name the various categories of common medical emergencies and give examples
3. Describe the evaluation of the nature of illness (NOI).
4. Discuss the assessment of a patient with a medical emergency.
5. Explain the importance of transport time and destination selection for a medical patient
6. Define “infectious disease” and “communicable disease.”
7. Describe the routes of transmission for an infectious disease
8. Discuss diseases of special concern and their routes of transmission, including herpes simplex, HIV/AIDS, syphilis, hepatitis, meningitis, tuberculosis, whooping cough, MRSA, hantavirus, West Nile virus, SARS, avian flu, and H1N1 (swine flu), COVID and others.

Skills Objectives

There are no skills objectives for this chapter.

Respiratory Emergencies

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Respiratory

Anatomy, signs, symptoms, and management of respiratory emergencies including those that affect the:

- Upper airway
- Lower airway

Anatomy, physiology, pathophysiology, assessment, and management of:

- Epiglottitis
- Spontaneous pneumothorax
- Pulmonary edema
- Asthma
- Chronic obstructive pulmonary disease
- Environmental/industrial exposure
- Toxic gas
- Pertussis
- Cystic fibrosis
- Pulmonary embolism
- Pneumonia
- Viral respiratory infections
- Allergic reactions
- Congestive Heart Failure
- Carbon Monoxide poisoning
- Croup
- Pertussis

- Tuberculosis

Knowledge Objectives

1. List the structures and functions of the upper and lower airways, lungs, and accessory structures of the respiratory system.
2. Explain the physiology of respiration, and list the signs of normal breathing.
3. Discuss the pathophysiology of respiration, and provide examples of the common signs and symptoms a patient with inadequate breathing may present with in an emergency situation
4. Explain the special patient assessment and care considerations that are required for geriatric patients who are experiencing respiratory distress. (
5. Describe different respiratory conditions that cause dyspnea, including their causes, assessment findings and symptoms, complications, and specific prehospital management and transport decisions.
6. List and review the characteristics of infectious diseases that are frequently associated with dyspnea.
7. Describe the assessment of a patient who is in respiratory distress and the relationship of the assessment findings to patient management and transport decisions.
8. List and define five different types of adventitious breath sounds, their signs and symptoms, and the disease process associated with each one.
9. Describe the primary emergency medical care of a person who is in respiratory distress.
10. State the generic name, medication forms, dose, administration, indications, actions, and contraindications for medications that are administered via metered-dose inhalers (MDIs) and small-volume nebulizers.
11. Discuss some epidemic and pandemic considerations related to the spread of infectious respiratory diseases and strategies EMTs should employ to protect themselves from infection during a possible crisis situation.
12. Explain the special patient assessment and care considerations that are required for pediatric patients who are experiencing respiratory distress.

Skills Objectives

1. Demonstrate the process of history taking to obtain more information related to a patient's chief complaint based on a case scenario.
2. Demonstrate how to use the OPQRST assessment to obtain more specific information about a patient's breathing problem.
3. Demonstrate how to use the PASTE assessment to obtain more specific information about a patient's breathing problem.
4. Demonstrate how to assist a patient with the administration of an MDI.
5. Demonstrate how to assist a patient with the administration of a small-volume nebulizer.

Cardiovascular Emergencies

Pathophysiology

Applies fundamental knowledge of the pathophysiology of respiration and perfusion to patient assessment and management.

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Cardiovascular

Anatomy, signs, symptoms, and management of:

- Chest pain
- Cardiac arrest

Anatomy, physiology, pathophysiology, assessment, and management of:

- Acute coronary syndrome
  - Angina pectoris
  - Myocardial infarction
- Aortic aneurysm/dissection
- Thromboembolism

- Heart failure
- Hypertensive emergencies
- Cardiac tamponade
- Cardiogenic shock
- Patients with cardiac assist devices

Knowledge Objectives

1. Understand the basic anatomy and physiology of the cardiovascular system.
2. Describe the anatomy, physiology, pathophysiology, assessment, and management of angina pectoris.
3. Describe the anatomy, physiology, pathophysiology, assessment, and management of thromboembolism.
4. Describe the anatomy, physiology, pathophysiology, assessment, and management of myocardial infarction.
5. Understand the anatomy, signs and symptoms, and management of hypertensive emergencies.
6. Describe the anatomy, physiology, pathophysiology, assessment, and management of aortic aneurysm/dissection.
7. Describe the anatomy, physiology, pathophysiology, assessment, and management of cardiogenic shock.
8. Describe the anatomy, physiology, pathophysiology, assessment, and management of patients with cardiac assist devices.
9. Describe the anatomy, physiology, pathophysiology, assessment, and management of aortic aneurysm/dissection.
10. Discuss the pathophysiology of the cardiovascular system.
11. Understand the relationship between airway management and the patient with cardiac compromise.
12. Explain patient assessment procedures for cardiovascular problems.
13. Give the indications and contraindications for the use of nitroglycerin.
14. Give the indications and contraindications for the use of Aspirin for chest pain.
15. Recognize that many patients will have had cardiac surgery and may have implanted pacemakers.

16. Define “cardiac arrest.”
17. Give the indications and contraindications for use of an automated external defibrillator (AED).
18. Explain the relationship of age and weight to defibrillation.
19. Discuss the different types of AEDs.
20. Give the advantages of using AEDs.
21. Describe the difference between the fully automated and the semiautomated defibrillator.
22. Explain the use of remote, adhesive defibrillator pads.
23. Recognize that not all patients in cardiac arrest need to be attached to an AED.
24. Explain the circumstances that may result in inappropriate shocks from an AED.
25. Explain the reason not to touch the patient, such as by delivering CPR, while the AED is analyzing the heart rhythm and delivering shocks.
26. Understand the reasons for early defibrillation.
27. Describe AED maintenance procedures.
28. Explain the role played by medical direction in the use of AEDs.
29. Understand the importance of practice and continuing education with the AED.
30. Explain the need for a case review of each incident in which an AED is used.
31. Understand quality improvement goals relating to AEDs.
32. Discuss the procedures to follow for standard operation of the various types of AEDs.
33. Describe the emergency medical care for the patient with cardiac arrest.
34. Describe the components of care following AED shocks.
35. Explain criteria for transport of the patient for advanced life support (ALS) following CPR and defibrillation.
36. Discuss the importance of coordinating with ALS personnel.

Skills Objectives

1. Demonstrate how to assess and provide emergency medical care for a patient with chest pain or discomfort.
2. Demonstrate the administration of nitroglycerin and aspirin.
3. Demonstrate how to perform maintenance of an AED.
4. Demonstrate how to use AEDs and perform CPR.

Neurologic Emergencies

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Neurology

Anatomy, presentations, and management of:

- Decreased level of responsiveness
- Seizure
- Stroke
- Mental status changes related to medical emergencies, trauma or pregnancy.

Anatomy, physiology, pathophysiology, assessment, and management of:

- Stroke/transient ischemic attack
- Seizure
- Status epilepticus
- Headache
- AMS related to other conditions

Knowledge Objectives

1. Discuss the anatomy and physiology of the brain and spinal cord.
2. Discuss the different types of headaches, the possible causes of each, and how to distinguish a harmless headache from a potentially life-threatening condition.
3. List the various ways blood flow to the brain may be interrupted and cause a cerebrovascular accident (CVA).
4. Discuss the causes of ischemic strokes, hemorrhagic strokes, and transient ischemic attacks (TIA) and their similarities and differences.
5. List the general signs and symptoms of stroke, and identify those symptoms that manifest if the left hemisphere of the brain is affected, if the right hemisphere of the brain is affected, and if there is bleeding in the brain.
6. Discuss three conditions with symptoms that mimic stroke and the assessment techniques the EMT may use to identify them.

7. Define a generalized seizure, partial seizure, and status epilepticus, including their effects on a patient and how they differ from each other.
8. Describe the different phases of a seizure.
9. List the different types of seizures and their possible causes.
10. Explain why it is important for the EMT to recognize when a seizure is occurring or whether one has already occurred in a patient and to identify other problems that may be associated with the seizure.
11. Describe the postictal state and the specific patient care interventions that may be necessary to assist the patient.
12. Discuss other conditions that can cause altered mental status such as allergic reactions, toxicity, infection, dehydration, head trauma, hypoxia, emergencies related to pregnancy, and others.
13. Define altered mental status, its various possible causes, and the patient assessment considerations that apply to each.
14. Discuss the special considerations required for pediatric patients who exhibit altered mental status.
15. Discuss scene safety considerations when responding to a patient with a neurologic emergency.
16. Describe the steps involved in performing a primary assessment of a patient who is experiencing a neurologic emergency and the necessary interventions that may be required to address all life threats.
17. Describe the process of history taking for a patient who is experiencing a neurologic emergency, and explain how this process varies depending on the nature of the patient's illness.
18. Describe the secondary assessment of a patient who is experiencing a neurologic emergency.
19. Discuss how to use a stroke assessment tool to identify a stroke patient rapidly, giving examples of two commonly used tools.
20. List the key information an EMT must obtain and document for a stroke patient during assessment and reassessment.
21. Explain why a patient who is suspected of having a stroke is placed on stroke alert and requires treatment within the first 3 to 6 hours after the stroke begins.

22. Discuss special considerations for geriatric patients who are experiencing a neurologic emergency.
23. Describe the patient management, treatment, and transport of patients who are experiencing headaches, stroke, seizure, and altered mental status.

Skills Objectives

1. Demonstrate how to use a stroke assessment tool such as the Cincinnati Prehospital Stroke Scale to test a patient for aphasia, facial weakness, and motor weakness.

Gastrointestinal and Urologic Emergencies

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Abdominal and Gastrointestinal Disorders

Anatomy, presentations, and management of shock associated with abdominal emergencies:

- Gastrointestinal bleeding

Anatomy, physiology, pathophysiology, assessment, and management of:

- Acute and chronic gastrointestinal hemorrhage
- Peritonitis
- Ulcerative diseases

Genitourinary/Renal

- Blood pressure assessment in hemodialysis patients

Anatomy, physiology, pathophysiology, assessment, and management of:

- Complications related to kidney failure
    - Renal dialysis
    - Urinary catheter management (not insertion)
- Kidney stones
- Reproductive system (male and female)

Knowledge Objectives

1. Understand the basic anatomy and physiology of the gastrointestinal, genital, and urinary systems.

2. Define the term “acute abdomen.”

3. Describe pathologic conditions of the gastrointestinal, genital, and urinary systems.

4. Explain the concept of referred pain.

5. Understand that abdominal pain can arise from other body systems.

6. List the most common abdominal emergencies, with the most common locations of direct and referred pain.

7. Identify the signs and symptoms, and common causes, of an acute abdomen.

8. Explain the procedures to follow for patient assessment of gastrointestinal and urologic emergencies.

9. Describe the emergency medical care of the patient with gastrointestinal or urologic emergencies.

10. Describe the procedures to follow in managing the patient with shock associated with abdominal emergencies.

11. Explain the procedures to follow in the assessment and management of acute and chronic gastrointestinal hemorrhage, peritonitis, and ulcerative diseases.

12. Understand the principles of kidney dialysis.

Skills Objectives

1. Demonstrate the assessment of a patient’s abdomen.

Endocrine and Hematologic Emergencies

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Endocrine Disorders

Awareness that:

- Diabetic emergencies cause altered mental status Anatomy,

physiology, pathophysiology, assessment, and management of:

- Acute diabetic emergencies (to include HHNS/HHNK)

Hematology

Anatomy, physiology, pathophysiology, assessment, and management of:

- Sickle cell crisis
- Clotting disorders

Knowledge Objectives

1. Describe the anatomy and physiology of the endocrine system and its main function in the body.

2. Define and explain the terms diabetes, low blood glucose, and high blood glucose and distinguish between the two types of diabetes and how their onset patterns differ.

3. Discuss the role of glucose as a major source of energy for the body and its relationship to insulin.

4. Describe the differences and similarities between hyperglycemic and hypoglycemic diabetic emergencies, including their onset, signs and symptoms, and management considerations.

5. Explain some age-related considerations when managing a pediatric patient who is experiencing a hypoglycemic crisis.

6. Discuss the steps the EMT should follow when conducting a primary and secondary assessment of a patient with an altered mental status who is a suspected diabetic patient.

7. Explain the process for assessing and managing the airway of a patient with an altered mental status, including ways to differentiate a hyperglycemic patient from a hypoglycemic patient.

8. Describe the interventions for providing emergency medical care to both a conscious and unconscious patient with an altered mental status and a history of diabetes who is having a hypoglycemic crisis.

9. Describe the interventions for providing emergency medical care to both a conscious and

unconscious patient with an altered mental status and a history of diabetes who is having a hyperglycemic crisis.

10. Explain when it is appropriate to obtain medical direction when providing emergency medical care to a diabetic patient.

11. Provide the generic and trade names, form, dose, administration, indications and contraindications for giving oral glucose to a patient with a decreased level of consciousness who has a history of diabetes.

12. Explain some age-related considerations when managing a geriatric patient who has undiagnosed diabetes.

13. Discuss the composition and functions of blood.

14. Describe the pathophysiology of sickle cell disease and the four main types of sickle cell crises.

15. Describe the assessment and management of a patient with suspected sickle cell disease.

16. Describe two types of blood clotting disorders, and the risk factors, characteristics, and management of each.

Skills Objectives

1. Demonstrate the assessment and care of a patient with hypoglycemia or hyperglycemia.

2. Demonstrate how to administer glucose to a patient with an altered mental status.

Immunologic Emergencies

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Immunology

Recognition and management of shock and difficulty breathing related to:

- Anaphylactic reactions

Anatomy, physiology, pathophysiology, assessment, and management of:

- Hypersensitivity disorders and/or emergencies

- Anaphylactic reactions

Knowledge Objectives

1. Understand and define the terms allergic reaction and anaphylaxis.
2. Explain the difference between a local and a systemic response to allergens.
3. Differentiate the primary assessment for a patient with a systemic allergic or anaphylactic reaction and a local reaction.
4. Describe the five categories of stimuli that could cause an allergic reaction or an extreme allergic reaction.
5. Discuss the steps in the primary assessment that are specific to a patient who is having an allergic reaction.
6. Explain the importance of managing the ABCs of a patient who is having an allergic reaction.
7. Explain the factors involved when making a transport decision for a patient having an allergic reaction.
8. Explain the rationale, including communication and documentation considerations, when determining whether to administer epinephrine to a patient who is having an allergic reaction.
9. Review the process for providing emergency medical care to a patient who is experiencing an allergic reaction.
10. Describe some age-related contraindications to using epinephrine to treat an allergic reaction in a geriatric patient.

Skills Objectives

1. Demonstrate how to remove the stinger from a honeybee sting and proper patient management following its removal.
2. Demonstrate how to use an EpiPen auto-injector.
3. Demonstrate how to use a Twinject.

Toxicology

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Toxicology

- Recognition and management of
    - Carbon monoxide poisoning
    - Nerve agent poisoning
    - Narcotic overdose
- How and when to contact a poison control center
- Anatomy, physiology, pathophysiology, assessment, and management of
    - Inhaled poisons
    - Ingested poisons
    - Injected poisons
    - Absorbed poisons
    - Alcohol intoxication and withdrawal
    - Narcotic Overdoses

Knowledge Objectives

1. Define toxicology, poison, and overdose.
2. Describe how poisons enter the body.
3. Identify the common signs and symptoms of poisoning.
4. Describe the assessment and treatment of the patient with suspected poisoning
5. Describe the assessment and treatment of the patient with a possible overdose.
6. Explain the use of activated charcoal, including indications, contraindications, and the need to obtain approval from medical control before administering it.
7. Identify the main types of specific poisons and their effects, including alcohol, opioids, sedative-hypnotic drugs, inhalants, sympathomimetics, marijuana, hallucinogens, anticholinergic agents, and cholinergic agents.
8. Describe the assessment and treatment for the patient with suspected food poisoning.

9. Describe the assessment and treatment for the patient with suspected plant poisoning.
10. Understand the role of airway management in the patient suffering from poisoning or overdose.
11. Discuss the use of activated charcoal.
12. Describe the assessment and treatment for the patient suffering from a possible narcotic overdose.
13. Discuss and describe the use of naloxone by inhalation route.

Skills Objectives

1. Demonstrate the steps in the assessment and treatment of the patient with suspected poisoning.
2. Demonstrate the steps in the assessment and treatment of the patient with suspected overdose.
3. Demonstrate the steps required to administer activated charcoal.
4. Demonstrate the steps required to administer naloxone by inhaled route.

Psychiatric Emergencies

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Psychiatric

Recognition of

- Behaviors that pose a risk to the EMT, patient, or others
- Basic principles of the mental health system
- Assessment and management of
    - Acute psychosis
    - Suicidal/risk
    - Agitated delirium

Knowledge Objectives

1. Discuss the myths and realities concerning psychiatric emergencies.
2. Discuss general factors that can cause alteration in a patient's behavior.
3. Define a behavioral crisis.
4. Understand the magnitude of mental health problems in society.
5. Understand the main principles of how the mental health system functions.
6. Describe the two basic categories of diagnosis that a physician will use.
7. Discuss special considerations for assessing and managing a behavioral crisis or psychiatric emergency.
8. Define acute psychosis.
9. Define schizophrenia.
10. Describe the care for a psychotic patient.
11. Explain how to recognize the behavior of a patient at risk of suicide, and discuss the management of such a patient.
12. Define agitated delirium and describe the care for a patient with agitated delirium.
13. Discuss the medical and legal aspects of managing a psychiatric emergency.
14. Describe methods used to restrain patients.
15. Explain the safe management of a potentially violent patient.

Skills Objectives

1. Demonstrate the techniques used to mechanically restrain a patient.

Gynecologic Emergencies

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Gynecology

- Recognition and management of shock associated with
    - Vaginal bleeding
- Anatomy, physiology, assessment findings, and management of
    - Vaginal bleeding
    - Sexual assault (to include appropriate emotional support)
    - Infections

Knowledge Objectives

1. Describe the anatomy and physiology of the female reproductive system, including the developmental changes that occur during puberty and menopause.
2. Discuss the special, age-related patient management considerations an EMT should provide for both younger and older female patients who are experiencing gynecologic emergencies.
3. List three common examples of gynecologic emergencies, including their causes, risk factors, assessment findings, and patient management considerations.
4. Discuss the assessment and management of a patient who is experiencing a gynecologic emergency, including a discussion of specific assessment findings.
5. Explain the general management of a gynecologic emergency in relation to patient privacy and communication.
6. Give examples of the different types of personal protective equipment EMTs should use when treating patients with gynecologic emergencies.
7. Discuss the special considerations and precautions an EMT must observe when arriving at the scene of a suspected case of sexual assault or rape.
8. Discuss the assessment and management of a patient who has been sexually assaulted, including the additional steps an EMT must take on behalf of the patient.

Skills Objectives

There are no skills objectives for this chapter.

Trauma Overview

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Trauma Overview

Pathophysiology, assessment, and management of the trauma patient

- Trauma scoring
- Rapid transport and destination issues
- Transport mode

Multisystem Trauma

Recognition and management of

- Multisystem trauma

Pathophysiology, assessment, and management of

- Multisystem trauma
- Blast injuries

Knowledge Objectives

1. Define the term mechanism of injury (MOI) and explain its relationship to potential energy, kinetic energy, and work.
2. Define the terms blunt and penetrating trauma and provide examples of the mechanism of injury that would cause each one to occur.
3. Describe the five types of motor vehicle collisions, the injury patterns associated with each one, and how each relates to the index of suspicion of life-threatening injuries.
4. Discuss the three specific factors to consider during assessment of a patient who has been injured in a fall, plus additional considerations for pediatric and geriatric patients.

5. Discuss the affects of high-, medium-, and low-velocity penetrating trauma on the body and how an understanding of each type helps the EMT form an index of suspicion about unseen life-threatening injuries.
6. Discuss primary, secondary, tertiary, and miscellaneous blast injuries and describe the anticipated damage each one will cause to the body.
7. Describe multisystem trauma and the special considerations that are required for patients who fit this category, and provide a general overview of multisystem trauma patient management.
8. Outline the major components of trauma patient assessment, including considerations related to whether the method of injury was significant or nonsignificant.
9. Discuss the special assessment considerations related to a trauma patient who has injuries in each of the following areas: head, neck and throat, chest, and abdomen.
10. Describe trauma patient management in relation to scene time and transport selection and list the Association of Air Medical Services criteria for the appropriate use of emergency air medical services.
11. Describe the American College of Surgeons' Committee on Trauma classification of trauma centers and how it relates to making an appropriate destination selection for a trauma patient.

Skills Objectives

There are no skills objectives for this chapter.

Bleeding

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Bleeding

Recognition and management of

- Bleeding

Pathophysiology, assessment, and management of

- Bleeding

Pathophysiology

Applies fundamental knowledge of the pathophysiology of respiration and perfusion to patient assessment and management.

Knowledge Objectives

1. Understand the general structure of the circulatory system and the function of its different parts, including the heart, arteries, veins, and interconnecting capillaries.
2. Explain the significant bleeding that may be caused by blunt force trauma, including the importance of perfusion.
3. Discuss bleeding and the possibility of hypovolemic shock, including the signs of shock.
4. Explain the importance of following standard precautions when treating patients with external bleeding.
5. Describe the characteristics of external bleeding, including the identification of the following types of bleeding: arterial, venous, and capillary .
6. Identify the signs and symptoms of internal bleeding.
7. Explain how to determine the nature of the illness (NOI) for internal bleeding, including identifying possible traumatic and nontraumatic sources.
8. Explain how to conduct a primary assessment, including identification of life threats beyond bleeding, ensuring a patent airway, and making the transport decision.
9. Discuss internal bleeding in terms of the different mechanisms of injury and their associated internal bleeding sources.
10. Explain how to conduct a secondary assessment on a patient with external or internal bleeding, including physical examination, vital signs, and use of monitoring devices.

11. Explain the emergency medical care of the patient with external bleeding.
12. Explain the emergency medical care of the patient with internal bleeding.

Skills Objectives

1. Demonstrate emergency medical care of the patient with external bleeding using direct pressure.
2. Demonstrate emergency medical care of the patient with external bleeding using a commercial tourniquet.
3. Demonstrate emergency medical care of the patient with epistaxis, or nosebleed.
4. Demonstrate emergency medical care of the patient who shows signs and symptoms of internal bleeding.

Soft-Tissue Injuries

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Soft-Tissue Trauma

Recognition and management of

- Wounds
- Burns
    - Electrical
    - Chemical
    - Thermal
- Chemicals in the eye and on the skin

Pathophysiology, assessment, and management

- Wounds
    - Avulsions
    - Bite wounds
    - Lacerations
    - Puncture wounds
    - Incisions
- Burns
    - Electrical
    - Chemical
    - Thermal
    - Radiation
- Crush syndrome

Knowledge Objectives

1. Discuss the anatomy of the skin, including the layers of the skin.
2. Understand the functions of the skin.
3. Describe the three types of soft-tissue injuries.
4. Describe the types of closed soft-tissue injuries.
5. Describe the types of open soft-tissue injuries.
6. Discuss the assessment of both closed and open injuries.
7. Describe the relationship between airway management and the patient with closed and open injuries.
8. Describe the emergency medical care for closed and open injuries.
9. Explain the emergency medical care for a patient with an open wound to the abdomen.
10. Discuss the emergency medical care for a patient with an impaled object.
11. Discuss the emergency medical care for neck injuries.
12. Discuss the management of small animal bites, human bites, and rabies.
13. Explain how the seriousness of a burn is related to its depth and extent.
14. Define and give the characteristics of superficial, partial-thickness, and full-thickness burns.

15. Describe and discuss the emergency management of chemical, electrical, thermal, inhalation, and radiation burns.
16. Explain the steps involved in the assessment of burns.
17. Describe the emergency medical care for burn injuries.
18. Understand the functions of sterile dressings and bandages.

Skills Objectives

1. Demonstrate the emergency medical care of closed soft-tissue injuries.
2. Demonstrate the emergency medical care of a patient with an open chest wound.
3. Demonstrate how to control bleeding from an open soft-tissue injury.
4. Demonstrate the emergency medical care of a patient with an open abdominal wound.
5. Demonstrate how to stabilize an impaled object.
6. Demonstrate how to care for a burn.
7. Demonstrate the emergency medical care of a patient with a chemical, electrical, thermal, inhalation, or radiation burn.

Face and Neck Injuries

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Diseases of the Eyes, Ears, Nose, and Throat

Recognition and management of

- Nosebleed

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Head, Facial, Neck, and Spine Trauma

- Recognition and management of:
    - Life threats
    - Spine trauma
- Pathophysiology, assessment, and management of:
    - Penetrating neck trauma
    - Laryngotracheal injuries
    - Spine trauma
    - Facial fractures
    - Skull fractures
    - Foreign bodies in the eyes
    - Dental trauma

Knowledge Objectives

1. Discuss the anatomy and physiology of the head, face, and neck, including major structures and specific important landmarks of which the EMT must be aware.
2. Describe the factors that may cause the obstruction of the upper airway following a facial injury.
3. Discuss the different types of facial injuries and patient care considerations related to each one.
4. Describe the process of providing emergency care to a patient who has sustained face and neck injuries, including assessment of the patient, review of signs and symptoms, and management of care.
5. List the steps in the emergency medical care of the patient with soft-tissue wounds of the face and neck.

6. List the steps in the emergency medical care of the patient with an eye injury based on the following scenarios: foreign object, impaled object, burns, lacerations, blunt trauma, closed head injuries, and blast injuries.
7. Describe the three different causes of a burn injury to the eye and patient management considerations related to each one.
8. List the steps in the emergency medical care of the patient with injuries of the nose.
9. List the steps in the emergency medical care of the patient with injuries of the ear, including lacerations and foreign body insertions.
10. Describe the physical findings of a patient with a facial fracture and list the steps related to providing emergency medical care to these patients.
11. List the steps in the emergency medical care of the patient with dental and cheek injuries, including how to deal with an avulsed tooth.
12. List the steps in the emergency medical care of patient with an upper airway injury caused by blunt trauma.
13. List the steps in the emergency medical care of the patient with a penetrating injury to the neck, including how to control regular and life-threatening bleeding.

Skills Objectives

1. Demonstrate the removal of a foreign object from under a patient's upper eyelid.
2. Demonstrate the stabilization of a foreign object that has been impaled in a patient's eye.
3. Demonstrate irrigation of a patient's eye using a nasal cannula, bottle, or basin.
4. Demonstrate the care of a patient who has a penetrating eye injury.
5. Demonstrate how to control bleeding from a neck injury.

Head and Spine Injuries

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Head, Facial, Neck, and Spine Trauma

Recognition and management of

- Life threats
- Spine trauma Pathophysiology,

assessment, and management of

- Penetrating neck trauma
- Laryngotracheal injuries
- Spine trauma
- Facial fractures
- Skull fractures
- Foreign bodies in the eyes
- Dental trauma

Nervous System Trauma

Pathophysiology, assessment, and management of

- Traumatic brain injury
- Spinal cord injury

Knowledge Objectives

1. Describe the anatomy and physiology of the nervous system, including its divisions into the central nervous system (CNS) and peripheral nervous system (PNS) and the structures and functions of each.
2. Explain the functions of both the somatic and autonomic nervous systems.
3. List the major bones of the skull and spinal column and their related structures, and describe their functions as related to the nervous system.
4. Discuss age-related variations that are required when providing emergency care to a pediatric patient who has a suspected head or spine injury.

5. Discuss the different types of head injuries, their potential mechanism of injury (MOI), and general signs and symptoms of a head injury that the EMT should consider when performing a patient assessment.
6. Define traumatic brain injury (TBI) and explain the difference between a primary (direct) injury and a secondary (indirect) injury, providing examples of possible mechanisms of injury that may cause each one.
7. Discuss the different types of brain injuries and their corresponding signs and symptoms, including increased intracranial pressure (ICP), concussion, contusion, and injuries caused by medical conditions.
8. Discuss the different types of injuries that may damage the cervical, thoracic, or lumbar spine, providing examples of possible mechanisms of injury that may cause each one.
9. List the mechanisms of injury that cause a high index of suspicion for the possibility of a head or spinal injury.
10. Describe the steps in the patient assessment process for a person who has a suspected head or spine injury, including specific variations that may be required as related to the type of injury.
11. Describe the process of providing emergency medical care to a patient with a head injury, including the three general principles designed to protect and maintain the critical functions of the central nervous system and ways to determine if the patient has a traumatic brain injury.
12. Describe the process of providing emergency medical care to a patient with a spinal injury, including the implications of not properly caring for patients with injuries of this nature, the steps for performing manual in-line stabilization, implications for sizing and using a cervical spine immobilization device, and key symptoms that contraindicate in-line stabilization.
13. Describe the process of preparing patients who have suspected head or spinal injuries for transport, including the use and functions of a long backboard, short backboard, and other short spinal extrication devices to immobilize the patient's cervical and thoracic spine.
14. Explain the different circumstances in which a helmet should be either left on or taken off a patient with a possible head or spinal injury, and then list the steps EMTs must follow to remove a helmet, including the alternate method for removing a football helmet.

Skills Objectives

1. Demonstrate how to perform a jaw-thrust maneuver on a patient with a suspected spinal injury.
2. Demonstrate how to perform manual in-line stabilization on a patient with a suspected spinal injury.
3. Demonstrate how to immobilize a patient with a suspected spinal injury to a long backboard.
4. Demonstrate how to immobilize a patient with a suspected spinal injury who was found in a sitting position.
5. Demonstrate how to immobilize a patient with a suspected spinal injury who was found in a standing position.
6. Demonstrate how to apply a cervical collar to a patient with a suspected spinal injury
7. Demonstrate how to immobilize a patient with a suspected spinal injury to a short backboard.
8. Demonstrate how to remove a helmet from a patient with a suspected head or spinal injury.
9. Demonstrate the alternate method for removal of a football helmet from a patient with a suspected head or spinal injury.

Chest Injuries

National EMS Education Standard Competencies

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Chest Trauma

Recognition and management of

- Blunt versus penetrating mechanisms

- Open chest wound
- Impaled object Pathophysiology,

assessment, and management of

- Blunt versus penetrating mechanisms
- Hemothorax
- Pneumothorax
    - Open
    - Simple
    - Tension
- Cardiac tamponade
- Rib fractures
- Flail chest
- Commotio cordis

Knowledge Objectives

1. Understand the mechanics of ventilation in relation to chest injuries.
2. Describe the differences between an open and closed chest injury.
3. Recognize the signs of chest injury.
4. Differentiate between a pneumothorax (open, simple, and tension) and hemothorax
5. Describe the complications of cardiac tamponade.
6. Describe the complications of rib fractures.
7. Describe the complications of a patient with a flail chest.
8. Explain the complications of a patient with an open pneumothorax (sucking chest wound
9. Recognize the complications that can accompany chest injuries.
10. Describe the management of a patient with a suspected chest injury, including pneumothorax, hemothorax, cardiac tamponade, rib fractures, flail chest, pulmonary contusion, traumatic asphyxia, blunt myocardial injury, commotio cordis, and laceration of the great vessels.

Skills Objectives

1. Describe the steps to take in the assessment of a patient with a suspected chest injury.
2. Demonstrate the management of a patient with a sucking chest wound.
3. Demonstrate the management of a patient with a flail chest.

Genitourinary Injuries

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Abdominal and Genitourinary Trauma

- Recognition and management of
    - Blunt versus penetrating mechanisms
    - Evisceration
    - Impaled object
- Pathophysiology, assessment, and management of
    - Solid and hollow organ injuries
    - Blunt versus penetrating mechanisms
    - Evisceration
    - Injuries to the external genitalia
    - Vaginal bleeding due to trauma
    - Sexual assault

Knowledge Objectives

1. Describe the anatomy and physiology of the abdomen, including an explanation of abdominal quadrants and boundaries and the difference between hollow and solid organs.

2. Describe some special considerations related to the care of pediatric patients and geriatric patients who have experienced abdominal trauma.
3. Define and discuss closed abdominal injuries, providing examples of the mechanisms of injury that are likely to cause this type of trauma in a patient, as well as key signs and symptoms.
4. Define and discuss open abdominal injuries, including ways to distinguish low-velocity, medium-velocity, and high-velocity injuries, examples of the mechanisms of injury that would cause each, and signs and symptoms exhibited by a patient who has experienced this type of injury.
5. Describe the different ways hollow and solids organs of the abdomen can be injured and include the signs and symptoms a patient might exhibit depending on the organ(s) involved
6. Discuss assessment of a patient who has experienced an abdominal injury, including key indicators that will help determine the mechanism of injury (MOI) and whether it is significant or nonsignificant.
7. Discuss the emergency medical care of a patient who has sustained a closed abdominal injury, including blunt trauma caused by a seatbelt or air bag.
8. Discuss the emergency medical care of a patient who has sustained an open abdominal injury, including penetrating injuries and abdominal evisceration, and considerations related to caring for these patients.
9. Describe the anatomy and physiology of the female and male genitourinary systems and distinguish between hollow and solid organs.
10. Discuss the types of traumatic injuries that may be sustained by the organs of the male and female genitourinary system, including the kidneys, urinary bladder, and internal and external genitalia.
11. Discuss assessment of a patient who has experienced a genitourinary injury, including special considerations related to patient privacy and determining the MOI.
12. Discuss the emergency medical care of a patient who has sustained a genitourinary injury related to the kidneys, bladder, external male genitalia, female genitalia, and rectum

13. Explain special considerations related to a patient who has experienced a genitourinary injury caused by a sexual assault, including patient treatment, criminal implications, and evidence management.

Skills Objectives

1. Demonstrate proper emergency medical care of a patient who has experienced a blunt abdominal injury.
2. Demonstrate proper emergency medical care of a patient who has a penetrating abdominal injury with an impaled object.
3. Demonstrate how to apply a dressing to an abdominal evisceration wound.

Orthopaedic Injuries

National EMS Education Standard Competencies

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Orthopaedic Trauma

- Recognition and management of
    - Open fractures
    - Closed fractures
    - Dislocations
    - Amputations
- Pathophysiology, assessment, and management of
    - Upper and lower extremity orthopaedic trauma
    - Open fractures
    - Closed fractures
    - Dislocations
    - Sprains/strains

- Pelvic fractures
- Amputations/replantation

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Nontraumatic Musculoskeletal Disorders

Anatomy, physiology, pathophysiology, assessment, and management of

- Nontraumatic fractures

Knowledge Objectives

1. Describe the function of the musculoskeletal system.
2. Understand the anatomy and physiology of the musculoskeletal system.
3. Describe the different types of musculoskeletal injuries, including fractures, dislocations, amputations, sprains, and strains.
4. Name the four mechanisms of injury.
5. Differentiate between open and closed fractures.
6. Explain how to assess the severity of an injury.
7. Understand the emergency medical care of the patient with an orthopaedic injury
8. Describe the emergency medical care of the patient with a swollen, painful, deformed extremity (fracture).
9. Understand the need for, general rules of, and possible complications of splinting.
10. Explain the reasons for splinting fractures, dislocations, and sprains at the scene versus transporting the patient immediately.
11. Recognize the characteristics of specific types of musculoskeletal injuries.
12. Describe the emergency medical care of the patient with an amputation.

Skills Objectives

1. Demonstrate the assessment of neurovascular status.
2. Demonstrate the care of musculoskeletal injuries.
3. Demonstrate how to apply a rigid splint.
4. Demonstrate how to apply a zippered air splint.
5. Demonstrate how to apply an unzippered air splint.
6. Demonstrate how to apply a vacuum splint.
7. Demonstrate how to apply a Hare traction splint.
8. Demonstrate how to apply a Sager traction splint.
9. Demonstrate how to splint the hand and wrist.
10. Demonstrate how to splint the clavicle, the scapula, the shoulder, the humerus, the elbow, and the forearm.
11. Demonstrate how to care for a patient with an amputation.

Environmental Emergencies

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Environmental Emergencies

Recognition and management of

- Submersion incidents
- Temperature-related illness

Pathophysiology, assessment, and management of

- Near drowning
- Temperature-related illness
- Bites and envenomations

- Dysbarism
    - High altitude
    - Diving injuries
- Electrical injury
- Radiation exposure

Knowledge Objectives

1. Describe four factors that affect how a person deals with exposure to a cold or hot environment and how each one relates to emergency medical care.
2. Explain the five different ways a body can lose heat and ways the rate and amount of heat loss or gain can be modified in an emergency situation.
3. Define and discuss hypothermia, including the signs and symptoms of its four different stages and the risk factors for developing it.
4. Explain local cold injuries and their underlying causes.
5. Describe the process of providing emergency care to a patient who has sustained a cold injury, including assessment of the patient, review of signs and symptoms, and management of care.
6. Explain the importance of following regional and state protocols when rewarming a patient who is experiencing moderate or severe hypothermia.
7. Describe the three forms of illness that are caused by heat exposure, including their signs and symptoms, and give examples of persons who are at the greatest risk of developing one of them.
8. Describe the process of providing emergency care to a patient who has sustained a heat injury, including assessment of the patient, review of signs and symptoms, and management of care.
9. Define drowning and discuss its incidence, risk factors, and prevention.
10. List the basic rules of performing a water rescue and discuss why rescue personnel should have a prearranged water rescue plan based on the environment in which they work.
11. List five conditions that may result in a spinal injury following a submersion incident and the steps for stabilizing a patient with a suspected spinal injury in the water.

12. Discuss recovery techniques and resuscitation efforts EMTs may need to follow when managing a patient who has been involved in a submersion incident.
13. Describe the three different types of diving emergencies, how they may occur, and their signs and symptoms.
14. Describe the process of providing emergency care to a patient who has been involved in a drowning or diving emergency, including assessment of the patient, review of signs and symptoms, and management of care.
15. Discuss the types of dysbarism injuries that may be caused by high altitudes, including their signs and symptoms and emergency medical treatment in the field.
16. Discuss lightning injuries, including their incidence, risk factors, assessment, and emergency medical treatment.
17. Identify the species of spiders found in the United States that may cause life-threatening injuries, and then describe the process of providing emergency care to patients who have been bitten by each type.
18. Discuss the emergency medical care of patients who have been stung by hymenoptera and scorpions, and bitten by ticks, including steps the EMT should follow if a patient develops a severe reaction to the sting or bite.
19. Identify the species of snakes found in the United States that are venomous, and then describe the process of providing emergency care to patients who have been bitten by each type and are showing signs of envenomation.
20. Discuss the emergency medical care of patients who have been stung by a coelenterate or other marine animal.

Skills Objectives

1. Demonstrate the emergency medical treatment of local cold injuries in the field.
2. Demonstrate using a warm-water bath to rewarm the limb of a patient who has sustained a local cold injury.
3. Demonstrate how to treat a patient with heat cramps.
4. Demonstrate how to treat a patient with heat exhaustion.
5. Demonstrate how to treat a patient with heatstroke.

6. Demonstrate how to stabilize a patient with a suspected spinal injury in the water.
7. Demonstrate how to care for a patient who is suspected of having an air embolism or decompression sickness following a drowning or diving emergency.
8. Demonstrate how to care for a patient who has been bitten by a pit viper and is showing signs of envenomation.
9. Demonstrate how to care for a patient who has been bitten by a coral snake and is showing signs of envenomation.
10. Demonstrate how to care for a patient who has sustained a coelenterate envenomation.

Obstetrics and Neonatal Care

Special Patient Populations

Applies a fundamental knowledge of growth, development, and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs.

Obstetrics

- Recognition and management of:
    - Normal delivery
    - Vaginal bleeding in the pregnant patient
- Anatomy and physiology of normal pregnancy
- Pathophysiology of complications of pregnancy
- Assessment of the pregnant patient
- Management of
    - Normal delivery
    - Abnormal delivery
        - Nuchal cord
        - Prolapsed cord

    - Breech delivery
- Third trimester bleeding
    - Placenta previa
    - Abruptio placenta
- Spontaneous abortion/miscarriage
- Ectopic pregnancy
- Preeclampsia/Eclampsia

Neonatal Care

Assessment and management

- Newborn care
- Neonatal resuscitation

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Special Considerations in Trauma

- Recognition and management of trauma in the:
    - Pregnant patient
    - Pediatric
    - Geriatric patient
- Pathophysiology, assessment, and management of trauma in the :
    - Pregnant patient
    - Pediatric patient
    - Geriatric patient
    - Cognitively impaired patient

Knowledge Objectives

1. Be familiar with the anatomy and physiology of the female reproductive system.

2. Understand the normal changes that occur in the body during pregnancy.
3. Differentiate between the three stages of labor.
4. Recognize complications of pregnancy including hypertensive disorders, bleeding, and gestational diabetes.
5. Understand the need to consider two patients—the woman and the unborn fetus—when treating a pregnant trauma patient.
6. Be aware of special considerations involving pregnancy in different cultures and with teenage patients.
7. Describe assessment of the pregnant patient.
8. Explain the significance of meconium in the amniotic fluid.
9. Describe the indications of an imminent delivery.
10. Explain the steps involved in normal delivery management.
11. List the contents of an obstetrics kit.
12. Explain the necessary care of the baby as the head appears.
13. Describe the procedure followed to cut and tie the umbilical cord.
14. Describe delivery of the placenta.
15. Understand the steps to take in neonatal assessment and resuscitation.
16. Recognize complicated delivery emergencies including breech presentations, limb presentations, umbilical cord prolapse, spina bifida, abortion (miscarriage), multiple gestation, abuse, substance abuse, premature infants, postterm pregnancy, fetal demise, and delivery without sterile supplies.
17. Describe and know how to deal with postpartum complications.

Skills Objectives

1. Demonstrate the procedure to assist in a normal cephalic delivery.
2. Demonstrate care procedures of the infant as the head appears.
3. Demonstrate the steps to follow in postdelivery care of the infant.
4. Demonstrate how to cut and tie the umbilical cord.
5. Demonstrate how to assist in delivery of the placenta.
6. Demonstrate the postdelivery care of the mother.

7. Demonstrate procedures to follow for complicated delivery emergencies including vaginal bleeding, breech presentation, limb presentation, and prolapsed umbilical cord.

Pediatric Emergencies

Pediatrics

Age-related assessment findings, and age-related assessment and treatment modifications for pediatric-specific major diseases and/or emergencies

- Upper airway obstruction
- Lower airway reactive disease
- Respiratory distress/failure/arrest
- Shock
- Seizures
- Sudden infant death syndrome

Age-related assessment findings, and developmental stage related assessment and treatment modifications for pediatric-specific major diseases and/or emergencies

- Upper airway obstruction
- Lower airway reactive disease
- Respiratory distress/failure/arrest
- Shock
- Seizures
- Sudden infant death syndrome
- Gastrointestinal disease

Special Patient Populations

Applies a fundamental knowledge of the growth, development, and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs.

Patients With Special Challenges

- Recognizing and reporting abuse and neglect

Health care implications of

- Abuse
- Neglect
- Homelessness
- Poverty
- Bariatrics
- Technology dependent
- Hospice/terminally ill
- Tracheostomy care/dysfunction
- Home care
- Sensory deficit/loss
- Developmental disability

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Special Considerations in Trauma

Recognition and management of trauma in

- Pregnant patient
- Pediatric patient
- Geriatric patient

Pathophysiology, assessment, and management of trauma in the

- Pregnant patient
- Pediatric patient
- Geriatric patient
- Cognitively impaired patient

Knowledge Objectives

1. Explain some of the challenges inherent in providing emergency care to pediatric patients and why effective communication with both the patient and his or her family members is critical to a successful outcome.
2. Discuss the physical and cognitive developmental stages of an infant, including signs that may indicate illness and patient assessment considerations when caring for an infant patient.
3. Discuss the physical and cognitive developmental stages of a toddler, including health risks, signs that may indicate illness, and patient assessment.
4. Discuss the physical and cognitive developmental stages of a preschool-age child, including health risks, signs that may indicate illness, and patient assessment.
5. Discuss the physical and cognitive developmental stages of a school-age child, including health risks, signs that may indicate illness, and patient assessment.
6. Discuss the physical and cognitive developmental stages of an adolescent, including health risks, patient assessment, and privacy issues.
7. Describe differences in the anatomy, physiology, and pathophysiology of the pediatric patient as compared to the adult patient and their implications for the health care provider, with a focus on the following body systems: respiratory, circulatory, nervous, gastrointestinal, musculoskeletal, and integumentary.
8. Describe the steps in the primary assessment for providing emergency care to a pediatric patient, including the elements of the pediatric assessment triangle (PAT), hands-on ABCs, transport decision considerations, and privacy issues.
9. Discuss the steps in the secondary assessment of a pediatric patient, describing what the EMT should look for related to different body areas and the method of injury.
10. Describe the different causes of pediatric respiratory emergencies, the signs and symptoms of increased work of breathing, the difference between respiratory distress and respiratory failure, and the emergency medical care strategies used in the management of each
11. List the possible causes of an upper and a lower airway obstruction in a pediatric patient and the steps in the management of foreign body airway obstruction.

12. Describe asthma, its possible causes, signs and symptoms, and steps in the management of a patient who is experiencing an asthma attack.
13. Explain how to determine the correct size of an airway adjunct intended for a pediatric patient during an emergency.
14. List the different oxygen delivery device options that are available for providing oxygen to a pediatric patient, including the indications for the use of each and precautions the EMT must take to ensure the patient's safety.
15. Discuss the most common causes of shock (hypoperfusion) in a pediatric patient, its signs and symptoms, and emergency medical management in the field.
16. Discuss the most common causes of altered mental status (AMS) in a pediatric patient, its signs and symptoms, and emergency medical management in the field.
17. List the common causes of seizures in a pediatric patient, the different types of seizures, and their emergency medical management in the field.
18. List the common causes of meningitis, patient groups who are at the highest risk for contracting it, its signs and symptoms, special precautions, and emergency medical management in the field.
19. Discuss the types of gastrointestinal disease emergencies that might affect pediatric patients and their emergency medical management.
20. Discuss poisoning in pediatric patients, including common poison sources, signs and symptoms of poisoning, and its emergency medical management.
21. Discuss dehydration emergencies in pediatric patients, including how to gauge their severity based on key signs and symptoms, and emergency medical management.
22. Discuss the common causes of a fever emergency in a pediatric patient and the role of the EMT regarding patient management.
23. Discuss the common causes of drowning emergencies in pediatric patients, their signs and symptoms, and emergency medical management.
24. Discuss the common causes of pediatric trauma emergencies and differentiate between injury patterns in adults, infants, and children.
25. Discuss the significance of burns in pediatric patients, their most common causes, and general guidelines an EMT should follow when assessing patients who have sustained burns.

26. Explain the four triage categories used in the JumpSTART system for pediatric patients during disaster management.
27. Describe child abuse and neglect and its possible indicators, and then describe the medical and legal responsibilities of an EMT when caring for a pediatric patient who is a possible victim of child abuse.
28. Discuss sudden infant death syndrome (SIDS), including its risk factors, patient assessment, and special management considerations related to the death of an infant patient
29. Discuss the responsibilities of the EMT when communicating with a family or loved ones following the death of a child.
30. Discuss some positive ways an EMT may cope with the death of a pediatric patient and why managing posttraumatic stress is important for all health care professionals.

Skills Objectives

1. Demonstrate how to position the airway in a pediatric patient.
2. Demonstrate how to palpate the pulse and estimate the capillary refill time in a pediatric patient.
3. Demonstrate how to use a pediatric resuscitation tape measure to size equipment appropriately for a pediatric patient.
4. Demonstrate how to insert an oropharyngeal airway in a pediatric patient.
5. Demonstrate how to insert a nasopharyngeal airway in a pediatric patient.
6. Demonstrate how to administer blow-by oxygen to a pediatric patient.
7. Demonstrate how to apply a nasal cannula to a pediatric patient.
8. Demonstrate how to apply a nonrebreathing mask to a pediatric patient.
9. Demonstrate how to assist ventilation of an infant or child using a bag-mask device.
10. Demonstrate how to perform one-rescuer bag-mask device ventilation on a pediatric patient.

11. Demonstrate how to perform two-rescuer bag-mask device ventilation on a pediatric patient.
12. Demonstrate how to immobilize a pediatric patient who has been involved in a trauma emergency.
13. Demonstrate how to immobilize a pediatric patient who has been involved in a trauma emergency in a car seat.
14. Demonstrate how to immobilize a pediatric patient who has been involved in a trauma emergency out of a car seat.

Geriatric Emergencies

Special Patient Populations

Applies a fundamental knowledge of growth, development, and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs.

Geriatrics

- Impact of age-related changes on assessment and care
- Changes associated with aging, psychosocial aspects of aging and age-related assessment and treatment modifications for the major or common geriatric diseases and/or emergencies
    - Cardiovascular diseases
    - Respiratory diseases
    - Neurological diseases
    - Endocrine diseases
    - Alzheimer disease
    - Dementia

- Recognizing and reporting abuse and neglect

Health care implications of

- Abuse
- Neglect
- Homelessness
- Poverty
- Bariatrics
- Technology dependent
- Hospice/terminally ill
- Tracheostomy care/dysfunction
- Homecare
- Sensory deficit/loss
- Developmental disability

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Special Considerations in Trauma

- Recognition and management of trauma in the:
    - Pregnant patient
    - Pediatric patient
    - Geriatric patient
- Pathophysiology, assessment, and management of trauma in the:
    - Pregnant patient
    - Pediatric patient
    - Geriatric patient
    - Cognitively impaired patient

Knowledge Objectives

1. Define the term “geriatrics.”
2. Appreciate some of the special aspects of the lives of elderly persons.
3. Discuss generational considerations when communicating with a geriatric patient.
4. Describe the common complaints and the leading causes of death in the elderly.
5. Discuss special considerations when performing the patient assessment process on a geriatric patient with a medical condition.
6. Explain the GEMS Diamond and its role in the assessment and care of the geriatric patient.
7. Discuss the physiologic changes associated with the aging process and the age-related assessment and treatment modifications that result.
8. Define “polypharmacy,” and explain the toxicity issues that can result.
9. Discuss the effect of aging on psychiatric emergencies.
10. Explain special considerations when performing the patient assessment process on a geriatric patient with a traumatic injury.
11. Discuss the effects of aging on environmental emergencies.
12. Discuss the special considerations when responding to calls to nursing and skilled care facilities.
13. Define an advanced directive and explain its use with older patients.
14. Describe the causes of elder abuse and neglect, and explain why the extent of elder abuse is not well known.
15. Describe the assessment and care of a geriatric patient who has potentially been abused or neglected.

Skills Objectives

There are no skills objectives for this chapter.

Patients with Special Challenges

Special Patient Populations

Applies a fundamental knowledge of growth, development, and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs.

Patients With Special Challenges

Recognizing and reporting abuse and neglect

Health care implications of

- Abuse
- Neglect
- Homelessness
- Poverty
- Bariatrics
- Technology dependent
- Hospice/terminally ill
- Tracheostomy care/dysfunction
- Homecare
- Sensory deficit/loss
- Developmental disability

Trauma

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.

Special Considerations in Trauma

Recognition and management of trauma in

- Pregnant patient
- Pediatric patient
- Geriatric patient

Pathophysiology, assessment, and management of trauma in the

- Pregnant patient
- Pediatric patient
- Geriatric patient
- Cognitively impaired patient

Knowledge Objectives

1. Give some examples of patients with special needs whom an EMT may encounter during a

medical emergency.
2. Discuss the special patient care considerations that may be required when providing emergency medical care to patients with developmental disabilities, including patients with autism, Down syndrome, and prior brain injuries.
3. Discuss different types of visual impairments and the special patient care considerations that may be required when providing emergency medical care for these patients depending on the level of their disability.
4. Explain the various types of hearing impairments and the special patient care considerations that may be required when providing emergency medical care for these patients, including tips on effective communication.
5. List the various types of hearing aids that may be worn by patients and describe troubleshooting strategies that may help to fi x a hearing aid that is not working.
6. Discuss the special patient care considerations that may be required when providing emergency medical care to patients who have cerebral palsy, spina bifida, and paralysis.
7. Define obesity and discuss the special patient care considerations, including the best way to move a morbidly obese patient, that may be required when providing emergency medical care to bariatric patients.
8. Discuss the special patient care considerations that may be required when providing emergency medical care to a patient who relies on a form of medical technological assistance, including a tracheostomy tube, mechanical ventilator, apnea monitor, internal cardiac pacemaker, left ventricular assist device, central venous catheter, gastrostomy tube, shunt, vagal nerve stimulator, colostomy, and ileostomy.
9. Describe home care, the types of patients it serves, and the services it encompasses.
10. Discuss hospice and palliative care and how they differ from curative care, and then explain the responsibilities of the EMT when responding to calls for terminally ill patients who have DNR orders.
11. Discuss the issues of poverty and homelessness in the US, its negative effects on a person's health, and the role of the EMT as a patient advocate.

Skills Objectives

1. Demonstrate different strategies to communicate effectively with a patient who has a hearing

impairment.

Lifting and Moving Patients

EMS Operations

Knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety.

Knowledge Objectives

1. Describe the technical skills and general considerations that are required of the EMTs during patient packaging and patient handling.
2. Define the term body mechanics and discuss how following proper patient lifting and moving techniques can help prevent work-related injuries.
3. Describe the guidelines and safety precautions the EMT should follow when lifting and carrying a patient on a stretcher or backboard and identify how to avoid common mistakes.
4. Describe the guidelines for lifting a patient, including using a power grip and using a sheet or blanket.
5. Explain how to carry patients safely on stairs, including the selection of appropriate equipment to aid in the process.
6. Summarize the general considerations required to move patients safely without causing them further harm while simultaneously protecting the EMT from injury.
7. Describe specific situations in which an urgent move or rapid extrication may be necessary to move a patient and explain how each one is performed.
8. Describe specific situations in which a nonurgent move may be necessary to move a patient and explain how each one is performed.
9. Discuss special considerations related to moving and transporting geriatric patients and guidelines that must be followed during their lifting and moving.
10. Define the term bariatrics and discuss the guidelines for lifting and moving bariatric patients.
11. Provide seven examples of patient-moving equipment and explain how each one is used to move a patient.
12. Explain the relationship between equipment decontamination and the prevention of disease transmission.

13. Discuss situations that may require the use of medical restraints on a patient and explain guidelines and safety considerations for their use.

Skills Objectives

1. Perform a power lift to lift a patient.
2. Demonstrate using a power grip.
3. Perform the diamond carry to move a patient.
4. Perform the one-handed carrying technique to move a patient.
5. Perform a patient carry to move a patient down the stairs.
6. Perform a patient carry using a stair chair to move a patient down the stairs.
7. Demonstrate the body mechanics and principles required for safe reaching and pulling, including the safe reaching technique used for performing log rolls.
8. Demonstrate how to perform an emergency or urgent move.
9. Perform the rapid extrication technique to move a patient from a vehicle.
10. Perform the direct ground lift to lift a patient.
11. Perform the extremity lift to move a patient.
12. Perform the direct carry to move a patient.
13. Demonstrate how to use the draw sheet method to transfer a patient onto a stretcher.
14. Use a scoop stretcher to move a patient.
15. Demonstrate how to load a stretcher into an ambulance.
16. Demonstrate the correct use of medical restraints on a patient.

Transport Operations

EMS Operations

Knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety.

Principles of Safely Operating a Ground Ambulance

- Risks and responsibilities of emergency response
- Risks and responsibilities of transport

Air Medical

- Safe air medical operations

- Criteria for utilizing air medical response

Medicine

Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.

Infectious Diseases

Awareness of

- How to decontaminate equipment after treating a patient
- How to decontaminate the ambulance and equipment after treating a patient

Knowledge Objectives

1. Describe the nine phases of an ambulance call and provide examples of key tasks the EMT performs during each phase.
2. Describe the medical equipment carried on an ambulance and provide examples of supplies that are included in each main category of the ambulance equipment checklist.
3. Provide examples of the safety and operations equipment carried on an ambulance and explain how each item might be used in an emergency by EMTs.
4. Discuss the importance of performing regular vehicle inspections and list the specific parts of an ambulance that should be inspected daily.
5. Describe the minimum dispatch information required by EMS to respond to an emergency call.
6. Provide examples of some high-risk situations and hazards that may affect the safety of the ambulance and its passengers during both pretransport and transport.
7. Discuss specific considerations that are required for ensuring scene safety, including personal safety, patient safety, and traffic control.
8. Describe the key elements related to patient information that must be included in the written patient report upon patient delivery to the hospital.
9. Summarize the tasks that must be completed by EMS at the completion of an ambulance call.
10. Define the terms cleaning, disinfection, high-level disinfection, and sterilization and explain how they differ.
11. Discuss the guidelines for driving an ambulance safely and defensively and identify key steps EMS personnel can take to improve safety while en route to the scene, the hospital, and

the station.
12. Describe the elements that dictate the use of lights and siren to the scene and to the hospital and the factors required to perform a risk-benefit analysis regarding their use.
13. Give examples of the specific, limited privileges that are provided to emergency vehicle drivers by most state laws and regulations.
14. Explain why using police escorts and crossing intersections pose additional risks to EMS personnel during transport and discuss special considerations related to each.
15. Describe the capabilities, protocols, and methods for accessing air ambulances.
16. Describe key scene safety considerations when preparing for a helicopter medivac, including establishing a landing zone, securing loose objects, mitigating onsite hazards, and approaching the aircraft.

Skills Objectives

1. Demonstrate how to perform a daily inspection of an ambulance.
2. Demonstrate how to present a verbal report that would be given to arrival personnel at the hospital upon patient transfer.
3. Demonstrate how to write a written report that includes all pertinent patient information following patient transfer to the hospital.
4. Demonstrate how to clean and disinfect the ambulance and equipment during the postrun phase.

Vehicle Extrication and Special Rescue

EMS Operations

Knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety.

Vehicle Extrication

- Safe vehicle extrication

- Use of simple hand tools

Knowledge Objectives

1. Explain the responsibilities of an EMT in patient rescue and vehicle extrication.
2. Discuss how to ensure safety at the scene of a rescue incident, including scene size-up and the selection of the proper personal protective equipment and additional necessary gear.
3. Provide examples of vehicle safety components that may be hazardous to both EMTs and patients following a collision and explain how to mitigate their dangers.
4. Define the terms extrication and entrapment and explain how they differ.
5. Describe the ten phases of vehicle extrication and the role of the EMT during each one.
6. Discuss the various factors related to ensuring situational safety at the site of a vehicle extrication, including controlling traffic flow, performing a 360° assessment, stabilizing the vehicle, dealing with unique hazards, and evaluating the need for additional resources.
7. Describe the special precautions the EMT should follow to protect the patient during a vehicle extrication.
8. Explain the different factors that must be considered before attempting to gain access to the patient during an incident that requires extrication.
9. Discuss patient care considerations related to assisting with rapid extrication, providing emergency care to a trapped patient, and removing and transferring a patient.
10. Explain the difference between simple access and complex access in vehicle extrication.
11. Give examples of situations that would require special technical rescue teams and describe the EMT's role in these situations.

Skills Objectives

There are no skills objectives for this chapter.

Incident Management

EMS Operations

Knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety.

Incident Management

- Establish and work within the incident management system

Multiple Casualty Incidents*

- Triage principles
- Resource management
- Triage
    - Performing
    - Retriage
    - Destination decisions
    - Posttraumatic and cumulative stress

*This text uses the term mass-casualty incident.

Hazardous Materials Awareness

- Risks and responsibilities of operating in a cold zone at a hazardous material or other special incident.

Knowledge Objectives

1. Describe the National Incident Management System (NIMS) and its major components.
2. Describe the purpose of the incident command system (ICS) and its organizational structure and explain the role of EMS response within it.
3. Describe how the ICS assists the EMS in ensuring both personal safety and the safety of bystanders, health care professionals, and patients during an emergency.
4. Describe the role of the EMT in establishing command under the ICS.
5. Explain the purpose of medical incident command within the incident management system and describe its organizational structure within ICS.
6. Describe the specific conditions that would define a situation as a mass-casualty incident (MCI) and give some examples.
7. Describe what occurs during primary and secondary triage, how the four triage categories are assigned to patients on the scene, and how destination decisions regarding triaged patients are made.
8. Describe how the SALT, START and JumpSTART triage methods are performed.
9. Explain how a disaster differs from a mass-casualty incident and describe the role of the EMT during a disaster operation.
10. Recognize the entry-level training or experience requirements identified by the HAZWOPER regulation for an EMT to respond to a HazMat incident.
11. Define the term hazardous material, including the classification system used by the NFPA, and discuss the specific types of information and resources an EMT can use to recognize a HazMat incident.
12. List the different reference materials that may assist personnel who respond to a HazMat incident.
13. Explain the role of the EMT during a hazardous materials incident both before and after the HazMat team arrives, including precautions required to ensure the safety of civilians and public service personnel.
14. Explain how the three control zones are established at a HazMat incident and discuss the characteristics of each zone, including the personnel who work within each one.

15. Describe patient care at a HazMat incident and explain special requirements that are necessary for those patients who require immediate treatment and transport prior to full decontamination.
16. Describe the four levels of personal protective equipment (PPE) that may be required at a HazMat incident to protect personnel from injury by or contamination from a particular substance.

Skills Objectives

1. Demonstrate how to perform triage based on a fictitious scenario that involves a mass-casualty incident.
2. Correctly identify DOT labels, placards, and markings that are used to designate hazardous materials.
3. Demonstrate the ability to use a variety of reference materials to identify a hazardous material.

Terrorism and Disaster Management

EMS Operations

Knowledge of operational roles and responsibilities to ensure patient, public, and personnel safety.

Mass-Casualty Incidents Due to Terrorism and Disaster

- Risks and responsibilities of operating on the scene of a natural or man-made disaster.

Knowledge Objectives

1. Define the terms international terrorism and domestic terrorism and provide some examples of incidents that have been caused by each one.
2. Provide examples of four different types of goals that commonly motivate terrorist groups to stage a terrorist attack.
3. Define the terms weapon of mass destruction (WMD) and weapon of mass casualty (WMC), and list and give examples of the five categories of weapons that are considered WMDs.

4. Discuss the history of chemical agents, their four main classifications, routes of exposure, effects on the patient, and patient care.
5. Discuss three categories of biologic agents, their routes of exposure, effects on the patient, and patient care.
6. Describe the history of nuclear/radiologic devices, sources of radiologic materials and dispersal devices, medical management of the patient, and protective measures that can be taken by the EMT during a nuclear/radiologic incident.
7. Describe how the Department of Homeland Security (DHS) Homeland Security Advisory System relates to the daily activities of EMTs and their ability to respond to and survive a terrorist attack.
8. Describe key observations an EMT must make on each call to assist in the determination of whether an incident is related to terrorism.
9. Explain the colors and threat levels that are used by the DHS daily to heighten awareness of the current terrorist threat.
10. Describe the critical response actions related to establishing and reassessing scene safety, personnel protection, notification procedures, and establishing command an EMT must perform at a suspected terrorist event.
11. Explain the role of EMS in relation to syndromic surveillance and points of distribution (PODS) during a biologic event.
12. Describe the mechanisms of injury caused by incendiary and explosive devices, including the types of wounds and their severity.

Skills Objectives

1. Demonstrate the steps an EMT can take to establish and reassess scene safety based on a scenario of a terrorist event.
2. Demonstrate the steps an EMT can take for the management of a patient exposed to a chemical agent.
3. Demonstrate the use of the Mark 1 Nerve Agent Antidote Kit (NAAK) and/or the DuoDote Auto-Injector.

ALS Assist

There are no National EMS Education Standard Competencies for this chapter.

Knowledge Objectives

1. Discuss advanced airway techniques.
2. Describe the basic anatomy and physiology of the airway.
3. Explain the principles of basic airway management.
4. Describe the equipment and techniques used in endotracheal intubation.
5. Discuss the benefits and disadvantages of multilumen and single-lumen airways.
6. Discuss placement of a gastric tube.
7. Understand the uses for continuous positive airway pressure (CPAP).
8. Be familiar with the equipment necessary to gain intravenous (IV) access.
9. Understand the techniques, alternative IV sites, and complications associated with IV access.
10. Describe age-specific considerations in the care of pediatric patients.
11. Describe age-specific considerations in the care of geriatric patients.
12. Understand the use and techniques of cardiac monitoring.

Skills Objectives

1. Demonstrate how to assist with orotracheal intubation.
2. Demonstrate the steps in assembling IV equipment.
3. Demonstrate how to spike the bag with an IV administration set.
4. Demonstrate how to assist with startomh an IV.
5. Demonstrate appropriate lead placement for both 4-lead and 12-lead ECG monitoring.