

# EMT-Paramedic: National Standard Curriculum

## Module and Unit Objective Summary

- 1 At the completion of this module, the paramedics student will understand the roles and responsibilities of a Paramedic within an EMS system, apply the basic concepts of development, pathophysiology and pharmacology to assessment and management of emergency patients, be able to properly administer medications, and communicate effectively with patients.
  - 1-1 At the completion of this unit, the paramedic student will understand his or her roles and responsibilities within an EMS system, and how these roles and responsibilities differ from other levels of providers.
  - 1-2 At the completion of this unit, the paramedic student will understand and value the importance of personal wellness in EMS and serve as a healthy role model for peers.
  - 1-3 At the completion of this unit, the paramedic student will be able to integrate the implementation of primary injury prevention activities as an effective way to reduce death, disabilities and health care costs.
  - 1-4 At the completion of this unit, the paramedic student will understand the legal issues that impact decisions made in the out-of-hospital environment.
  - 1-5 At the completion of this unit, the paramedic student will understand the role that ethics plays in decision making in the out-of-hospital environment.
  - 1-6 At the completion of this unit, the paramedic student will be able to apply the general concepts of pathophysiology for the assessment and management of emergency patients.
  - 1-7 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles of pharmacology and the assessment findings to formulate a field impression and implement a pharmacologic management plan.
  - 1-8 At the completion of this unit, the paramedic student will be able to safely and precisely access the venous circulation and administer medications.
  - 1-9 At the completion of this unit, the paramedic student will be able to integrate the principles of therapeutic communication to effectively communicate with any patient while providing care.
  - 1-10 At the completion of this unit, the paramedic student will be able to integrate the physiological, psychological, and sociological changes throughout human development with assessment and communication strategies for patients of all ages.
  
- 2 At the completion of this module, the paramedic student will be able to establish and/ or maintain a patent airway, oxygenate, and ventilate a patient.
  - 2-1 At the completion of this unit, the paramedic student will be able to establish and/ or maintain a patent airway, oxygenate, and ventilate a patient.
  
- 3 At the completion of this module, the paramedic student will be able to take a proper history and perform a comprehensive physical exam on any patient, and communicate the findings to others.
  - 3-1 At the completion of this unit, the paramedic student will be able to use the appropriate techniques to obtain a medical history from a patient.
  - 3-2 At the completion end of this unit, the paramedic student will be able to explain the pathophysiological significance of physical exam findings.
  - 3-3 At the end of this unit, the paramedic student will be able to integrate the principles of history taking and techniques of physical exam to perform a patient assessment.
  - 3-4 At the end of this unit, the paramedic student will be able to apply a process of clinical decision making to use the assessment findings to help form a field impression.
  - 3-5 At the completion of this unit, the paramedic student will be able to follow an accepted format for dissemination of patient information in verbal form, either in person or over the radio.
  - 3-6 At the completion of this unit, the paramedic student will be able to effectively document the essential elements of patient assessment, care and transport.

- 4 At the completion of this module, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the trauma patient.
  - 4-1 At the completion of this unit, the Paramedic student will be able to integrate the principles of kinematics to enhance the patient assessment and predict the likelihood of injuries based on the patient's mechanism of injury.
  - 4-2 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with shock or hemorrhage.
  - 4-3 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement the treatment plan for the patient with soft tissue trauma.
  - 4-4 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement the management plan for the patient with a burn injury.
  - 4-5 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the trauma patient with a suspected head injury.
  - 4-6 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with a suspected spinal injury.
  - 4-7 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for a patient with a thoracic injury.
  - 4-8 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement the treatment plan for the patient with suspected abdominal trauma.
  - 4-9 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement the treatment plan for the patient with a musculoskeletal injury.
  
- 5 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the medical patient.
  - 5-1 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with respiratory problems.
  - 5-2 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with cardiovascular disease.
  - 5-3 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with a neurological problem.
  - 5-4 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with an endocrine problem.
  - 5-5 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with an allergic or anaphylactic reaction.
  - 5-6 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with a gastroenterologic problem.
  - 5-7 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with a renal or urologic problem.

- 5-8 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with a toxic exposure.
  - 5-9 At the completion of this unit, the paramedic student will be able to integrate the pathophysiological principles of the hematopoietic system to formulate a field impression and implement a treatment plan.
  - 5-10 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with an environmentally induced or exacerbated medical or traumatic condition.
  - 5-11 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a management plan for the patient with infectious and communicable diseases.
  - 5-12 At the end of this unit, the paramedic student will be able to describe and demonstrate safe, empathetic competence in caring for patients with behavioral emergencies.
  - 5-13 At the end of this unit, the paramedic student will be able to utilize gynecological principles and assessment findings to formulate a field impression and implement the management plan for the patient experiencing a gynecological emergency.
  - 5-14 At the completion of this unit, the paramedic student will be able to apply an understanding of the anatomy and physiology of the female reproductive system to the assessment and management of a patient experiencing normal or abnormal labor.
- 6 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for neonatal, pediatric, and geriatric patients, diverse patients, and chronically ill patients.
- 6-1 At the completion of this lesson, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the neonatal patient.
  - 6-2 At the completion of this lesson, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the pediatric patient.
  - 6-3 At the completion of this unit, the paramedic student will be able to integrate the pathophysiological principles and the assessment findings to formulate and implement a treatment plan for the geriatric patient.
  - 6-4 At the completion of this unit, the paramedic student will be able to integrate the assessment findings to formulate a field impression and implement a treatment plan for the patient who has sustained abuse or assault.
  - 6-5 At the completion of this unit the paramedic student will be able to integrate pathophysiological and psychosocial principles to adapt the assessment and treatment plan for diverse patients and those who face physical, mental, social and financial challenges.
  - 6-6 At the completion of this unit, the paramedic student will be able to integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the acute deterioration of a chronic care patient.
- 7 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for patients with common complaints.
- 7-1 At the completion of this unit, the paramedic student will be able to integrate the principles of assessment based management to perform an appropriate assessment and implement the management plan for patients with common complaints.
- 8 At the completion of this unit, the paramedic student will be able to safely manage the scene of an emergency.
- 8-1 At the completion of this unit, the paramedic will understand standards and guidelines

that help ensure safe and effective ground and air medical transport.

- 8-2 At the completion of this unit, the paramedic student will be able to integrate the principles of general incident management and multiple casualty incident (MCI) management techniques in order to function effectively at major incidents.
- 8-3 At the completion of this unit, the paramedic student will be able to integrate the principles of rescue awareness and operations to safely rescue a patient from water, hazardous atmospheres, trenches, highways, and hazardous terrain.
- 8-4 At the completion of this unit, the paramedic student will be able to evaluate hazardous materials emergencies, call for appropriate resources, and work in the cold zone.
- 8-5 At the completion of this unit, the paramedic student will have an awareness of the human hazard of crime and violence and the safe operation at crime scenes and other emergencies.

**UNIT TERMINAL OBJECTIVE**

1-1 At the completion of this unit, the paramedic student will understand his or her roles and responsibilities within an EMS system, and how these roles and responsibilities differ from other levels of providers.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

**A,B** 1-1.1 Define the following terms: (C-1)

- a. EMS Systems
- b. Licensure
- c. Certification
- d. Registration
- e. Profession
- f. Professionalism
- g. Health care professional
- h. Ethics
- i. Peer review
- j. Medical direction
- k. Protocols

**A,B,C,D** 1-1.2 Describe key historical events that influenced the development of national Emergency Medical Services (EMS) systems. (C-1)

**A,B,C,D** 1-1.3 Identify national groups important to the development, education, and implementation of EMS. (C-1)

**A,B,C** 1-1.4 Differentiate among the four nationally recognized levels of EMS training/ education, leading to licensure/ certification/ registration. (C-1)

**A,B,C** 1-1.5 Describe the attributes of a paramedic as a health care professional. (C-1)

**A,B,C** 1-1.6 Describe the recognized levels of EMS training/ education, leading to licensure/ certification in his or her state. (C-1)

**A,B** 1-1.7 Explain paramedic licensure/ certification, recertification, and reciprocity requirements in his or her state. (C-1)

**A,B** 1-1.8 Evaluate the importance of maintaining one's paramedic license/ certification. (C-3)

**A,B** 1-1.9 Describe the benefits of paramedic continuing education. (C-1)

**A,B** 1-1.10 List current state requirements for paramedic education in his/ her state. (C-1)

**A,B** 1-1.11 Discuss the role of national associations and of a national registry agency. (C-1)

**A,B** 1-1.12 Discuss current issues in his/ her state impacting EMS. (C-1)

**A,B** 1-1.13 Discuss the roles of various EMS standard setting agencies. (C-1)

**A,B,C** 1-1.14 Identify the standards (components) of an EMS System as defined by the National Highway Traffic Safety Administration. (C-1)

**A,B,C** 1-1.15 Describe how professionalism applies to the paramedic while on and off duty. (C-1)

**A,B,C** 1-1.16 Describe examples of professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service. (C-1)

**A,B,C** 1-1.17 Provide examples of activities that constitute appropriate professional behavior for a paramedic. (C-2)

**A,B,E** 1-1.18 Describe the importance of quality EMS research to the future of EMS. (C-3)

**A,B** 1-1.19 Identify the benefits of paramedics teaching in their community. (C-1)

**A,B,C** 1-1.20 Describe what is meant by "citizen involvement in the EMS system." (C-1)

**A,B** 1-1.21 Analyze how the paramedic can benefit the health care system by supporting primary care to patients in the out-of-hospital setting. (C-3)

**A,B,C** 1-1.22 List the primary and additional responsibilities of paramedics. (C-1)

**A,B,C** 1-1.23 Describe the role of the EMS physician in providing medical direction. (C-1)

**A,B,C** 1-1.24 Describe the benefits of medical direction, both on-line and off-line. (C-1)

**A,B** 1-1.25 Describe the process for the development of local policies and protocols. (C-2)

**A,B** 1-1.26 Provide examples of local protocols. (C-1)

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410**

- A,B,C** 1-1.27 Discuss prehospital and out-of-hospital care as an extension of the physician. (C-1)
- A,B,C** 1-1.28 Describe the relationship between a physician on the scene, the paramedic on the scene, and the EMS physician providing on-line medical direction. (C-1)
- A,B,D** 1-1.29 Describe the components of continuous quality improvement. (C-1)
- A,B,E** 1-1.30 Analyze the role of continuous quality improvement with respect to continuing medical education and research. (C-3)
- B,C,F** 1-1.31 Define the role of the paramedic relative to the safety of the crew, the patient, and bystanders. (C-1)
- B, 430** 1-1.32 Identify local health care agencies and transportation resources for patients with special needs. (C-1)
- B** 1-1.33 Describe the role of the paramedic in health education activities related to illness and injury prevention. (C-1)
- B,E** 1-1.34 Describe the importance and benefits of research. (C-2)
- B,E** 1-1.35 Explain the EMS provider's role in data collection. (C-1)
- B,E** 1-1.36 Explain the basic principles of research. (C-1)
- B,E** 1-1.37 Describe a process of evaluating and interpreting research. (C-3)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B** 1-1.38 Assess personal practices relative to the responsibility for personal safety, the safety of the crew, the patient, and bystanders. (A-3)
- B** 1-1.39 Serve as a role model for others relative to professionalism in EMS. (A-3)
- B** 1-1.40 Value the need to serve as the patient advocate inclusive of those with special needs, alternate life styles and cultural diversity. (A-3)
- B** 1-1.41 Defend the importance of continuing medical education and skills retention. (A-3)
- B,E** 1-1.42 Advocate the need for supporting and participating in research efforts aimed at improving EMS systems. (A-3)
- B** 1-1.43 Assess personal attitudes and demeanor that may distract from professionalism. (A-3)
- B** 1-1.44 Value the role that family dynamics plays in the total care of patients. (A-3)
- B, H** 1-1.45 Advocate the need for injury prevention, including abusive situations. (A-1)
- B** 1-1.46 Exhibit professional behaviors in the following areas: integrity, empathy, self-motivation, appearance and personal hygiene, self-confidence, communications, time management, teamwork and diplomacy, respect, patient advocacy, and careful delivery of service. (A-2)

### **PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**UNIT TERMINAL OBJECTIVE**

- B** 1-2 At the completion of this unit, the paramedic student will understand and value the importance of personal wellness in EMS and serve as a healthy role model for peers.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,F** 1-2.1 Discuss the concept of wellness and its benefits. (C-1)
- B,F** 1-2.2 Define the components of wellness. (C-1)
- B,F** 1-2.3 Describe the role of the paramedic in promoting wellness. (C-1)
- B,F** 1-2.4 Discuss the components of wellness associated with proper nutrition. (C-1)
- B,F** 1-2.5 List principles of weight control. (C-1)
- B,F** 1-2.6 Discuss how cardiovascular endurance, muscle strength, and flexibility contribute to physical fitness. (C-2)
- B** 1-2.7 Describe the impact of shift work on circadian rhythms. (C-1)
- B** 1-2.8 Discuss how periodic risk assessments and knowledge of warning signs contribute to cancer and cardiovascular disease prevention. (C-1)
- B,F** 1-2.9 Differentiate proper from improper body mechanics for lifting and moving patients in emergency and non-emergency situations. (C-3)
- B,C,F** 1-2.10 Describe the problems that a paramedic might encounter in a hostile situation and the techniques used to manage the situation. (C-1)
- B,C,F** 1-2.11 Given a scenario involving arrival at the scene of a motor vehicle collision, assess the safety of the scene and propose ways to make the scene safer. (C-3)
- B,F** 1-2.12 List factors that contribute to safe vehicle operations. (C-1)
- B,F** 1-2.13 Describe the considerations that should be given to: (C-1)
- Using escorts
  - Adverse environmental conditions
  - Using lights and siren
  - Proceeding through intersections
  - Parking at an emergency scene
- B,F** 1-2.14 Discuss the concept of "due regard for the safety of all others" while operating an emergency vehicle. (C-1)
- B,C,F** 1-2.15 Describe the equipment available for self-protection when confronted with a variety of adverse situations. (C-1)
- B** 1-2.16 Describe the benefits and methods of smoking cessation. (C-1)
- B** 1-2.17 Describe the three phases of the stress response. (C-1)
- B** 1-2.18 List factors that trigger the stress response. (C-1)
- B,F,G** 1-2.19 Differentiate between normal/ healthy and detrimental reactions to anxiety and stress. (C-3)
- B,F,G** 1-2.20 Describe the common physiological and psychological effects of stress. (C-1)
- B,F,G** 1-2.21 Identify causes of stress in EMS. (C-1)
- B,F,G** 1-2.22 Describe behavior that is a manifestation of stress in patients and those close to them and how these relate to paramedic stress. (C-1)
- B,F,G** 1-2.23 Identify and describe the defense mechanisms and management techniques commonly used to deal with stress. (C-1)
- B,F,G** 1-2.24 Describe the components of critical incident stress management (CISM). (C-1)
- B,F,G** 1-2.25 Provide examples of situations in which CISM would likely be beneficial to paramedics. (C-1)
- B,F,G** 1-2.26 Given a scenario involving a stressful situation, formulate a strategy to help cope with the stress. (C-3)
- B,F,G** 1-2.27 Describe the stages of the grieving process (Kubler-Ross). (C-1)
- B,F,G** 1-2.28 Describe the needs of the paramedic when dealing with death and dying. (C-1)
- B,G** 1-2.29 Describe the unique challenges for paramedics in dealing with the needs of children and other special populations related to their understanding or experience of death and dying. (C-1)
- B,C,F** 1-2.30 Discuss the importance of universal precautions and body substance isolation practices. (C-1)
- B,F** 1-2.31 Describe the steps to take for personal protection from airborne and bloodborne pathogens. (C-1)

- B,F** 1-2.32 Given a scenario in which equipment and supplies have been exposed to body substances, plan for the proper cleaning, disinfection, and disposal of the items. (C-3)
- B,F** 1-2.33 Explain what is meant by an exposure and describe principles for management. (C-1)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A,B,G** 1-2.34 Advocate the benefits of working toward the goal of total personal wellness. (A-2)
- A,B,G** 1-2.35 Serve as a role model for other EMS providers in regard to a total wellness lifestyle. (A-3)
- A,B,G** 1-2.36 Value the need to assess his/ her own lifestyle. (A-2)
- A,B,G** 1-2.37 Challenge his/ herself to each wellness concept in his/ her role as a paramedic. (A-3)
- A,B,G** 1-2.38 Defend the need to treat each patient as an individual, with respect and dignity. (A-2)
- A,B,G** 1-2.39 Assess his/ her own prejudices related to the various aspects of cultural diversity. (A-3)
- A,B,G** 1-2.40 Improve personal physical well-being through achieving and maintaining proper body weight, regular exercise and proper nutrition. (A-3)
- A,B,G** 1-2.41 Promote and practice stress management techniques. (A-3)
- A,B,G** 1-2.42 Defend the need to respect the emotional needs of dying patients and their families. (A-3)
- A,B,G** 1-2.43 Advocate and practice the use of personal safety precautions in all scene situations. (A-3)
- A,B** 1-2.44 Advocate and serve as a role model for other EMS providers relative to body substance isolation practices. (A-3)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- F, H** 1-2.45 Demonstrate safe methods for lifting and moving patients in emergency and non-emergency situations. (P-2)
- F** 1-2.46 Demonstrate the proper procedures to take for personal protection from disease. (P-2)



**FINAL VERSION**

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**Preparatory: 1**

Illness and Injury Prevention: 3

**UNIT TERMINAL OBJECTIVE**

- H 1-3 At the completion of this unit, the paramedic student will be able to integrate the implementation of primary injury prevention activities as an effective way to reduce death, disabilities and health care costs.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H 1.3-1 Describe the incidence, morbidity and mortality of unintentional and alleged unintentional events. (C-1)
- H 1.3-2 Identify the human, environmental, and socioeconomic impact of unintentional and alleged unintentional events. (C-1)
- H 1.3-3 Identify health hazards and potential crime areas within the community. (C-1)
- H 1.3-4 Identify local municipal and community resources available for physical, socioeconomic crises. (C-1)
- H 1.3-5 List the general and specific environmental parameters that should be inspected to assess a patient's need for preventative information and direction. (C-1)
- H 1.3-6 Identify the role of EMS in local municipal and community prevention programs. (C-1)
- H 1.3-7 Identify the local prevention programs that promote safety for all age populations. (C-2)
- H 1.3-8 Identify patient situations where the paramedic can intervene in a preventative manner. (C-1)
- H 1.3-9 Document primary and secondary injury prevention data. (C-1)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H 1.3-10 Value and defend tenets of prevention in terms of personal safety and wellness. (A-3)
- H 1.3-11 Value and defend tenets of prevention for patients and communities being served. (A-3)
- H 1.3-12 Value the contribution of effective documentation as one justification for funding of prevention programs. (A-3)
- H 1.3-13 Value personal commitment to success of prevention programs. (A-3)

**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H 1.3-14 Demonstrate the use of protective equipment appropriate to the environment and scene. (P-3)

**UNIT TERMINAL OBJECTIVE**

- B,D** 1-4 At the completion of this unit, the paramedic student will understand the legal issues that impact decisions made in the out-of-hospital environment.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,D** 1-4.1 Differentiate between legal and ethical responsibilities. (C-2)
- B,D** 1-4.2 Describe the basic structure of the legal system in the United States. (C-1)
- B,D** 1-4.3 Differentiate between civil and criminal law as it pertains to the paramedic. (C-1)
- B,D** 1-4.4 Identify and explain the importance of laws pertinent to the paramedic. (C-1)
- B** 1-4.5 Differentiate between licensure and certification as they apply to the paramedic. (C-1)
- B,D** 1-4.6 List the specific problems or conditions encountered while providing care that a paramedic is required to report, and identify in each instance to whom the report is to be made. (C-1)
- B,D** 1-4.7 Define the following terms: (C-1)
- a. Abandonment
  - b. Advance directives
  - c. Assault
  - d. Battery
  - e. Breach of duty
  - f. Confidentiality
  - g. Consent (expressed, implied, informed, involuntary)
  - h. Do not resuscitate (DNR) orders
  - i. Duty to act
  - j. Emancipated minor
  - k. False imprisonment
  - l. Immunity
  - m. Liability
  - n. Libel
  - o. Minor
  - p. Negligence
  - q. Proximate cause
  - r. Scope of practice
  - s. Slander
  - t. Standard of care
  - u. Tort
- B,D** 1-4.8 Differentiate between the scope of practice and the standard of care for paramedic practice. (C-3)
- B** 1-4.9 Discuss the concept of medical direction, including off-line medical direction and on-line medical direction, and its relationship to the standard of care of a paramedic. (C-1)
- B,D** 1-4.10 Describe the four elements that must be present in order to prove negligence. (C-1)
- B,D** 1-4.11 Given a scenario in which a patient is injured while a paramedic is providing care, determine whether the four components of negligence are present. (C-2)
- B,D** 1-4.12 Given a scenario, demonstrate patient care behaviors that would protect the paramedic from claims of negligence. (C-3)
- B,D** 1-4.13 Explain the concept of liability as it might apply to paramedic practice, including physicians providing medical direction and paramedic supervision of other care providers. (C-2)
- B,D** 1-4.14 Discuss the legal concept of immunity, including Good Samaritan statutes and governmental immunity, as it applies to the paramedic. (C-1)
- B,C,F** 1-4.15 Explain the importance and necessity of patient confidentiality and the standards for maintaining patient confidentiality that apply to the paramedic. (C-1)
- B,F** 1-4.16 Differentiate among expressed, informed, implied, and involuntary consent. (C-2)
- B,F** 1-4.17 Given a scenario in which a paramedic is presented with a conscious patient in need of care, describe the process used to obtain consent. (C-2)
- B,F** 1-4.18 Identify the steps to take if a patient refuses care. (C-1)

- B,F** 1-4.19 Given a scenario, demonstrate appropriate patient management and care techniques in a refusal of care situation. (C-3)
- D** 1-4.20 Describe what constitutes abandonment. (C-1)
- D** 1-4.21 Identify the legal issues involved in the decision not to transport a patient, or to reduce the level of care being provided during transportation. (C-1)
- D** 1-4.22 Describe how hospitals are selected to receive patients based on patient need and hospital capability and the role of the paramedic in such selection. (C-1)
- D,F** 1-4.23 Differentiate between assault and battery and describe how to avoid each. (C-2)
- D,F** 1-4.24 Describe the conditions under which the use of force, including restraint, is acceptable. (C-1)
- D,F** 1-4.25 Explain the purpose of advance directives relative to patient care and how the paramedic should care for a patient who is covered by an advance directive. (C-1)
- D,F** 1-4.26 Discuss the responsibilities of the paramedic relative to resuscitation efforts for patients who are potential organ donors. (C-1)
- D,F** 1-4.27 Describe the actions that the paramedic should take to preserve evidence at a crime or accident scene. (C-1)
- D,F** 1-4.28 Describe the importance of providing accurate documentation (oral and written) in substantiating an incident. (C-1)
- D,F** 1-4.29 Describe the characteristics of a patient care report required to make it an effective legal document. (C-1)
- F** 1-4.30 Given a scenario, prepare a patient care report, including an appropriately detailed narrative. (C-2)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B** 1-4.31 Advocate the need to show respect for the rights and feelings of patients. (A-3)
- B** 1-4.32 Assess his/ her personal commitment to protecting patient confidentiality. (A-3)
- B** 1-4.33 Given a scenario involving a new employee, explain the importance of obtaining consent for adults and minors. (A-2)
- B** 1-4.34 Defend personal beliefs about withholding or stopping patient care. (A-3)
- B** 1-4.35 Defend the value of advance medical directives. (A-3)

### **PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**FINAL VERSION**

For review only. Do not cite, quote or publish.

**Preparatory: 1****Ethics: 5**

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**UNIT TERMINAL OBJECTIVE**

A 1-5 At the completion of this unit, the paramedic student will understand the role that ethics plays in decision making in the out-of-hospital environment.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A,B,D 1-5.1 Define ethics. (C-1)  
A,B,D 1-5.2 Distinguish between ethical and moral decisions. (C-3)  
A,B,D 1-5.3 Identify the premise that should underlie the paramedic's ethical decisions in out-of hospital care. (C-1)  
A,B,D,F 1-5.4 Analyze the relationship between the law and ethics in EMS. (C-3)  
A,B 1-5.5 Compare and contrast the criteria that may be used in allocating scarce EMS resources. (C-3)  
A,B,D 1-5.6 Identify the issues surrounding the use of advance directives, in making a prehospital resuscitation decision. (C-1)  
A,B,D 1-5.7 Describe the criteria necessary to honor an advance directive in your state. (C-1)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A,B 1-5.8 Value the patient's autonomy in the decision-making process. (A-2)  
A,B 1-5.9 Defend the following ethical positions: (A-3)  
a. The paramedic is accountable to the patient.  
b. The paramedic is accountable to the medical director.  
c. The paramedic is accountable to the EMS system.  
d. The paramedic is accountable for fulfilling the standard of care.  
A,B 1-5.10 Given a scenario, defend or challenge a paramedic's actions concerning a patient who is treated against his/ her wishes. (A-3)  
A,B 1-5.11 Given a scenario, defend a paramedic's actions in a situation where a physician orders therapy the paramedic feels to be detrimental to the patient's best interests. (A-3)

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

## FINAL VERSION

For review only. Do not cite, quote or publish.

Preparatory: 1

General Principles of Pathophysiology: 6

### UNIT TERMINAL OBJECTIVE

All courses 1-6 At the completion of this unit, the paramedic student will be able to apply the general concepts of pathophysiology for the assessment and management of emergency patients.

### COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- I,J 1-6.1 Discuss cellular adaptation. (C-1)
- I,J 1-6.2 Describe cellular injury and cellular death. (C-1)
- I,J 1-6.3 Describe the factors that precipitate disease in the human body. (C-1)
- I,J 1-6.4 Describe the cellular environment. (C-1)
- A 1-6.5 **Discuss analyzing disease risk. (C-1)**
- A 1-6.6 Describe environmental risk factors. (C-1)
- A 1-6.7 Discuss combined effects and interaction among risk factors. (C-1)
- A,K 1-6.8 Describe aging as a risk factor for disease. (C-1)
- A 1-6.9 Discuss familial diseases and associated risk factors. (C-1)
- C 1-6.10 Discuss hypoperfusion. (C-1)
- H,L 1-6.11 Define cardiogenic, hypovolemic, neurogenic, anaphylactic and septic shock. (C-1)
- H 1-6.12 Describe multiple organ dysfunction syndrome. (C-1)
- L 1-6.13 Define the characteristics of the immune response. (C-1)
- L 1-6.14 Discuss induction of the immune system. (C-1)
- M 1-6.15 **Discuss fetal and neonatal immune function. (C-1)**
- L,K 1-6.16 **Discuss aging and the immune function in the elderly. (C-1)**
- H,L 1-6.17 Describe the inflammation response. (C-1)
- H,L 1-6.18 Discuss the role of mast cells as part of the inflammation response. (C-1)
- H,L 1-6.19 **Describe the plasma protein system. (C-1)**
- H,L 1-6.20 **Discuss the cellular components of inflammation. (C-1)**
- H,L 1-6.21 Describe the systemic manifestations of the inflammation response. (C-1)
- H,L 1-6.22 **Describe the resolution and repair from inflammation. (C-1)**
- H,L 1-6.23 **Discuss the effect of aging on the mechanisms of self-defense. (C-1)**
- H,L 1-6.24 Discuss hypersensitivity. (C-1)
- H,L 1-6.25 Describe deficiencies in immunity and inflammation. (C-1)
- C,H,L 1-6.26 Describe homeostasis as a dynamic steady state. (C-1)
- H,L 1-6.27 List types of tissue. (C-1)
- H,L 1-6.28 Describe the systemic manifestations that result from cellular injury. (C-1)
- H,L 1-6.29 Describe neuroendocrine regulation. (C-1)
- H,L 1-6.30 Discuss the inter-relationships between stress, coping, and illness. (C-1)

### AFFECTIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- All courses 1-6.31 Advocate the need to understand and apply the knowledge of pathophysiology to patient assessment and treatment. (A-2)

### PSYCHOMOTOR OBJECTIVES

None identified for this unit.

**A**=EMC 340, **B**=EMC 496, **C**=HSCC 240, **D**=HSCC 330, **E**=HSCC 470, **F**=HSCC 241, **G**=PSY 460, **H**=EMC 410  
**I**=BIO 291, **J**=BIO 292, **K**=EMC 430, **L**=EMC 370, **M**=EMC 420

**FINAL VERSION**

For review only. Do not cite, quote or publish.

**Preparatory: 1**  
**Pharmacology: 7****UNIT TERMINAL OBJECTIVE**

**All courses** 1-7 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles of pharmacology and the assessment findings to formulate a field impression and implement a pharmacologic management plan.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,L 1-7.1 Describe historical trends in pharmacology. (C-1)
- B,L 1-7.2 Differentiate among the chemical, generic (nonproprietary), and trade (proprietary) names of a drug. (C-3)
- B,L 1-7.3 List the four main sources of drug products. (C-1)
- B,L 1-7.4 Describe how drugs are classified. (C-1)
- B,L 1-7.5 List the authoritative sources for drug information. (C-1)
- B,L 1-7.6 List legislative acts controlling drug use and abuse in the United States. (C-1)
- B,L 1-7.7 Differentiate among Schedule I, II, III, IV, and V substances. (C-3)
- B,L 1-7.8 List examples of substances in each schedule. (C-1)
- B,L 1-7.9 Discuss standardization of drugs. (C-1)
- B,L 1-7.10 **Discuss investigational drugs, including the Food and Drug Administration (FDA) approval process and the FDA classifications for newly approved drugs. (C-1)**
- B,L 1-7.11 Discuss special consideration in drug treatment with regard to pregnant, pediatric and geriatric patients. (C-1)
- B,L 1-7.12 Discuss the paramedic's responsibilities and scope of management pertinent to the administration of medications. (C-1)
- B,L 1-7.13 Review the specific anatomy and physiology pertinent to pharmacology with additional attention to autonomic pharmacology. (C-1)
- B,L 1-7.14 List and describe general properties of drugs. (C-1)
- B,L 1-7.15 List and describe liquid and solid drug forms. (C-1)
- B,L 1-7.16 List and differentiate routes of drug administration. (C-3)
- B,L 1-7.17 Differentiate between enteral and parenteral routes of drug administration. (C-3)
- B,L 1-7.18 Describe mechanisms of drug action. (C-1)
- B,L 1-7.19 List and differentiate the phases of drug activity, including the pharmaceutical, pharmacokinetic, and pharmacodynamic phases. (C-3)
- B,L 1-7.20 Describe the process called pharmacokinetics, pharmacodynamics, including theories of drug action, drug-response relationship, factors altering drug responses, predictable drug responses, iatrogenic drug responses, and unpredictable adverse drug responses. (C-1)
- B,L 1-7.21 Differentiate among drug interactions. (C-3)
- B,L 1-7.22 Discuss considerations for storing and securing medications. (C-1)
- B,L 1-7.23 List the component of a drug profile by classification. (C-1)
- B,L 1-7.24 List and describe drugs that the paramedic may administer according to local protocol. (C-1)
- B,L 1-7.25 Integrate pathophysiological principles of pharmacology with patient assessment. (C-3)
- B,L 1-7.26 Synthesize patient history information and assessment findings to form a field impression. (C-3)
- B,L 1-7.27 Synthesize a field impression to implement a pharmacologic management plan. (C-3)
- B,L 1-7.28 Assess the pathophysiology of a patient's condition by identifying classifications of drugs. (C-3)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- L 1-7.29 Serve as a model for obtaining a history by identifying classifications of drugs. (A-3)
- L 1-7.30 Defend the administration of drugs by a paramedic to affect positive therapeutic affect. (A-3)
- L 1-7.31 Advocate drug education through identification of drug classifications. (A-3)

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410**  
**I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361**

**UNIT TERMINAL OBJECTIVE**

**H,N,O** 1-8 At the completion of this unit, the paramedic student will be able to safely and precisely access the venous circulation and administer medications.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,L** 1-8.1 Review the specific anatomy and physiology pertinent to medication administration. (C-1)  
**B,L** 1-8.2 Review mathematical principles. (C-1)  
**B,L** 1-8.3 Review mathematical equivalents. (C-1)  
**B,L** 1-8.4 Differentiate temperature readings between the Centigrade and Fahrenheit scales. (C-3)  
**B,L** 1-8.5 Discuss formulas as a basis for performing drug calculations. (C-1)  
**B,L** 1-8.6 Discuss applying basic principles of mathematics to the calculation of problems associated with medication dosages. (C-1)  
**B,L** 1-8.7 Describe how to perform mathematical conversions from the household system to the metric system. (C-1)  
**B,H,O** 1-8.8 Describe the indications, equipment needed, technique used, precautions, and general principles of peripheral venous or external jugular cannulation. (C-1)  
**B,H,O** 1-8.9 Describe the indications, equipment needed, technique used, precautions, and general principles of intraosseous needle placement and infusion. (C-1)  
**B,N** 1-8.10 Discuss legal aspects affecting medication administration. (C-1)  
**B,N** 1-8.11 Discuss the "six rights" of drug administration and correlate these with the principles of medication administration. (C-1)  
**B,O** 1-8.12 Discuss medical asepsis and the differences between clean and sterile techniques. (C-1)  
**B,O** 1-8.13 Describe use of antiseptics and disinfectants. (C-1)  
**B,N,O** 1-8.14 Describe the use of universal precautions and body substance isolation (BSI) procedures when administering a medication. (C-1)  
**B,N** 1-8.15 Differentiate among the different dosage forms of oral medications. (C-3)  
**B,N** 1-8.16 Describe the equipment needed and general principles of administering oral medications. (C-3)  
**B,N,O** 1-8.17 Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the inhalation route. (C-3)  
**B,O** 1-8.18 Describe the indications, equipment needed, techniques used, precautions, and general principles of administering medications by the gastric tube. (C-3)  
**B,O** 1-8.19 Describe the indications, equipment needed, techniques used, precautions, and general principles of rectal medication administration. (C-3)  
**B,N,O** 1-8.20 Differentiate among the different parenteral routes of medication administration. (C-3)  
**B,N,O** 1-8.21 Describe the equipment needed, techniques used, complications, and general principles for the preparation and administration of parenteral medications. (C-1)  
**B,N,O** 1-8.22 Differentiate among the different percutaneous routes of medication administration. (C-3)  
**B,O** 1-8.23 Describe the purpose, equipment needed, techniques used, complications, and general principles for obtaining a blood sample. (C-1)  
**B,O** 1-8.24 Describe disposal of contaminated items and sharps. (C-1)  
**B,N** 1-8.25 Synthesize a pharmacologic management plan including medication administration. (C-3)  
**B,N** 1-8.26 Integrate pathophysiological principles of medication administration with patient management. (C-3)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- O** 1-8.27 Comply with paramedic standards of medication administration. (A-1)  
**O** 1-8.28 Comply with universal precautions and body substance isolation (BSI). (A-1)  
**O** 1-8.29 Defend a pharmacologic management plan for medication administration. (A-3)  
**O** 1-8.30 Serve as a model for medical asepsis. (A-3)

- O   1-8.31 Serve as a model for advocacy while performing medication administration. (A-3)
- O   1-8.32 Serve as a model for disposing contaminated items and sharps. (A-3)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- O   1-8.33 Use universal precautions and body substance isolation (BSI) procedures during medication administration. (P-2)
- O   1-8.34 Demonstrate cannulation of peripheral or external jugular veins. (P-2)
- O   1-8.35 Demonstrate intraosseous needle placement and infusion. (P-2)
- O   1-8.36 Demonstrate clean technique during medication administration. (P-3)
- O   1-8.37 Demonstrate administration of oral medications. (P-2)
- O   1-8.38 Demonstrate administration of medications by the inhalation route. (P-2)
- O   1-8.39 Demonstrate administration of medications by the gastric tube. (P-2)
- O   1-8.40 Demonstrate rectal administration of medications. (P-2)
- O   1-8.41 Demonstrate preparation and administration of parenteral medications. (P-2)
- O   1-8.42 Demonstrate preparation and techniques for obtaining a blood sample. (P-2)
- O   1-8.43 Perfect disposal of contaminated items and sharps. (P-3)



**UNIT TERMINAL OBJECTIVE**

- A 1-9 At the completion of this unit, the paramedic student will be able to integrate the principles of therapeutic communication to effectively communicate with any patient while providing care.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A,C,F 1-9.1 Define communication. (C-1)  
A,C,F 1-9.2 Identify internal and external factors that affect a patient/ bystander interview conducted by a paramedic. (C-1)  
A,C,F 1-9.3 Restate the strategies for developing patient rapport. (C-1)  
A,C,F 1-9.4 Provide examples of open-ended and closed or direct questions. (C-1)  
A,C,F 1-9.5 Discuss common errors made by paramedics when interviewing patients. (C-1)  
A,C,F 1-9.6 Identify the nonverbal skills that are used in patient interviewing. (C-1)  
A,C,F 1-9.7 Restate the strategies to obtain information from the patient. (C-1)  
A,C,F 1-9.8 Summarize the methods to assess mental status based on interview techniques. (C-1)  
A,C,F 1-9.9 Discuss the strategies for interviewing a patient who is unmotivated to talk. (C-1)  
A,C,F 1-9.10 Differentiate the strategies a paramedic uses when interviewing a patient who is hostile compared to one who is cooperative. (C-3)  
A,C,F 1-9.11 Summarize developmental considerations of various age groups that influence patient interviewing. (C-1)  
A,K 1-9.12 Restate unique interviewing techniques necessary to employ with patients who have special needs. (C-1)  
A,K 1-9.13 Discuss interviewing considerations used by paramedics in cross-cultural communications. (C-1)

**AFFECTIVE OBJECTIVES**

- A 1-9.14 Serve as a model for an effective communication process. (A-3)  
A 1-9.15 Advocate the importance of external factors of communication. (A-2)  
A 1-9.16 Promote proper responses to patient communication. (A-2)  
A 1-9.17 Exhibit professional non-verbal behaviors. (A-2)  
A 1-9.18 Advocate development of proper patient rapport. (A-2)  
A 1-9.19 Value strategies to obtain patient information. (A-2)  
A 1-9.20 Exhibit professional behaviors in communicating with patients in special situations. (A-3)  
A 1-9.21 Exhibit professional behaviors in communication with patient from different cultures. (A-3)

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**FINAL VERSION**

For review only. Do not cite, quote or publish.

**Preparatory: 1**

Life Span Development: 10

**UNIT TERMINAL OBJECTIVE**

**A,M** 1-10 At the completion of this unit, the paramedic student will be able to integrate the physiological, psychological, and sociological changes throughout human development with assessment and communication strategies for patients of all ages.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- M** 1-10.1 Compare the physiological and psychosocial characteristics of an infant with those of an early adult. (C-3)
- M** 1-10.2 Compare the physiological and psychosocial characteristics of a toddler with those of an early adult. (C-3)
- M** 1-10.3 Compare the physiological and psychosocial characteristics of a pre-school child with those of an early adult. (C-3)
- M** 1-10.4 Compare the physiological and psychosocial characteristics of a school-aged child with those of an early adult. (C-3)
- M** 1-10.5 Compare the physiological and psychosocial characteristics of an adolescent with those of an early adult. (C-3)
- A** 1-10.6 Summarize the physiological and psychosocial characteristics of an early adult. (C-3)
- A** 1-10.7 Compare the physiological and psychosocial characteristics of a middle aged adult with those of an early adult. (C-3)
- A** 1-10.8 Compare the physiological and psychosocial characteristics of a person in late adulthood with those of an early adult. (C-3)

**AFFECTIVE OBJECTIVES**

- A,M** 1-10.9 Value the uniqueness of infants, toddlers, pre-school, school aged, adolescent, early adulthood, middle aged, and late adulthood physiological and psychosocial characteristics. (A-3)

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**UNIT TERMINAL OBJECTIVE**

**B, C, F, H, N, P2-1** At the completion of this unit, the paramedic student will be able to establish and/ or maintain a patent airway, oxygenate, and ventilate a patient.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

<b>B, C, F, H, O, P</b>	2-1.1	Explain the primary objective of airway maintenance. (C-1)
<b>B, C, F, H, O, P</b>	2-1.2	Identify commonly neglected prehospital skills related to airway. (C-1)
<b>B, C, F, H, O, P</b>	2-1.3	Identify the anatomy of the upper and lower airway. (C-1)
<b>B, C, F, H, O, P</b>	2-1.4	Describe the functions of the upper and lower airway. (C-1)
<b>B, C, F, H, O, P</b>	2-1.5	Explain the differences between adult and pediatric airway anatomy. (C-1)
<b>B, C, F, H, O, P</b>	2-1.6	Define gag reflex. (C-1)
<b>B, C, F, H, O, P</b>	2-1.7	Explain the relationship between pulmonary circulation and respiration. (C-3)
<b>B, C, F, H, O, P</b>	2-1.8	List the concentration of gases that comprise atmospheric air. (C-1)
<b>B, C, F, H, O, P</b>	2-1.9	Describe the measurement of oxygen in the blood. (C-1)
<b>B, C, F, H, O, P</b>	2-1.10	Describe the measurement of carbon dioxide in the blood. (C-1)
<b>B, H, O, P</b>	2-1.11	Describe peak expiratory flow. (C-1)
<b>B, H, O, P</b>	2-1.12	List factors that cause decreased oxygen concentrations in the blood. (C-1)
<b>B, H, O, P</b>	2-1.13	List the factors that increase and decrease carbon dioxide production in the body. (C-1)
<b>B, H, O, P</b>	2-1.14	Define atelectasis. (C-1)
<b>B, H, O, P</b>	2-1.15	Define FiO <sub>2</sub> . (C-1)
<b>B, H, O, P</b>	2-1.16	Define and differentiate between hypoxia and hypoxemia. (C-1)
<b>B, H, O, P</b>	2-1.17	Describe the voluntary and involuntary regulation of respiration. (C-1)
<b>B, H, O, P</b>	2-1.18	Describe the modified forms of respiration. (C-1)
<b>B, H, O, P</b>	2-1.19	Define normal respiratory rates and tidal volumes for the adult, child, and infant. (C-1)
<b>B, C, H, O, P</b>	2-1.20	List the factors that affect respiratory rate and depth. (C-1)
<b>B, H, O, P</b>	2-1.21	Explain the risk of infection to EMS providers associated with ventilation. (C-3)
<b>B, H, O, P</b>	2-1.22	Define pulsus paradoxus. (C-1)
<b>B, H, O, P</b>	2-1.23	Define and explain the implications of partial airway obstruction with good and poor air exchange. (C-1)
<b>B, C, H, O, P</b>	2-1.24	Define complete airway obstruction. (C-1)
<b>B, C, H, O, P</b>	2-1.25	Describe causes of upper airway obstruction. (C-1)
<b>B, C, H, O, P</b>	2-1.26	Describe causes of respiratory distress. (C-1)
<b>B, C, H, O, P</b>	2-1.27	Describe manual airway maneuvers. (C-1)
<b>B, H, O, P</b>	2-1.28	Describe the Sellick (cricoid pressure) maneuver. (C-1)
<b>B, C, F, H, O, P</b>	2-1.29	Describe complete airway obstruction maneuvers. (C-1)
<b>B, C, F, H, O, P</b>	2-1.30	Explain the purpose for suctioning the upper airway. (C-1)
<b>B, C, F, H, O, P</b>	2-1.31	Identify types of suction equipment. (C-1)
<b>B, C, F, H, O, P</b>	2-1.32	Describe the indications for suctioning the upper airway. (C-3)
<b>B, C, F, H, O, P</b>	2-1.33	Identify types of suction catheters, including hard or rigid catheters and soft catheters. (C-1)
<b>B, C, F, H, O, P</b>	2-1.34	Identify techniques of suctioning the upper airway. (C-1)
<b>B, C, F, H, O, P</b>	2-1.35	Identify special considerations of suctioning the upper airway. (C-1)
<b>B, H, O, P</b>	2-1.36	Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique of tracheobronchial suctioning in the intubated patient. (C-3)
<b>B, C, F, H, O, P</b>	2-1.37	Describe the use of an oral and nasal airway. (C-1)
<b>B, H, O, P</b>	2-1.38	Identify special considerations of tracheobronchial suctioning in the intubated patient. (C-1)
<b>B, C, F, H, O, P</b>	2-1.39	Define gastric distention. (C-1)
<b>B, H, O, P</b>	2-1.40	Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for inserting a nasogastric tube and orogastric tube. (C-1)
<b>B, H, O, P</b>	2-1.41	Identify special considerations of gastric decompression. (C-1)
<b>B, C, F, H, O, P</b>	2-1.42	Describe the indications, contraindications, advantages, disadvantages, complications, and technique for inserting an oropharyngeal and nasopharyngeal airway (C-1)

<u>B, C, F, H, O, P</u>	2-1.43	Describe the indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient by: (C-1) a. Mouth-to-mouth b. Mouth-to-nose c. Mouth-to-mask d. One person bag-valve-mask e. Two person bag-valve-mask f. Three person bag-valve-mask g. Flow-restricted, oxygen-powered ventilation device
<u>B, F, H, O, P</u>	2-1.44	Explain the advantage of the two person method when ventilating with the bag-valve-mask. (C-1)
<u>B, F, H, O, P</u>	2-1.45	Compare the ventilation techniques used for an adult patient to those used for pediatric patients. (C-3)
<u>B, H, O, P</u>	2-1.46	Describe indications, contraindications, advantages, disadvantages, complications, and technique for ventilating a patient with an automatic transport ventilator (ATV). (C-1)
<u>B, F, H, O, P</u>	2-1.47	Explain safety considerations of oxygen storage and delivery. (C-1)
<u>B, F, H, O, P</u>	2-1.48	Identify types of oxygen cylinders and pressure regulators (including a high-pressure regulator and a therapy regulator). (C-1)
<u>B, F, H, O, P</u>	2-1.49	List the steps for delivering oxygen from a cylinder and regulator. (C-1)
<u>B, F, H, O, P</u>	2-1.50	Describe the use, advantages and disadvantages of an oxygen humidifier. (C-1)
<u>B, F, H, O, P</u>	2-1.51	Describe the indications, contraindications, advantages, disadvantages, complications, liter flow range, and concentration of delivered oxygen for supplemental oxygen delivery devices. (C-3)
<u>B, H, O, P</u>	2-1.52	Define, identify and describe a tracheostomy, stoma, and tracheostomy tube. (C-1)
<u>B, H, O, P</u>	2-1.53	Define, identify, and describe a laryngectomy. (C-1)
<u>B, F, H, O, P</u>	2-1.54	Define how to ventilate with a patient with a stoma, including mouth-to-stoma and bag-valve-mask-to-stoma ventilation. (C-1)
<u>B, H, O, P</u>	2-1.55	Describe the special considerations in airway management and ventilation for patients with facial injuries. (C-1)
<u>B, F, H, M, O, P</u>	2-1.56	Describe the special considerations in airway management and ventilation for the pediatric patient. (C-1)
<u>B, H, O, P</u>	2-1.57	Differentiate endotracheal intubation from other methods of advanced airway management. (C-3)
<u>B, H, O, P</u>	2-1.58	Describe the indications, contraindications, advantages, disadvantages and complications of endotracheal intubation. (C-1)
<u>B, H, O, P</u>	2-1.59	Describe laryngoscopy for the removal of a foreign body airway obstruction. (C-1)
<u>B, H, O, P</u>	2-1.60	Describe the indications, contraindications, advantages, disadvantages, complications, equipment, and technique for direct laryngoscopy. (C-1)
<u>B, H, O, P</u>	2-1.61	Describe visual landmarks for direct laryngoscopy. (C-1)
<u>B, H, O, P</u>	2-1.62	Describe use of cricoid pressure during intubation. (C-1)
<u>B, H, O, P</u>	2-1.63	Describe indications, contraindications, advantages, disadvantages, complications, equipment and technique for digital endotracheal intubation. (C-1)
<u>B, H, O, P</u>	2-1.64	Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for using a dual lumen airway. (C-3)
<u>B, H, O, P</u>	2-1.65	Describe the indications, contraindications, advantages, disadvantages, complications and equipment for rapid sequence intubation with neuromuscular blockade. (C-1)
<u>B, H, N, O, P</u>	2-1.66	Identify neuromuscular blocking drugs and other agents used in rapid sequence intubation. (C-1)
<u>B, H, O, P</u>	2-1.67	Describe the indications, contraindications, advantages, disadvantages, complications and equipment for sedation during intubation. (C-1)
<u>B, H, N, O, P</u>	2-1.68	Identify sedative agents used in airway management. (C-1)
<u>B, H, O, P</u>	2-1.69	Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for nasotracheal intubation. (C-1)
<u>B, H, O, P</u>	2-1.70	Describe the indications, contraindications, advantages, disadvantages and complications for performing an open cricothyrotomy. (C-3)
<u>B, H, O, P</u>	2-1.71	Describe the equipment and technique for performing an open cricothyrotomy. (C-1)

- B,H,O,P** 2-1.72 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for transtaryngeal catheter ventilation (needle cricothyrotomy). (C-3)
- B,H,O,P** 2-1.73 Describe methods of assessment for confirming correct placement of an endotracheal tube. (C-1)
- B,H,O,P** 2-1.74 Describe methods for securing an endotracheal tube. (C-1)
- B,H,O,P** 2-1.75 Describe the indications, contraindications, advantages, disadvantages, complications, equipment and technique for extubation. (C-1)
- B,H,M,O,P** 2-1.76 Describe methods of endotracheal intubation in the pediatric patient. (C-1)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,C,F,H,O,P** 2-1.77 Defend the need to oxygenate and ventilate a patient. (A-1)
- B,C,F,H,O,P** 2-1.78 Defend the necessity of establishing and/ or maintaining patency of a patient's airway. (A-1)
- B,C,F,H,O,P** 2-1.79 Comply with standard precautions to defend against infectious and communicable diseases. (A-1)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H,O** 2-1.80 Perform body substance isolation (BSI) procedures during basic airway management, advanced airway management, and ventilation. (P-2)
- H,O** 2-1.81 Perform pulse oximetry. (P-2)
- H,O** 2-1.82 Perform end-tidal CO<sub>2</sub> detection. (P-2)
- H,O** 2-1.83 Perform peak expiratory flow testing. (P-2)
- H,O** 2-1.84 Perform manual airway maneuvers, including: (P-2)
- Opening the mouth
  - Head-tilt/ chin-lift maneuver
  - Jaw-thrust without head-tilt maneuver
  - Modified jaw-thrust maneuver
- H,O** 2-1.85 Perform manual airway maneuvers for pediatric patients, including: (P-2)
- Opening the mouth
  - Head-tilt/ chin-lift maneuver
  - Jaw-thrust without head-tilt maneuver
  - Modified jaw-thrust maneuver
- H,O** 2-1.86 Perform the Sellick maneuver (cricoid pressure). (P-2)
- H,O** 2-1.87 Perform complete airway obstruction maneuvers, including: (P-2)
- Heimlich maneuver
  - Finger sweep
  - Chest thrusts
  - Removal with Magill forceps
- H,O** 2-1.88 Demonstrate suctioning the upper airway by selecting a suction device, catheter and technique. (P-2)
- H,O** 2-1.89 Perform tracheobronchial suctioning in the intubated patient by selecting a suction device, catheter and technique. (P-2)
- H,O** 2-1.90 Demonstrate insertion of a nasogastric tube. (P-2)
- H,O** 2-1.91 Demonstrate insertion of an orogastric tube. (P-2)
- H,O** 2-1.92 Perform gastric decompression by selecting a suction device, catheter and technique. (P-2)
- H,O** 2-1.93 Demonstrate insertion of an oropharyngeal airway. (P-2)
- H,O** 2-1.94 Demonstrate insertion of a nasopharyngeal airway. (P-2)
- H,O** 2-1.95 Demonstrate ventilating a patient by the following techniques: (P-2)
- Mouth-to-mask ventilation
  - One person bag-valve-mask
  - Two person bag-valve-mask
  - Three person bag-valve-mask
  - Flow-restricted, oxygen-powered ventilation device

- f. Automatic transport ventilator
- g. Mouth-to-stoma
- h. Bag-valve-mask-to-stoma ventilation
- H,O 2-1.96 Ventilate a pediatric patient using the one and two person techniques. (P-2)
- H,O 2-1.97 Perform ventilation with a bag-valve-mask with an in-line small-volume nebulizer. (P-2)
- H,O 2-1.98 Perform oxygen delivery from a cylinder and regulator with an oxygen delivery device. (P-2)
- H,O 2-1.99 Perform oxygen delivery with an oxygen humidifier. (P-
- H,O 2-1.100 Deliver supplemental oxygen to a breathing patient using the following devices: nasal cannula, simple face mask, partial rebreather mask, non-rebreather mask, and venturi mask (P-2)
- H,O 2-1.101 Perform stoma suctioning. (P-2)
- H,O 2-1.102 Perform retrieval of foreign bodies from the upper airway. (P-2)
- H,O 2-1.103 Perform assessment to confirm correct placement of the endotracheal tube. (P-2)
- H,O 2-1.104 Intubate the trachea by the following methods: (P-2)
  - a. Orotracheal intubation
    - b. Nasotracheal intubation
    - c. Multi-lumen airways
    - d. Digital intubation
    - e. Transillumination
    - f. Open cricothyrotomy
- H,O 2-1.105 Adequately secure an endotracheal tube. (P-1)
- H,O 2-1.106 Perform endotracheal intubation in the pediatric patient. (P-2)
- H,O 2-1.107 Perform transtracheal catheter ventilation (needle cricothyrotomy). (P-2)
- H,O 2-1.108 Perform extubation. (P-2)
- H,O 2-1.109 Perform replacement of a tracheostomy tube through a stoma. (P-2)

**FINAL VERSION**

For review only. Do not cite, quote or publish.

**Patient Assessment: 3**

History Taking : 1

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**UNIT TERMINAL OBJECTIVE**

- A,B 3-1 At the completion of this unit, the paramedic student will be able to use the appropriate techniques to obtain a medical history from a patient.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A,B,C,F 3-1.1 Describe the techniques of history taking. (C-1)  
A,B,C,F 3-1.2 Discuss the importance of using open ended questions. (C-1)  
A,B 3-1.3 Describe the use of facilitation, reflection, clarification, empathetic responses, confrontation, and interpretation. (C-1)  
A,B 3-1.4 Differentiate between facilitation, reflection, clarification, sympathetic responses, confrontation, and interpretation. (C-3)  
A,B 3-1.5 Describe the structure and purpose of a health history. (C-1)  
A,B 3-1.6 Describe how to obtain a comprehensive health history. (C-1)  
A,B 3-1.7 List the components of a comprehensive history of an adult patient. (C-1)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A,B 3-1.8 Demonstrate the importance of empathy when obtaining a health history. (A-1)  
A,B 3-1.9 Demonstrate the importance of confidentiality when obtaining a health history. (A-1)

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**UNIT TERMINAL OBJECTIVE**

- A 3-2 At the completion end of this unit, the paramedic student will be able to explain the pathophysiological significance of physical exam findings.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A,C,F 3-2.1 Define the terms inspection, palpation, percussion, auscultation. (C-1)  
A,C,F 3-2.2 Describe the techniques of inspection, palpation, percussion, and auscultation. (C-1)  
A,C,F 3-2.3 Describe the evaluation of mental status. (C-1)  
A,C,F 3-2.4 Evaluate the importance of a general survey. (C-3)  
A,C,F 3-2.5 Describe the examination of skin, hair and nails. (C-1)  
A,C,F 3-2.6 Differentiate normal and abnormal findings of the assessment of the skin. (C-3)  
A,C,F 3-2.7 Distinguish the importance of abnormal findings of the assessment of the skin. (C-3)  
A,C,F 3-2.8 Describe the examination of the head and neck. (C-1)  
A,C,F 3-2.9 Differentiate normal and abnormal findings of the scalp examination. (C-3)  
A,C,F 3-2.10 Describe the normal and abnormal assessment findings of the skull. (C-1)  
A 3-2.11 Describe the assessment of visual acuity. (C-1)  
A 3-2.12 Explain the rationale for the use of an ophthalmoscope. (C-1)  
A,C,F 3-2.13 Describe the examination of the eyes. (C-1)  
A,C,F 3-2.14 Distinguish between normal and abnormal assessment findings of the eyes. (C-3)  
A 3-2.15 Explain the rationale for the use of an otoscope. (C-1)  
A,C,F 3-2.16 Describe the examination of the ears. (C-1)  
A,C,F 3-2.17 Differentiate normal and abnormal assessment findings of the ears. (C-3)  
A,C,F 3-2.18 Describe the examination of the nose. (C-1)  
A,C,F 3-2.19 Differentiate normal and abnormal assessment findings of the nose. (C-3)  
A,C,F 3-2.20 Describe the examination of the mouth and pharynx. (C-1)  
A,C,F 3-2.21 Differentiate normal and abnormal assessment findings of the mouth and pharynx. (C-3)  
A,C,F 3-2.22 Describe the examination of the neck. (C-1)  
A,C,F 3-2.23 Differentiate normal and abnormal assessment findings the neck. (C-3)  
A,C,F 3-2.24 Describe the survey of the thorax and respiration. (C-1)  
A,C,F 3-2.25 Describe the examination of the posterior chest. (C-1)  
A 3-2.26 Describe percussion of the chest. (C-1)  
A 3-2.27 Differentiate the percussion notes and their characteristics. (C-3)  
A,C,F 3-2.28 Differentiate the characteristics of breath sounds. (C-3)  
A,C,F 3-2.29 Describe the examination of the anterior chest. (C-1)  
A,C,F 3-2.30 Differentiate normal and abnormal assessment findings of the chest examination. (C-3)  
A 3-2.31 Describe special examination techniques related to the assessment of the chest. (C-1)  
A,C,F 3-2.32 Describe the examination of the arterial pulse including rate, rhythm, and amplitude. (C-1)  
A,C,F 3-2.33 Distinguish normal and abnormal findings of arterial pulse. (C-3)  
A 3-2.34 Describe the assessment of jugular venous pressure and pulsations. (C-1)  
A 3-2.35 Distinguish normal and abnormal examination findings of jugular venous pressure and pulsations. (C-3)  
A 3-2.36 Describe the examination of the heart and blood vessels. (C-1)  
A 3-2.37 Differentiate normal and abnormal assessment findings of the heart and blood vessels. (C-3)  
A 3-2.38 Describe the auscultation of the heart. (C-1)  
A 3-2.39 Differentiate the characteristics of normal and abnormal findings associated with the auscultation of the heart. (C-3)  
A 3-2.40 Describe special examination techniques of the cardiovascular examination. (C-1)  
A,C,F 3-2.41 Describe the examination of the abdomen. (C-1)  
A,C,F 3-2.42 Differentiate normal and abnormal assessment findings of the abdomen. (C-3)  
A 3-2.43 Describe auscultation of the abdomen. (C-1)  
A 3-2.44 Distinguish normal and abnormal findings of the auscultation of the abdomen. (C-3)



- A 3-2.45 Describe the examination of the female genitalia. (C-1)
- A 3-2.46 Differentiate normal and abnormal assessment findings of the female genitalia. (C-3)
- A 3-2.47 Describe the examination of the male genitalia. (C-1)
- A 3-2.48 Differentiate normal and abnormal findings of the male genitalia. (C-3)
- A 3-2.49 Describe the examination of the anus and rectum. (C-3)
- A 3-2.50 Distinguish between normal and abnormal findings of the anus and rectum. (C-3)
- A 3-2.51 Describe the examination of the peripheral vascular system. (C-1)
- A 3-2.52 Differentiate normal and abnormal findings of the peripheral vascular system. (C-3)
- A 3-2.53 Describe the examination of the musculoskeletal system. (C-1)
- A 3-2.54 Differentiate normal and abnormal findings of the musculoskeletal system. (C-3)
- A 3-2.55 Describe the examination of the nervous system. (C-1)
- A 3-2.56 Differentiate normal and abnormal findings of the nervous system. (C-3)
- A 3-2.57 Describe the assessment of the cranial nerves. (C-1)
- A 3-2.58 Differentiate normal and abnormal findings of the cranial nerves. (C-3)
- A 3-2.59 Describe the general guidelines of recording examination information. (C-1)
- A,C,F 3-2.60 Discuss the considerations of examination of an infant or child. (C-1)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A 3-2.61 Demonstrate a caring attitude when performing physical examination skills. (A-3)
- A 3-2.62 Discuss the importance of a professional appearance and demeanor when performing physical examination skills. (A-1)
- A 3-2.63 Appreciate the limitations of conducting a physical exam in the out-of-hospital environment. (A-2)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A 3-2.64 Demonstrate the examination of skin, hair and nails. (P-2)
- A 3-2.65 Demonstrate the examination of the head and neck. (P-2)
- A 3-2.66 Demonstrate the examination of the eyes. (P-2)
- A 3-2.67 Demonstrate the examination of the ears. (P-2)
- A 3-2.68 Demonstrate the assessment of visual acuity. (P-2)
- A 3-2.69 Demonstrate the examination of the nose. (P-2)
- A 3-2.70 Demonstrate the examination of the mouth and pharynx. (P-2)
- A 3-2.71 Demonstrate the examination of the neck. (P-2)
- A 3-2.72 Demonstrate the examination of the thorax and ventilation. (P-2)
- A 3-2.73 Demonstrate the examination of the posterior chest. (P-2)
- A 3-2.74 Demonstrate auscultation of the chest. (P-2)
- A 3-2.75 Demonstrate percussion of the chest. (P-2)
- A 3-2.76 Demonstrate the examination of the anterior chest. (P-2)
- A 3-2.77 Demonstrate special examination techniques related to the assessment of the chest. (P-2)
- A 3-2.78 Demonstrate the examination of the arterial pulse including location, rate, rhythm, and amplitude. (P-2)
- A 3-2.79 Demonstrate the assessment of jugular venous pressure and pulsations. (P-2)
- A 3-2.80 Demonstrate the examination of the heart and blood vessels. (P-2)
- A 3-2.81 Demonstrate special examination techniques of the cardiovascular examination. (P-2)
- A 3-2.82 Demonstrate the examination of the abdomen. (P-2)
- A 3-2.83 Demonstrate auscultation of the abdomen. (P-2)
- A 3-2.84 Demonstrate the external visual examination of the female genitalia. (P-2)
- A 3-2.85 Demonstrate the examination of the male genitalia. (P-2)
- A 3-2.86 Demonstrate the examination of the peripheral vascular system. (P-2)
- A 3-2.87 Demonstrate the examination of the musculoskeletal system. (P-2)
- A 3-2.88 Demonstrate the examination of the nervous system. (P-2)

**UNIT TERMINAL OBJECTIVE**

- A** 3-3 At the end of this unit, the paramedic student will be able to integrate the principles of history taking and techniques of physical exam to perform a patient assessment.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A,C,F,H** 3-3.1 Recognize hazards/ potential hazards. (C-1)  
**A,C,F,H** 3-3.2 Describe common hazards found at the scene of a trauma and a medical patient. (C-1)  
**A,C,F,H** 3-3.3 Determine hazards found at the scene of a medical or trauma patient. (C-2)  
**A,C,F,H** 3-3.4 Differentiate safe from unsafe scenes. (C-3)  
**A,C,F,H** 3-3.5 Describe methods to making an unsafe scene safe. (C-1)  
**A,C,F,H** 3-3.6 Discuss common mechanisms of injury/ nature of illness. (C-1)  
**A,C,F,H** 3-3.7 Predict patterns of injury based on mechanism of injury. (C-2)  
**A,C,F,H** 3-3.8 Discuss the reason for identifying the total number of patients at the scene. (C-1)  
**A,C,F,H** 3-3.9 Organize the management of a scene following size-up. (C-3)  
**A,C,F,H** 3-3.10 Explain the reasons for identifying the need for additional help or assistance. (C-1)  
**A,C,F,H** 3-3.11 Summarize the reasons for forming a general impression of the patient. (C-1)  
**A,C,F,H** 3-3.12 Discuss methods of assessing mental status. (C-1)  
**A,C,F,H** 3-3.13 Categorize levels of consciousness in the adult, infant and child. (C-3)  
**A,C,F,H** 3-3.14 Differentiate between assessing the altered mental status in the adult, child and infant patient. (C-3)  
**A,C,F,H** 3-3.15 Discuss methods of assessing the airway in the adult, child and infant patient. (C-1)  
**A,C,F,H** 3-3.16 State reasons for management of the cervical spine once the patient has been determined to be a trauma patient. (C-1)  
**A,C,F,H** 3-3.17 Analyze a scene to determine if spinal precautions are required. (C-3)  
**A,C,F,H** 3-3.18 Describe methods used for assessing if a patient is breathing. (C-1)  
**A,C,F,H** 3-3.19 Differentiate between a patient with adequate and inadequate minute ventilation. (C-3)  
**A,C,F,H** 3-3.20 Distinguish between methods of assessing breathing in the adult, child and infant patient. (C-3)  
**A,C,F,H** 3-3.21 Compare the methods of providing airway care to the adult, child and infant patient. (C-3)  
**A,C,F,H** 3-3.22 Describe the methods used to locate and assess a pulse. (C-1)  
**A,C,F,H** 3-3.23 Differentiate between locating and assessing a pulse in an adult, child and infant patient. (C-3)  
**A,C,F,H** 3-3.24 Discuss the need for assessing the patient for external bleeding. (C-1)  
**A,C,F,H** 3-3.25 Describe normal and abnormal findings when assessing skin color. (C-1)  
**A,C,F,H** 3-3.26 Describe normal and abnormal findings when assessing skin temperature. (C-1)  
**A,C,F,H** 3-3.27 Describe normal and abnormal findings when assessing skin condition. (C-1)  
**A,C,F,H** 3-3.28 Explain the reason for prioritizing a patient for care and transport. (C-1)  
**A,C,F,H** 3-3.29 Identify patients who require expeditious transport. (C-3)  
**A,C,F,H** 3-3.30 Describe the evaluation of patient's perfusion status based on findings in the initial assessment. (C-1)  
**A,C,F,H** 3-3.31 Describe orthostatic vital signs and evaluate their usefulness in assessing a patient in shock. (C-1)  
**A,C,F,H** 3-3.32 Apply the techniques of physical examination to the medical patient. (C-1)  
**A,C,F,H** 3-3.33 Differentiate between the assessment that is performed for a patient who is unresponsive or has an altered mental status and other medical patients requiring assessment. (C-3)  
**A,C,F,H** 3-3.34 Discuss the reasons for reconsidering the mechanism of injury. (C-1)  
**A,C,F,H** 3-3.35 State the reasons for performing a rapid trauma assessment. (C-1)  
**A,C,F,H** 3-3.36 Recite examples and explain why patients should receive a rapid trauma assessment. (C-1)  
**A,C,F,H** 3-3.37 Apply the techniques of physical examination to the trauma patient. (C-1)  
**A,C,F,H** 3-3.38 Describe the areas included in the rapid trauma assessment and discuss what should be evaluated. (C-1)  
**A,C,F,H** 3-3.39 Differentiate cases when the rapid assessment may be altered in order to provide patient care. (C-3)

- A,C,F,H 3-3.40 Discuss the reason for performing a focused history and physical exam. (C-1)
- A,C,F,H 3-3.41 Describe when and why a detailed physical examination is necessary. (C-1)
- A,C,F,H 3-3.42 Discuss the components of the detailed physical exam in relation to the techniques of examination. (C-1)
- A,C,F,H 3-3.43 State the areas of the body that are evaluated during the detailed physical exam. (C-1)
- A,C,F,H 3-3.44 Explain what additional care should be provided while performing the detailed physical exam. (C-1)
- A,C,F,H 3-3.45 Distinguish between the detailed physical exam that is performed on a trauma patient and that of the medical patient. (C-3)
- A,C,F,H 3-3.46 Differentiate patients requiring a detailed physical exam from those who do not. (C-3)
- A,C,F,H 3-3.47 Discuss the reasons for repeating the initial assessment as part of the on-going assessment. (C-1)
- A,C,F,H 3-3.48 Describe the components of the on-going assessment. (C-1)
- A,C,F,H 3-3.49 Describe trending of assessment components. (C-1)
- A,C,F,H 3-3.50 Discuss medical identification devices/ systems. (C-1)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A,H 3-3.51 Explain the rationale for crew members to evaluate scene safety prior to entering. (A-2)
- A,H 3-3.52 Serve as a model for others explaining how patient situations affect your evaluation of mechanism of injury or illness. (A-3)
- A,H 3-3.53 Explain the importance of forming a general impression of the patient. (A-1)
- A,H 3-3.54 Explain the value of performing an initial assessment. (A-2)
- A,H 3-3.55 Demonstrate a caring attitude when performing an initial assessment. (A-3)
- A,H 3-3.56 Attend to the feelings that patients with medical conditions might be experiencing. (A-1)
- A,H 3-3.57 Value the need for maintaining a professional caring attitude when performing a focused history and physical examination. (A-3)
- A,H 3-3.58 Explain the rationale for the feelings that these patients might be experiencing. (A-3)
- A,H 3-3.59 Demonstrate a caring attitude when performing a detailed physical examination. (A-3)
- A,H 3-3.60 Explain the value of performing an on-going assessment. (A-2)
- A,H 3-3.61 Recognize and respect the feelings that patients might experience during assessment. (A-1)
- A,H 3-3.62 Explain the value of trending assessment components to other health professionals who assume care of the patient. (A-2)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- A,H 3-3.63 Observe various scenarios and identify potential hazards. (P-1)
- A,H 3-3.64 Demonstrate the scene-size-up. (P-2)
- A,H 3-3.65 Demonstrate the techniques for assessing mental status. (P-2)
- A,H 3-3.66 Demonstrate the techniques for assessing the airway. (P-2)
- A,H 3-3.67 Demonstrate the techniques for assessing if the patient is breathing. (P-2)
- A,H 3-3.68 Demonstrate the techniques for assessing if the patient has a pulse. (P-2)
- A,H 3-3.69 Demonstrate the techniques for assessing the patient for external bleeding. (P-2)
- A,H 3-3.70 Demonstrate the techniques for assessing the patient's skin color, temperature, and condition. (P-2)
- A,H 3-3.71 Demonstrate the ability to prioritize patients. (P-2)
- A,H 3-3.72 Using the techniques of examination, demonstrate the assessment of a medical patient. (P-2)
- A,H 3-3.73 Demonstrate the patient care skills that should be used to assist with a patient who is responsive with no known history. (P-2)
- A,H 3-3.74 Demonstrate the patient care skills that should be used to assist with a patient who is unresponsive or has an altered mental status. (P-2)
- A,H 3-3.75 Perform a rapid medical assessment. (P-2)
- A,H 3-3.76 Perform a focused history and physical exam of the medical patient. (P-2)
- A,H 3-3.77 Using the techniques of physical examination, demonstrate the assessment of a trauma patient. (P-2)

- A,H 3-3.78 Demonstrate the rapid trauma assessment used to assess a patient based on mechanism of injury. (P-2)
- A,H 3-3.79 Perform a focused history and physical exam on a non-critically injured patient. (P-2)
- A,H 3-3.80 Perform a focused history and physical exam on a patient with life-threatening injuries. (P-2)
- A,H 3-3.81 Perform a detailed physical examination. (P-2)
- A,H 3-3.82 Demonstrate the skills involved in performing the on-going assessment. (P-2)

**FINAL VERSION**

For review only. Do not cite, quote or publish

**Patient Assessment: 3****Clinical Decision Making: 4**

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**UNIT TERMINAL OBJECTIVE**

- A   3-4     At the end of this unit, the paramedic student will be able to apply a process of clinical decision making to use the assessment findings to help form a field impression.

**COGNITIVE OBJECTIVES**

At the end of this unit, the paramedic student will be able to:

- A   3-4.1    Compare the factors influencing medical care in the out-of-hospital environment to other medical settings. (C-2)
- A,F  3-4.2    Differentiate between critical life-threatening, potentially life-threatening, and non life-threatening patient presentations. (C-3)
- A   3-4.3    Evaluate the benefits and shortfalls of protocols, standing orders and patient care algorithms. (C-3)
- A   3-4.4    Define the components, stages and sequences of the critical thinking process for paramedics. (C-1)
- A   3-4.5    Apply the fundamental elements of critical thinking for paramedics. (C-2)
- A   3-4.6    Describe the effects of the “fight or flight” response and the positive and negative effects on a paramedic’s decision making. (C-1)
- A   3-4.7    Summarize the “six Rs” of putting it all together: Read the patient, Read the scene, React, Reevaluate, Revise the management plan, Review performance. (C-1)

**AFFECTIVE OBJECTIVES**

At the end of this unit, the paramedic student will be able to:

- A   3-4.8    Defend the position that clinical decision making is the cornerstone of effective paramedic practice. (A-3)
- A   3-4.9    Practice facilitating behaviors when thinking under pressure. (A-1)

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**UNIT TERMINAL OBJECTIVE**

H, Q, R, S, T 3-5 At the completion of this unit, the paramedic student will be able to follow an accepted format for dissemination of patient information in verbal form, either in person or over the radio.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- C, F 3-5.1 Identify the importance of communications when providing EMS. (C-1)
- C, F 3-5.2 Identify the role of verbal, written, and electronic communications in the provision of EMS. (C-1)
- C, F 3-5.3 Describe the phases of communications necessary to complete a typical EMS event. (C-1)
- C, F 3-5.4 Identify the importance of proper terminology when communicating during an EMS event. (C-1)
- C, F 3-5.5 Identify the importance of proper verbal communications during an EMS event. (C-1)
- C, F 3-5.6 List factors that impede effective verbal communications. (C-1)
- C, F 3-5.7 List factors which enhance verbal communications. (C-1)
- C, F, Q, R, S, T 3-5.8 Identify the importance of proper written communications during an EMS event. (C-1)
- C, F, Q, R, S, T 3-5.9 List factors which impede effective written communications. (C-1)
- C, F, Q, R, S, T 3-5.10 List factors which enhance written communications. (C-1)
- C, D, F, Q, R, S, T 3-5.11 Recognize the legal status of written communications related to an EMS event. (C-1)
- C, F, Q, R, S, T 3-5.12 State the importance of data collection during an EMS event. (C-1)
- C, F, Q, R, S, T 3-5.13 Identify technology used to collect and exchange patient and/ or scene information electronically. (C-1)
- C, D, F, Q, R, S, T 3-5.14 Recognize the legal status of patient medical information exchanged electronically. (C-1)
- H 3-5.15 Identify the components of the local EMS communications system and describe their function and use. (C-1)
- H 3-5.16 Identify and differentiate among the following communications systems: (C-3)
  - a. Simplex
  - b. Multiplex
  - c. Duplex
  - d. Trunked
  - e. Digital communications
  - f. Cellular telephone
  - g. Facsimile
  - h. Computer
- H 3-5.17 Identify the components of the local dispatch communications system and describe their function and use. (C-1)
- H 3-5.18 Describe the functions and responsibilities of the Federal Communications Commission. (C-1)
- C, H 3-5.19 Describe how an EMS dispatcher functions as an integral part of the EMS team. (C-1)
- C, H 3-5.20 List appropriate information to be gathered by the Emergency Medical Dispatcher. (C-1)
- C, H 3-5.21 Identify the role of Emergency Medical Dispatch in a typical EMS event. (C-1)
- C, H 3-5.22 Identify the importance of pre-arrival instructions in a typical EMS event. (C-1)
- C, H 3-5.23 Describe the purpose of verbal communication of patient information to the hospital. (C-1)
- F, H 3-5.24 Describe information that should be included in patient assessment information verbally reported to medical direction. (C-1)
- H 3-5.25 Diagram a basic model of communications. (C-3)
- H 3-5.26 Organize a list of patient assessment information in the correct order for electronic transmission to medical direction according to the format used locally. (C-3)

### **AFFECTIVE OBJECTIVES**

At the end of this unit, the paramedic student will be able to:

A, H, Q, R, S, T 3-5.27 Show appreciation for proper terminology when describing a patient or patient condition.  
(A-2)

### **PSYCHOMOTOR OBJECTIVES**

At the end of this unit, the paramedic student will be able to:

H, R, S, T 3-5.28 Demonstrate the ability to use the local dispatch communications system. (P-1)

H, R, S, T 3-5.29 Demonstrate the ability to use a radio. (P-1)

H, R, S, T 3-5.30 Demonstrate the ability to use the biotelemetry equipment used locally. (P-1)

**UNIT TERMINAL OBJECTIVE**

**R,S,T,U** 3-6 At the completion of this unit, the paramedic student will be able to effectively document the essential elements of patient assessment, care and transport.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- F,R,S,T,U** 3-6.1 Identify the general principles regarding the importance of EMS documentation and ways in which documents are used. (C-1)
- C,F,R,S,T,U** 3-6.2 Identify and use medical terminology correctly. (C-1)
- D,R,S,T,U** 3-6.3 Recite appropriate and accurate medical abbreviations and acronyms. (C-1)
- R,S,T,U** 3-6.4 Record all pertinent administrative information. (C-1)
- D,F,R,S,T,U** 3-6.5 Explain the role of documentation in agency reimbursement. (C-1)
- D,F,R,S,T,U** 3-6.6 Analyze the documentation for accuracy and completeness, including spelling. (C-3)
- D,F,R,S,T,U** 3-6.7 Identify and eliminate extraneous or nonprofessional information. (C-1)
- D,F,R,S,T,U** 3-6.8 Describe the differences between subjective and objective elements of documentation. (C-1)
- D,F,R,S,T,U** 3-6.9 Evaluate a finished document for errors and omissions. (C-3)
- D,F,R,S,T,U** 3-6.10 Evaluate a finished document for proper use and spelling of abbreviations and acronyms. (C-3)
- D,F,R,S,T,U** 3-6.11 Evaluate the confidential nature of an EMS report. (C-3)
- D,F,R,S,T,U** 3-6.12 Describe the potential consequences of illegible, incomplete, or inaccurate documentation. (C-1)
- D,F,R,S,T,U** 3-6.13 Describe the special considerations concerning patient refusal of transport. (C-3)
- D,F,R,S,T,U** 3-6.14 Record pertinent information using a consistent narrative format. (C-3)
- D,F,R,S,T,U** 3-6.15 Explain how to properly record direct patient or bystander comments. (C-1)
- R,S,T,U** 3-6.16 Describe the special considerations concerning mass casualty incident documentation. (C-1)
- R,S,T,U** 3-6.17 Apply the principles of documentation to computer charting, as access to this technology becomes available. (C-2)
- F,R,S,T,U** 3-6.18 Identify and record the pertinent, reportable clinical data of each patient interaction. (C-1)
- F,R,S,T,U** 3-6.19 Note and record "pertinent negative" clinical findings. (C-1)
- D,F,R,S,T,U** 3-6.20 Correct errors and omissions, using proper procedures as defined under local protocol. (C-1)
- D,F,R,S,T,U** 3-6.21 Revise documents, when necessary, using locally-approved procedures. (C-1)
- R,S,T,U** 3-6.22 Assume responsibility for self-assessment of all documentation. (C-3)
- R,S,T,U** 3-6.23 Demonstrate proper completion of an EMS event record used locally. (C-3)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- R,S,T,U** 3-6.24 Advocate among peers the relevance and importance of properly completed documentation. (A-3)
- R,S,T,U** 3-6.25 Resolve the common negative attitudes toward the task of documentation. (A-3)

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.



**FINAL VERSION**

For review only. Do not cite, quote or publish.

**Trauma: 4****Trauma Systems and Mechanism of Injury: 1**

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**UNIT TERMINAL OBJECTIVE**

- H 4-1 At the completion of this unit, the Paramedic student will be able to integrate the principles of kinematics to enhance the patient assessment and predict the likelihood of injuries based on the patient's mechanism of injury.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the Paramedic student will be able to:

- H 4-1.1 List and describe the components of a comprehensive trauma system. (C-1)  
H 4-1.2 Describe the role of and differences between levels of trauma centers. (C-3)  
H 4-1.3 Describe the criteria for transport to a trauma center. (C-1)  
H 4-1.4 Describe the criteria and procedure for air medical transport. (C-1)  
C,H 4-1.5 Define energy and force as they relate to trauma. (C-1)  
C,H 4-1.6 Define laws of motion and energy and understand the role that increased speed has on injuries. (C-1)  
C,H 4-1.7 Describe each type of impact and its effect on unrestrained victims (e.g., "down and under," "up and over," compression, deceleration). (C-1)  
C,H 4-1.8 Describe the pathophysiology of the head, spine, thorax, and abdomen that result from the above forces. (C-1)  
C,H 4-1.9 List specific injuries and their causes as related to interior and exterior vehicle damage. (C-1)  
C,H 4-1.10 Describe the kinematics of penetrating injuries. (C-1)  
C,H 4-1.11 List the motion and energy considerations of mechanisms other than motor vehicle crashes. (C-1)  
C,H 4-1.12 Define the role of kinematics as an additional tool for patient assessment. (C-1)

**AFFECTIVE OBJECTIVES**

None identified for this unit.

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**UNIT TERMINAL OBJECTIVE**

**H,L,P** 4-2 the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with shock or hemorrhage.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- C,H,L,P** 4-2.1 Describe the epidemiology, including the morbidity/ mortality and prevention strategies, for shock and hemorrhage. (C-1)
- C,H,L,P** 4-2.2 Discuss the anatomy and physiology of the cardiovascular system. (C-1)
- C,H,L,P** 4-2.3 Predict shock and hemorrhage based on mechanism of injury. (C-1)
- C,H,L,P** 4-2.4 Discuss the various types and degrees of shock and hemorrhage. (C-1)
- C,H,L,P** 4-2.4 Discuss the pathophysiology of hemorrhage and shock. (C-1)
- C,H,L,P** 4-2.4 Discuss the assessment findings associated with hemorrhage and shock. (C-1)
- C,H,L,P** 4-2.4 Identify the need for intervention and transport of the patient with hemorrhage or shock. (C-1)
- C,H,L,P** 4-2.4 Discuss the treatment plan and management of hemorrhage and shock. (C-1)
- C,H,L,P** 4-2.4 Discuss the management of external hemorrhage. (C-1)
- C,H,L,P** 4-2.4 Differentiate between controlled and uncontrolled hemorrhage. (C-3)
- H,L,P** 4-2.4 Differentiate between the administration rate and amount of IV fluid in a patient with controlled versus uncontrolled hemorrhage. (C-3)
- H,L,P** 4-2.4 Relate internal hemorrhage to the pathophysiology of compensated and decompensated hemorrhagic shock. (C-3)
- H,L,P** 4-2.4 Relate internal hemorrhage to the assessment findings of compensated and decompensated hemorrhagic shock. (C-3)
- C,H,L,P** 4-2.4 Discuss the management of internal hemorrhage. (C-1)
- H,L,P** 4-2.4 Define shock based on aerobic and anaerobic metabolism. (C-1)
- H,L,P** 4-2.4 Describe the incidence, morbidity, and mortality of shock. (C-1)
- C,H,L,P** 4-2.4 Describe the body's physiologic response to changes in perfusion. (C-1)
- C,H,L,P** 4-2.4 Describe the effects of decreased perfusion at the capillary level. (C-1)
- H,L,P** 4-2.4 Discuss the cellular ischemic phase related to hemorrhagic shock. (C-1)
- H,L,P** 4-2.4 Discuss the capillary stagnation phase related to hemorrhagic shock. (C-1)
- H,L,P** 4-2.4 Discuss the capillary washout phase related to hemorrhagic shock. (C-1)
- C,F,H,L,P** 4-2.4 Discuss the assessment findings of hemorrhagic shock. (C-1)
- H,L,P** 4-2.4 Relate pulse pressure changes to perfusion status. (C-3)
- H,L,P** 4-2.4 Relate orthostatic vital sign changes to perfusion status. (C-3)
- C,H,L,P** 4-2.4 Define compensated and decompensated hemorrhagic shock. (C-1)
- C,H,L,P** 4-2.4 Discuss the pathophysiological changes associated with compensated shock. (C-1)
- C,H,L,P** 4-2.4 Discuss the assessment findings associated with compensated shock. (C-1)
- C,H,L,P** 4-2.4 Identify the need for intervention and transport of the patient with compensated shock. (C-1)
- C,H,L,P** 4-2.4 Discuss the treatment plan and management of compensated shock. (C-1)
- C,H,L,P** 4-2.4 Discuss the pathophysiological changes associated with decompensated shock. (C-1)
- C,H,L,P** 4-2.4 Discuss the assessment findings associated with decompensated shock. (C-1)
- C,H,L,P** 4-2.4 Identify the need for intervention and transport of the patient with decompensated shock. (C-1)
- C,H,L,P** 4-2.4 Discuss the treatment plan and management of the patient with decompensated shock. (C-1)
- C,H,L,P** 4-2.4 Differentiate between compensated and decompensated shock. (C-3)
- C,H,L,P** 4-2.4 Relate external hemorrhage to the pathophysiology of compensated and decompensated hemorrhagic shock. (C-3)
- C,H,L,P** 4-2.4 Relate external hemorrhage to the assessment findings of compensated and decompensated hemorrhagic shock. (C-3)
- H,L,P** 4-2.4 Differentiate between the normotensive, hypotensive, or profoundly hypotensive patient. (C-3)

- H,L,P** 4-2.4 Differentiate between the administration of fluid in the normotensive, hypotensive, or profoundly hypotensive patient. (C-3)
- F,H,L,P** 4-2.4 Discuss the physiologic changes associated with the pneumatic anti-shock garment (PASG). (C-1)
- F,H,L,P** 4-2.4 Discuss the indications and contraindications for the application and inflation of the PASG. (C-1)
- H,L,P** 4-2.4 Apply epidemiology to develop prevention strategies for hemorrhage and shock. (C-1)
- H,N,P** 4-2.4 Integrate the pathophysiological principles to the assessment of a patient with hemorrhage or shock. (C-3)
- H,N,P** 4-2.4 Synthesize assessment findings and patient history information to form a field impression for the patient with hemorrhage or shock. (C-3)
- H,N,P** 4-2.4 Develop, execute and evaluate a treatment plan based on the field impression for the hemorrhage or shock patient. (C-3)

**AFFECTIVE OBJECTIVES**

None identified for this unit.

**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H,N,P** 4-2.4 Demonstrate the assessment of a patient with signs and symptoms of hemorrhagic shock. (P-2)
- H,N,P** 4-2.4 Demonstrate the management of a patient with signs and symptoms of hemorrhagic shock. (P-2)
- H,N,P** 4-2.4 Demonstrate the assessment of a patient with signs and symptoms of compensated hemorrhagic shock. (P-2)
- H,N,P** 4-2.4 Demonstrate the management of a patient with signs and symptoms of compensated hemorrhagic shock. (P-2)
- H,N,P** 4-2.4 Demonstrate the assessment of a patient with signs and symptoms of decompensated hemorrhagic shock. (P-2)
- H,N,P** 4-2.4 Demonstrate the management of a patient with signs and symptoms of decompensated hemorrhagic shock. (P-2)
- H,N,P** 4-2.4 Demonstrate the assessment of a patient with signs and symptoms of external hemorrhage. (P-2)
- H,N,P** 4-2.4 Demonstrate the management of a patient with signs and symptoms of external hemorrhage. (P-2)
- H,N,P** 4-2.4 Demonstrate the assessment of a patient with signs and symptoms of internal hemorrhage. (P-2)
- H,N,P** 4-2.4 Demonstrate the management of a patient with signs and symptoms of internal hemorrhage. (P-2)

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
 I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
 Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
 Y=EMC 453, Z=EMC 451**

**UNIT TERMINAL OBJECTIVE**

- H 4-3 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement the treatment plan for the patient with soft tissue trauma.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H 4-3.1 Describe the incidence, morbidity, and mortality of soft tissue injuries. (C-1)
- H 4-3.2 Describe the layers of the skin, specifically: (C-1)
- Epidermis and dermis (cutaneous)
  - Superficial fascia (subcutaneous)
  - Deep fascia
- C,H 4-3.3 Identify the major functions of the integumentary system. (C-1)
- H 4-3.4 Identify the skin tension lines of the body. (C-1)
- C,H 4-3.5 Predict soft tissue injuries based on mechanism of injury. (C-1)
- H 4-3.6 Discuss the pathophysiology of wound healing, including: (C-1)
- Hemostasis
  - Inflammation phase
  - Epithelialization
  - Neovascularization
  - Collagen synthesis
- C,H 4-3.7 Discuss the pathophysiology of soft tissue injuries. (C-2)
- C,H 4-3.8 Differentiate between the following types of closed soft tissue injuries: (C-3)
- Contusion
  - Hematoma
  - Crush injuries
- C,H 4-3.9 Discuss the assessment findings associated with closed soft tissue injuries. (C-1)
- C,H 4-3.10 Discuss the management of a patient with closed soft tissue injuries. (C-2)
- C,H 4-3.11 Discuss the pathophysiology of open soft tissue injuries. (C-2)
- C,H 4-3.12 Differentiate between the following types of open soft tissue injuries: (C-3)
- Abrasions
  - Lacerations
  - Major arterial lacerations
  - Avulsions
  - Impaled objects
  - Amputations
  - Incisions
  - Crush injuries
  - Blast injuries
  - Penetrations/ punctures
- H 4-3.13 Discuss the incidence, morbidity, and mortality of blast injuries. (C-1)
- H 4-3.14 Predict blast injuries based on mechanism of injury, including: (C-2)
- Primary
  - Secondary
  - Tertiary
- C,H 4-3.15 Discuss types of trauma including: (C-1)
- Blunt
  - Penetrating
  - Barotrauma
  - Burns
- H 4-3.16 Discuss the pathophysiology associated with blast injuries. (C-1)
- H 4-3.17 Discuss the effects of an explosion within an enclosed space on a patient. (C-1)
- H 4-3.18 Discuss the assessment findings associated with blast injuries. (C-1)

- H 4-3.19 Identify the need for rapid intervention and transport of the patient with a blast injury. (C-1)
- H 4-3.20 Discuss the management of a patient with a blast injury. (C-1)
- H 4-3.21 Discuss the incidence, morbidity, and mortality of crush injuries. (C-1)
- H 4-3.22 Define the following conditions: (C-1)
- a. Crush injury
  - b. Crush syndrome
  - c. Compartment syndrome
- H 4-3.23 Discuss the mechanisms of injury in a crush injury. (C-1)
- H 4-3.24 Discuss the effects of reperfusion and rhabdomyolysis on the body. (C-1)
- H 4-3.25 Discuss the assessment findings associated with crush injuries. (C-1)
- H 4-3.26 Identify the need for rapid intervention and transport of the patient with a crush injury. (C-1)
- H 4-3.27 Discuss the management of a patient with a crush injury. (C-1)
- C,F,H 4-3.28 Discuss the pathophysiology of hemorrhage associated with soft tissue injuries, including: (C-2)
- a. Capillary
  - b. Venous
  - c. Arterial
- C,F,H 4-3.29 Discuss the assessment findings associated with open soft tissue injuries. (C-1)
- C,F,H 4-3.30 Discuss the assessment of hemorrhage associated with open soft tissue injuries. (C-1)
- C,F,H 4-3.31 Differentiate between the various management techniques for hemorrhage control of open soft tissue injuries, including: (C-3)
- a. Direct pressure
  - b. Elevation
  - c. Pressure dressing
  - d. Pressure point
  - e. Tourniquet application
- C,F,H 4-3.32 Differentiate between the types of injuries requiring the use of an occlusive versus non-occlusive dressing. (C-3)
- C,F,H 4-3.33 Identify the need for rapid assessment, intervention and appropriate transport for the patient with a soft tissue injury. (C-2)
- C,F,H 4-3.34 Discuss the management of the soft tissue injury patient. (C-2)
- C,F,H 4-3.35 Define and discuss the following: (C-1)
- a. Dressings
    1. Sterile
    2. Occlusive
    4. Non-occlusive
    5. Adherent
    6. Non-adherent
    7. Absorbent
    8. Non-absorbent
    9. Wet
    10. Dry
  - b. Bandages
    1. Absorbent
    2. Non-absorbent
    3. Adherent
    4. Non-adherent
  - c. Tourniquet
- C,F,H 4-3.36 Predict the possible complications of an improperly applied dressing, bandage, or tourniquet. (C-2)
- H 4-3.37 Discuss the assessment of wound healing. (C-1)
- H 4-3.38 Discuss the management of wound healing. (C-1)
- H 4-3.39 Discuss the pathophysiology of wound infection. (C-1)
- H 4-3.40 Discuss the assessment of wound infection. (C-1)
- H 4-3.41 Discuss the management of wound infection. (C-1)
- H 4-3.42 Integrate pathophysiological principles to the assessment of a patient with a soft tissue injury. (C-3)
- F,H 4-3.43 Formulate treatment priorities for patients with soft tissue injuries in conjunction with: (C-3)
- a. Airway/ face/ neck trauma

- b. Thoracic trauma (open/ closed)
- c. Abdominal trauma
- H 4-3.44 Synthesize assessment findings and patient history information to form a field impression for the patient with soft tissue trauma. (C-3)
- H 4-3.45 Develop, execute, and evaluate a treatment plan based on the field impression for the patient with soft tissue trauma. (C-3)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H 4-3.46 Defend the rationale explaining why immediate life-threats must take priority over wound closure. (A-3)
- H 4-3.47 Defend the management regimens for various soft tissue injuries. (A-3)
- H 4-3.48 Defend why immediate life-threatening conditions take priority over soft tissue management. (A-3)
- H 4-3.49 Value the importance of a thorough assessment for patients with soft tissue injuries. (A-3)
- H 4-3.50 Attend to the feelings that the patient with a soft tissue injury may experience. (A-2)
- H 4-3.51 Appreciate the importance of good follow-up care for patients receiving sutures. (A-2)
- H 4-3.52 Understand the value of the written report for soft tissue injuries, in the continuum of patient care. (A-2)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H 4-3.53 Demonstrate the assessment and management of a patient with signs and symptoms of soft tissue injury, including: (P-2)
  - a. Contusion
  - b. Hematoma
  - c. Crushing
  - d. Abrasion
  - e. Laceration
  - f. Avulsion
  - g. Amputation
  - h. Impaled object
  - i. Penetration/ puncture
  - j. Blast

**UNIT TERMINAL OBJECTIVE**

<u>H</u>	4-4	At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement the management plan for the patient with a burn injury.
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**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

<u>C,H</u>	4-4.1	Describe the anatomy and physiology pertinent to burn injuries. (C-1)
<u>H</u>	4-4.2	Describe the epidemiology, including incidence, mortality/ morbidity, risk factors, and prevention strategies for the patient with a burn injury. (C-1)
<u>H</u>	4-4.3	Describe the pathophysiologic complications and systemic complications of a burn injury. (C-1)
<u>C,H</u>	4-4.4	Identify and describe types of burn injuries, including a thermal burn, an inhalation burn, a chemical burn, an electrical burn, and a radiation exposure. (C-1)
<u>C,H</u>	4-4.5	Identify and describe the depth classifications of burn injuries, including a superficial burn, a partial-thickness burn, a full-thickness burn, and other depth classifications described by local protocol. (C-1)
<u>C,H</u>	4-4.6	Identify and describe methods for determining body surface area percentage of a burn injury including the "rules of nines," the "rules of palms," and other methods described by local protocol. (C-1)
<u>C,H</u>	4-4.7	Identify and describe the severity of a burn including a minor burn, a moderate burn, a severe burn, and other severity classifications described by local protocol. (C-1)
<u>C,H</u>	4-4.8	Differentiate criteria for determining the severity of a burn injury between a pediatric patient and an adult patient. (C-3)
<u>C,H</u>	4-4.9	Describe special considerations for a pediatric patient with a burn injury. (C-1)
<u>H</u>	4-4.10	Discuss considerations which impact management and prognosis of the burn injured patient. (C-1)
<u>H</u>	4-4.11	Discuss mechanisms of burn injuries. (C-1)
<u>C,H</u>	4-4.12	Discuss conditions associated with burn injuries, including trauma, blast injuries, airway compromise, respiratory compromise, and child abuse. (C-1)
<u>H</u>	4-4.13	Describe the management of a burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol. (C-1)
<u>H</u>	4-4.14	Describe the epidemiology of a thermal burn injury. (C-1)
<u>C,H</u>	4-4.15	Describe the specific anatomy and physiology pertinent to a thermal burn injury. (C-1)
<u>C,H</u>	4-4.16	Describe the pathophysiology of a thermal burn injury. (C-1)
<u>C,H</u>	4-4.17	Identify and describe the depth classifications of a thermal burn injury. (C-1)
<u>C,H</u>	4-4.18	Identify and describe the severity of a thermal burn injury. (C-1)
<u>H</u>	4-4.19	Describe considerations which impact management and prognosis of the patient with a thermal burn injury. (C-1)
<u>H</u>	4-4.20	Discuss mechanisms of burn injury and conditions associated with a thermal burn injury. (C-1)
<u>H</u>	4-4.21	Describe the management of a thermal burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, and psychological support/ communication strategies. (C-1)
<u>H</u>	4-4.22	Describe the epidemiology of an inhalation burn injury. (C-1)
<u>H</u>	4-4.23	Describe the specific anatomy and physiology pertinent to an inhalation burn injury. (C-1)
<u>H</u>	4-4.24	Describe the pathophysiology of an inhalation burn injury. (C-1)
<u>H</u>	4-4.25	Differentiate between supraglottic and infraglottic inhalation injuries. (C-3)
<u>H</u>	4-4.26	Identify and describe the depth classifications of an inhalation burn injury. (C-1)
<u>H</u>	4-4.27	Identify and describe the severity of an inhalation burn injury. (C-1)
<u>H</u>	4-4.28	Describe considerations which impact management and prognosis of the patient with an inhalation burn injury. (C-1)
<u>H</u>	4-4.29	Discuss mechanisms of burn injury and conditions associated with an inhalation burn injury. (C-1)
<u>H</u>	4-4.30	Describe the management of an inhalation burn injury, including airway and ventilation, circulation,

pharmacological, non-pharmacological, transport considerations, and psychological support/ communication strategies. (C-1)

- H 4-4.31 Describe the epidemiology of a chemical burn injury and a chemical burn injury to the eye. (C-1)
- H 4-4.32 Describe the specific anatomy and physiology pertinent to a chemical burn injury and a chemical burn injury to the eye. (C-1)
- H 4-4.33 Describe the pathophysiology of a chemical burn injury, including types of chemicals and their burning processes and a chemical burn injury to the eye. (C-1)
- H 4-4.34 Identify and describe the depth classifications of a chemical burn injury. (C-1)
- H 4-4.35 Identify and describe the severity of a chemical burn injury. (C-1)
- H 4-4.36 Describe considerations which impact management and prognosis of the patient with a chemical burn injury and a chemical burn injury to the eye. (C-1)
- H 4-4.37 Discuss mechanisms of burn injury and conditions associated with a chemical burn injury. (C-1)
- H 4-4.38 Describe the management of a chemical burn injury and a chemical burn injury to the eye, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, and psychological support/ communication strategies. (C-1)
- C,H 4-4.39 Describe the epidemiology of an electrical burn injury. (C-1)
- C,H 4-4.40 Describe the specific anatomy and physiology pertinent to an electrical burn injury. (C-1)
- C,H 4-4.41 Describe the pathophysiology of an electrical burn injury. (C-1)
- H 4-4.42 Identify and describe the depth classifications of an electrical burn injury. (C-1)
- G 4-4.43 Identify and describe the severity of an electrical burn injury. (C-1)
- C,H 4-4.44 Describe considerations which impact management and prognosis of the patient with an electrical burn injury. (C-1)
- H 4-4.45 Discuss mechanisms of burn injury and conditions associated with an electrical burn injury. (C-1)
- H 4-4.46 Describe the management of an electrical burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, and psychological support/ communication strategies. (C-1)
- H 4-4.47 Describe the epidemiology of a radiation exposure. (C-1)
- H 4-4.48 Describe the specific anatomy and physiology pertinent to a radiation exposure. (C-1)
- H 4-4.49 Describe the pathophysiology of a radiation exposure, including the types and characteristics of ionizing radiation. (C-1)
- H 4-4.50 Identify and describe the depth classifications of a radiation exposure. (C-1)
- H 4-4.51 Identify and describe the severity of a radiation exposure. (C-1)
- H 4-4.52 Describe considerations which impact management and prognosis of the patient with a radiation exposure. (C-1)
- H 4-4.53 Discuss mechanisms of burn injury associated with a radiation exposure. (C-1)
- H 4-4.54 Discuss conditions associated with a radiation exposure. (C-1)
- H 4-4.55 Describe the management of a radiation exposure, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, and psychological support/ communication strategies. (C-1)
- H 4-4.56 Integrate pathophysiological principles to the assessment of a patient with a thermal burn injury. (C-3)
- H 4-4.57 Integrate pathophysiological principles to the assessment of a patient with an inhalation burn injury. (C-3)
- H 4-4.58 Integrate pathophysiological principles to the assessment of a patient with a chemical burn injury. (C-3)
- H 4-4.59 Integrate pathophysiological principles to the assessment of a patient with an electrical burn injury. (C-3)
- H 4-4.60 Integrate pathophysiological principles to the assessment of a patient with a radiation exposure. (C-3)
- H 4-4.61 Synthesize patient history information and assessment findings to form a field impression for the patient with a thermal burn injury. (C-3)
- H 4-4.62 Synthesize patient history information and assessment findings to form a field impression for the patient with an inhalation burn injury. (C-3)
- H 4-4.63 Synthesize patient history information and assessment findings to form a field impression for the patient with a chemical burn injury. (C-3)
- H 4-4.64 Synthesize patient history information and assessment findings to form a field impression for the patient with an electrical burn injury. (C-3)

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410**



- H   4-4.65 Synthesize patient history information and assessment findings to form a field impression for the patient with a radiation exposure. (C-3)
- H   4-4.66 Develop, execute and evaluate a management plan based on the field impression for the patient with a thermal burn injury. (C-3)
- H   4-4.67 Develop, execute and evaluate a management plan based on the field impression for the patient with an inhalation burn injury. (C-3)
- H   4-4.68 Develop, execute and evaluate a management plan based on the field impression for the patient with a chemical burn injury. (C-3)
- H   4-4.69 Develop, execute and evaluate a management plan based on the field impression for the patient with an electrical burn injury. (C-3)
- H   4-4.70 Develop, execute and evaluate a management plan based on the field impression for the patient with a radiation exposure. (C-3)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H   4-4.71 Value the changes of a patient's self-image associated with a burn injury. (A-2)
- H   4-4.72 Value the impact of managing a burn injured patient. (A-2)
- H   4-4.73 Advocate empathy for a burn injured patient. (A-2)
- H   4-4.74 Assess safety at a burn injury incident. (A-3)
- H   4-4.75 Characterize mortality and morbidity based on the pathophysiology and assessment findings of a patient with a burn injury. (A-3)
- H   4-4.76 Value and defend the sense of urgency in burn injuries. (A-3)
- H   4-4.77 Serve as a model for universal precautions and body substance isolation (BSI). (A-3)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H   4-4.78 Take body substance isolation procedures during assessment and management of patients with a burn injury. (P-2)
- H   4-4.79 Perform assessment of a patient with a burn injury. (P-2)
- H   4-4.80 Perform management of a thermal burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol. (P-2)
- H   4-4.81 Perform management of an inhalation burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol. (P-2)
- H   4-4.82 Perform management of a chemical burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol. (P-2)
- H   4-4.83 Perform management of an electrical burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol. (P-2)
- H   4-4.84 Perform management of a radiation exposure, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol. (P-2)

**UNIT TERMINAL OBJECTIVE**

<u>H</u>	4-5	At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the trauma patient with a suspected head injury.
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**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

<u>H</u>	4-5.1	Describe the incidence, morbidity, and mortality of facial injuries. (C-1)
<u>H</u>	4-5.2	Explain facial anatomy and relate physiology to facial injuries. (C-1)
<u>H</u>	4-5.3	Predict facial injuries based on mechanism of injury. (C-1)
<u>H</u>	4-5.4	Predict other injuries commonly associated with facial injuries based on mechanism of injury. (C-2)
<u>H</u>	4-5.5	Differentiate between the following types of facial injuries, highlighting the defining characteristics of each: (C-3) <ul style="list-style-type: none"> <li>a. Eye</li> <li>b. Ear</li> <li>c. Nose</li> <li>d. Throat</li> <li>e. Mouth</li> </ul>
<u>H</u>	4-5.6	Integrate pathophysiological principles to the assessment of a patient with a facial injury. (C-3)
<u>H</u>	4-5.7	Differentiate between facial injuries based on the assessment and history. (C-3)
<u>H</u>	4-5.8	Formulate a field impression for a patient with a facial injury based on the assessment findings. (C-3)
<u>H</u>	4-5.9	Develop a patient management plan for a patient with a facial injury based on the field impression. (C-3)
<u>H</u>	4-5.10	Explain the pathophysiology of eye injuries. (C-1)
<u>H</u>	4-5.11	Relate assessment findings associated with eye injuries to pathophysiology. (C-3)
<u>H</u>	4-5.12	Integrate pathophysiological principles to the assessment of a patient with an eye injury. (C-3)
<u>H</u>	4-5.13	Formulate a field impression for a patient with an eye injury based on the assessment findings. (C-3)
<u>H</u>	4-5.14	Develop a patient management plan for a patient with an eye injury based on the field impression. (C-3)
<u>H</u>	4-5.15	Explain the pathophysiology of ear injuries. (C-1)
<u>H</u>	4-5.16	Relate assessment findings associated with ear injuries to pathophysiology. (C-3)
<u>H</u>	4-5.17	Integrate pathophysiological principles to the assessment of a patient with an ear injury. (C-3)
<u>H</u>	4-5.18	Formulate a field impression for a patient with an ear injury based on the assessment findings. (C-3)
<u>H</u>	4-5.19	Develop a patient management plan for a patient with an ear injury based on the field impression. (C-3)
<u>H</u>	4-5.20	Explain the pathophysiology of nose injuries. (C-1)
<u>H</u>	4-5.21	Relate assessment findings associated with nose injuries to pathophysiology. (C-3)
<u>H</u>	4-5.22	Integrate pathophysiological principles to the assessment of a patient with a nose injury. (C-3)
<u>H</u>	4-5.23	Formulate a field impression for a patient with a nose injury based on the assessment findings. (C-3)
<u>H</u>	4-5.24	Develop a patient management plan for a patient with a nose injury based on the field impression. (C-3)
<u>H</u>	4-5.25	Explain the pathophysiology of throat injuries. (C-1)
<u>H</u>	4-5.26	Relate assessment findings associated with throat injuries to pathophysiology. (C-3)
<u>H</u>	4-5.27	Integrate pathophysiological principles to the assessment of a patient with a throat injury. (C-3)
<u>H</u>	4-5.28	Formulate a field impression for a patient with a throat injury based on the assessment findings. (C-3)
<u>H</u>	4-5.29	Develop a patient management plan for a patient with a throat injury based on the field impression. (C-3)
<u>H</u>	4-5.30	Explain the pathophysiology of mouth injuries. (C-1)
<u>H</u>	4-5.31	Relate assessment findings associated with mouth injuries to pathophysiology. (C-3)

- H 4-5.32 Integrate pathophysiological principles to the assessment of a patient with a mouth injury. (C-3)
- H 4-5.33 Formulate a field impression for a patient with a mouth injury based on the assessment findings. (C-3)
- H 4-5.34 Develop a patient management plan for a patient with a mouth injury based on the field impression. (C-3)
- H 4-5.35 Describe the incidence, morbidity, and mortality of head injuries. (C-1)
- H 4-5.36 Explain anatomy and relate physiology of the CNS to head injuries. (C-1)
- H 4-5.37 Predict head injuries based on mechanism of injury. (C-2)
- H 4-5.38 Distinguish between head injury and brain injury. (C-3)
- H 4-5.39 Explain the pathophysiology of head/ brain injuries. (C-1)
- H 4-5.40 Explain the concept of increasing intracranial pressure (ICP). (C-1)
- H 4-5.41 Explain the effect of increased and decreased carbon dioxide on ICP. (C-1)
- H 4-5.42 Define and explain the process involved with each of the levels of increasing ICP. (C-1)
- H 4-5.43 Relate assessment findings associated with head/ brain injuries to the pathophysiologic process. (C-3)
- H 4-5.44 Classify head injuries (mild, moderate, severe) according to assessment findings. (C-2)
- H 4-5.45 Identify the need for rapid intervention and transport of the patient with a head/ brain injury. (C-1)
- H 4-5.46 Describe and explain the general management of the head/ brain injury patient, including pharmacological and non-pharmacological treatment. (C-1)
- H 4-5.47 Analyze the relationship between carbon dioxide concentration in the blood and management of the airway in the head/ brain injured patient. (C-3)
- H 4-5.48 Explain the pathophysiology of diffuse axonal injury. (C-1)
- H 4-5.49 Relate assessment findings associated with concussion, moderate and severe diffuse axonal injury to pathophysiology. (C-3)
- H 4-5.50 Develop a management plan for a patient with a moderate and severe diffuse axonal injury. (C-3)
- H 4-5.51 Explain the pathophysiology of skull fracture. (C-1)
- H 4-5.52 Relate assessment findings associated with skull fracture to pathophysiology. (C-3)
- H 4-5.53 Develop a management plan for a patient with a skull fracture. (C-3)
- H 4-5.54 Explain the pathophysiology of cerebral contusion. (C-1)
- H 4-5.55 Relate assessment findings associated with cerebral contusion to pathophysiology. (C-3)
- H 4-5.56 Develop a management plan for a patient with a cerebral contusion. (C-3)
- H 4-5.57 Explain the pathophysiology of intracranial hemorrhage, including: (C-1)
  - a. Epidural
  - b. Subdural
  - c. Intracerebral
  - d. Subarachnoid
- H 4-5.58 Relate assessment findings associated with intracranial hemorrhage to pathophysiology, including: (C-3)
  - a. Epidural
  - b. Subdural
  - c. Intracerebral
  - d. Subarachnoid
- H 4-5.59 Develop a management plan for a patient with a intracranial hemorrhage, including: (C-1)
  - a. Epidural
  - b. Subdural
  - c. Intracerebral
  - d. Subarachnoid
- H 4-5.60 Describe the various types of helmets and their purposes. (C-1)
- H 4-5.61 Relate priorities of care to factors determining the need for helmet removal in various field situations including sports related incidents. (C-3)
- H 4-5.62 Develop a management plan for the removal of a helmet for a head injured patient. (C-3)
- H 4-5.63 Integrate the pathophysiological principles to the assessment of a patient with head/ brain injury. (C-3)
- H 4-5.64 Differentiate between the types of head/ brain injuries based on the assessment and history. (C-3)
- H 4-5.65 Formulate a field impression for a patient with a head/ brain injury based on the assessment findings. (C-3)

H 4-5.66 Develop a patient management plan for a patient with a head/ brain injury based on the field impression. (C-3)

**AFFECTIVE OBJECTIVES**

None identified for this unit.

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**UNIT TERMINAL OBJECTIVE**

H 4-6 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with a suspected spinal injury.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- C,H 4-6.1 Describe the incidence, morbidity, and mortality of spinal injuries in the trauma patient. (C-1)
- C,H 4-6.2 Describe the anatomy and physiology of structures related to spinal injuries. (C-1)
- a. Cervical
  - b. Thoracic
  - c. Lumbar
  - d. Sacrum
  - e. Coccyx
  - f. Head
  - g. Brain
  - h. Spinal cord
  - i. Nerve tract(s)
  - j. Dermatomes
- C,H 4-6.3 Predict spinal injuries based on mechanism of injury. (C-2)
- C,H 4-6.4 Describe the pathophysiology of spinal injuries. (C-1)
- H 4-6.5 Explain traumatic and non-traumatic spinal injuries. (C-1)
- C,F,H 4-6.6 Describe the assessment findings associated with spinal injuries. (C-1)
- C,F,H 4-6.7 Describe the management of spinal injuries. (C-1)
- C,F,H 4-6.8 Identify the need for rapid intervention and transport of the patient with spinal injuries. (C-1)
- H 4-6.9 Integrate the pathophysiological principles to the assessment of a patient with a spinal injury. (C-3)
- H 4-6.10 Differentiate between spinal injuries based on the assessment and history. (C-3)
- H 4-6.11 Formulate a field impression based on the assessment findings. (C-3)
- H 4-6.12 Develop a patient management plan based on the field impression. (C-3)
- H 4-6.13 Describe the pathophysiology of traumatic spinal injury related to: (C-1)
- a. Spinal shock
  - b. Spinal neurogenic shock
  - c. Quadriplegia/ paraplegia
  - d. Incomplete cord injury/ cord syndromes:
    1. Central cord syndrome
    2. Anterior cord syndrome
    3. Brown-Sequard syndrome
- C,F,H 4-6.14 Describe the assessment findings associated with traumatic spinal injuries. (C-1)
- C,F,H 4-6.15 Describe the management of traumatic spinal injuries. (C-1)
- H 4-6.16 Integrate pathophysiological principles to the assessment of a patient with a traumatic spinal injury. (C-3)
- H 4-6.17 Differentiate between traumatic and non-traumatic spinal injuries based on the assessment and history. (C-3)
- H 4-6.18 Formulate a field impression for traumatic spinal injury based on the assessment findings. (C-3)
- H 4-6.19 Develop a patient management plan for traumatic spinal injury based on the field impression. (C-3)
- H 4-6.20 Describe the pathophysiology of non-traumatic spinal injury, including: (C-1)
- a. Low back pain
  - b. Herniated intervertebral disk
  - c. Spinal cord tumors
- H 4-6.21 Describe the assessment findings associated with non-traumatic spinal injuries. (C-1)
- H 4-6.22 Describe the management of non-traumatic spinal injuries. (C-1)

- H   4-6.23 Integrate pathophysiological principles to the assessment of a patient with non-traumatic spinal injury. (C-3)
- H   4-6.24 Differentiate between traumatic and non-traumatic spinal injuries based on the assessment and history. (C-3)
- H   4-6.25 Formulate a field impression for non-traumatic spinal injury based on the assessment findings. (C-3)
- H   4-6.26 Develop a patient management plan for non-traumatic spinal injury based on the field impression. (C-3)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H   4-6.27 Advocate the use of a thorough assessment when determining the proper management modality for spine injuries. (A-3)
- H   4-6.28 Value the implications of failing to properly immobilize a spine injured patient. (A-2)

**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H   4-6.29 Demonstrate a clinical assessment to determine the proper management modality for a patient with a suspected traumatic spinal injury. (P-1)
- H   4-6.30 Demonstrate a clinical assessment to determine the proper management modality for a patient with a suspected non-traumatic spinal injury. (P-1)
- H   4-6.31 Demonstrate immobilization of the urgent and non-urgent patient with assessment findings of spinal injury from the following presentations: (P-1)
  - a. Supine
  - b. Prone
  - c. Semi-prone
  - d. Sitting
  - e. Standing
- H   4-6.32 Demonstrate documentation of suspected spinal cord injury to include: (P-1)
  - a. General area of spinal cord involved
  - b. Sensation
  - c. Dermatomes
  - d. Motor function
  - e. Area(s) of weakness
- H   4-6.33 Demonstrate preferred methods for stabilization of a helmet from a potentially spine injured patient. (P-1)
- H   4-6.34 Demonstrate helmet removal techniques. (P-1)
- H   4-6.35 Demonstrate alternative methods for stabilization of a helmet from a potentially spine injured patient. (P-1)
- H   4-6.36 Demonstrate documentation of assessment before spinal immobilization. (P-1)
- H   4-6.37 Demonstrate documentation of assessment during spinal immobilization. (P-1)
- H   4-6.38 Demonstrate documentation of assessment after spinal immobilization. (P-1)

**UNIT TERMINAL OBJECTIVE**

- H 4-7 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for a patient with a thoracic injury.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H 4-7.1 Describe the incidence, morbidity, and mortality of thoracic injuries in the trauma patient. (C-1)
- C,H 4-7.2 Discuss the anatomy and physiology of the organs and structures related to thoracic injuries. (C-1)
- C,H 4-7.3 Predict thoracic injuries based on mechanism of injury. (C-2)
- C,H 4-7.4 Discuss the types of thoracic injuries. (C-1)
- C,H 4-7.5 Discuss the pathophysiology of thoracic injuries. (C-1)
- C,H 4-7.6 Discuss the assessment findings associated with thoracic injuries. (C-1)
- C,H 4-7.7 Discuss the management of thoracic injuries. (C-1)
- C,H 4-7.8 Identify the need for rapid intervention and transport of the patient with thoracic injuries. (C-1)
- C,H 4-7.9 Discuss the pathophysiology of specific chest wall injuries, including: (C-1)
- Rib fracture
  - Flail segment
  - Sternal fracture
- H 4-7.10 Discuss the assessment findings associated with chest wall injuries. (C-1)
- H 4-7.11 Identify the need for rapid intervention and transport of the patient with chest wall injuries. (C-1)
- H 4-7.12 Discuss the management of chest wall injuries. (C-1)
- C,H 4-7.13 Discuss the pathophysiology of injury to the lung, including: (C-1)
- Simple pneumothorax
  - Open pneumothorax
  - Tension pneumothorax
  - Hemothorax
  - Hemopneumothorax
  - Pulmonary contusion
- C,H 4-7.14 Discuss the assessment findings associated with lung injuries. (C-1)
- C,H 4-7.15 Discuss the management of lung injuries. (C-1)
- C,H 4-7.16 Identify the need for rapid intervention and transport of the patient with lung injuries. (C-1)
- H 4-7.17 Discuss the pathophysiology of myocardial injuries, including: (C-1)
- Pericardial tamponade
  - Myocardial contusion
  - Myocardial rupture
- H 4-7.18 Discuss the assessment findings associated with myocardial injuries. (C-1)
- H 4-7.19 Discuss the management of myocardial injuries. (C-1)
- H 4-7.20 Identify the need for rapid intervention and transport of the patient with myocardial injuries. (C-1)
- H 4-7.21 Discuss the pathophysiology of vascular injuries, including injuries to: (C-1)
- Aorta
  - Vena cava
  - Pulmonary arteries/ veins
- H 4-7.22 Discuss the assessment findings associated with vascular injuries. (C-1)
- H 4-7.23 Discuss the management of vascular injuries. (C-1)
- H 4-7.24 Identify the need for rapid intervention and transport of the patient with vascular injuries. (C-1)
- H 4-7.25 Discuss the pathophysiology of diaphragmatic injuries. (C-1)
- H 4-7.26 Discuss the assessment findings associated with diaphragmatic injuries. (C-1)
- H 4-7.27 Discuss the management of diaphragmatic injuries. (C-1)
- H 4-7.28 Identify the need for rapid intervention and transport of the patient with diaphragmatic injuries. (C-1)
- H 4-7.29 Discuss the pathophysiology of esophageal injuries. (C-1)
- H 4-7.30 Discuss the assessment findings associated with esophageal injuries. (C-1)

- H   4-7.31 Discuss the management of esophageal injuries. (C-1)
- H   4-7.32 Identify the need for rapid intervention and transport of the patient with esophageal injuries. (C-1)
- H   4-7.33 Discuss the pathophysiology of tracheo-bronchial injuries. (C-1)
- H   4-7.34 Discuss the assessment findings associated with tracheo-bronchial injuries. (C-1)
- H   4-7.35 Discuss the management of tracheo-bronchial injuries. (C-1)
- H   4-7.36 Identify the need for rapid intervention and transport of the patient with tracheo-bronchial injuries. (C-1)
- H   4-7.37 Discuss the pathophysiology of traumatic asphyxia. (C-1)
- H   4-7.38 Discuss the assessment findings associated with traumatic asphyxia. (C-1)
- H   4-7.39 Discuss the management of traumatic asphyxia. (C-1)
- H   4-7.40 Identify the need for rapid intervention and transport of the patient with traumatic asphyxia. (C-1)
- H   4-7.41 Integrate the pathophysiological principles to the assessment of a patient with thoracic injury. (C-1)
- H   4-7.42 Differentiate between thoracic injuries based on the assessment and history. (C-3)
- H   4-7.43 Formulate a field impression based on the assessment findings. (C-3)
- H   4-7.44 Develop a patient management plan based on the field impression. (C-3)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H   4-7.45 Advocate the use of a thorough assessment to determine a differential diagnosis and treatment plan for thoracic trauma. (A-3)
- H   4-7.46 Advocate the use of a thorough scene survey to determine the forces involved in thoracic trauma. (A-3)
- H   4-7.47 Value the implications of failing to properly diagnose thoracic trauma. (A-2)
- H   4-7.48 Value the implications of failing to initiate timely interventions to patients with thoracic trauma. (A-2)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H   4-7.49 Demonstrate a clinical assessment for a patient with suspected thoracic trauma. (P-1)
- H   4-7.50 Demonstrate the following techniques of management for thoracic injuries: (P-1)
  - a. Needle decompression
  - b. Fracture stabilization
  - c. Elective intubation
  - d. ECG monitoring
  - e. Oxygenation and ventilation



**UNIT TERMINAL OBJECTIVE**

<u>H</u>	4-8	At the completion of this unit, the paramedic student will be able to integrate pathophysiologic principles and the assessment findings to formulate a field impression and implement the treatment plan for the patient with suspected abdominal trauma.
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**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

<u>H</u>	4-8.1	Describe the epidemiology, including the morbidity/mortality and prevention strategies for a patient with abdominal trauma. (C-1)
<u>H</u>	4-8.2	Describe the anatomy and physiology of organs and structures related to abdominal injuries. (C-1)
<u>C,H</u>	4-8.3	Predict abdominal injuries based on blunt and penetrating mechanisms of injury. (C-2)
<u>C,H</u>	4-8.4	Describe open and closed abdominal injuries. (C-1)
<u>C,H</u>	4-8.5	Explain the pathophysiology of abdominal injuries. (C-1)
<u>C,H</u>	4-8.6	Describe the assessment findings associated with abdominal injuries. (C-1)
<u>C,H</u>	4-8.7	Identify the need for rapid intervention and transport of the patient with abdominal injuries based on assessment findings. (C-1)
<u>C,H</u>	4-8.8	Describe the management of abdominal injuries. (C-1)
<u>H</u>	4-8.9	Integrate the pathophysiological principles to the assessment of a patient with abdominal injury. (C-3)
<u>H</u>	4-8.10	Differentiate between abdominal injuries based on the assessment and history. (C-3)
<u>H</u>	4-8.11	Formulate a field impression for patients with abdominal trauma based on the assessment findings. (C-3)
<u>H</u>	4-8.12	Develop a patient management plan for patients with abdominal trauma based on the field impression. (C-3)
<u>H</u>	4-8.13	Describe the epidemiology, including the morbidity/ mortality and prevention strategies for solid organ injuries. (C-1)
<u>H</u>	4-8.14	Explain the pathophysiology of solid organ injuries. (C-1)
<u>H</u>	4-8.15	Describe the assessment findings associated with solid organ injuries. (C-1)
<u>H</u>	4-8.16	Describe the treatment plan and management of solid organ injuries. (C-1)
<u>H</u>	4-8.17	Describe the epidemiology, including the morbidity/ mortality and prevention strategies for hollow organ injuries. (C-1)
<u>H</u>	4-8.18	Explain the pathophysiology of hollow organ injuries. (C-1)
<u>H</u>	4-8.19	Describe the assessment findings associated with hollow organ injuries. (C-1)
<u>H</u>	4-8.20	Describe the treatment plan and management of hollow organ injuries. (C-1)
<u>H</u>	4-8.21	Describe the epidemiology, including the morbidity/ mortality and prevention strategies for abdominal vascular injuries. (C-1)
<u>H</u>	4-8.22	Explain the pathophysiology of abdominal vascular injuries. (C-1)
<u>H</u>	4-8.23	Describe the assessment findings associated with abdominal vascular injuries. (C-1)
<u>H</u>	4-8.24	Describe the treatment plan and management of abdominal vascular injuries. (C-1)
<u>H</u>	4-8.25	Describe the epidemiology, including the morbidity/ mortality and prevention strategies for pelvic fractures. (C-1)
<u>C,H</u>	4-8.26	Explain the pathophysiology of pelvic fractures. (C-1)
<u>C,H</u>	4-8.27	Describe the assessment findings associated with pelvic fractures. (C-1)
<u>C,H</u>	4-8.28	Describe the treatment plan and management of pelvic fractures. (C-1)
<u>H</u>	4-8.29	Describe the epidemiology, including the morbidity/ mortality and prevention strategies for other related abdominal injuries. (C-1)
<u>H</u>	4-8.30	Explain the pathophysiology of other related abdominal injuries. (C-1)
<u>H</u>	4-8.31	Describe the assessment findings associated with other related abdominal injuries. (C-1)
<u>H</u>	4-8.32	Describe the treatment plan and management of other related abdominal injuries. (C-1)
<u>H</u>	4-8.33	Apply the epidemiologic principles to develop prevention strategies for abdominal injuries. (C-2)
<u>H</u>	4-8.34	Integrate the pathophysiological principles to the assessment of a patient with abdominal injuries. (C-3)
<u>H</u>	4-8.35	Differentiate between abdominal injuries based on the assessment and history. (C-3)

- H   4-8.36 Formulate a field impression based upon the assessment findings for a patient with abdominal injuries. (C-3)
- H   4-8.37 Develop a patient management plan for a patient with abdominal injuries, based upon field impression. (C-3)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H   4-8.38 Advocate the use of a thorough assessment to determine a differential diagnosis and treatment plan for abdominal trauma. (A-3)
- H   4-8.39 Advocate the use of a thorough scene survey to determine the forces involved in abdominal trauma. (A-3)
- H   4-8.40 Value the implications of failing to properly diagnose abdominal trauma and initiate timely interventions to patients with abdominal trauma. (A-2)

**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H   4-8.41 Demonstrate a clinical assessment to determine the proper treatment plan for a patient with suspected abdominal trauma. (P-1)
- H   4-8.42 Demonstrate the proper use of PASG in a patient with suspected abdominal trauma. (P-1)
- H   4-8.43 Demonstrate the proper use of PASG in a patient with suspected pelvic fracture. (P-1)

**UNIT TERMINAL OBJECTIVE**

H 4-9 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement the treatment plan for the patient with a musculoskeletal injury.

**COGNITIVE OBJECTIVE**

At the completion of this unit, the paramedic student will be able to:

- H 4-9.1 Describe the incidence, morbidity, and mortality of musculoskeletal injuries. (C-1)
- C,F,H 4-9.2 Discuss the anatomy and physiology of the musculoskeletal system. (C-1)
- C,F,H 4-9.3 Predict injuries based on the mechanism of injury, including: (C-3)
- f. Direct
  - g. Indirect
  - h. Pathologic
- C,F,H 4-9.4 Discuss the types of musculoskeletal injuries: (C-1)
- a. Fracture (open and closed)
  - b. Dislocation/ fracture
  - c. Sprain
  - d. Strain
- C,F,H 4-9.5 Discuss the pathophysiology of musculoskeletal injuries. (C-1)
- C,F,H 4-9.6 Discuss the assessment findings associated with musculoskeletal injuries. (C-1)
- H 4-9.7 List the six "P"s of musculoskeletal injury assessment. (C-1)
- H 4-9.8 List the primary signs and symptoms of extremity trauma. (C-1)
- H 4-9.9 List other signs and symptoms that can indicate less obvious extremity injury. (C-1)
- C,F,H 4-9.10 Discuss the need for assessment of pulses, motor and sensation before and after splinting. (C-1)
- C,F,H 4-9.11 Identify the need for rapid intervention and transport when dealing with musculoskeletal injuries. (C-1)
- C,F,H 4-9.12 Discuss the management of musculoskeletal injuries. (C-1)
- C,F,H 4-9.13 Discuss the general guidelines for splinting. (C-1)
- C,F,H 4-9.14 Explain the benefits of cold application for musculoskeletal injury. (C-1)
- H 4-9.15 Explain the benefits of heat application for musculoskeletal injury. (C-1)
- M 4-9.16 Describe age associated changes in the bones. (C-1)
- C,F,H 4-9.17 Discuss the pathophysiology of open and closed fractures. (C-1)
- H 4-9.18 Discuss the relationship between volume of hemorrhage and open or closed fractures. (C-3)
- C,F,H 4-9.19 Discuss the assessment findings associated with fractures. (C-1)
- C,F,H 4-9.20 Discuss the management of fractures. (C-1)
- C,H 4-9.21 Discuss the usefulness of the pneumatic anti-shock garment (PASG) in the management of fractures. (C-1)
- C,H 4-9.22 Describe the special considerations involved in femur fracture management. (C-1)
- C,F,H 4-9.23 Discuss the pathophysiology of dislocations. (C-1)
- C,F,H 4-9.24 Discuss the assessment findings of dislocations. (C-1)
- C,F,H 4-9.25 Discuss the out-of-hospital management of dislocation/ fractures, including splinting and realignment. (C-1)
- H 4-9.26 Explain the importance of manipulating a knee dislocation/ fracture with an absent distal pulse. (C-1)
- H 4-9.27 Describe the procedure for reduction of a shoulder, finger or ankle dislocation/ fracture. (C-1)
- C,F,H 4-9.28 Discuss the pathophysiology of sprains. (C-1)
- C,F,H 4-9.29 Discuss the assessment findings of sprains. (C-1)
- C,F,H 4-9.30 Discuss the management of sprains. (C-1)
- C,F,H 4-9.31 Discuss the pathophysiology of strains. (C-1)
- C,F,H 4-9.32 Discuss the assessment findings of strains. (C-1)
- C,F,H 4-9.33 Discuss the management of strains. (C-1)
- H 4-9.34 Discuss the pathophysiology of a tendon injury. (C-1)

- H   4-9.35 Discuss the assessment findings of tendon injury. (C-1)
- H   4-9.36 Discuss the management of a tendon injury. (C-1)
- H   4-9.37 Integrate the pathophysiological principles to the assessment of a patient with a musculoskeletal injury. (C-3)
- H   4-9.38 Differentiate between musculoskeletal injuries based on the assessment findings and history. (C-3)
- H   4-9.39 Formulate a field impression of a musculoskeletal injury based on the assessment findings. (C-3)
- H   4-9.40 Develop a patient management plan for the musculoskeletal injury based on the field impression. (C-3)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H   4-9.41 Advocate the use of a thorough assessment to determine a working diagnosis and treatment plan for musculoskeletal injuries. (A-3)
- H   4-9.42 Advocate for the use of pain management in the treatment of musculoskeletal injuries. (A-3)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H   4-9.43 Demonstrate a clinical assessment to determine the proper treatment plan for a patient with a suspected musculoskeletal injury. (P-1)
- H   4-9.44 Demonstrate the proper use of fixation, soft and traction splints for a patient with a suspected fracture. (P-1)

**UNIT TERMINAL OBJECTIVE**

- P 5-1 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with respiratory problems.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- P 5-1.1 Discuss the epidemiology of pulmonary diseases and conditions. (C-1)
- P 5-1.2 Identify and describe the function of the structures located in the upper and lower airway. (C-1)
- C 5-1.3 Discuss the physiology of ventilation and respiration. (C-1)
- P 5-1.4 Identify common pathological events that affect the pulmonary system. (C-1)
- C 5-1.5 Discuss abnormal assessment findings associated with pulmonary diseases and conditions. (C-1)
- P 5-1.6 Compare various airway and ventilation techniques used in the management of pulmonary diseases. (C-3)
- L 5-1.7 Review the pharmacological preparations that paramedics use for management of respiratory diseases and conditions. (C-1)
- L 5-1.8 Review the pharmacological preparations used in managing patients with respiratory diseases that may be prescribed by physicians. (C-1)
- P 5-1.9 Review the use of equipment used during the physical examination of patients with complaints associated with respiratory diseases and conditions. (C-1)
- P 5-1.10 Identify the epidemiology, anatomy, physiology, pathophysiology, assessment findings, and management for the following respiratory diseases and conditions: (C-1)
- a. Adult respiratory distress syndrome
  - b. Bronchial asthma
  - c. Chronic bronchitis
  - d. Emphysema
  - e. Pneumonia
  - f. Pulmonary edema
  - g. Pulmonary thromboembolism
  - h. Neoplasms of the lung
  - i. Upper respiratory infections
  - j. Spontaneous pneumothorax
  - k. Hyperventilation syndrome

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- P 5-1.11 Recognize and value the assessment and treatment of patients with respiratory diseases. (A-2)
- P 5-1.12 Indicate appreciation for the critical nature of accurate field impressions of patients with respiratory diseases and conditions. (A-2)

**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- P 5-1.13 Demonstrate proper use of airway and ventilation devices. (P-1)
- P 5-1.14 Conduct a history and patient assessment for patients with pulmonary diseases and conditions. (P-1)
- P 5-1.15 Demonstrate the application of a CPAP/ BiPAP unit. (P-1)

**UNIT TERMINAL OBJECTIVE**

V,W,X 5-2 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with cardiovascular disease.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- V 5-2.1 Describe the incidence, morbidity and mortality of cardiovascular disease. (C-1)
- V 5-2.2 Discuss prevention strategies that may reduce the morbidity and mortality of cardiovascular disease. (C-1)
- V 5-2.3 Identify the risk factors most predisposing to coronary artery disease. (C-1)
- H,V,W,X 5-2.4 Describe the anatomy of the heart, including the position in the thoracic cavity, layers of the heart, chambers of the heart, and location and function of cardiac valves. (C-1)
- H,V,W,X 5-2.5 Identify the major structures of the vascular system. (C-1)
- V 5-2.6 Identify the factors affecting venous return. (C-1)
- H,V,X 5-2.7 Identify and define the components of cardiac output. (C-1)
- W,X 5-2.8 Identify phases of the cardiac cycle. (C-1)
- V,W,X 5-2.9 Identify the arterial blood supply to any given area of the myocardium. (C-1)
- X 5-2.10 Compare and contrast the coronary arterial distribution to the major portions of the cardiac conduction system. (C-3)
- W,X 5-2.11 Identify the structure and course of all divisions and subdivisions of the cardiac conduction system. (C-1)
- W,X 5-2.12 Identify and describe how the heart's pacemaking control, rate, and rhythm are determined. (C-2)
- W,X 5-2.13 Explain the physiological basis of conduction delay in the AV node. (C-3)
- W,X 5-2.14 Define the functional properties of cardiac muscle. (C-1)
- W,X 5-2.15 Define the events comprising electrical potential. (C-1)
- W,X 5-2.16 List the most important ions involved in myocardial action potential and their primary function in this process. (C-2)
- W,X 5-2.17 Describe the events involved in the steps from excitation to contraction of cardiac muscle fibers. (C-1)
- W,X 5-2.18 Describe the clinical significance of Starling's law. (C-3)
- W,X 5-2.19 Identify the structures of the autonomic nervous system (ANS). (C-1)
- W,X 5-2.20 Identify the effect of the ANS on heart rate, rhythm and contractility. (C-1)
- W,X 5-2.21 Define and give examples of positive and negative inotropism, chronotropism and dromotropism. (C-2)
- H,V,X 5-2.22 Discuss the pathophysiology of cardiac disease and injury. (C-1)
- H,V,X 5-2.23 Identify and describe the details of inspection, auscultation and palpation specific to the cardiovascular system. (C-1)
- H,V,X 5-2.24 Define pulse deficit, pulsus paradoxus and pulsus alternans. (C-1)
- A,H,X 5-2.25 Identify the normal characteristics of the point of maximal impulse (PMI). (C-1)
- A,H,X 5-2.26 Identify and define the heart sounds. (C-1)
- A 5-2.27 Relate heart sounds to hemodynamic events in the cardiac cycle. (C-2)
- A,H,X 5-2.28 Describe the differences between normal and abnormal heart sounds. (C-2)
- C,V 5-2.29 Identify and describe the components of the focused history as it relates to the patient with cardiovascular compromise. (C-1)
- W,Z 5-2.30 Explain the purpose of ECG monitoring. (C-1)
- W,Z 5-2.31 Describe how ECG wave forms are produced. (C-2)
- W,Z 5-2.32 Correlate the electrophysiological and hemodynamic events occurring throughout the entire cardiac cycle with the various ECG wave forms, segments and intervals. (C-2)
- W,Z 5-2.33 Identify how heart rates, durations, and amplitudes may be determined from ECG recordings. (C-3)

A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
Y=EMC 453, Z=EMC 451

- W,Z 5-2.34 Relate the cardiac surfaces or areas represented by the ECG leads. (C-2)
- W,Z 5-2.35 Given an ECG, identify the arrhythmia. (C-3)
- W,Z 5-2.36 Identify the limitations to the ECG. (C-1)
- W,Z 5-2.37 Differentiate among the primary mechanisms responsible for producing cardiac arrhythmias. (C-1)
- W,Z 5-2.38 Describe a systematic approach to the analysis and interpretation of cardiac arrhythmias. (C-2)
- W 5-2.39 Describe the arrhythmias originating in the sinus node, the AV junction, the atria, and the ventricles. (C-3)
- W 5-2.40 Describe the arrhythmias originating or sustained in the AV junction. (C-3)
- W,Z 5-2.41 Describe the abnormalities originating within the bundle branch system. (C-3)
- W,Z 5-2.42 Describe the process of differentiating wide QRS complex tachycardias. (C-3)
- W,Z 5-2.43 Recognize the pitfalls in the differentiation of wide QRS complex tachycardias. (C-1)
- V,W,Z 5-2.44 Describe the conditions of pulseless electrical activity. (C-3)
- W,Z 5-2.45 Describe the phenomena of reentry, aberration and accessory pathways. (C-1)
- W,Z 5-2.46 Identify the ECG changes characteristically produced by electrolyte imbalances and specify the clinical implications. (C-2)
- W,Z 5-2.47 Identify patient situations where ECG rhythm analysis is indicated. (C-1)
- W,Z 5-2.48 Recognize the changes on the ECG that may reflect evidence of myocardial ischemia and injury. (C-1)
- W,Z 5-2.49 Recognize the limitations of the ECG in reflecting evidence of myocardial ischemia and injury. (C-1)
- V,Z 5-2.50 Correlate abnormal ECG findings with clinical interpretation. (C-2)
- V,Z 5-2.51 Identify the major therapeutic objectives in the treatment of the patient with any arrhythmia. (C-1)
- V,Z 5-2.52 Identify the major mechanical, pharmacological and electrical therapeutic interventions. (C-3)
- V,Z 5-2.53 Based on field impressions, identify the need for rapid intervention for the patient in cardiovascular compromise. (C-3)
- V,Z 5-2.54 Describe the incidence, morbidity and mortality associated with myocardial conduction defects. (C-1)
- V,W,X,Z 5-2.55 Identify the clinical indications for transcutaneous and permanent artificial cardiac pacing. (C-1)
- V,W,X,Z 5-2.56 Describe the components and the functions of a transcutaneous pacing system. (C-1)
- V,W,X,Z 5-2.57 Explain what each setting and indicator on a transcutaneous pacing system represents and how the settings may be adjusted. (C-2)
- V,W,X,Z 5-2.58 Describe the techniques of applying a transcutaneous pacing system. (C-1)
- V,W,X,Z 5-2.59 Describe the characteristics of an implanted pacemaking system. (C-1)
- W,X,Z 5-2.60 Describe artifacts that may cause confusion when evaluating the ECG of a patient with a pacemaker. (C-2)
- W,X,Z 5-2.61 List the possible complications of pacing. (C-3)
- W,X,Z 5-2.62 List the causes and implications of pacemaker failure. (C-2)
- W,X,Z 5-2.63 Identify additional hazards that interfere with artificial pacemaker function. (C-1)
- W,X,Z 5-2.64 Recognize the complications of artificial pacemakers as evidenced on ECG. (C-2)
- C,V 5-2.65 Describe the epidemiology, morbidity and mortality, and pathophysiology of angina pectoris. (C-1)
- V 5-2.66 List and describe the assessment parameters to be evaluated in a patient with angina pectoris. (C-1)
- C,V 5-2.67 Identify what is meant by the OPQRST of chest pain assessment. (C-3)
- V 5-2.68 List other clinical conditions that may mimic signs and symptoms of coronary artery disease and angina pectoris. (C-1)
- W 5-2.69 Identify the ECG findings in patients with angina pectoris. (C-3)
- V 5-2.70 Identify the paramedic responsibilities associated with management of the patient with angina pectoris. (C-2)
- V 5-2.71 Based on the pathophysiology and clinical evaluation of the patient with chest pain, list the anticipated clinical problems according to their life-threatening potential. (C-3)
- V 5-2.72 Describe the epidemiology, morbidity and mortality of myocardial infarction. (C-1)
- V 5-2.73 List the mechanisms by which an MI may be produced by traumatic and non-traumatic events. (C-2)
- V 5-2.74 Identify the primary hemodynamic changes produced in myocardial infarction. (C-1)

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- V 5-2.75 List and describe the assessment parameters to be evaluated in a patient with a suspected myocardial infarction. (C-1)
- V 5-2.76 Identify the anticipated clinical presentation of a patient with a suspected acute myocardial infarction. (C-3)
- V 5-2.77 Differentiate the characteristics of the pain/ discomfort occurring in angina pectoris and acute myocardial infarction. (C-2)
- V,Z 5-2.78 Identify the ECG changes characteristically seen during evolution of an acute myocardial infarction. (C-2)
- V 5-2.79 Identify the most common complications of an acute myocardial infarction. (C-3)
- V,X,Z 5-2.80 List the characteristics of a patient eligible for thrombolytic therapy. (C-2)
- V,Z 5-2.81 Describe the "window of opportunity" as it pertains to reperfusion of a myocardial injury or infarction. (C-3)
- V 5-2.82 Based on the pathophysiology and clinical evaluation of the patient with a suspected acute myocardial infarction, list the anticipated clinical problems according to their life-threatening potential. (C-3)
- V 5-2.83 Specify the measures that may be taken to prevent or minimize complications in the patient suspected of myocardial infarction. (C-3)
- N,V 5-2.84 Describe the most commonly used cardiac drugs in terms of therapeutic effect and dosages, routes of administration, side effects and toxic effects. (C-3)
- V 5-2.85 Describe the epidemiology, morbidity and mortality of heart failure. (C-1)
- V 5-2.86 Define the principle causes and terminology associated with heart failure. (C-1)
- V 5-2.87 Identify the factors that may precipitate or aggravate heart failure. (C-3)
- V 5-2.88 Describe the physiological effects of heart failure. (C-2)
- V 5-2.89 Define the term "acute pulmonary edema" and describe its relationship to left ventricular failure. (C-3)
- V 5-2.90 Define preload, afterload and left ventricular end-diastolic pressure and relate each to the pathophysiology of heart failure. (C-3)
- V 5-2.91 Differentiate between early and late signs and symptoms of left ventricular failure and those of right ventricular failure. (C-3)
- V 5-2.92 Explain the clinical significance of paroxysmal nocturnal dyspnea. (C-1)
- V 5-2.93 Explain the clinical significance of edema of the extremities and sacrum. (C-1)
- V 5-2.94 List the interventions prescribed for the patient in acute congestive heart failure. (C-2)
- N,V 5-2.95 Describe the most commonly used pharmacological agents in the management of congestive heart failure in terms of therapeutic effect, dosages, routes of administration, side effects and toxic effects. (C-1)
- V 5-2.96 Define the term "cardiac tamponade". (C-1)
- V 5-2.97 List the mechanisms by which cardiac tamponade may be produced by traumatic and non-traumatic events. (C-2)
- V 5-2.98 Identify the limiting factor of pericardial anatomy that determines intrapericardial pressure. (C-1)
- V 5-2.99 Identify the clinical criteria specific to cardiac tamponade. (C-2)
- V 5-2.100 Describe how to determine if pulsus paradoxus, pulsus alternans or electrical alternans is present. (C-2)
- V 5-2.101 Identify the paramedic responsibilities associated with management of a patient with cardiac tamponade. (C-2)
- V 5-2.102 Describe the incidence, morbidity and mortality of hypertensive emergencies. (C-1)
- V 5-2.103 Define the term "hypertensive emergency". (C-1)
- V 5-2.104 Identify the characteristics of the patient population at risk for developing a hypertensive emergency. (C-1)
- V 5-2.105 Explain the essential pathophysiological defect of hypertension in terms of Starling's law of the heart. (C-3)
- V 5-2.106 Identify the progressive vascular changes associate with sustained hypertension. (C-1)
- V 5-2.107 Describe the clinical features of the patient in a hypertensive emergency. (C-3)
- V 5-2.108 Rank the clinical problems of patients in hypertensive emergencies according to their sense of urgency. (C-3)

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Y=EMC 453, Z=EMC 451**



- V 5-2.109 From the priority of clinical problems identified, state the management responsibilities for the patient with a hypertensive emergency. (C-2)
- L,V 5-2.110 Identify the drugs of choice for hypertensive emergencies, rationale for use, clinical precautions and disadvantages of selected antihypertensive agents. (C-3)
- V 5-2.111 Correlate abnormal findings with clinical interpretation of the patient with a hypertensive emergency. (C-3)
- C,V 5-2.112 Define the term "cardiogenic shock". (C-1)
- V 5-2.113 Describe the major systemic effects of reduced tissue perfusion caused by cardiogenic shock. (C-3)
- V 5-2.114 Explain the primary mechanisms by which the heart may compensate for a diminished cardiac output and describe their efficiency in cardiogenic shock. (C-3)
- V 5-2.115 Differentiate progressive stages of cardiogenic shock. (C-3)
- V 5-2.116 Identify the clinical criteria for cardiogenic shock. (C-1)
- V 5-2.117 Describe the characteristics of patients most likely to develop cardiogenic shock. (C-3)
- V 5-2.118 Describe the most commonly used pharmacological agents in the management of cardiogenic shock in terms of therapeutic effects, dosages, routes of administration, side effects and toxic effects. (C-2)
- V 5-2.119 Correlate abnormal findings with clinical assessment of the patient in cardiogenic shock. (C-3)
- V 5-2.120 Identify the paramedic responsibilities associated with management of a patient in cardiogenic shock. (C-2)
- V 5-2.121 Define the term "cardiac arrest". (C-1)
- V 5-2.122 Identify the characteristics of patient population at risk for developing cardiac arrest from cardiac causes. (C-1)
- V 5-2.123 Identify non-cardiac causes of cardiac arrest. (C-1)
- V,X 5-2.124 Describe the arrhythmias seen in cardiac arrest. (C-3)
- V,X 5-2.125 Identify the critical actions necessary in caring for the patient with cardiac arrest. (C-3)
- V,X 5-2.126 Explain how to confirm asystole using the 3-lead ECG. (C-1)
- V,X 5-2.127 Define the terms defibrillation and synchronized cardioversion. (C-1)
- V 5-2.128 Specify the methods of supporting the patient with a suspected ineffective implanted defibrillation device. (C-2)
- L,V,X 5-2.129 Describe the most commonly used pharmacological agents in the managements of cardiac arrest in terms of therapeutic effects. (C-3)
- V,X 5-2.130 Identify resuscitation. (C-1)
- V,X 5-2.131 Identify circumstances and situations where resuscitation efforts would not be initiated. (C-1)
- V,X 5-2.132 Identify and list the inclusion and exclusion criteria for termination of resuscitation efforts. (C-1)
- V,X 5-2.133 Identify communication and documentation protocols with medical direction and law enforcement used for termination of resuscitation efforts. (C-1)
- V 5-2.134 Describe the incidence, morbidity and mortality of vascular disorders. (C-1)
- V 5-2.135 Describe the pathophysiology of vascular disorders. (C-1)
- V 5-2.136 List the traumatic and non-traumatic causes of vascular disorders. (C-1)
- V 5-2.137 Define the terms "aneurysm", "claudication" and "phlebitis". (C-1)
- V 5-2.138 Identify the peripheral arteries most commonly affected by occlusive disease. (C-1)
- V 5-2.139 Identify the major factors involved in the pathophysiology of aortic aneurysm. (C-1)
- V 5-2.140 Recognize the usual order of signs and symptoms that develop following peripheral artery occlusion. (C-3)
- V 5-2.141 Identify the clinical significance of claudication and presence of arterial bruits in a patient with peripheral vascular disorders. (C-3)
- V 5-2.142 Describe the clinical significance of unequal arterial blood pressure readings in the arms. (C-3)
- V 5-2.143 Recognize and describe the signs and symptoms of dissecting thoracic or abdominal aneurysm. (C-3)
- V 5-2.144 Describe the significant elements of the patient history in a patient with vascular disease. (C-2)
- V 5-2.145 Identify the hemodynamic effects of vascular disorders. (C-1)
- V 5-2.146 Identify the complications of vascular disorders. (C-1)

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Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
Y=EMC 453, Z=EMC 451**

- V 5-2.147 Identify the Paramedic's responsibilities associated with management of patients with vascular disorders. (C-2)
  - V 5-2.148 Develop, execute and evaluate a treatment plan based on the field impression for the patient with vascular disorders. (C-3)
  - V,X 5-2.149 Differentiate between signs and symptoms of cardiac tamponade, hypertensive emergencies, cardiogenic shock, and cardiac arrest. (C-3)
  - V 5-2.150 Based on the pathophysiology and clinical evaluation of the patient with chest pain, characterize the clinical problems according to their life-threatening potential. (C-3)
  - V 5-2.151 Apply knowledge of the epidemiology of cardiovascular disease to develop prevention strategies. (C-3)
  - V 5-2.152 Integrate pathophysiological principles into the assessment of a patient with cardiovascular disease. (C-3)
- A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410**
- V 5-2.153 Apply knowledge of the epidemiology of cardiovascular disease to develop prevention strategies. (C-3)
  - V 5-2.154 Integrate pathophysiological principles into the assessment of a patient with cardiovascular disease. (C-3)
  - V,X 5-2.155 Synthesize patient history, assessment findings and ECG analysis to form a field impression for the patient with cardiovascular disease. (C-3)
  - V 5-2.156 Integrate pathophysiological principles to the assessment of a patient in need of a pacemaker. (C-1)
  - V,X 5-2.157 Synthesize patient history, assessment findings and ECG analysis to form a field impression for the patient in need of a pacemaker. (C-3)
  - V,X 5-2.158 Develop, execute, and evaluate a treatment plan based on field impression for the patient in need of a pacemaker. (C-3)
  - V 5-2.159 Based on the pathophysiology and clinical evaluation of the patient with chest pain, characterize the clinical problems according to their life-threatening potential. (C-3)
  - V 5-2.160 Integrate pathophysiological principles to the assessment of a patient with chest pain. (C-3)
  - V,X 5-2.161 Synthesize patient history, assessment findings and ECG analysis to form a field impression for the patient with angina pectoris. (C-3)
  - V,X 5-2.162 Develop, execute and evaluate a treatment plan based on the field impression for the patient with chest pain. (C-3)
  - V,X 5-2.163 Integrate pathophysiological principles to the assessment of a patient with a suspected myocardial infarction. (C-3)
  - V,X 5-2.164 Synthesize patient history, assessment findings and ECG analysis to form a field impression for the patient with a suspected myocardial infarction. (C-3)
  - V,X 5-2.165 Develop, execute and evaluate a treatment plan based on the field impression for the suspected myocardial infarction patient. (C-3)
  - V,X 5-2.166 Integrate pathophysiological principles to the assessment of the patient with heart failure. (C-3)
  - V,X 5-2.167 Synthesize assessment findings and patient history information to form a field impression of the patient with heart failure. (C-3)
  - V,X 5-2.168 Develop, execute, and evaluate a treatment plan based on the field impression for the heart failure patient. (C-3)
  - V 5-2.169 Integrate pathophysiological principles to the assessment of a patient with cardiac tamponade. (C-3)
  - V 5-2.170 Synthesize assessment findings and patient history information to form a field impression of the patient with cardiac tamponade. (C-3)
  - V 5-2.171 Develop, execute and evaluate a treatment plan based on the field impression for the patient with cardiac tamponade. (C-3)
  - V 5-2.172 Integrate pathophysiological principles to the assessment of the patient with a hypertensive emergency. (C-3)
  - V 5-2.173 Synthesize assessment findings and patient history information to form a field impression of the patient with a hypertensive emergency. (C-3)
  - V 5-2.174 Develop, execute and evaluate a treatment plan based on the field impression for the patient with a hypertensive emergency. (C-3)

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Y=EMC 453, Z=EMC 451**

- a hypertensive emergency. (C-3)
- V,X 5-2.175 Integrate pathophysiological principles to the assessment of the patient with cardiogenic shock. (C-3)
- V,X 5-2.176 Synthesize assessment findings and patient history information to form a field impression of the patient with cardiogenic shock. (C-3)
- V,X 5-2.177 Develop, execute, and evaluate a treatment plan based on the field impression for the patient with cardiogenic shock. (C-3)
- V,X 5-2.178 Integrate the pathophysiological principles to the assessment of the patient with cardiac arrest. (C-3)
- V,X 5-2.179 Synthesize assessment findings to formulate a rapid intervention for a patient in cardiac arrest. (C-3)
- V,X 5-2.180 Synthesize assessment findings to formulate the termination of resuscitative efforts for a patient in cardiac arrest. (C-3)
- V 5-2.181 Integrate pathophysiological principles to the assessment of a patient with vascular disorders. (C-3)
- V 5-2.182 Synthesize assessment findings and patient history to form a field impression for the patient with vascular disorders. (C-3)
- V,X 5-2.183 Integrate pathophysiological principles to the assessment and field management of a patient with chest pain. (C-3)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- C,V,X 5-2.184 Value the sense of urgency for initial assessment and intervention in the patient with cardiac compromise. (A-3)
- C,V,X 5-2.185 Value and defend the sense of urgency necessary to protect the window of opportunity for reperfusion in the patient with suspected myocardial infarction. (A-3)
- C,V,X 5-2.186 Defend patient situations where ECG rhythm analysis is indicated. (A-3)
- C,V,X 5-2.187 Value and defend the application of transcutaneous pacing system. (A-3)
- C,V,X 5-2.188 Value and defend the urgency in identifying pacemaker malfunction. (A-3)
- C,V,X 5-2.189 Based on the pathophysiology and clinical evaluation of the patient with acute myocardial infarction, characterize the clinical problems according to their life-threatening potential. (A-3)
- C,V,X 5-2.190 Defend the measures that may be taken to prevent or minimize complications in the patient with a suspected myocardial infarction. (A-3)
- V 5-2.191 Defend the urgency based on the severity of the patient's clinical problems in a hypertensive emergency. (A-3)
- V 5-2.192 From the priority of clinical problems identified, state the management responsibilities for the patient with a hypertensive emergency. (A-3)
- V,X 5-2.193 Value and defend the urgency in rapid determination of and rapid intervention of patients in cardiac arrest. (A-3)
- V,X 5-2.194 Value and defend the possibility of termination of resuscitative efforts in the out-of-hospital setting. (A-3)
- V 5-2.195 Based on the pathophysiology and clinical evaluation of the patient with vascular disorders, characterize the clinical problems according to their life-threatening potential. (A-3)
- V 5-2.196 Value and defend the sense of urgency in identifying peripheral vascular occlusion. (A-3)
- V 5-2.197 Value and defend the sense of urgency in recognizing signs of aortic aneurysm. (A-3)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- W,X,Z 5-2.198 Demonstrate how to set and adjust the ECG monitor settings to varying patient situations. (P-3)
- W,X,Z 5-2.199 Demonstrate a working knowledge of various ECG lead systems. (P-3)
- W,X,Z 5-2.200 Demonstrate how to record an ECG. (P-2)

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410, I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360, Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452, Y=EMC 453, Z=EMC 451**

<u>W,X,Z</u>	5-2.199	Demonstrate a working knowledge of various ECG lead systems. (P-3)
<u>W,X,Z</u>	5-2.200	Demonstrate how to record an ECG. (P-2)
<u>W,X,Z</u>	5-2.201	Perform, document and communicate a cardiovascular assessment. (P-1)
<u>W,X,Z</u>	5-2.202	Set up and apply a transcutaneous pacing system. (P-3)
<u>W,X,Z</u>	5-2.203	Given the model of a patient with signs and symptoms of heart failure, position the patient to afford comfort and relief. (P-2)
<u>W,X,Z</u>	5-2.204	Demonstrate how to determine if pulsus paradoxus, pulsus alternans or electrical alternans is present. (P-2)
<u>W,X,Z</u>	5-2.205	Demonstrate satisfactory performance of psychomotor skills of basic and advanced life support techniques according to the current American Heart Association Standards and Guidelines, including: (P-3) <ul style="list-style-type: none"> <li>a. Cardiopulmonary resuscitation</li> <li>b. Defibrillation</li> <li>c. Synchronized cardioversion</li> <li>d. Transcutaneous pacing</li> </ul>
<u>S,T</u>	5-2.206	Complete a communication patch with medical direction and law enforcement used for termination of resuscitation efforts. (P-1)
<u>A</u>	5-2.207	Demonstrate how to evaluate major peripheral arterial pulses. (P-1)

**A**=EMC 340, **B**=EMC 496, **C**=HSCC 240, **D**=HSCC 330, **E**=HSCC 470, **F**=HSCC 241, **G**=PSY 460, **H**=EMC 410  
**I**=BIO 291, **J**=BIO 292, **K**=EMC 430, **L**=EMC 370, **M**=EMC 420, **N**=HSCC 370, **O**=EMC 361, **P**=EMC 360,  
**Q**=EMC 461, **R**=EMC 382, **S**=EMC 483, **T**=EMC 485, **U**=EMC 484, **V**=EMC 350, **W**=EMC 351, **X**=EMC 452,  
**Y**=EMC 453, **Z**=EMC 451

**UNIT TERMINAL OBJECTIVE**

- L 5-3 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with a neurological problem.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- C,L 5-3.1 Describe the incidence, morbidity and mortality of neurological emergencies. (C-1)  
C,L 5-3.2 Identify the risk factors most predisposing to the nervous system. (C-1)  
C,L 5-3.3 Discuss the anatomy and physiology of the organs and structures related to nervous system. (C-1)  
L 5-3.4 Discuss the pathophysiology of non-traumatic neurologic emergencies. (C-1)  
L 5-3.5 Discuss the assessment findings associated with non-traumatic neurologic emergencies. (C-1)  
L 5-3.6 Identify the need for rapid intervention and the transport of the patient with non-traumatic emergencies. (C-1)  
L 5-3.7 Discuss the management of non-traumatic neurological emergencies. (C-1)  
C,L 5-3.8 Discuss the pathophysiology of coma and altered mental status. (C-1)  
C,L 5-3.9 Discuss the assessment findings associated with coma and altered mental status. (C-1)  
C,L 5-3.10 Discuss the management/ treatment plan of coma and altered mental status. (C-1)  
C,L 5-3.11 Describe the epidemiology, including the morbidity/ mortality and prevention strategies, for seizures. (C-1)  
C,L 5-3.12 Discuss the pathophysiology of seizures. (C-1)  
C,L 5-3.13 Discuss the assessment findings associated with seizures. (C-1)  
C,L 5-3.14 Define seizure. (C-1)  
C,L 5-3.15 Describe and differentiate the major types of seizures. (C-3)  
C,L 5-3.16 List the most common causes of seizures. (C-1)  
C,L 5-3.17 Describe the phases of a generalized seizure. (C-1)  
C,L 5-3.18 Discuss the pathophysiology of syncope. (C-1)  
C,L 5-3.19 Discuss the assessment findings associated with syncope. (C-1)  
C,L 5-3.20 Discuss the management/ treatment plan of syncope. (C-1)  
L 5-3.21 Discuss the pathophysiology of headache. (C-1)  
L 5-3.22 Discuss the assessment findings associated with headache. (C-1)  
L 5-3.23 Discuss the management/ treatment plan of headache. (C-1)  
L 5-3.24 Describe the epidemiology, including the morbidity/ mortality and prevention strategies, for neoplasms. (C-1)  
L 5-3.25 Discuss the pathophysiology of neoplasms. (C-1)  
L 5-3.26 Describe the types of neoplasms. (C-1)  
L 5-3.27 Discuss the assessment findings associated with neoplasms. (C-1)  
L 5-3.28 Discuss the management/ treatment plan of neoplasms. (C-1)  
L 5-3.29 Define neoplasms. (C-1)  
L 5-3.30 Recognize the signs and symptoms related to neoplasms. (C-1)  
L 5-3.31 Correlate abnormal assessment findings with clinical significance in the patient with neoplasms. (C-3)  
L 5-3.32 Differentiate among the various treatment and pharmacological interventions used in the management of neoplasms. (C-3)  
L 5-3.33 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with neoplasms. (C-3)  
L 5-3.34 Describe the epidemiology, including the morbidity/ mortality and prevention strategies, for abscess. (C-1)  
L 5-3.35 Discuss the pathophysiology of abscess. (C-1)  
L 5-3.36 Discuss the assessment findings associated with abscess. (C-1)  
L 5-3.37 Discuss the management/ treatment plan of abscess. (C-1)

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410, I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360, Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452, Y=EMC 453, Z=EMC 451**

- L 5-3.38 Define abscess. (C-1)
- L 5-3.39 Recognize the signs and symptoms related to abscess. (C-1)
- L 5-3.40 Correlate abnormal assessment findings with clinical significance in the patient with abscess. (C-3)
- L 5-3.41 Differentiate among the various treatment and pharmacological interventions used in the management of abscess. (C-3)
- L 5-3.42 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with abscess. (C-3)
- C,L 5-3.43 Describe the epidemiology, including the morbidity/ mortality and prevention strategies, for stroke and intracranial hemorrhage. (C-1)
- C,L 5-3.44 Discuss the pathophysiology of stroke and intracranial hemorrhage. (C-1)
- C,L 5-3.45 Describe the types of stroke and intracranial hemorrhage. (C-1)
- C,L 5-3.46 Discuss the assessment findings associated with stroke and intracranial hemorrhage. (C-1)
- C,L 5-3.47 Discuss the management/ treatment plan of stroke and intracranial hemorrhage. (C-1)
- C,L 5-3.48 Define stroke and intracranial hemorrhage. (C-1)
- C,L 5-3.49 Recognize the signs and symptoms related to stroke and intracranial hemorrhage. (C-1)
- C,L 5-3.50 Correlate abnormal assessment findings with clinical significance in the patient with stroke and intracranial hemorrhage. (C-3)
- L 5-3.51 Differentiate among the various treatment and pharmacological interventions used in the management of stroke and intracranial hemorrhage. (C-3)
- C,L 5-3.52 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with stroke and intracranial hemorrhage. (C-3)
- C,L 5-3.53 Describe the epidemiology, including the morbidity/ mortality and prevention strategies, for transient ischemic attack. (C-3)
- C,L 5-3.54 Discuss the pathophysiology of transient ischemic attack. (C-1)
- C,L 5-3.55 Discuss the assessment findings associated with transient ischemic attack. (C-1)
- C,L 5-3.56 Discuss the management/ treatment plan of transient ischemic attack. (C-1)
- C,L 5-3.57 Define transient ischemic attack. (C-1)
- C,L 5-3.58 Recognize the signs and symptoms related to transient ischemic attack. (C-1)
- C,L 5-3.59 Correlate abnormal assessment findings with clinical significance in the patient with transient ischemic attack. (C-3)
- L 5-3.60 Differentiate among the various treatment and pharmacological interventions used in the management of transient ischemic attack. (C-3)
- L 5-3.61 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with transient ischemic attack. (C-3)
- K,L 5-3.62 Describe the epidemiology, including the morbidity/ mortality and prevention strategies, for degenerative neurological diseases. (C-1)
- K,L 5-3.63 Discuss the pathophysiology of degenerative neurological diseases. (C-1)
- K,L 5-3.64 Discuss the assessment findings associated with degenerative neurological diseases. (C-1)
- K,L 5-3.65 Discuss the management/ treatment plan of degenerative neurological diseases. (C-1)
- K,L 5-3.66 Define the following: (C-1)
  - a. Muscular dystrophy
  - b. Multiple sclerosis
  - c. **Dystonia**
  - d. Parkinson's disease
  - e. Trigeminal neuralgia
  - f. Bell's palsy
  - g. Amyotrophic lateral sclerosis
  - h. Peripheral neuropathy
  - i. Myoclonus
  - j. Spina bifida
  - k. **Poliomyelitis**
- K,L 5-3.67 Recognize the signs and symptoms related to degenerative neurological diseases. (C-1)
- K,L 5-3.68 Correlate abnormal assessment findings with clinical significance in the patient with degenerative neurological diseases. (C-3)

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 Y=EMC 453, Z=EMC 451**

- K.L** 5-3.69 Differentiate among the various treatment and pharmacological interventions used in the management of degenerative neurological diseases. (C-3)
- K.L** 5-3.70 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with degenerative neurological diseases. (C-3)
- K.L** 5-3.71 Integrate the pathophysiological principles of the patient with a neurological emergency. (C-3)
- K.L** 5-3.72 Differentiate between neurological emergencies based on assessment findings. (C-3)
- K.L** 5-3.73 Correlate abnormal assessment findings with the clinical significance in the patient with neurological complaints. (C-3)
- K.L** 5-3.74 Develop a patient management plan based on field impression in the patient with neurological emergencies. (C-3)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- L** 5-3.75 Characterize the feelings of a patient who regains consciousness among strangers. (A-2)
- L** 5-3.76 Formulate means of conveying empathy to patients whose ability to communicate is limited by their condition. (A-3)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- AA** 5-3.77 Perform an appropriate assessment of a patient with coma or altered mental status. (P-3)
- AA** 5-3.78 Perform a complete neurological examination as part of the comprehensive physical examination of a patient with coma or altered mental status. (P-3)
- AA** 5-3.79 Appropriately manage a patient with coma or altered mental status, including the administration of oxygen, oral glucose, 50% dextrose and narcotic reversal agents. (P-3)
- AA** 5-3.80 Perform an appropriate assessment of a patient with syncope. (P-3)
- AA** 5-3.81 Appropriately manage a patient with syncope. (P-3)
- AA** 5-3.82 Perform an appropriate assessment of a patient with seizures. (P-3)
- AA** 5-3.83 Appropriately manage a patient with seizures, including the administration of diazepam or lorazepam. (P-3)
- AA** 5-3.84 Perform an appropriate assessment of a patient with stroke and intracranial hemorrhage or TIA. (P-3)
- AA** 5-3.85 Appropriately manage a patient with stroke and intracranial hemorrhage or TIA. (P-3)
- AA** 5-3.86 Demonstrate an appropriate assessment of a patient with a chief complaint of weakness. (P-3)

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I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
Y=EMC 453, Z=EMC 451, AA=SIMLAB**

**UNIT TERMINAL OBJECTIVE**

- B,L** 5-4 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with an endocrine problem.

**COGNITIVE OBJECTIVE**

At the completion of this unit, the paramedic student will be able to:

- B,L** 5-4.1 Describe the incidence, morbidity and mortality of endocrinologic emergencies. (C-1)  
**B,L** 5-4.2 Identify the risk factors most predisposing to endocrinologic disease. (C-1)  
**B,L** 5-4.3 Discuss the anatomy and physiology of organs and structures related to endocrinologic diseases. (C-1)  
**B,L** 5-4.4 Review the pathophysiology of endocrinologic emergencies. (C-1)  
**B,L** 5-4.5 Discuss the general assessment findings associated with endocrinologic emergencies. (C-1)  
**B,L** 5-4.6 Identify the need for rapid intervention of the patient with endocrinologic emergencies. (C-1)  
**B,L** 5-4.7 Discuss the management of endocrinologic emergencies. (C-1)  
**B,L** 5-4.8 Describe osmotic diuresis and its relationship to diabetes. (C-1)  
**B,C,L** 5-4.9 Describe the pathophysiology of adult onset diabetes mellitus. (C-1)  
**B,C,L** 5-4.10 Describe the pathophysiology of juvenile onset diabetes mellitus. (C-1)  
**B,C,L** 5-4.11 Describe the effects of decreased levels of insulin on the body. (C-1)  
**B,C,L** 5-4.12 Correlate abnormal findings in assessment with clinical significance in the patient with a diabetic emergency. (C-3)  
**B,C,L** 5-4.13 Discuss the management of diabetic emergencies. (C-1)  
**B,C,L** 5-4.14 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with a diabetic emergency. (C-3)  
**B,L** 5-4.15 Differentiate between the pathophysiology of normal glucose metabolism and diabetic glucose metabolism. (C-3)  
**B,L** 5-4.16 Describe the mechanism of ketone body formation and its relationship to ketoacidosis. (C-1)  
**B,L** 5-4.17 Discuss the physiology of the excretion of potassium and ketone bodies by the kidneys. (C-1)  
**B,C,L** 5-4.18 Describe the relationship of insulin to serum glucose levels. (C-1)  
**B,C,L** 5-4.19 Describe the effects of decreased levels of insulin on the body. (C-1)  
**B,C,L** 5-4.20 Describe the effects of increased serum glucose levels on the body. (C-1)  
**B,C,L** 5-4.21 Discuss the pathophysiology of hypoglycemia. (C-1)  
**B,C,L** 5-4.22 Discuss the utilization of glycogen by the human body as it relates to the pathophysiology of hypoglycemia. (C-3)  
**B,L** 5-4.23 Describe the actions of epinephrine as it relates to the pathophysiology of hypoglycemia. (C-3)  
**B,C,L** 5-4.24 Recognize the signs and symptoms of the patient with hypoglycemia. (C-1)  
**B,L** 5-4.25 Describe the compensatory mechanisms utilized by the body to promote homeostasis relative to hypoglycemia. (C-1)  
**B,C,L** 5-4.26 Describe the management of a responsive hypoglycemic patient. (C-1)  
**B,L** 5-4.27 Correlate abnormal findings in assessment with clinical significance in the patient with hypoglycemia. (C-1)  
**B,C,L** 5-4.28 Discuss the management of the hypoglycemic patient. (C-1)  
**B,C,L** 5-4.29 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with hypoglycemia. (C-3)  
**B,C,L** 5-4.30 Discuss the pathophysiology of hyperglycemia. (C-1)  
**B,C,L** 5-4.31 Recognize the signs and symptoms of the patient with hyperglycemia. (C-1)  
**B,C,L** 5-4.32 Describe the management of hyperglycemia. (C-1)  
**B,C,L** 5-4.33 Correlate abnormal findings in assessment with clinical significance in the patient with hyperglycemia. (C-3)  
**B,C,L** 5-4.34 Discuss the management of the patient with hyperglycemia. (C-1)

A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
 I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
 Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
 Y=EMC 453, Z=EMC 451, AA=SIMLAB



- B,C,L** 5-4.35 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with hyperglycemia. (C-3)
- B,L** 5-4.36 Discuss the pathophysiology of nonketotic hyperosmolar coma. (C-1)
- B,L** 5-4.37 Recognize the signs and symptoms of the patient with nonketotic hyperosmolar coma. (C-1)
- B,L** 5-4.38 Describe the management of nonketotic hyperosmolar coma. (C-1)
- L** 5-4.39 Correlate abnormal findings in assessment with clinical significance in the patient with nonketotic hyperosmolar coma. (C-3)
- L** 5-4.40 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with nonketotic hyperosmolar coma. (C-3)
- B,L** 5-4.41 Discuss the management of the patient with hyperglycemia. (C-1)
- B,L** 5-4.42 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with hyperglycemia. (C-3)
- B,L** 5-4.43 Discuss the pathophysiology of diabetic ketoacidosis. (C-1)
- B,L** 5-4.44 Recognize the signs and symptoms of the patient with diabetic ketoacidosis. (C-1)
- B,L** 5-4.45 Describe the management of diabetic ketoacidosis. (C-1)
- B,L** 5-4.46 Correlate abnormal findings in assessment with clinical significance in the patient with diabetic ketoacidosis. (C-3)
- B,L** 5-4.47 Discuss the management of the patient with diabetic ketoacidosis. (C-1)
- B,L** 5-4.48 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with diabetic ketoacidosis. (C-3)
- L** 5-4.49 Discuss the pathophysiology of thyrotoxicosis. (C-1)
- L** 5-4.50 Recognize signs and symptoms of the patient with thyrotoxicosis. (C-1)
- L** 5-4.51 Describe the management of thyrotoxicosis. (C-1)
- L** 5-4.52 Correlate abnormal findings in assessment with clinical significance in the patient with thyrotoxicosis. (C-3)
- L** 5-4.53 Discuss the management of the patient with thyrotoxicosis. (C-1)
- L** 5-4.54 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with thyrotoxicosis. (C-3)
- L** 5-4.55 Discuss the pathophysiology of myxedema. (C-1)
- L** 5-4.56 Recognize signs and symptoms of the patient with myxedema. (C-1)
- L** 5-4.57 Describe the management of myxedema. (C-1)
- L** 5-4.58 Correlate abnormal findings in assessment with clinical significance in the patient with myxedema. (C-3)
- L** 5-4.59 Discuss the management of the patient with myxedema. (C-1)
- L** 5-4.60 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with myxedema. (C-3)
- L** 5-4.61 Discuss the pathophysiology of Cushing's syndrome. (C-1)
- L** 5-4.62 Recognize signs and symptoms of the patient with Cushing's syndrome. (C-1)
- L** 5-4.63 Describe the management of Cushing's syndrome. (C-1)
- L** 5-4.64 Correlate abnormal findings in assessment with clinical significance in the patient with Cushing's syndrome. (C-3)
- L** 5-4.65 Discuss the management of the patient with Cushing's syndrome. (C-1)
- L** 5-4.66 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with Cushing's syndrome. (C-3)
- L** 5-4.67 Discuss the pathophysiology of adrenal Insufficiency. (C-1)
- L** 5-4.68 Recognize signs and symptoms of the patient with adrenal insufficiency. (C-1)
- L** 5-4.69 Describe the management of adrenal insufficiency. (C-1)
- L** 5-4.70 Correlate abnormal findings in assessment with clinical significance in the patient with adrenal insufficiency. (C-3)
- L** 5-4.71 Discuss the management of the patient with adrenal insufficiency. (C-1)
- L** 5-4.72 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with adrenal insufficiency. (C-3)
- L** 5-4.73 Integrate the pathophysiological principles to the assessment of a patient with a endocrinological emergency. (C-3)

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410, I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360, Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452, Y=EMC 453, Z=EMC 451, AA=SIMLAB**

- L 5-4.74 Differentiate between endocrine emergencies based on assessment and history. (C-3)
- L 5-4.75 Correlate abnormal findings in the assessment with clinical significance in the patient with endocrinologic emergencies. (C-3)
- L 5-4.76 Develop a patient management plan based on field impression in the patient with an endocrinologic emergency. (C-3)

**AFFECTIVE OBJECTIVES**

None identified for this unit.

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
Y=EMC 453, Z=EMC 451, AA=SIMLAB**

**UNIT TERMINAL OBJECTIVE**

- B,L** 5-5 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with an allergic or anaphylactic reaction.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,C,L** 5-5.1 Define allergic reaction. (C-1)  
**B,C,L** 5-5.2 Define anaphylaxis. (C-1)  
**B,C,L** 5-5.3 Describe the incidence, morbidity and mortality of anaphylaxis. (C-1)  
**B,C,L** 5-5.4 Identify the risk factors most predisposing to anaphylaxis. (C-1)  
**B,C,L** 5-5.5 Discuss the anatomy and physiology of the organs and structures related to anaphylaxis. (C-1)  
**B,C,L** 5-5.6 Describe the prevention of anaphylaxis and appropriate patient education. (C-1)  
**B,C,L** 5-5.7 Discuss the pathophysiology of allergy and anaphylaxis. (C-1)  
**B,C,L** 5-5.8 Describe the common methods of entry of substances into the body. (C-1)  
**B,L** 5-5.9 Define natural and acquired immunity. (C-1)  
**B,C,L** 5-5.10 Define antigens and antibodies. (C-1)  
**B,C,L** 5-5.11 List common antigens most frequently associated with anaphylaxis. (C-1)  
**B,C,L** 5-5.12 Discuss the formation of antibodies in the body. (C-1)  
**B,C,L** 5-5.13 Describe physical manifestations in anaphylaxis. (C-1)  
**B,C,L** 5-5.14 Differentiate manifestations of an allergic reaction from anaphylaxis. (C-3)  
**B,C,L** 5-5.15 Recognize the signs and symptoms related to anaphylaxis. (C-1)  
**B,C,L** 5-5.16 Differentiate among the various treatment and pharmacological interventions used in the management of anaphylaxis. (C-3)  
**B,C,L** 5-5.17 Integrate the pathophysiological principles of the patient with anaphylaxis. (C-3)  
**B,C,L** 5-5.18 Correlate abnormal findings in assessment with the clinical significance in the patient with anaphylaxis. (C-3)  
**B,C,L** 5-5.19 Develop a treatment plan based on field impression in the patient with allergic reaction and anaphylaxis. (C-3)

**AFFECTIVE OBJECTIVES**

None identified for this unit.

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**UNIT TERMINAL OBJECTIVE**

**B,L** 5-6 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with a gastroenterologic problem.

**COGNITIVE OBJECTIVE**

At the conclusion of this unit, the paramedic student will be able to:

- B,L** 5-6.1 Describe the incidence, morbidity and mortality of gastrointestinal emergencies. (C-1)
- B,L** 5-6.2 Identify the risk factors most predisposing to gastrointestinal emergencies. (C-1)
- B,L** 5-6.3 Discuss the anatomy and physiology of the organs and structures related to gastrointestinal diseases. (C-1)
- B,L** 5-6.4 Discuss the pathophysiology of inflammation and its relationship to acute abdominal pain. (C-1)
- B,L** 5-6.5 Define somatic pain as it relates to gastroenterology. (C-1)
- B,L** 5-6.6 Define visceral pain as it relates to gastroenterology. (C-1)
- B,L** 5-6.7 Define referred pain as it relates to gastroenterology. (C-1)
- B,L** 5-6.8 Differentiate between hemorrhagic and non-hemorrhagic abdominal pain. (C-3)
- B,L** 5-6.9 Discuss the signs and symptoms of local inflammation relative to acute abdominal pain. (C-1)
- B,L** 5-6.10 Discuss the signs and symptoms of peritoneal inflammation relative to acute abdominal pain. (C-1)
- B,L** 5-6.11 List the signs and symptoms of general inflammation relative to acute abdominal pain. (C-1)
- B,L** 5-6.12 Based on assessment findings, differentiate between local, peritoneal and general inflammation as they relate to acute abdominal pain. (C-3)
- B,C,L** 5-6.13 Describe the questioning technique and specific questions the paramedic should ask when gathering a focused history in a patient with abdominal pain. (C-1)
- B,L** 5-6.14 Describe the technique for performing a comprehensive physical examination on a patient complaining of abdominal pain. (C-1)
- B,L** 5-6.15 Define upper gastrointestinal bleeding. (C-1)
- B,L** 5-6.16 Discuss the pathophysiology of upper gastrointestinal bleeding. (C-1)
- B,L** 5-6.17 Recognize the signs and symptoms related to upper gastrointestinal bleeding. (C-1)
- B,L** 5-6.18 Describe the management for upper gastrointestinal bleeding. (C-1)
- B,L** 5-6.19 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with upper GI bleeding. (C-3)
- B,L** 5-6.20 Define lower gastrointestinal bleeding. (C-1)
- B,L** 5-6.21 Discuss the pathophysiology of lower gastrointestinal bleeding. (C-1)
- B,L** 5-6.22 Recognize the signs and symptoms related to lower gastrointestinal bleeding. (C-1)
- B,L** 5-6.23 Describe the management for lower gastrointestinal bleeding. (C-1)
- B,L** 5-6.24 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with lower GI bleeding. (C-3)
- B,L** 5-6.25 Define acute gastroenteritis. (C-1)
- B,L** 5-6.26 Discuss the pathophysiology of acute gastroenteritis. (C-1)
- B,L** 5-6.27 Recognize the signs and symptoms related to acute gastroenteritis. (C-1)
- B,L** 5-6.28 Describe the management for acute gastroenteritis. (C-1)
- B,L** 5-6.29 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with acute gastroenteritis. (C-3)
- B,L** 5-6.30 Define colitis. (C-1)
- B,L** 5-6.31 Discuss the pathophysiology of colitis. (C-1)
- B,L** 5-6.32 Recognize the signs and symptoms related to colitis. (C-1)
- B,L** 5-6.33 Describe the management for colitis. (C-1)
- B,L** 5-6.34 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with colitis. (C-3)
- B,L** 5-6.35 Define gastroenteritis. (C-1)
- B,L** 5-6.36 Discuss the pathophysiology of gastroenteritis. (C-1)

A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
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Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
Y=EMC 453, Z=EMC 451, AA=SIMLAB

- B,L 5-6.37 Recognize the signs and symptoms related to gastroenteritis. (C-1)
- B,L 5-6.38 Describe the management for gastroenteritis. (C-1)
- B,L 5-6.39 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with gastroenteritis. (C-3)
- B,L 5-6.40 Define diverticulitis. (C-1)
- B,L 5-6.41 Discuss the pathophysiology of diverticulitis. (C-1)
- B,L 5-6.42 Recognize the signs and symptoms related to diverticulitis. (C-1)
- B,L 5-6.43 Describe the management for diverticulitis. (C-1)
- B,L 5-6.44 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with diverticulitis. (C-3)
- B,L 5-6.45 Define appendicitis. (C-1)
- B,L 5-6.46 Discuss the pathophysiology of appendicitis. (C-1)
- B,L 5-6.47 Recognize the signs and symptoms related to appendicitis. (C-1)
- B,L 5-6.48 Describe the management for appendicitis. (C-1)
- B,L 5-6.49 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with appendicitis. (C-3)
- B,L 5-6.50 Define peptic ulcer disease. (C-1)
- B,L 5-6.51 Discuss the pathophysiology of peptic ulcer disease. (C-1)
- B,L 5-6.52 Recognize the signs and symptoms related to peptic ulcer disease. (C-1)
- B,L 5-6.53 Describe the management for peptic ulcer disease. (C-1)
- B,L 5-6.54 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with peptic ulcer disease. (C-3)
- B,L 5-6.55 Define bowel obstruction. (C-1)
- B,L 5-6.56 Discuss the pathophysiology of bowel obstruction. (C-1)
- B,L 5-6.57 Recognize the signs and symptoms related to bowel obstruction. (C-1)
- B,L 5-6.58 Describe the management for bowel obstruction. (C-1)
- B,L 5-6.59 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with bowel obstruction. (C-3)
- B,L 5-6.60 Define Crohns disease. (C-1)
- B,L 5-6.61 Discuss the pathophysiology of Crohns disease. (C-1)
- B,L 5-6.62 Recognize the signs and symptoms related to Crohns disease. (C-1)
- B,L 5-6.63 Describe the management for Crohns disease. (C-1)
- B,L 5-6.64 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with Crohns disease. (C-3)
- B,L 5-6.65 Define pancreatitis. (C-1)
- B,L 5-6.66 Discuss the pathophysiology of pancreatitis. (C-1)
- B,L 5-6.67 Recognize the signs and symptoms related to pancreatitis. (C-1)
- B,L 5-6.68 Describe the management for pancreatitis. (C-1)
- B,L 5-6.69 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with pancreatitis. (C-3)
- B,L 5-6.70 Define esophageal varices. (C-1)
- B,L 5-6.71 Discuss the pathophysiology of esophageal varices. (C-1)
- B,L 5-6.72 Recognize the signs and symptoms related to esophageal varices. (C-1)
- B,L 5-6.73 Describe the management for esophageal varices. (C-1)
- B,L 5-6.74 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with esophageal varices. (C-3)
- B,L 5-6.75 Define hemorrhoids. (C-1)
- B,L 5-6.76 Discuss the pathophysiology of hemorrhoids. (C-1)
- B,L 5-6.77 Recognize the signs and symptoms related to hemorrhoids. (C-1)
- B,L 5-6.78 Describe the management for hemorrhoids. (C-1)
- B,L 5-6.79 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with hemorrhoids. (C-3)
- B,L 5-6.80 Define cholecystitis. (C-1)
- B,L 5-6.81 Discuss the pathophysiology of cholecystitis. (C-1)
- B,L 5-6.82 Recognize the signs and symptoms related to cholecystitis. (C-1)

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
Y=EMC 453, Z=EMC 451, AA=SIMLAB**

- B,L 5-6.83 Describe the management for cholecystitis. (C-1)
- B,L 5-6.84 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with cholecystitis. (C-3)
- B,L 5-6.85 Define acute hepatitis. (C-1)
- B,L 5-6.86 Discuss the pathophysiology of acute hepatitis. (C-1)
- B,L 5-6.87 Recognize the signs and symptoms related to acute hepatitis. (C-1)
- B,L 5-6.88 Describe the management for acute hepatitis. (C-1)
- B,L 5-6.89 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with acute hepatitis. (C-3)
- B,L 5-6.90 Integrate pathophysiological principles of the patient with a gastrointestinal emergency. (C-3)
- B,L 5-6.91 Differentiate between gastrointestinal emergencies based on assessment findings. (C-3)
- B,L 5-6.92 Correlate abnormal findings in the assessment with the clinical significance in the patient with abdominal pain. (C-3)
- B,L 5-6.93 Develop a patient management plan based on field impression in the patient with abdominal pain. (C-3)

**AFFECTIVE OBJECTIVES**

None identified for this unit.

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
 I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
 Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
 Y=EMC 453, Z=EMC 451, AA=SIMLAB**

**UNIT TERMINAL OBJECTIVE**

- B,L** 5-7 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with a renal or urologic problem.

**COGNITIVE OBJECTIVES**

At the conclusion of this unit, the paramedic student will be able to :

- B,L** 5-7.1 Describe the incidence, morbidity, mortality, and risk factors predisposing to urological emergencies. (C-1)
- B,L** 5-7.2 Discuss the anatomy and physiology of the organs and structures related to urogenital diseases. (C-1)
- B,L** 5-7.3 Define referred pain and visceral pain as it relates to urology. (C-1)
- B,C,L** 5-7.4 Describe the questioning technique and specific questions the paramedic should utilize when gathering a focused history in a patient with abdominal pain. (C-1)
- B,L** 5-7.5 Describe the technique for performing a comprehensive physical examination of a patient complaining of abdominal pain. (C-1)
- B,L** 5-7.6 Define acute renal failure. (C-1)
- B,L** 5-7.7 Discuss the pathophysiology of acute renal failure. (C-1)
- B,L** 5-7.8 Recognize the signs and symptoms related to acute renal failure. (C-1)
- B,L** 5-7.9 Describe the management for acute renal failure. (C-1)
- B,L** 5-7.10 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with acute renal failure. (C-3)
- B,L** 5-7.11 Define chronic renal failure. (C-1)
- B,L** 5-7.12 Discuss the pathophysiology of chronic renal failure. (C-1)
- B,L** 5-7.13 Recognize the signs and symptoms related to chronic renal failure. (C-1)
- B,L** 5-7.14 Describe the management for chronic renal failure. (C-1)
- B,L** 5-7.15 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with chronic renal failure. (C-3)
- B,K,L** 5-7.16 Define renal dialysis. (C-1)
- B,L** 5-7.17 Discuss the common complication of renal dialysis. (C-1)
- B,L** 5-7.18 Define renal calculi. (C-1)
- B,L** 5-7.19 Discuss the pathophysiology of renal calculi. (C-1)
- B,L** 5-7.20 Recognize the signs and symptoms related to renal calculi. (C-1)
- B,L** 5-7.21 Describe the management for renal calculi. (C-1)
- B,L** 5-7.22 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with renal calculi. (C-3)
- B,L** 5-7.23 Define urinary tract infection. (C-1)
- B,L** 5-7.24 Discuss the pathophysiology of urinary tract infection. (C-1)
- B,L** 5-7.25 Recognize the signs and symptoms related to urinary tract infection. (C-1)
- B,L** 5-7.26 Describe the management for a urinary tract infection. (C-1)
- B,L** 5-7.27 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with a urinary tract infection. (C-3)
- B,L** 5-7.28 Apply the epidemiology to develop prevention strategies for urological emergencies. (C-2)
- B,L** 5-7.29 Integrate pathophysiological principles to the assessment of a patient with abdominal pain. (C-3)
- B,L** 5-7.30 Synthesize assessment findings and patient history information to accurately differentiate between pain of a urogenital emergency and that of other origins. (C-3)
- B,L** 5-7.31 Develop, execute, and evaluate a treatment plan based on the field impression made in the assessment. (C-3)

**AFFECTIVE OBJECTIVES**

None identified for this unit.

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
Y=EMC 453, Z=EMC 451, AA=SIMLAB**

**PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
Y=EMC 453, Z=EMC 451, AA=SIMLAB**



**UNIT TERMINAL OBJECTIVE**

- B,L** 5-8 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient with a toxic exposure.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,C,L** 5-8.1 Describe the incidence, morbidity and mortality of toxic emergencies. (C-1)  
**B,C,L** 5-8.2 Identify the risk factors most predisposing to toxic emergencies. (C-1)  
**B,L** 5-8.3 Discuss the anatomy and physiology of the organs and structures related to toxic emergencies. (C-1)  
**B,C,L** 5-8.4 Describe the routes of entry of toxic substances into the body. (C-1)  
**B,C,L** 5-8.5 Discuss the role of the Poison Control Center in the United States. (C-1)  
**B,C,L** 5-8.6 List the toxic substances that are specific to your region. (C-1)  
**B,C,L** 5-8.7 Discuss the pathophysiology of the entry of toxic substances into the body. (C-1)  
**B,C,L** 5-8.8 Discuss the assessment findings associated with various toxidromes. (C-1)  
**B,C,L** 5-8.9 Identify the need for rapid intervention and transport of the patient with a toxic substance emergency. (C-1)  
**B,C,L** 5-8.10 Discuss the management of toxic substances. (C-1)  
**B,C,L** 5-8.11 Define poisoning by ingestion. (C-1)  
**B,C,L** 5-8.12 List the most common poisonings by ingestion. (C-1)  
**B,C,L** 5-8.13 Describe the pathophysiology of poisoning by ingestion. (C-1)  
**B,C,L** 5-8.14 Recognize the signs and symptoms related to the most common poisonings by ingestion. (C-1)  
**B,C,L** 5-8.15 Correlate the abnormal findings in assessment with the clinical significance in the patient with the most common poisonings by ingestion. (C-1)  
**B,C,L** 5-8.16 Differentiate among the various treatments and pharmacological interventions in the management of the most common poisonings by ingestion. (C-3)  
**B,C,L** 5-8.17 Discuss the factors affecting the decision to induce vomiting in a patient with ingested poison. (C-1)  
**B,C,L** 5-8.18 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with the most common poisonings by ingestion. (C-3)  
**B,C,L** 5-8.19 Define poisoning by inhalation. (C-1)  
**B,C,L** 5-8.20 List the most common poisonings by inhalation. (C-1)  
**B,C,L** 5-8.21 Describe the pathophysiology of poisoning by inhalation. (C-1)  
**B,C,L** 5-8.22 Recognize the signs and symptoms related to the most common poisonings by inhalation. (C-1)  
**B,C,L** 5-8.23 Correlate the abnormal findings in assessment with the clinical significance in patients with the most common poisonings by inhalation. (C-1)  
**B,C,L** 5-8.24 Differentiate among the various treatments and pharmacological interventions in the management of the most common poisonings by inhalation. (C-3)  
**B,C,L** 5-8.25 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with the most common poisonings by inhalation. (C-3)  
**B,C,L** 5-8.26 Define poisoning by injection. (C-1)  
**B,C,L** 5-8.27 List the most common poisonings by injection. (C-1)  
**B,C,L** 5-8.28 Describe the pathophysiology of poisoning by injection. (C-1)  
**B,C,L** 5-8.29 Recognize the signs and symptoms related to the most common poisonings by injection. (C-1)  
**B,C,L** 5-8.30 Correlate the abnormal findings in assessment with the clinical significance in the patient with the most common poisonings by injection. (C-3)  
**B,C,L** 5-8.31 Differentiate among the various treatments and pharmacological interventions in the management of the most common poisonings by injection. (C-3)

A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
 I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
 Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
 Y=EMC 453, Z=EMC 451, AA=SIMLAB

- B,C,L** 5-8.32 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with the most common poisonings by injection. (C-3)
- B,C,L** 5-8.33 Define poisoning by surface absorption. (C-1)
- B,C,L** 5-8.34 List the most common poisonings by surface absorption. (C-1)
- B,C,L** 5-8.35 Describe the pathophysiology of poisoning by surface absorption. (C-1)
- B,C,L** 5-8.36 Recognize the signs and symptoms related to the most common poisonings by surface absorption. (C-1)
- B,C,L** 5-8.37 Correlate the abnormal findings in assessment with the clinical significance in patients with the most common poisonings by surface absorption. (C-3)
- B,C,L** 5-8.38 Differentiate among the various treatments and pharmacological interventions in the management of the most common poisonings by surface absorption. (C-3)
- B,C,L** 5-8.39 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for patients with the most common poisonings by surface absorption. (C-3)
- B,C,L** 5-8.40 Define poisoning by overdose. (C-1)
- B,C,L** 5-8.41 List the most common poisonings by overdose. (C-1)
- B,C,L** 5-8.42 Describe the pathophysiology of poisoning by overdose. (C-1)
- B,C,L** 5-8.43 Recognize the signs and symptoms related to the most common poisonings by overdose. (C-1)
- B,C,L** 5-8.44 Correlate the abnormal findings in assessment with the clinical significance in patients with the most common poisonings by overdose. (C-3)
- B,C,L** 5-8.45 Differentiate among the various treatments and pharmacological interventions in the management of the most common poisonings by overdose. (C-3)
- B,C,L** 5-8.46 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for patients with the most common poisonings by overdose. (C-3)
- B,L** 5-8.47 Define drug abuse. (C-1)
- B,L** 5-8.48 Discuss the incidence of drug abuse in the United States. (C-1)
- B,L** 5-8.49 Define the following terms: (C-1)
- a. Substance or drug abuse
  - b. Substance or drug dependence
  - c. Tolerance
  - d. Withdrawal
  - e. Addiction
- B,L** 5-8.50 List the most commonly abused drugs (both by chemical name and street names). (C-1)
- B,L** 5-8.51 Describe the pathophysiology of commonly used drugs. (C-1)
- B,L** 5-8.52 Recognize the signs and symptoms related to the most commonly abused drugs. (C-1)
- B,L** 5-8.53 Correlate the abnormal findings in assessment with the clinical significance in patients using the most commonly abused drugs. (C-3)
- B,L** 5-8.54 Differentiate among the various treatments and pharmacological interventions in the management of the most commonly abused drugs. (C-3)
- B,L** 5-8.55 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for patients using the most commonly abused drugs. (C-3)
- B,L** 5-8.56 List the clinical uses, street names, pharmacology, assessment finding and management for patient who have taken the following drugs or been exposed to the following substances: (C-1)
- a. Cocaine
  - b. Marijuana and cannabis compounds
  - c. Amphetamines and amphetamine-like drugs
  - d. Barbiturates
  - e. Sedative-hypnotics
  - f. Cyanide
  - g. Narcotics/ opiates
  - h. Cardiac medications
  - i. Caustics
  - j. Common household substances

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
Y=EMC 453, Z=EMC 451, AA=SIMLAB**

- k. Drugs abused for sexual purposes/ sexual gratification
- l. Carbon monoxide
- m. Alcohols
- n. Hydrocarbons
- o. Psychiatric medications
- p. Newer anti-depressants and serotonin syndromes
- q. Lithium
- r. MAO inhibitors
- s. Non-prescription pain medications
  - (1) Nonsteroidal antiinflammatory agents
  - (2) Salicylates
  - (3) Acetaminophen
- t. Theophylline
- u. Metals
- v. Plants and mushrooms

- B,L 5-8.57 Discuss common causative agents, pharmacology, assessment findings and management for a patient with food poisoning. (C-1)
- B,L 5-8.58 Discuss common offending organisms, pharmacology, assessment findings and management for a patient with a bite or sting. (C-1)
- B,C,L 5-8.59 Integrate pathophysiological principles of the patient with a toxic substance exposure. (C-1)
- B,C,L 5-8.60 Differentiate between toxic substance emergencies based on assessment findings. (C-3)
- B,C,L 5-8.61 Correlate abnormal findings in the assessment with the clinical significance in the patient exposed to a toxic substance. (C-3)
- B,C,L 5-8.62 Develop a patient management plan based on field impression in the patient exposed to a toxic substance. (C-3)

#### AFFECTIVE OBJECTIVES

None identified for this unit.

#### PSYCHOMOTOR OBJECTIVES

None identified for this unit.

**A**=EMC 340, **B**=EMC 496, **C**=HSCC 240, **D**=HSCC 330, **E**=HSCC 470, **F**=HSCC 241, **G**=PSY 460, **H**=EMC 410  
**I**=BIO 291, **J**=BIO 292, **K**=EMC 430, **L**=EMC 370, **M**=EMC 420, **N**=HSCC 370, **O**=EMC 361, **P**=EMC 360,  
**Q**=EMC 461, **R**=EMC 382, **S**=EMC 483, **T**=EMC 485, **U**=EMC 484, **V**=EMC 350, **W**=EMC 351, **X**=EMC 452,  
**Y**=EMC 453, **Z**=EMC 451, **AA**=SIMLAB

**UNIT TERMINAL OBJECTIVE**

- B,L** 5-9 At the completion of this unit, the paramedic student will be able to integrate the pathophysiological principles of the hematopoietic system to formulate a field impression and implement a treatment plan.

**COGNITIVE OBJECTIVES**

At the completion to this unit, the paramedic student will be able to:

- B,L** 5-9.1 Identify the anatomy of the hematopoietic system. (C-1)
- B,L** 5-9.2 Describe volume and volume-control related to the hematopoietic system. (C-1)
- B,L** 5-9.3 Identify and describe the blood-forming organs. (C-1)
- B,L** 5-9.4 Describe normal red blood cell (RBC) production, function and destruction. (C-1)
- B,L,V** 5-9.5 Explain the significance of the hematocrit with respect to red cell size and number. (C-1)
- B,L** 5-9.6 Explain the correlation of the RBC count, hematocrit and hemoglobin values. (C-1)
- B,L** 5-9.7 Define anemia. (C-1)
- B,L** 5-9.8 Describe normal white blood cell (WBC) production, function and destruction. (C-1)
- B,L** 5-9.9 Identify the characteristics of the inflammatory process. (C-1)
- B,L** 5-9.10 Identify the difference between cellular and humoral immunity. (C-1)
- B,L** 5-9.11 Identify alterations in immunologic response. (C-1)
- B,L** 5-9.12 Describe the number, normal function, types and life span of leukocytes. (C-1)
- B,L** 5-9.13 List the leukocyte disorders. (C-1)
- B,L** 5-9.14 Describe platelets with respect to normal function, life span and numbers. (C-1)
- B,L** 5-9.15 Describe the components of the hemostatic mechanism. (C-1)
- B,L** 5-9.16 Describe the function of coagulation factors, platelets and blood vessels necessary for normal coagulation. (C-1)
- B,L** 5-9.17 Describe the intrinsic and extrinsic clotting systems with respect to identification of factor deficiencies in each stage. (C-3)
- B,L** 5-9.18 Identify blood groups. (C-1)
- B,L** 5-9.19 Describe how acquired factor deficiencies may occur. (C-3)
- B,L,V** 5-9.20 Define fibrinolysis. (C-1)
- B,L** 5-9.21 Identify the components of physical assessment as they relate to the hematologic system. (C-1)
- B,L** 5-9.22 Describe the pathology and clinical manifestations and prognosis associated with: (C-3)
- a. Anemia
  - b. Leukemia
  - c. Lymphomas
  - d. Polycythemia
  - e. Disseminated intravascular coagulopathy
  - f. Hemophilia
  - g. Sickle cell disease
  - h. Multiple myeloma
- B,L** 5-9.23 Integrate pathophysiological principles into the assessment of a patient with hematologic disease. (C-3)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,L** 5-9.24 Value the sense of urgency for initial assessment and interventions for patients with hematologic crises.

**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,L** 5-9.25 Perform an assessment of the patient with hematologic disorder. ( P-1)
- A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410**  
**I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,**  
**Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,**  
**Y=EMC 453, Z=EMC 451, AA=SIMLAB**

**UNIT TERMINAL OBJECTIVE**

**B,L** 5-10 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the patient with an environmentally induced or exacerbated medical or traumatic condition.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,C,L** 5-10.1 Define "environmental emergency." (C-1)  
**B,C,L** 5-10.2 Describe the incidence, morbidity and mortality associated with environmental emergencies. (C-1)  
**B,C,L** 5-10.3 Identify risk factors most predisposing to environmental emergencies. (C-1)  
**B,C,L** 5-10.4 Identify environmental factors that may cause illness or exacerbate a preexisting illness. (C-1)  
**B,C,L** 5-10.5 Identify environmental factors that may complicate treatment or transport decisions. (C-1)  
**B,C,L** 5-10.6 List the principal types of environmental illnesses. (C-1)  
**B,C,L** 5-10.7 Define "homeostasis" and relate the concept to environmental influences. (C-1)  
**B,C,L** 5-10.8 Identify normal, critically high and critically low body temperatures. (C-1)  
**B,L** 5-10.9 Describe several methods of temperature monitoring. (C-1)  
**B,L** 5-10.10 Identify the components of the bodys thermoregulatory mechanism. (C-1)  
**B,L** 5-10.11 Describe the general process of thermal regulation, including substances used and wastes generated. (C-1)  
**B,C,L** 5-10.12 Describe the bodys compensatory process for over heating. (C-1)  
**B,C,L** 5-10.13 Describe the bodys compensatory process for excess heat loss. (C-1)  
**B,C,L** 5-10.14 List the common forms of heat and cold disorders. (C-1)  
**B,C,L** 5-10.15 List the common predisposing factors associated with heat and cold disorders. (C-1)  
**B,C,L** 5-10.16 List the common preventative measures associated with heat and cold disorders. (C-1)  
**B,C,L** 5-10.17 Integrate the pathophysiological principles and complicating factors common to environmental emergencies and discuss differentiating features between emergent and urgent presentations. (C-3)  
**B,C,L** 5-10.18 Define heat illness. (C-1)  
**B,C,L** 5-10.19 Describe the pathophysiology of heat illness. (C-1)  
**B,C,L** 5-10.20 Identify signs and symptoms of heat illness. (C-1)  
**B,C,L** 5-10.21 List the predisposing factors for heat illness. (C-1)  
**B,C,L** 5-10.22 List measures to prevent heat illness. (C-1)  
**B,C,L** 5-10.23 Discuss the symptomatic variations presented in progressive heat disorders. (C-1)  
**B,C,L** 5-10.24 Relate symptomatic findings to the commonly used terms: heat cramps, heat exhaustion, and heatstroke. (C-3)  
**B,C,L** 5-10.25 Correlate the abnormal findings in assessment with their clinical significance in the patient with heat illness. (C-3)  
**B,C,L** 5-10.26 Describe the contribution of dehydration to the development of heat disorders. (C-1)  
**B,C,L** 5-10.27 Describe the differences between classical and exertional heatstroke. (C-1)  
**B,L** 5-10.28 Define fever and discuss its pathophysiologic mechanism. (C-1)  
**B,L** 5-10.29 Identify the fundamental thermoregulatory difference between fever and heatstroke. (C-1)  
**B,L** 5-10.30 Discuss how one may differentiate between fever and heatstroke. (C-1)  
**B,L** 5-10.31 Discuss the role of fluid therapy in the treatment of heat disorders. (C-1)  
**B,C,L** 5-10.32 Differentiate among the various treatments and interventions in the management of heat disorders. (C-3)  
**B,C,L** 5-10.33 Integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient who has dehydration, heat exhaustion, or heatstroke. (C-3)  
**B,C,L** 5-10.34 Define hypothermia. (C-1)

A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
 I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
 Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
 Y=EMC 453, Z=EMC 451, AA=SIMLAB

- B,C,L** 5-10.35 Describe the pathophysiology of hypothermia. (C-1)
- B,C,L** 5-10.36 List predisposing factors for hypothermia. (C-1)
- B,C,L** 5-10.37 List measures to prevent hypothermia. (C-1)
- B,C,L** 5-10.38 Identify differences between mild and severe hypothermia. (C-1)
- B,C,L** 5-10.39 Describe differences between chronic and acute hypothermia. (C-1)
- B,C,L** 5-10.40 List signs and symptoms of hypothermia. (C-1)
- B,C,L** 5-10.41 Correlate abnormal findings in assessment with their clinical significance in the patient with hypothermia. (C-3)
- B,L,X** 5-10.42 Discuss the impact of severe hypothermia on standard BCLS and ACLS algorithms and transport considerations. (C-1)
- B,C,L** 5-10.43 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient who has either mild or severe hypothermia. (C-3)
- B,C,L** 5-10.44 Define frostbite. (C-1)
- B,C,L** 5-10.45 Define superficial frostbite (frostnip). (C-1)
- B,C,L** 5-10.46 Differentiate between superficial frostbite and deep frostbite. (C-3)
- B,C,L** 5-10.47 List predisposing factors for frostbite. (C-1)
- B,C,L** 5-10.48 List measures to prevent frostbite. (C-1)
- B,C,L** 5-10.49 Correlate abnormal findings in assessment with their clinical significance in the patient with frostbite. (C-3)
- B,C,L** 5-10.50 Differentiate among the various treatments and interventions in the management of frostbite. (C-3)
- B,C,L** 5-10.51 Integrate pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the patient with superficial or deep frostbite. (C-3)
- B,C,L** 5-10.52 Define near-drowning. (C-1)
- B,C,L** 5-10.53 Describe the pathophysiology of near-drowning. (C-1)
- B,C,L** 5-10.54 List signs and symptoms of near-drowning. (C-1)
- B,L** 5-10.55 Describe the lack of significance of fresh versus saltwater immersion, as it relates to near-drowning. (C-3)
- B,L** 5-10.56 Discuss the incidence of "wet" versus "dry" drownings and the differences in their management. (C-3)
- B,L** 5-10.57 Discuss the complications and protective role of hypothermia in the context of near-drowning. (C-1)
- B,L** 5-10.58 Correlate the abnormal findings in assessment with the clinical significance in the patient with near-drowning. (C-3)
- B,L** 5-10.59 Differentiate among the various treatments and interventions in the management of near-drowning. (C-3)
- B,C,L** 5-10.60 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the near-drowning patient. (C-3)
- B,L** 5-10.61 Define self contained underwater breathing apparatus (SCUBA). (C-1)
- B,L** 5-10.62 Describe the laws of gasses and relate them to diving emergencies. (C-1)
- B,C,L** 5-10.63 Describe the pathophysiology of diving emergencies. (C-1)
- B,C,L** 5-10.64 Define decompression illness (DCI). (C-1)
- B,C,L** 5-10.65 Identify the various forms of DCI. (C-1)
- B,L** 5-10.66 Identify the various conditions that may result from pulmonary over-pressure accidents. (C-1)
- B,C,L** 5-10.67 Differentiate between the various diving emergencies. (C-3)
- B,C,L** 5-10.68 List signs and symptoms of diving emergencies. (C-1)
- B,C,L** 5-10.69 Correlate abnormal findings in assessment with their clinical significance in the patient with a diving related illness. (C-3)
- B,L** 5-10.70 Describe the function of the Divers Alert Network (DAN) and how its members may aid in the management of diving related illnesses. (C-1)
- B,C,L** 5-10.71 Differentiate among the various treatments and interventions for the management of diving accidents. (C-3)
- B,L** 5-10.72 Describe the specific function and benefit of hyperbaric oxygen therapy for the management of diving accidents. (C-1)

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- B,C,L** 5-10.73 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a management plan for the patient who has had a diving accident. (C-3)
- B,L** 5-10.74 Define altitude illness. (C-1)
- B,L** 5-10.75 Describe the application of gas laws to altitude illness. (C-2)
- B,L** 5-10.76 Describe the etiology and epidemiology of altitude illness. (C-1)
- B,L** 5-10.77 List predisposing factors for altitude illness. (C-1)
- B,L** 5-10.78 List measures to prevent altitude illness. (C-1)
- B,L** 5-10.79 Define acute mountain sickness (AMS). (C-1)
- B,L** 5-10.80 Define high altitude pulmonary edema (HAPE). (C-1)
- B,L** 5-10.81 Define high altitude cerebral edema (HACE). (C-1)
- B,L** 5-10.82 Discuss the symptomatic variations presented in progressive altitude illnesses. (C-1)
- B,L** 5-10.83 List signs and symptoms of altitude illnesses. (C-1)
- B,L** 5-10.84 Correlate abnormal findings in assessment with their clinical significance in the patient with altitude illness. (C-3)
- B,L** 5-10.85 Discuss the pharmacology appropriate for the treatment of altitude illnesses. (C-1)
- B,L** 5-10.86 Differentiate among the various treatments and interventions for the management of altitude illness. (C-3)
- B,L** 5-10.87 Integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the patient who has altitude illness. (C-1)
- B,L** 5-10.88 Integrate the pathophysiological principles of the patient affected by an environmental emergency. (C-3)
- B,C,L** 5-10.89 Differentiate between environmental emergencies based on assessment findings. (C-3)
- B,C,L** 5-10.90 Correlate abnormal findings in the assessment with their clinical significance in the patient affected by an environmental emergency. (C-3)
- B,C,L** 5-10.91 Develop a patient management plan based on the field impression of the patient affected by an environmental emergency. (C-3)

#### **AFFECTIVE OBJECTIVES**

None identified for this unit.

#### **PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
I=BIO 291, J=BIO 292, K=EMC 430, L=EMC 370, M=EMC 420, N=HSCC 370, O=EMC 361, P=EMC 360,  
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Y=EMC 453, Z=EMC 451, AA=SIMLAB**



**UNIT TERMINAL OBJECTIVE**

**B,L** 5-11 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a management plan for the patient with infectious and communicable diseases.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,L** 5-11.1 Review the specific anatomy and physiology pertinent to infectious and communicable diseases. (C-1)
- B,L** 5-11.2 Define specific terminology identified with infectious/ communicable diseases. (C-1)
- B,L** 5-11.3 Discuss public health principles relevant to infectious/ communicable disease. (C-1)
- B,L** 5-11.4 Identify public health agencies involved in the prevention and management of disease outbreaks. (C-1)
- B,L** 5-11.5 List and describe the steps of an infectious process. (C-1)
- B,L** 5-11.6 Discuss the risks associated with infection. (C-1)
- B,L** 5-11.7 List and describe the stages of infectious diseases. (C-1)
- B,L** 5-11.8 List and describe infectious agents, including bacteria, viruses, fungi, protozoans, and helminths (worms). (C-1)
- B,L** 5-11.9 Describe host defense mechanisms against infection. (C-1)
- B,L** 5-11.10 Describe characteristics of the immune system, including the categories of white blood cells, the reticuloendothelial system (RES), and the complement system. (C-1)
- B,L** 5-11.11 Describe the processes of the immune system defenses, to include humoral and cell-mediated immunity. (C-1)
- B,L** 5-11.12 In specific diseases, identify and discuss the issues of personal isolation. (C-1)
- B,F,L** 5-11.13 Describe and discuss the rationale for the various types of PPE. (C-1)
- B,F,L** 5-11.14 Discuss what constitutes a significant exposure to an infectious agent. (C-1)
- B,F,L** 5-11.15 Describe the assessment of a patient suspected of, or identified as having, an infectious/ communicable disease. (C-1)
- B,F,L** 5-11.16 Discuss the proper disposal of contaminated supplies (sharps, gauze sponges, tourniquets, etc.). (C-1)
- B,F,L** 5-11.17 Discuss disinfection of patient care equipment, and areas in which care of the patient occurred. (C-1)
- B,F,L** 5-11.18 Discuss the following relative to HIV - causative agent, body systems affected and potential secondary complications, modes of transmission, the seroconversion rate after direct significant exposure, susceptibility and resistance, signs and symptoms, specific patient management and personal protective measures, and immunization. (C-1)
- B,F,L** 5-11.19 Discuss Hepatitis A (infectious hepatitis), including the causative agent, body systems affected and potential secondary complications, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,F,L** 5-11.20 Discuss Hepatitis B (serum hepatitis), including the causative agent, the organ affected and potential secondary complications, routes of transmission, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,F,L** 5-11.21 Discuss the susceptibility and resistance to Hepatitis B. (C-1)
- B,F,L** 5-11.22 Discuss Hepatitis C, including the causative agent, the organ affected, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization and control measures. (C-1)
- B,L** 5-11.23 Discuss Hepatitis D (Hepatitis delta virus), including the causative agent, the organ affected, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization and control measures. (C-1)
- B,L** 5-11.24 Discuss Hepatitis E, including the causative agent, the organ affected, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective

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 Y=EMC 453, Z=EMC 451, AA=SIMLAB



**measures, and immunization and control measures. (C-1)**

- B,F,L** 5-11.25 Discuss tuberculosis, including the causative agent, body systems affected and secondary complications, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization and control measures. (C-1)
- B,L** 5-11.26 Discuss meningococcal meningitis (spinal meningitis), including causative organisms, tissues affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization and control measures. (C-1)
- B,L** 5-11.27 Discuss other infectious agents known to cause meningitis including streptococcus pneumonia, hemophilus influenza type b, and other varieties of viruses. (C-1)
- B,L** 5-11.28 Discuss pneumonia, including causative organisms, body systems affected, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.29 Discuss tetanus, including the causative organism, the body system affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.30 Discuss rabies and hantavirus as they apply to regional environmental exposures, including the causative organisms, the body systems affected, routes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization and control measures. (C-1)
- B,L** 5-11.31 Identify pediatric viral diseases. (C-3)
- B,L** 5-11.32 Discuss chickenpox, including the causative organism, the body system affected, mode of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization and control measures. (C-1)
- B,L** 5-11.33 Discuss mumps, including the causative organism, the body organs and systems affected, mode of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.34 Discuss rubella (German measles), including the causative agent, the body tissues and systems affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.35 Discuss measles (rubeola, hard measles), including the causative organism, the body tissues, organs, and systems affected, mode of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.36 Discuss the importance of immunization, and those diseases, especially in the pediatric population, which warrant widespread immunization (MMR). (C-1)
- B,L** 5-11.37 Discuss pertussis (whooping cough), including the causative organism, the body organs affected, mode of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.38 Discuss influenza, including causative organisms, the body system affected, mode of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.39 Discuss mononucleosis, including the causative organisms, the body regions, organs, and systems affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.40 Discuss herpes simplex type 1, including the causative organism, the body regions and system affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** **5-11.41 Discuss the characteristics of, and organisms associated with, febrile and afebrile respiratory disease, to include bronchiolitis, bronchitis, laryngitis, croup, epiglottitis, and the common cold. (C-1)**
- B,L** 5-11.42 Discuss syphilis, including the causative organism, the body regions, organs, and systems affected, modes of transmission, susceptibility and resistance, stages of signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.43 Discuss gonorrhea, including the causative organism, the body organs and associated structures affected, mode of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)

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- B,L** 5-11.44 Discuss chlamydia, including the causative organism, the body regions, organs, and systems affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.45 Discuss herpes simplex 2 (genital herpes), including the causative organism, the body regions, tissues, and structures affected, mode of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.46 Discuss scabies, including the etiologic agent, the body organs affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.47 Discuss lice, including the infesting agents, the body regions affected, modes of transmission and host factors, susceptibility and resistance, signs and symptoms, patient management and protective measures, and prevention. (C-1)
- B,L** 5-11.48 Describe lyme disease, including the causative organism, the body organs and systems affected, mode of transmission, susceptibility and resistance, phases of signs and symptoms, patient management and control measures, and immunization. (C-1)
- B,L** 5-11.49 Discuss gastroenteritis, including the causative organisms, the body system affected, modes of transmission, susceptibility and resistance, signs and symptoms, patient management and protective measures, and immunization. (C-1)
- B,L** 5-11.50 Discuss the local protocol for reporting and documenting an infectious/ communicable disease exposure. (C-1)
- B,L** 5-11.51 Articulate the pathophysiological principles of an infectious process given a case study of a patient with an infectious/ communicable disease. (C-3)
- B,L** 5-11.52 Articulate the field assessment and management, to include safety considerations, of a patient presenting with signs and symptoms suggestive of an infectious/ communicable disease. (C-3)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,L** 5-11.53 Advocate compliance with standards and guidelines by role modeling adherence to universal/ standard precautions and BSI. (A-1)
- B,L** 5-11.54 Value the importance of immunization, especially in children and populations at risk. (A-1)
- B,L** 5-11.55 Value the safe management of a patient with an infectious/ communicable disease. (A-2)
- B,L** 5-11.56 Advocate respect for the feelings of patients, family, and others at the scene of an infectious/ communicable disease. (A-2)
- B,L** 5-11.57 Advocate empathy for a patient with an infectious/ communicable disease. (A-2)
- B,L** 5-11.58 Value the importance of infectious/ communicable disease control. (A-2)
- B,L** 5-11.59 Consistently demonstrate the use of body substance isolation. (A-2)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,L** 5-11.60 Demonstrate the ability to comply with body substance isolation guidelines. (P-2)
- B,L** 5-11.61 Perform an assessment of a patient with an infectious/ communicable disease. (P-2)
- B,L** 5-11.62 Effectively and safely manage a patient with an infectious/ communicable disease, including airway and ventilation care, support of circulation, pharmacological intervention, transport considerations, psychological support/ communication strategies, and other considerations as mandated by local protocol. (P-2)

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**UNIT TERMINAL OBJECTIVE**

**B,L** 5-12 At the end of this unit, the paramedic student will be able to describe and demonstrate safe, empathetic competence in caring for patients with behavioral emergencies.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,C,L** 5-12.1 Define behavior and distinguish between normal and abnormal behavior. (C-1)
- B,C,L** 5-12.2 Define behavioral emergency. (C-1)
- B,C,L** 5-12.3 Discuss the prevalence of behavior and psychiatric disorders. (C-1)
- B,C,L** 5-12.4 Discuss the factors that may alter the behavior or emotional status of an ill or injured individual. (C-1)
- B,C,D,L** 5-12.5 Describe the medical legal considerations for management of emotionally disturbed patients. (C-1)
- B,C,L** 5-12.6 Discuss the pathophysiology of behavioral and psychiatric disorders. (C-1)
- B,C,L** 5-12.7 Describe the overt behaviors associated with behavioral and psychiatric disorders. (C-1)
- B,C,L** 5-12.8 Define the following terms: (C-1)
- a. Affect
  - b. Anger
  - c. Anxiety
  - d. Confusion
  - e. Depression
  - f. Fear
  - g. Mental status
  - h. Open-ended question
  - i. Posture
- B,C,L** 5-12.9 Describe the verbal techniques useful in managing the emotionally disturbed patient. (C-1)
- B,C,L** 5-12.10 List the reasons for taking appropriate measures to ensure the safety of the patient, paramedic and others. (C-1)
- B,C,L** 5-12.11 Describe the circumstances when relatives, bystanders and others should be removed from the scene. (C-1)
- B,C,L** 5-12.12 Describe the techniques that facilitate the systematic gathering of information from the disturbed patient. (C-1)
- B,C,L** 5-12.13 List situations in which the EMT-P is expected to transport a patient forcibly and against his will. (C-1)
- B,C,L** 5-12.14 Identify techniques for physical assessment in a patient with behavioral problems. (C-1)
- B,C,L** 5-12.15 Describe methods of restraint that may be necessary in managing the emotionally disturbed patient. (C-1)
- B,C,L** 5-12.16 List the risk factors for suicide. (C-1)
- B,C,L** 5-12.17 List the behaviors that may be seen indicating that patient may be at risk for suicide. (C-1)
- B,C,L** 5-12.18 Integrate the pathophysiological principles with the assessment of the patient with behavioral and psychiatric disorders. (C-3)
- B,C,L** 5-12.19 Differentiate between the various behavioral and psychiatric disorders based on the assessment and history. (C-3)
- B,C,L** 5-12.20 Formulate a field impression based on the assessment findings. (C-3)
- B,C,L** 5-12.21 Develop a patient management plan based on the field impressions. (C-3)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,L** 5-12.22 Advocate for empathetic and respectful treatment for individuals experiencing behavioral emergencies. (A-3)

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**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

**B,L** 5-12.23 Demonstrate safe techniques for managing and restraining a violent patient. (P-1)

**A=EMC 340, B=EMC 496, C=HSCC 240, D=HSCC 330, E=HSCC 470, F=HSCC 241, G=PSY 460, H=EMC 410  
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**UNIT TERMINAL OBJECTIVE**

- B,M** 5-13 At the end of this unit, the paramedic student will be able to utilize gynecological principles and assessment findings to formulate a field impression and implement the management plan for the patient experiencing a gynecological emergency.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,C,M** 5-13.1 Review the anatomic structures and physiology of the female reproductive system. (C-1)  
**B,M** 5-13.2 Identify the normal events of the menstrual cycle. (C-1)  
**B,M** 5-13.3 Describe how to assess a patient with a gynecological complaint. (C-1)  
**B,M** 5-13.4 Explain how to recognize a gynecological emergency. (C-1)  
**B,M** 5-13.5 Describe the general care for any patient experiencing a gynecological emergency. (C-1)  
**B,M** 5-13.6 Describe the pathophysiology, assessment, and management of specific gynecological emergencies. (C-1)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,M** 5-13.7 Value the importance of maintaining a patient's modesty and privacy while still being able to obtain necessary information. (A-2)  
**B,M** 5-13.8 Defend the need to provide care for a patient of sexual assault, while still preventing destruction of crime scene information. (A-3)  
**B,M** 5-13.9 Serve as a role model for other EMS providers when discussing or caring for patients with gynecological emergencies. (A-3)

**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- AA** 5-13.10 Demonstrate how to assess a patient with a gynecological complaint. (P-2)  
**B,M** 5-13.11 Demonstrate how to provide care for a patient with: (P-2)  
a. Excessive vaginal bleeding  
b. Abdominal pain  
c. Sexual assault

**UNIT TERMINAL OBJECTIVE**

**B,M** 5-14 At the completion of this unit, the paramedic student will be able to apply an understanding of the anatomy and physiology of the female reproductive system to the assessment and management of a patient experiencing normal or abnormal labor.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,C,M** 5-14.1 Review the anatomic structures and physiology of the reproductive system. (C-1)  
**B,C,M** 5-14.2 Identify the normal events of pregnancy. (C-1)  
**B,C,M** 5-14.3 Describe how to assess an obstetrical patient. (C-1)  
**B,C,M** 5-14.4 Identify the stages of labor and the paramedic's role in each stage. (C-1)  
**B,C,M** 5-14.5 Differentiate between normal and abnormal delivery. (C-3)  
**B,C,M** 5-14.6 Identify and describe complications associated with pregnancy and delivery. (C-1)  
**B,C,M** 5-14.7 Identify predelivery emergencies. (C-1)  
**B,C,M** 5-14.8 State indications of an imminent delivery. (C-1)  
**B,C,M** 5-14.9 Explain the use of the contents of an obstetrics kit. (C-2)  
**B,C,M** 5-14.10 Differentiate the management of a patient with predelivery emergencies from a normal delivery. (C-3)  
**B,C,M** 5-14.11 State the steps in the predelivery preparation of the mother. (C-1)  
**B,C,M** 5-14.12 Establish the relationship between body substance isolation and childbirth. (C-3)  
**B,C,M** 5-14.13 State the steps to assist in the delivery of a newborn. (C-1)  
**B,C,M** 5-14.14 Describe how to care for the newborn. (C-1)  
**B,C,M** 5-14.15 Describe how and when to cut the umbilical cord. (C-1)  
**B,C,M** 5-14.16 Discuss the steps in the delivery of the placenta. (C-1)  
**B,C,M** 5-14.17 Describe the management of the mother post-delivery. (C-1)  
**B,C,M** 5-14.18 Summarize neonatal resuscitation procedures. (C-1)  
**B,C,M** 5-14.19 Describe the procedures for handling abnormal deliveries. (C-1)  
**B,C,M** 5-14.20 Describe the procedures for handling complications of pregnancy. (C-1)  
**B,C,M** 5-14.21 Describe the procedures for handling maternal complications of labor. (C-1)  
**B,C,M** 5-14.22 Describe special considerations when meconium is present in amniotic fluid or during delivery. (C-1)  
**B,C,M** 5-14.23 Describe special considerations of a premature baby. (C-1)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,M** 5-14.24 Advocate the need for treating two patients (mother and baby). (A-2)  
**B,M** 5-14.25 Value the importance of maintaining a patient's modesty and privacy during assessment and management. (A-2)  
**B,M** 5-14.26 Serve as a role model for other EMS providers when discussing or performing the steps of childbirth. (A-3)

**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- AA,F** 5-14.27 Demonstrate how to assess an obstetric patient. (P-2)  
**AA,F** 5-14.28 Demonstrate how to provide care for a patient with:  
a. Excessive vaginal bleeding  
b. Abdominal pain  
c. Hypertensive crisis

**AA,F** 5-14.29 Demonstrate how to prepare the obstetric patient for delivery. (P-2)

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AA,F 5-14.30 Demonstrate how to assist in the normal cephalic delivery of the fetus. (P-2)  
AA,F 5-14.31 Demonstrate how to deliver the placenta. (P-2)

AA,F 5-14.32 Demonstrate how to provide post-delivery care of the mother. (P-2)

AA,F 5-14.33 Demonstrate how to assist with abnormal deliveries. (P-2)

AA,F 5-14.34 Demonstrate how to care for the mother with delivery complications. (P-2)

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**UNIT TERMINAL OBJECTIVE**

- B,M** 6-1.1 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for a neonatal patient.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,M** 6-1.2 Define the term newborn.(C-1)  
**B,M** 6-1.3 Define the term neonate. (C-1)  
**B,M** 6-1.4 Identify important antepartum factors that can affect childbirth. (C-1)  
**B,M** 6-1.5 Identify important intrapartum factors that can term the newborn high risk. (C-1)  
**B,M** 6-1.6 Identify the factors that lead to premature birth and low birth weight newborns. (C-1)  
**B,M** 6-1.7 Distinguish between primary and secondary apnea. (C-3)  
**B,M** 6-1.8 Discuss pulmonary perfusion and asphyxia. (C-1)  
**B,M** 6-1.9 Identify the primary signs utilized for evaluating a newborn during resuscitation. (C-1)  
**B,F,M** 6-1.10 Formulate an appropriate treatment plan for providing initial care to a newborn. (C-3)  
**B,F,M** 6-1.11 Identify the appropriate use of the APGAR score in caring for a newborn.(C-1)  
**B,F,M** 6-1.12 Calculate the APGAR score given various newborn situations. (C-3)  
**B,F,M** 6-1.13 Determine when ventilatory assistance is appropriate for a newborn. (C-1)  
**B,F,M** 6-1.14 Prepare appropriate ventilation equipment, adjuncts and technique for a newborn. (C-1)  
**B,F,M** 6-1.15 Determine when chest compressions are appropriate for a newborn. (C-1)  
**B,F,M** 6-1.16 Discuss appropriate chest compression techniques for a newborn. (C-1)  
**B,F,M** 6-1.17 Assess patient improvement due to chest compressions and ventilations. (C-1)  
**B,M** 6-1.18 Determine when endotracheal intubation is appropriate for a newborn. (C-1)  
**B,M** 6-1.19 Discuss appropriate endotracheal intubation techniques for a newborn. (C-1)  
**B,M** 6-1.20 Assess patient improvement due to endotracheal intubation. (C-1)  
**B,M** 6-1.21 Identify complications related to endotracheal intubation for a newborn. (C-1)  
**B,M** 6-1.22 Determine when vascular access is indicated for a newborn. (C-1)  
**B,M** 6-1.23 Discuss the routes of medication administration for a newborn. (C-1)  
**B,F,M** 6-1.24 Determine when blow-by oxygen delivery is appropriate for a newborn. (C-1)  
**B,F,M** 6-1.25 Discuss appropriate blow-by oxygen delivery devices and technique for a newborn. (C-1)  
**B,F,M** 6-1.26 Assess patient improvement due to assisted ventilations. (C-1)  
**B,M** 6-1.27 Determine when an orogastric tube should be inserted during positive-pressure ventilation. (C-1)  
**B,M** 6-1.28 Discuss the signs of hypovolemia in a newborn. (C-1)  
**B,F,M** 6-1.29 Discuss the initial steps in resuscitation of a newborn. (C-1)  
**B,F,M** 6-1.30 Assess patient improvement due to blow-by oxygen delivery. (C-1)  
**B,M** 6-1.31 Discuss the effects maternal narcotic usage has on the newborn. (C-1)  
**B,M** 6-1.32 Determine the appropriate treatment for the newborn with narcotic depression. (C-1)  
**B,M** 6-1.33 Discuss appropriate transport guidelines for a newborn. (C-1)  
**B,M** 6-1.34 Determine appropriate receiving facilities for low and high risk newborns. (C-1)  
**B,F,M** 6-1.35 Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for meconium aspiration. (C-1)  
**B,F,M** 6-1.36 Discuss the pathophysiology of meconium aspiration. (C-1)  
**B,F,M** 6-1.37 Discuss the assessment findings associated with meconium aspiration. (C-1)  
**B,F,M** 6-1.38 Discuss the management/ treatment plan for meconium aspiration. (C-1)  
**B,M** 6-1.39 Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for apnea in the neonate. (C-1)  
**B,M** 6-1.40 Discuss the pathophysiology of apnea in the neonate. (C-1)  
**B,M** 6-1.41 Discuss the assessment findings associated with apnea in the neonate. (C-1)  
**B,M** 6-1.42 Discuss the management/ treatment plan for apnea in the neonate. (C-1)

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- B,M** 6-1.43 Describe the epidemiology, pathophysiology, assessment findings, management/ treatment plan for diaphragmatic hernia. (C-1)
- B,M** 6-1.44 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for bradycardia in the neonate. (C-1)
- B,M** 6-1.45 Discuss the pathophysiology of bradycardia in the neonate. (C-1)
- B,M** 6-1.46 Discuss the assessment findings associated with bradycardia in the neonate. (C-1)
- B,M** 6-1.47 Discuss the management/ treatment plan for bradycardia in the neonate. (C-1)
- B,M** 6-1.48 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for premature infants
- B,M** 6-1.49 Discuss the pathophysiology of premature infants. (C-1)
- B,M** 6-1.50 Discuss the assessment findings associated with premature infants. (C-1)
- B,M** 6-1.51 Discuss the management/ treatment plan for premature infants. (C-1)
- B,M** 6-1.52 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for respiratory distress/ cyanosis in the neonate. (C-1)
- B,M** 6-1.53 Discuss the pathophysiology of respiratory distress/ cyanosis in the neonate. (C-1)
- B,M** 6-1.54 Discuss the assessment findings associated with respiratory distress/ cyanosis in the neonate. (C-1)
- B,M** 6-1.55 Discuss the management/ treatment plan for respiratory distress/ cyanosis in the neonate.(C-1)
- B,M** 6-1.56 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for seizures in the neonate. (C-1)
- B,M** 6-1.57 Discuss the pathophysiology of seizures in the neonate. (C-1)
- B,M** 6-1.58 Discuss the assessment findings associated with seizures in the neonate. (C-1)
- B,M** 6-1.59 Discuss the management/ treatment plan for seizures in the neonate. (C-1)
- B,M** 6-1.60 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for fever in the neonate. (C-1)
- B,M** 6-1.61 Discuss the pathophysiology of fever in the neonate. (C-1)
- B,M** 6-1.62 Discuss the assessment findings associated with fever in the neonate. (C-1)
- B,M** 6-1.63 Discuss the management/ treatment plan for fever in the neonate. (C-1)
- B,M** 6-1.64 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for hypothermia in the neonate. (C-1)
- B,M** 6-1.65 Discuss the pathophysiology of hypothermia in the neonate. (C-1)
- B,M** 6-1.66 Discuss the assessment findings associated with hypothermia in the neonate. (C-1)
- B,M** 6-1.67 Discuss the management/ treatment plan for hypothermia in the neonate. (C-1)
- B,M** 6-1.68 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for hypoglycemia in the neonate. (C-1)
- B,M** 6-1.69 Discuss the pathophysiology of hypoglycemia in the neonate. (C-1)
- B,M** 6-1.70 Discuss the assessment findings associated with hypoglycemia in the neonate. (C-1)
- B,M** 6-1.71 Discuss the management/ treatment plan for hypoglycemia in the neonate. (C-1)
- B,M** 6-1.72 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for vomiting in the neonate (C-1)
- B,M** 6-1.73 Discuss the pathophysiology of vomiting in the neonate. (C-1)
- B,M** 6-1.74 Discuss the assessment findings associated with vomiting in the neonate. (C-1)
- B,M** 6-1.75 Discuss the management/ treatment plan for vomiting in the neonate. (C-1)
- B,M** 6-1.76 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for diarrhea in the neonate. (C-1)
- B,M** 6-1.77 Discuss the pathophysiology of in diarrhea the neonate. (C-1)
- B,M** 6-1.78 Discuss the assessment findings associated with diarrhea in the neonate. (C-1)
- B,M** 6-1.79 Discuss the management/ treatment plan for diarrhea in the neonate. (C-1)
- B,M** 6-1.80 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for common birth injuries in the neonate. (C-1)
- B,M** 6-1.81 Discuss the pathophysiology of common birth injuries in the neonate. (C-1)
- B,M** 6-1.82 Discuss the assessment findings associated with common birth injuries in the neonate. (C-1)
- B,M** 6-1.83 Discuss the management/ treatment plan for common birth injuries in the neonate. (C-1)
- B,M** 6-1.84 Describe the epidemiology, including the incidence, morbidity/ mortality and risk factors for cardiac arrest in the neonate. (C-1)

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- B,M** 6-1.85 Discuss the pathophysiology of cardiac arrest in the neonate. (C-1)
- B,M** 6-1.86 Discuss the assessment findings associated with cardiac arrest in the neonate. (C-1)
- B,M** 6-1.87 Discuss the management/ treatment plan for cardiac arrest in the neonate. (C-1)
- B,M** 6-1.88 Discuss the pathophysiology of post arrest management of the neonate. (C-1)
- B,M** 6-1.89 Discuss the assessment findings associated with post arrest situations in the neonate. (C-1)
- B,M** 6-1.90 Discuss the management/ treatment plan to stabilize the post arrest neonate. (C-1)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,M** 6-1.91 Demonstrate and advocate appropriate interaction with a newborn/ neonate that conveys respect for their position in life. (A-3)
- B,M** 6-1.92 Recognize the emotional impact of newborn/ neonate injuries/ illnesses on parents/ guardians. (A-1)
- B,M** 6-1.93 Recognize and appreciate the physical and emotional difficulties associated with separation of the parent/ guardian and a newborn/ neonate. (A-3)
- B,M** 6-1.94 Listen to the concerns expressed by parents/ guardians. (A-1)
- B,M** 6-1.95 Attend to the need for reassurance, empathy and compassion for the parent/ guardian. (A-1)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- AA,F** 6-1.96 Demonstrate preparation of a newborn resuscitation area. (P-2)
- AA,F** 6-1.97 Demonstrate appropriate assessment technique for examining a newborn. (P-2)
- AA,F** 6-1.98 Demonstrate appropriate assisted ventilations for a newborn. (P-2)
- AA,F** 6-1.99 Demonstrate appropriate endotracheal intubation technique for a newborn. (P-2)
- AA** 6-1.100 Demonstrate appropriate meconium aspiration suctioning technique for a newborn. (P-2)
- AA** 6-1.101 Demonstrate appropriate insertion of an orogastric tube. (P-2)
- AA** 6-1.102 Demonstrate needle chest decompression for a newborn or neonate. (P-2)
- AA,F** 6-1.103 Demonstrate appropriate chest compression and ventilation technique for a newborn. (P-2)
- AA** 6-1.104 Demonstrate appropriate techniques to improve or eliminate endotracheal intubation complications. (P-2)
- AA,O** 6-1.105 Demonstrate vascular access cannulation techniques for a newborn. (P-2)
- AA,M** 6-1.106 Demonstrate the initial steps in resuscitation of a newborn. (P-2)
- AA,M** 6-1.107 Demonstrate blow-by oxygen delivery for a newborn. (P-2)

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 Y=EMC 453, Z=EMC 451, AA=SIMLAB**

## Special Considerations: 6

Pediatrics: 2

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### UNIT TERMINAL OBJECTIVE

B,M 6-2.1 At the completion of this unit, the paramedic student will be able to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for the pediatric patient.

### COGNITIVE OBJECTIVES

At the completion of this unit, the paramedic student will be able to:

- B,M 6-2.2 Discuss the paramedic's role in the reduction of infant and childhood morbidity and mortality from acute illness and injury. (C-1)
- B,M 6-2.3 Identify methods/ mechanisms that prevent injuries to infants and children. (C-1)
- B,M 6-2.4 Describe Emergency Medical Services for Children (EMSC). (C-1)
- B,M 6-2.5 Discuss how an integrated EMSC system can affect patient outcome. (C-2)
- B,C,M 6-2.6 Identify key growth and developmental characteristics of infants and children and their implications. (C-2)
- B,C,M 6-2.7 Identify key anatomical and physiological characteristics of infants and children and their implications. (C-2)
- B,C,M 6-2.8 Describe techniques for successful assessment of infants and children. (C-1)
- B,C,M 6-2.9 Describe techniques for successful treatment of infants and children. (C-1)
- B,C,M 6-2.10 Identify the common responses of families to acute illness and injury of an infant or child. (C-1)
- B,C,M 6-2.11 Describe techniques for successful interaction with families of acutely ill or injured infants and children. (C-1)
- B,C,M 6-2.12 Outline differences in adult and childhood anatomy and physiology. (C-3)
- B,C,M 6-2.13 Identify "normal" age group related vital signs. (C-1)
- B,C,M 6-2.14 Discuss the appropriate equipment utilized to obtain pediatric vital signs. (C-1)
- B,F,M 6-2.15 Determine appropriate airway adjuncts for infants and children. (C-1)
- B,F,M 6-2.16 Discuss complications of improper utilization of airway adjuncts with infants and children. (C-1)
- B,F,M 6-2.17 Discuss appropriate ventilation devices for infants and children. (C-1)
- B,F,M 6-2.18 Discuss complications of improper utilization of ventilation devices with infants and children. (C-1)
- B,M 6-2.19 Discuss appropriate endotracheal intubation equipment for infants and children. (C-1)
- B,M 6-2.20 Identify complications of improper endotracheal intubation procedure in infants and children. (C-1)
- B,M 6-2.21 List the indications and methods for gastric decompression for infants and children. (C-1)
- B,C,M 6-2.22 Define respiratory distress. (C-1)
- B,C,M 6-2.23 Define respiratory failure. (C-1)
- B,C,M 6-2.24 Define respiratory arrest. (C-1)
- B,M 6-2.25 Differentiate between upper airway obstruction and lower airway disease. (C-3)
- B,M 6-2.26 Describe the general approach to the treatment of children with respiratory distress, failure, or arrest from upper airway obstruction or lower airway disease. (C-3)
- B,M 6-2.27 Discuss the common causes of hypoperfusion in infants and children. (C-1)
- B,M 6-2.28 Evaluate the severity of hypoperfusion in infants and children. (C-3)
- B,M 6-2.29 Identify the major classifications of pediatric cardiac rhythms. (C-1)
- B,M 6-2.30 Discuss the primary etiologies of cardiopulmonary arrest in infants and children. (C-1)
- B,M 6-2.31 Discuss age appropriate vascular access sites for infants and children. (C-1)
- B,M 6-2.32 Discuss the appropriate equipment for vascular access in infants and children. (C-1)
- B,M 6-2.33 Identify complications of vascular access for infants and children. (C-1)
- B,M 6-2.34 Describe the primary etiologies of altered level of consciousness in infants and children. (C-1)
- B,M 6-2.35 Identify common lethal mechanisms of injury in infants and children. (C-1)
- B,M 6-2.36 Discuss anatomical features of children that predispose or protect them from certain injuries. (C-1)

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Y=EMC 453, Z=EMC 451, AA=SIMLAB

- B,M** 6-2.37 Describe aspects of infant and children airway management that are affected by potential cervical spine injury. (C-1)
- B,M** 6-2.38 Identify infant and child trauma patients who require spinal immobilization. (C-1)
- B,M** 6-2.39 Discuss fluid management and shock treatment for infant and child trauma patient. (C-1)
- B,M** 6-2.40 Determine when pain management and sedation are appropriate for infants and children. (C-1)
- B,C,M** 6-2.41 Define child abuse. (C-1)
- B,C,M** 6-2.42 Define child neglect. (C-1)
- B,C,M** 6-2.43 Define sudden infant death syndrome (SIDS). (C-1)
- B,C,M** 6-2.44 Discuss the parent/ caregiver responses to the death of an infant or child. (C-1)
- 6-2.45 Define children with special health care needs. (C-1)
- B,M** 6-2.46 Define technology assisted children. (C-1)
- B,F,M** 6-2.47 Discuss basic cardiac life support (CPR) guidelines for infants and children. (C-1)
- B,F,M** 6-2.48 Identify appropriate parameters for performing infant and child CPR. (C-1)
- B,F,M** 6-2.49 Integrate advanced life support skills with basic cardiac life support for infants and children. (C-3)
- B,M** 6-2.50 Discuss the indications, dosage, route of administration and special considerations for medication administration in infants and children. (C-1)
- B,M** 6-2.51 Discuss appropriate transport guidelines for infants and children. (C-1)
- B,M** 6-2.52 Discuss appropriate receiving facilities for low and high risk infants and children. (C-1)
- B,M** 6-2.53 Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for respiratory distress/ failure in infants and children. (C-1)
- B,M** 6-2.54 Discuss the pathophysiology of respiratory distress/ failure in infants and children. (C-1)
- B,M** 6-2.55 Discuss the assessment findings associated with respiratory distress/ failure in infants and children. (C-1)
- B,M** 6-2.56 Discuss the management/ treatment plan for respiratory distress/ failure in infants and children. (C-1)
- B,M** 6-2.57 Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for hypoperfusion in infants and children. (C-1)
- B,M** 6-2.58 Discuss the pathophysiology of hypoperfusion in infants and children. (C-1)
- B,M** 6-2.59 Discuss the assessment findings associated with hypoperfusion in infants and children. (C-1)
- B,M** 6-2.60 Discuss the management/ treatment plan for hypoperfusion in infants and children. (C-1)
- B,M** 6-2.61 Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for cardiac dysrhythmias in infants and children. (C-1)
- B,M** 6-2.62 Discuss the pathophysiology of cardiac dysrhythmias in infants and children. (C-1)
- B,M** 6-2.63 Discuss the assessment findings associated with cardiac dysrhythmias in infants and children. (C-1)
- B,M** 6-2.64 Discuss the management/ treatment plan for cardiac dysrhythmias in infants and children. (C-1)
- B,M** 6-2.65 Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for neurological emergencies in infants and children. (C-1)
- B,M** 6-2.66 Discuss the pathophysiology of neurological emergencies in infants and children. (C-1)
- B,M** 6-2.67 Discuss the assessment findings associated with neurological emergencies in infants and children. (C-1)
- B,M** 6-2.68 Discuss the management/ treatment plan for neurological emergencies in infants and children. (C-1)
- B,C,M** 6-2.69 Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for trauma in infants and children. (C-1)
- B,C,M** 6-2.70 Discuss the pathophysiology of trauma in infants and children. (C-1)
- B,C,M** 6-2.71 Discuss the assessment findings associated with trauma in infants and children. (C-1)
- B,C,M** 6-2.72 Discuss the management/ treatment plan for trauma in infants and children. (C-1)
- B,C,M** 6-2.73 Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for abuse and neglect in infants and children. (C-1)
- B,C,M** 6-2.74 Discuss the pathophysiology of abuse and neglect in infants and children. (C-1)
- B,C,M** 6-2.75 Discuss the assessment findings associated with abuse and neglect in infants and children. (C-1)
- B,C,M** 6-2.76 Discuss the management/ treatment plan for abuse and neglect in infants and children, including documentation and reporting. (C-1)

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**I**=BIO 291, **J**=BIO 292, **K**=EMC 430, **L**=EMC 370, **M**=EMC 420, **N**=HSCC 370, **O**=EMC 361, **P**=EMC 360,  
**Q**=EMC 461, **R**=EMC 382, **S**=EMC 483, **T**=EMC 485, **U**=EMC 484, **V**=EMC 350, **W**=EMC 351, **X**=EMC 452,  
**Y**=EMC 453, **Z**=EMC 451, **AA**=SIMLAB

- B,C,M** 6-2.77 Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for SIDS infants. (C-1)
- B,K,M** 6-2.78 Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for children with special health care needs including technology assisted children. (C-1)
- B,K,M** 6-2.79 Discuss the pathophysiology of children with special health care needs including technology assisted children. (C-1)
- B,K,M** 6-2.80 Discuss the assessment findings associated for children with special health care needs including technology assisted children. (C-1)
- B,K,M** 6-2.81 Discuss the management/ treatment plan for children with special health care needs including technology assisted children. (C-1)
- B,C,M** 6-2.82 Describe the epidemiology, including the incidence, morbidity/ mortality, risk factors and prevention strategies for SIDS infants. (C-1)
- B,C,M** 6-2.83 Discuss the pathophysiology of SIDS in infants. (C-1)
- B,C,M** 6-2.84 Discuss the assessment findings associated with SIDS infants. (C-1)
- B,C,M** 6-2.85 Discuss the management/ treatment plan for SIDS in infants. (C-1)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,M** 6-2.86 Demonstrate and advocate appropriate interactions with the infant/ child that conveys an understanding of their developmental stage. (A-3)
- B,M** 6-2.87 Recognize the emotional dependence of the infant/ child to their parent/ guardian. (A-1)
- B,M** 6-2.88 Recognize the emotional impact of the infant/ child injuries and illnesses on the parent/ guardian. (A-1)
- B,M** 6-2.89 Recognize and appreciate the physical and emotional difficulties associated with separation of the parent/ guardian of a special needs child (A-3)
- B,M** 6-2.90 Demonstrate the ability to provide reassurance, empathy and compassion for the parent/ guardian. (A-1)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- AA** 6-2.91 Demonstrate the appropriate approach for treating infants and children. (P-2)
- AA** 6-2.92 Demonstrate appropriate intervention techniques with families of acutely ill or injured infants and children. (P-2)
- AA** 6-2.93 Demonstrate an appropriate assessment for different developmental age groups. (P-2)
- AA** 6-2.94 Demonstrate an appropriate technique for measuring pediatric vital signs. (P-2)
- AA** 6-2.95 Demonstrate the use of a length-based resuscitation device for determining equipment sizes, drug doses and other pertinent information for a pediatric patient. (P-2)
- AA** 6-2.96 Demonstrate the appropriate approach for treating infants and children with respiratory distress, failure, and arrest. (P-2)
- AA** 6-2.97 Demonstrate proper technique for administering blow-by oxygen to infants and children. (P-2)
- AA** 6-2.98 Demonstrate the proper utilization of a pediatric non-rebreather oxygen mask. (P-2)
- AA,O** 6-2.99 Demonstrate proper technique for suctioning of infants and children. (P-2)
- AA,O** 6-2.100 Demonstrate appropriate use of airway adjuncts with infants and children. (P-2)
- AA,O** 6-2.101 Demonstrate appropriate use of ventilation devices for infants and children. (P-2)
- AA,O** 6-2.102 Demonstrate endotracheal intubation procedures in infants and children. (P-2)
- AA,O** 6-2.103 Demonstrate appropriate treatment/ management of intubation complications for infants and children. (P-2)
- AA,O** 6-2.104 Demonstrate appropriate needle cricothyroidotomy in infants and children. (P-2)
- AA,O** 6-2.105 Demonstrate proper placement of a gastric tube in infants and children. (P-2)
- AA,O** 6-2.106 Demonstrate an appropriate technique for insertion of peripheral intravenous catheters for infants and children. (P-2)

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- AA,O 6-2.107 Demonstrate an appropriate technique for administration of intramuscular, inhalation, subcutaneous, rectal, endotracheal and oral medication for infants and children. (P-2)
- AA,O 6-2.108 Demonstrate an appropriate technique for insertion of an intraosseous line for infants and children. (P-2)
- AA,O 6-2.109 Demonstrate appropriate interventions for infants and children with a partially obstructed airway. (P-2)
- AA,O 6-2.110 Demonstrate age appropriate basic airway clearing maneuvers for infants and children with a completely obstructed airway. (P-2)
- AA,O 6-2.111 Demonstrate proper technique for direct laryngoscopy and foreign body retrieval in infants and children with a completely obstructed airway. (P-2)
- AA,O 6-2.112 Demonstrate appropriate airway and breathing control maneuvers for infant and child trauma patients. (P-2)
- AA,O 6-2.113 Demonstrate appropriate treatment of infants and children requiring advanced airway and breathing control. (P-2)
- AA,H 6-2.114 Demonstrate appropriate immobilization techniques for infant and child trauma patients. (P-2)
- AA,H 6-2.115 Demonstrate treatment of infants and children with head injuries. (P-2)
- AA,H 6-2.116 Demonstrate appropriate treatment of infants and children with chest injuries. (P-2)
- AA,H 6-2.117 Demonstrate appropriate treatment of infants and children with abdominal injuries. (P-2)
- AA,H 6-2.118 Demonstrate appropriate treatment of infants and children with extremity injuries. (P-2)
- AA,H 6-2.119 Demonstrate appropriate treatment of infants and children with burns. (P-2)
- AA,H 6-2.120 Demonstrate appropriate parent/ caregiver interviewing techniques for infant and child death situations.(P-2)
- AA 6-2.121 Demonstrate proper infant CPR. (P-2)
- AA 6-2.122 Demonstrate proper child CPR. (P-2)
- AA 6-2.123 Demonstrate proper techniques for performing infant and child defibrillation and synchronized cardioversion.(P-2)

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**UNIT TERMINAL OBJECTIVE**

- B,K** 6-3 At the completion of this unit, the paramedic student will be able to integrate the pathophysiological principles and the assessment findings to formulate and implement a treatment plan for the geriatric patient.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,K** 6-3.1 Discuss population demographics demonstrating the rise in elderly population in the U.S. (C-1)
- B,K** 6-3.2 Discuss society's view of aging and the social, financial, and ethical issues facing the elderly. (C-1)
- B,K** 6-3.3 Assess the various living environments of elderly patients. (C-3)
- B,K** 6-3.4 Describe the local resources available to assist the elderly and create strategies to refer at risk patients to appropriate community services. (C-3)
- B,K** 6-3.5 Discuss issues facing society concerning the elderly. (C-1)
- B,K** 6-3.6 Discuss common emotional and psychological reactions to aging to include causes and manifestations. (C-1)
- B,K** 6-3.7 Apply the pathophysiology of multi-system failure to the assessment and management of medical conditions in the elderly patient. (C-2)
- B,K** 6-3.8 Discuss the problems with mobility in the elderly and develop strategies to prevent falls. (C-1)
- B,K** 6-3.9 Discuss the implications of problems with sensation to communication and patient assessment. (C-2)
- B,K** 6-3.10 Discuss the problems with continence and elimination and develop communication strategies to provide psychological support. (C-3)
- B,K** 6-3.11 Discuss factors that may complicate the assessment of the elderly patient. (C-1)
- B,K** 6-3.12 Describe principles that should be employed when assessing and communicating with the elderly. (C-1)
- B,K** 6-3.13 Compare the assessment of a young patient with that of an elderly patient. (C-3)
- B,K** 6-3.14 Discuss common complaints of elderly patients. (C-1)
- B,K** 6-3.15 Compare the pharmacokinetics of an elderly patient to that of a young adult. (C-2)6-3.
- B,K** 6-3.16 Discuss the impact of polypharmacy and medication non-compliance on patient assessment and management. (C-1)
- B,K** 6-3.17 Discuss drug distribution, metabolism, and excretion in the elderly patient. (C-1)
- B,K** 6-3.18 Discuss medication issues of the elderly including polypharmacy, dosing errors and increased drug sensitivity. (C-1)
- B,K** 6-3.19 Discuss the use and effects of commonly prescribed drugs for the elderly patient. (C-1)
- B,K** 6-3.20 Discuss the normal and abnormal changes with age of the pulmonary system. (C-1)
- B,K** 6-3.21 Describe the epidemiology of pulmonary diseases in the elderly, including incidence, morbidity/mortality, risk factors, and prevention strategies for patients with pneumonia, chronic obstructive pulmonary diseases and pulmonary embolism. (C-1)
- B,K** 6-3.22 Compare and contrast the pathophysiology of pulmonary diseases in the elderly with that of a younger adult, including pneumonia, chronic obstructive pulmonary diseases, and pulmonary embolism. (C-3)
- B,K** 6-3.23 Discuss the assessment of the elderly patient with pulmonary complaints, including pneumonia, chronic obstructive pulmonary diseases, and pulmonary embolism. (C-1)
- B,K** 6-3.24 Identify the need for intervention and transport of the elderly patient with pulmonary complaints. (C-1)
- B,K** 6-3.25 Develop a treatment and management plan of the elderly patient with pulmonary complaints, including pneumonia, chronic obstructive pulmonary diseases, and pulmonary embolism. (C-3)
- B,K** 6-3.26 Discuss the normal and abnormal cardiovascular system changes with age. (C-1)

- B,K** 6-3.27 Describe the epidemiology for cardiovascular diseases in the elderly, including incidence, morbidity/ mortality, risk factors, and prevention strategies for patients with myocardial infarction, heart failure, dysrhythmias, aneurism, and hypertension. (C-1)
- B,K** 6-3.28 Compare and contrast the pathophysiology of cardiovascular diseases in the elderly with that of a younger adult, including myocardial infarction, heart failure, dysrhythmias, aneurism, and hypertension. (C-3)
- B,K** 6-3.29 Discuss the assessment of the elderly patient with complaints related to the cardiovascular system, including myocardial infarction, heart failure, dysrhythmias, aneurism, and hypertension. (C-1)
- B,K** 6-3.30 Identify the need for intervention and transportation of the elderly patient with cardiovascular complaints. (C-1)
- B,K** 6-3.31 Develop a treatment and management plan of the elderly patient with cardiovascular complaints, including myocardial infarction, heart failure, dysrhythmias, aneurism and hypertension. (C-3)
- B,K** 6-3.32 Discuss the normal and abnormal changes with age of the nervous system. (C-1)
- B,K** 6-3.33 Describe the epidemiology for nervous system diseases in the elderly, including incidence, morbidity/ mortality, risk factors, and prevention strategies for patients with cerebral vascular disease, delirium, dementia, Alzheimer's disease and Parkinson's disease. (C-1)
- B,K** 6-3.34 Compare and contrast the pathophysiology of nervous system diseases in the elderly with that of a younger adult, including cerebral vascular disease, delirium, dementia, Alzheimer's disease and Parkinson's disease. (C-3)
- B,K** 6-3.35 Discuss the assessment of the elderly patient with complaints related to the nervous system, including cerebral vascular disease, delirium, dementia, Alzheimer's disease and Parkinson's disease. (C-1)
- B,K** 6-3.36 Identify the need for intervention and transportation of the patient with complaints related to the nervous system. (C-1)
- B,K** 6-3.37 Develop a treatment and management plan of the elderly patient with complaints related to the nervous system, including cerebral vascular disease, delirium, dementia, Alzheimer's disease and Parkinson's disease. (C-3)
- B,K** 6-3.38 Discuss the normal and abnormal changes of the endocrine system with age. (C-1)
- B,K** 6-3.39 Describe the epidemiology for endocrine diseases in the elderly, including incidence, morbidity/ mortality, risk factors, and prevention strategies for patients with diabetes and thyroid diseases. (C-1)
- B,K** 6-3.40 Compare and contrast the pathophysiology of diabetes and thyroid diseases in the elderly with that of a younger adult. (C-3)
- B,K** 6-3.41 Discuss the assessment of the elderly patient with complaints related to the endocrine system, including diabetes and thyroid diseases. (C-1)
- B,K** 6-3.42 Identify the need for intervention and transportation of the patient with endocrine problems. (C-1)
- B,K** 6-3.43 Develop a treatment and management plan of the elderly patient with endocrine problems, including diabetes and thyroid diseases. (C-3)
- B,K** 6-3.44 Discuss the normal and abnormal changes of the gastrointestinal system with age. (C-1)
- B,K** 6-3.45 Discuss the assessment of the elderly patient with complaints related to the gastrointestinal system. (C-1)
- B,K** 6-3.46 Identify the need for intervention and transportation of the patient with gastrointestinal complaints. (C-1)
- B,K** 6-3.47 Develop and execute a treatment and management plan of the elderly patient with gastrointestinal problems. (C-3)
- B,K** 6-3.48 Discuss the assessment and management of an elderly patient with GI hemorrhage and bowel obstruction. (C-1)
- B,K** 6-3.49 Compare and contrast the pathophysiology of GI hemorrhage and bowel obstruction in the elderly with that of a young adult. (C-3)
- B,K** 6-3.50 Discuss the normal and abnormal changes with age related to toxicology. (C-1)
- B,K** 6-3.51 Discuss the assessment of the elderly patient with complaints related to toxicology. (C-1)
- B,K** 6-3.52 Identify the need for intervention and transportation of the patient with toxicological problems. (C-1)

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- B,K** 6-3.53 Develop and execute a treatment and management plan of the elderly patient with toxicological problems. (C-3)
- B,K** 6-3.54 Describe the epidemiology in the elderly, including the incidence, morbidity/ mortality, risk factors, and prevention strategies, for patients with drug toxicity. (C-1)
- B,K** 6-3.55 Compare and contrast the pathophysiology of drug toxicity in the elderly with that of a younger adult. (C-3)
- B,K** 6-3.56 Discuss the assessment findings common in elderly patients with drug toxicity. (C-1)
- B,K** 6-3.57 Discuss the management/ considerations when treating an elderly patient with drug toxicity. (C-1)
- B,K** 6-3.58 Describe the epidemiology for drug and alcohol abuse in the elderly, including incidence, morbidity/ mortality, risk factors, and prevention strategies. (C-1)
- B,K** 6-3.59 Compare and contrast the pathophysiology of drug and alcohol abuse in the elderly with that of a younger adult. (C-3)
- B,K** 6-3.60 Discuss the assessment findings common in elderly patients with drug and alcohol abuse. (C-1)
- B,K** 6-3.61 Discuss the management/ considerations when treating an elderly patient with drug and alcohol abuse. (C-1)
- B,K** 6-3.62 Discuss the normal and abnormal changes of thermoregulation with age. (C-1)
- B,K** 6-3.63 Discuss the assessment of the elderly patient with complaints related to thermoregulation. (C-1)
- B,K** 6-3.64 Identify the need for intervention and transportation of the patient with environmental considerations. (C-1)
- B,K** 6-3.65 Develop and execute a treatment and management plan of the elderly patient with environmental considerations. (C-3)
- B,K** 6-3.66 Compare and contrast the pathophysiology of hypothermia and hyperthermia in the elderly with that of a younger adult. (C-3)
- B,K** 6-3.67 Discuss the assessment findings and management plan for elderly patients with hypothermia and hyperthermia. (C-1)
- B,K** 6-3.68 Discuss the normal and abnormal psychiatric changes of age. (C-1)
- B,K** 6-3.69 Describe the epidemiology of depression and suicide in the elderly, including incidence, morbidity/ mortality, risk factors, and prevention strategies. (C-1)
- B,K** 6-3.70 Compare and contrast the psychiatry of depression and suicide in the elderly with that of a younger adult. (C-3)
- B,K** 6-3.71 Discuss the assessment of the elderly patient with psychiatric complaints, including depression and suicide. (C-1)
- B,K** 6-3.72 Identify the need for intervention and transport of the elderly psychiatric patient. (C-1)
- B,K** 6-3.73 Develop a treatment and management plan of the elderly psychiatric patient, including depression and suicide. (C-3)
- B,K** 6-3.74 Discuss the normal and abnormal changes of the integumentary system with age. (C-1)
- B,K** 6-3.75 Describe the epidemiology for pressure ulcers in the elderly, including incidence, morbidity/ mortality, risk factors, and prevention strategies. (C-1)
- B,K** 6-3.76 Compare and contrast the pathophysiology of pressure ulcers in the elderly with that of a younger adult. (C-3)
- B,K** 6-3.77 Discuss the assessment of the elderly patient with complaints related to the integumentary system, including pressure ulcers. (C-1)
- B,K** 6-3.78 Identify the need for intervention and transportation of the patient with complaints related to the integumentary system. (C-1)
- B,K** 6-3.79 Develop a treatment and management plan of the elderly patient with complaints related to the integumentary system, including pressure ulcers. (C-3)
- B,K** 6-3.80 Discuss the normal and abnormal changes of the musculoskeletal system with age. (C-1)
- B,K** 6-3.81 Describe the epidemiology for osteoarthritis and osteoporosis, including incidence, morbidity/ mortality, risk factors, and prevention strategies. (C-1)
- B,K** 6-3.82 Compare and contrast the pathophysiology of osteoarthritis and osteoporosis with that of a younger adult. (C-3)
- B,K** 6-3.83 Discuss the assessment of the elderly patient with complaints related to the musculoskeletal system, including osteoarthritis and osteoporosis. (C-1)
- B,K** 6-3.84 Identify the need for intervention and transportation of the patient with musculoskeletal complaints. (C-1)

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- B,K** 6-3.85 Develop a treatment and management plan of the elderly patient with musculoskeletal complaints, including osteoarthritis and osteoporosis. (C-3)
- B,K** 6-3.86 Describe the epidemiology for trauma in the elderly, including incidence, morbidity/ mortality, risk factors, and prevention strategies for patients with orthopedic injuries, burns and head injuries. (C-1)
- B,K** 6-3.87 Compare and contrast the pathophysiology of trauma in the elderly with that of a younger adult, including orthopedic injuries, burns and head injuries. (C-3)
- B,K** 6-3.88 Discuss the assessment findings common in elderly patients with traumatic injuries, including orthopedic injuries, burns and head injuries. (C-1)
- B,K** 6-3.89 Discuss the management/ considerations when treating an elderly patient with traumatic injuries, including orthopedic injuries, burns and head injuries. (C-1)
- B,K** 6-3.90 Identify the need for intervention and transport of the elderly patient with trauma. (C-1)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,K** 6-3.91 Demonstrate and advocate appropriate interactions with the elderly that conveys respect for their position in life. (A-3)
- B,K** 6-3.92 Recognize the emotional need for independence in the elderly while simultaneously attending to their apparent acute dependence. (A-1)
- B,K** 6-3.93 Recognize and appreciate the many impediments to physical and emotional well being in the elderly. (A-2)
- B,K** 6-3.94 Recognize and appreciate the physical and emotional difficulties associated with being a caretaker of an impaired elderly person, particularly the patient with Alzheimer's disease. (A-3)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,K** 6-3.95 Demonstrate the ability to assess a geriatric patient. (P-2)
- B,K** 6-3.96 Demonstrate the ability to adjust their assessment to a geriatric patient. (P-3)

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**UNIT TERMINAL OBJECTIVE**

**A,B,K** 6-4 At the completion of this unit, the paramedic student will be able to integrate the assessment findings to formulate a field impression and implement a treatment plan for the patient who has sustained abuse or assault.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,C** 6-4.1 Discuss the incidence of abuse and assault. (C-1)
- B,C** 6-4.2 Describe the categories of abuse. (C-1)
- B** 6-4.3 Discuss examples of spouse abuse. (C-1)
- B,K** 6-4.4 Discuss examples of elder abuse. (C-1)
- B,C** 6-4.5 Discuss examples of child abuse. (C-1)
- B** 6-4.6 Discuss examples of sexual assault. (C-1)
- B** 6-4.7 Describe the characteristics associated with the profile of the typical abuser of a spouse. (C-1)
- B,K** 6-4.8 Describe the characteristics associated with the profile of the typical abuser of the elder. (C-1)
- B,C** 6-4.9 Describe the characteristics associated with the profile of the typical abuser of children. (C-1)
- B** 6-4.10 Describe the characteristics associated with the profile of the typical assailant of sexual assault. (C-1)
- B** 6-4.11 Identify the profile of the "at-risk" spouse. (C-1)
- B,K** 6-4.12 Identify the profile of the "at-risk" elder. (C-1)
- B,C** 6-4.13 Identify the profile of the "at-risk" child. (C-1)
- B,C** 6-4.14 Discuss the assessment and management of the abused patient. (C-1)
- B,C** 6-4.15 Discuss the legal aspects associated with abuse situations. (C-1)
- B,C** 6-4.16 Identify community resources that are able to assist victims of abuse and assault. (C-1)
- B,C** 6-4.17 Discuss the documentation associated with abused and assaulted patient. (C-1)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- G,K** 6-4.18 Demonstrate sensitivity to the abused patient. (A-1)
- G,K** 6-4.19 Value the behavior of the abused patient. (A-2)
- G,K** 6-4.20 Attend to the emotional state of the abused patient. (A-1)
- G,K** 6-4.21 Recognize the value of non-verbal communication with the abused patient. (A-1)
- G,K** 6-4.22 Attend to the needs for reassurance, empathy and compassion with the abused patient. (A-1)
- G,K** 6-4.23 Listen to the concerns expressed by the abused patient. (A-1)
- G,K** 6-4.24 Listen and value the concerns expressed by the sexually assaulted patient. (A-2)

**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- G,K** 6-4.25 Demonstrate the ability to assess a spouse, elder or child abused patient. (P-1)
- G,K** 6-4.26 Demonstrate the ability to assess a sexually assaulted patient. (P-1)

**UNIT TERMINAL OBJECTIVE**

A,K 6-5 At the completion of this unit the paramedic student will be able to integrate pathophysiological and psychosocial principles to adapt the assessment and treatment plan for diverse patients and those who face physical, mental, social and financial challenges.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- K 6-5.1 Describe the various etiologies and types of hearing impairments. (C-1)
- K 6-5.2 Recognize the patient with a hearing impairment. (C-1)
- K 6-5.3 Anticipate accommodations that may be needed in order to properly manage the patient with a hearing impairment. (C-3)
- K 6-5.4 Describe the various etiologies of visual impairments. (C-1)
- K 6-5.5 Recognize the patient with a visual impairment. (C-1)
- K 6-5.6 Anticipate accommodations that may be needed in order to properly manage the patient with a visual impairment. (C-3)
- K 6-5.7 Describe the various etiologies and types of speech impairments. (C-1)
- K 6-5.8 Recognize the patient with a speech impairment. (C-1)
- K 6-5.9 Anticipate accommodations that may be needed in order to properly manage the patient with a speech impairment. (C-3)
- A 6-5.10 Describe the various etiologies of obesity. (C-1)
- A 6-5.11 Anticipate accommodations that may be needed in order to properly manage the patient with obesity. (C-3)
- K 6-5.12 Describe paraplegia/ quadriplegia. (C-1)
- K 6-5.13 Anticipate accommodations that may be needed in order to properly manage the patient with paraplegia/ quadriplegia. (C-3)
- K 6-5.14 Define mental illness. (C-1)
- K 6-5.15 Describe the various etiologies of mental illness. (C-1)
- K 6-5.16 Recognize the presenting signs of the various mental illnesses. (C-1)
- K 6-5.17 Anticipate accommodations that may be needed in order to properly manage the patient with a mental illness. (C-3)
- K 6-5.18 Define the term developmentally disabled. (C-1)
- K 6-5.19 Recognize the patient with a developmental disability. (C-1)
- K 6-5.20 Anticipate accommodations that may be needed in order to properly manage the patient with a developmental disability. (C-3)
- K 6-5.21 Describe Down's syndrome. (C-1)
- K 6-5.22 Recognize the patient with Down's syndrome. (C-1)
- K 6-5.23 Anticipate accommodations that may be needed in order to properly manage the patient with Down's syndrome. (C-3)
- K 6-5.24 Describe the various etiologies of emotional impairment. (C-1)
- K 6-5.25 Recognize the patient with an emotional impairment. (C-1)
- K 6-5.26 Anticipate accommodations that may be needed in order to properly manage the patient with an emotional impairment. (C-3)
- K 6-5.27 Define emotional/ mental impairment (EMI). (C-1)
- K 6-5.28 Recognize the patient with an emotional or mental impairment. (C-1)
- K 6-5.29 Anticipate accommodations that may be needed in order to properly manage patients with an emotional or mental impairment. (C-3)
- K 6-5.30 Describe the following diseases/ illnesses: (C-1)
  - a. Arthritis
  - b. Cancer
  - c. Cerebral palsy

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- d. Cystic fibrosis
  - e. Multiple sclerosis
  - f. Muscular dystrophy
  - g. Myasthenia gravis
  - h. Poliomyelitis
  - i. Spina bifida
  - j. Patients with a previous head injury
- K   6-5.31 Identify the possible presenting sign(s) for the following diseases/ illnesses: (C-1)
- a. Arthritis
  - b. Cancer
  - c. Cerebral palsy
  - d. Cystic fibrosis
  - e. Multiple sclerosis
  - f. Muscular dystrophy
  - g. Myasthenia gravis
  - h. Poliomyelitis
  - i. Spina bifida
- j. Patients with a previous head injury
- K   6-5.32 Anticipate accommodations that may be needed in order to properly manage the following patients: (C-3)
- a. Arthritis
  - b. Cancer
  - c. Cerebral palsy
  - d. Cystic fibrosis
  - e. Multiple sclerosis
  - f. Muscular dystrophy
  - g. Myasthenia gravis
  - h. Poliomyelitis
  - i. Spina bifida
  - j. Patients with a previous head injury
- K   6-5.33 Define cultural diversity. (C-1)
- K   6-5.34 Recognize a patient who is culturally diverse. (C-1)
- K   6-5.35 Anticipate accommodations that may be needed in order to properly manage a patient who is culturally diverse. (C-3)
- L   6-5.36 Identify a patient that is terminally ill. (C-1)
- K   6-5.37 Anticipate accommodations that may be needed in order to properly manage a patient who is terminally ill. (C-3)
- K   6-5.38 Identify a patient with a communicable disease. (C-1)
- K   6-5.39 Recognize the presenting signs of a patient with a communicable disease. (C-1)
- K   6-5.40 Anticipate accommodations that may be needed in order to properly manage a patient with a communicable disease. (C-3)
- A   6-5.41 Recognize sign(s) of financial impairments. (C-1)
- A   6-5.42 Anticipate accommodations that may be needed in order to properly manage the patient with a financial impairment. (C-3)

### **AFFECTIVE OBJECTIVES**

None identified for this unit.

### **PSYCHOMOTOR OBJECTIVES**

None identified for this unit.

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**UNIT TERMINAL OBJECTIVE**

- K 6-6 At the completion of this unit, the paramedic student will be able to integrate the pathophysiological principles and the assessment findings to formulate a field impression and implement a treatment plan for the acute deterioration of a chronic care patient.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- K 6-6.1 Compare and contrast the primary objectives of the ALS professional and the home care professional. (C-3)
- K 6-6.2 Identify the importance of home health care medicine as related to the ALS level of care. (C-1)
- K 6-6.3 Differentiate between the role of EMS provider and the role of the home care provider. (C-3)
- K 6-6.4 Compare and contrast the primary objectives of acute care, home care and hospice care. (C-3)
- K 6-6.5 Summarize the types of home health care available in your area and the services provided. (C-3)
- K 6-6.6 Discuss the aspects of home care that result in enhanced quality of care for a given patient. (C-1)
- K 6-6.7 Discuss the aspects of home care that have a potential to become a detriment to the quality of care for a given patient. (C-1)
- K 6-6.8 List complications commonly seen in the home care patients which result in their hospitalization. (C-1)
- K 6-6.9 Compare the cost, mortality and quality of care for a given patient in the hospital versus the home care setting. (C-3)
- K 6-6.10 Discuss the significance of palliative care programs as related to a patient in a home health care setting. (C-1)
- K 6-6.11 Define hospice care, comfort care and DNR/ DNAR as they relate to local practice, law and policy. (C-1)
- K 6-6.12 List the stages of the grief process and relate them to an individual in hospice care. (C-1)
- K 6-6.13 List pathologies and complications typical to home care patients. (C-1)
- K 6-6.14 Given a home care scenario, predict complications requiring ALS intervention. (C-3)
- K 6-6.15 Given a series of home care scenarios, determine which patients should receive follow-up home care and which should be transported to an emergency care facility. (C-3)
- K 6-6.16 Describe airway maintenance devices typically found in the home care environment. (C-1)
- K 6-6.17 Describe devices that provide or enhance alveolar ventilation in the home care setting. (C-1)
- K 6-6.18 List modes of artificial ventilation and an out-of-hospital situation where each might be employed. (C-1)
- K 6-6.19 List vascular access devices found in the home care setting. (C-1)
- K 6-6.20 Recognize standard central venous access devices utilized in home health care. (C-1)
- K 6-6.21 Describe the basic universal characteristics of central venous catheters. (C-1)
- K 6-6.22 Describe the basic universal characteristics of implantable injection devices. (C-1)
- K 6-6.23 List devices found in the home care setting that are used to empty, irrigate or deliver nutrition or medication to the GI/ GU tract. (C-1)
- K 6-6.24 Describe complications of assessing each of the airway, vascular access, and GI/ GU devices described above. (C-1)
- K 6-6.25 Given a series of scenarios, demonstrate the appropriate ALS interventions. (C-3)
- K 6-6.26 Given a series of scenarios, demonstrate interaction and support with the family members/ support persons for a patient who has died. (C-3)
- K 6-6.27 Describe common complications with central venous access and implantable drug administration ports in the out-of-hospital setting. (C-1)
- K 6-6.28 Describe the indications and contraindications for urinary catheter insertion in an out-of-hospital setting. (C-1)
- K 6-6.29 Identify the proper anatomy for placement of urinary catheters in males or females. (C-2)
- K 6-6.30 Identify failure of GI/ GU devices found in the home care setting. (C-2)

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- K   6-6.31 Identify failure of ventilatory devices found in the home care setting. (C-2)
- K   6-6.32 Identify failure of vascular access devices found in the home care setting. (C-2)
- K   6-6.33 Identify failure of drains. (C-2)
- K   6-6.34 Differentiate between home care and acute care as preferable situations for a given patient scenario. (C-3)
- K   6-6.35 Discuss the relationship between local home care treatment protocols/ SOPs and local EMS Protocols/ SOPs. (C-3)
- K   6-6.36 Discuss differences in individuals ability to accept and cope with their own impending death. (C-3)
- K   6-6.37 Discuss the rights of the terminally ill. (C-1)

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- K   6-6.38 Value the role of the home-care professional and understand their role in patient care along the life-span continuum. (A-2)
- K   6-6.39 Value the patient's desire to remain in the home setting. (A-2)
- K   6-6.40 Value the patient's desire to accept or deny hospice care. (A-2)
- K   6-6.41 Value the uses of long term venous access in the home health setting, including but not limited to: (A-2)
  - a. Chemotherapy
  - b. Home pain management
  - c. Nutrition therapy
  - d. Congestive heart therapy
  - e. Antibiotic therapy

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- O   6-6.42 Observe for an infected or otherwise complicated venous access point. (P-1)
- O   6-6.43 Demonstrate proper tracheotomy care. (P-1)
- O   6-6.44 Demonstrate the insertion of a new inner cannula and/ or the use of an endotracheal tube to temporarily maintain an airway in a tracheostomy patient. (P-1)
- O   6-6.45 **Demonstrate proper technique for drawing blood from a central venous line. (P-1)**
- O   6-6.46 Demonstrate the method of accessing vascular access devices found in the home health care setting. (P-1)

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 Y=EMC 453, Z=EMC 451, AA=SIMLAB**

**UNIT TERMINAL OBJECTIVE**

A, L, P, Q, V 7-1 At the completion of this unit, the paramedic student will be able to integrate the principles of assessment based management to perform an appropriate assessment and implement the management plan for patients with common complaints.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H, Q, V 7-1.1 Explain how effective assessment is critical to clinical decision making. (C-1)
- H, Q, V 7-1.2 Explain how the paramedic's attitude affects assessment and decision making. (C-1)
- H, Q, V 7-1.3 Explain how uncooperative patients affect assessment and decision making. (C-1)
- H, Q, V 7-1.4 Explain strategies to prevent labeling and tunnel vision. (C-1)
- H, Q, V 7-1.5 Develop strategies to decrease environmental distractions. (C-1)
- H, Q, V 7-1.6 Describe how manpower considerations and staffing configurations affect assessment and decision making. (C-1)
- H, Q, V 7-1.7 Synthesize concepts of scene management and choreography to simulated emergency calls. (C-3)
- H, Q, V 7-1.8 Explain the roles of the team leader and the patient care person. (C-1)
- H, Q, V 7-1.9 List and explain the rationale for carrying the essential patient care items. (C-3)
- H, Q, V 7-1.10 When given a simulated call, list the appropriate equipment to be taken to the patient. (C-2)
- H, Q, V 7-1.11 Explain the general approach to the emergency patient. (C-1)
- H, Q, V 7-1.12 Explain the general approach, patient assessment, differentials, and management priorities for patients with the following problems: (C-3)
- a. Chest pain
  - b. Medical and traumatic cardiac arrest
  - c. Acute abdominal pain
  - d. GI bleed
  - e. Altered mental status
  - f. Dyspnea
  - g. Syncope
  - h. Seizures
  - i. Environmental or thermal problem
  - j. Hazardous material or toxic exposure
  - k. Trauma or multi trauma patients
  - l. Allergic reactions
  - m. Behavioral problems
  - n. Obstetric or gynecological problems
  - o. Pediatric patients
- H, Q, V 7-1.13 Describe how to effectively communicate patient information face to face, over the telephone, by radio, and in writing. (C-1)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H, Q, V 7-1.14 Appreciate the use of scenarios to develop high level clinical decision making skills. (A-2)
- H, Q, V 7-1.15 Defend the importance of considering differentials in patient care. (A-3)
- H, Q, V 7-1.16 Advocate and practice the process of complete patient assessment on all patients. (A-3)
- H, Q, V 7-1.17 Value the importance of presenting the patient accurately and clearly. (A-2)



## **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H.Q.V** 7-1.18 While serving as team leader, choreograph the EMS response team, perform a patient assessment, provide local/ regionally appropriate treatment, present cases verbally and in writing given a moulaged and programed simulated patient. (P-3)
- H.Q.V** 7-1.19 While serving as team leader, assess a programmed patient or mannequin, consider differentials, make decisions relative to interventions and transportation, provide the interventions, patient packaging and transportation, work as a team and practice various roles for the following common emergencies: (P-3)
- a. Chest pain
  - b. Cardiac Arrest
    1. Traumatic arrest
    2. Medical arrest
  - c. Acute abdominal pain
  - d. GI bleed
  - e. Altered mental status
  - f. Dyspnea
  - g. Syncope
  - h. Seizure
  - i. Thermal/ environmental problem
  - j. Hazardous materials/ toxicology
  - k. Trauma
    1. Isolated extremity fracture (tibia/ fibula or radius/ ulna)
    2. Femur fracture
    3. Shoulder dislocation
    4. Clavicular fracture or A-C separation
    5. Minor wound (no sutures required, sutures required, high risk wounds, with tendon and/ or nerve injury)
    6. Spine injury (no neurologic deficit, with neurologic deficit)
    7. Multiple trauma-blunt
    8. Penetrating trauma
    9. Impaled object
    10. Elderly fall
    11. Athletic injury
    12. Head injury (concussion, subdural/ epidural)
  - l. Allergic reactions/ bites/ envenomation
    1. Local allergic reaction
    2. Systemic allergic reaction
    3. Envenomation
  - m. Behavioral
    1. Mood disorders
    2. Schizophrenic and delusional disorders
    3. Suicidal
  - n. Obstetrics/ gynecology
    1. Vaginal bleeding
    2. Childbirth (normal and abnormal)
  - o. Pediatric
    1. Respiratory distress
    2. Fever
    3. Seizures

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Y=EMC 453, Z=EMC 451, AA=SIMLAB**

**UNIT TERMINAL OBJECTIVE**

**B,H** 8-1 At the completion of this unit, the paramedic will understand standards and guidelines that help ensure safe and effective ground and air medical transport.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,D** 8-1.1 Identify current local and state standards which influence ambulance design, equipment requirements and staffing of ambulances. (C-1)
- B,D,F** 8-1.2 Discuss the importance of completing an ambulance equipment/ supply checklist. (C-1)
- B,BB** 8-1.3 Discuss the factors to be considered when determining ambulance stationing within a community. (C-1)
- B,H** 8-1.4 Describe the advantages and disadvantages of air medical transport. (C-1)
- B,H** 8-1.5 Identify the conditions/ situations in which air medical transport should be considered. (C-1)

**AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- T** 8-1.6 Assess personal practices relative to ambulance operations which may affect the safety of the crew, the patient and bystanders. (A-3)
- T** 8-1.7 Serve as a role model for others relative to the operation of ambulances. (A-3)
- T** 8-1.8 Value the need to serve as the patient advocate to ensure appropriate patient transportation via ground or air. (A-2)

**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- F** 8-1.9 Demonstrate how to place a patient in, and remove a patient from, an ambulance. (P-1)

**UNIT TERMINAL OBJECTIVE**

**B,C,H** 8-2 At the completion of this unit, the paramedic student will be able to integrate the principles of general incident management and multiple casualty incident (MCI) management techniques in order to function effectively at major incidents.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,C,H** 8-2.1 Explain the need for the incident management system (IMS)/ incident command system (ICS) in managing emergency medical services incidents. (C-1)
- B,C,H** 8-2.2 Define the term multiple casualty incident (MCI). (C-1)
- B,C,H** 8-2.3 Define the term disaster management. (C-1)
- B,C,H** 8-2.4 Describe essential elements of scene size-up when arriving at a potential MCI. (C-1)
- B,C,H** 8-2.5 Describe the role of the paramedics and EMS systems in planning for MCIs and disasters. (C-1)
- B,C,H** 8-2.6 Define the following types of incidents and how they affect medical management: (C-1)
- Open or uncontained incident
  - Closed or contained incident
- B, H** 8-2.7 Describe the functional components of the incident management system in terms of the following: (C-1)
- Command
  - Finance
  - Logistics
  - Operations
  - Planning
- B, H** 8-2.8 Differentiate between singular and unified command and when each is most applicable. (C-3)
- B, H** 8-2.9 Describe the role of command. (C-1)
- B, H** 8-2.10 Describe the need for transfer of command and procedures for transferring it. (C-1)
- B, H** 8-2.11 Differentiate between command procedures used at small, medium and large scale medical incidents. (C-1)
- B, H** 8-2.12 Explain the local/ regional threshold for establishing command and implementation of the incident management system including threshold MCI declaration. (C-1)
- B, H** 8-2.13 List and describe the functions of the following groups and leaders in ICS as it pertains to EMS incidents: (C-1)
- Safety
  - Logistics
  - Rehabilitation (rehab)
  - Staging
  - Treatment
  - Triage
  - Transportation
  - Extrication/ rescue
  - Disposition of deceased (morgue)
  - Communications
- B, H** 8-2.14 Describe the methods and rationale for identifying specific functions and leaders for these functions in ICS. (C-1)
- B, H** 8-2.15 Describe the role of both command posts and emergency operations centers in MCI and disaster management. (C-1)
- B, H** 8-2.16 Describe the role of the physician at multiple casualty incidents. (C-1)
- B,C,H** 8-2.17 Define triage and describe the principles of triage. (C-1)
- B,C,H** 8-2.18 Describe the START (simple triage and rapid treatment) method of initial triage. (C-1)

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**I**=BIO 291, **J**=BIO 292, **K**=EMC 430, **L**=EMC 370, **M**=EMC 420, **N**=HSCC 370, **O**=EMC 361, **P**=EMC 360,  
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**Y**=EMC 453, **Z**=EMC 451, **AA**=SIMLAB, **BB**=EMC 445

- B, H** 8-2.19 Given a list of 20 patients with various multiple injuries, determine the appropriate triage priority with 90% accuracy. (C-3)
- B,C,H** 8-2.20 Given color coded tags and numerical priorities, assign the following terms to each: (C-1)
- Immediate
  - Delayed
  - Hold
  - Deceased
- B, H** 8-2.21 Define primary and secondary triage. (C-1)
- B, H** 8-2.22 Describe when primary and secondary triage techniques should be implemented. (C-1)
- B, H** 8-2.23 Describe the need for and techniques used in tracking patients during multiple casualty incidents. (C-1)
- B, H** 8-2.24 Describe techniques used to allocate patients to hospitals and track them. (C-1)
- B, H** 8-2.25 Describe modifications of telecommunications procedures during multiple casualty incidents. (C-1)
- B, H** 8-2.26 List and describe the essential equipment to provide logistical support to MCI operations to include: (C-1)
- Airway, respiratory and hemorrhage control
  - Burn management
  - Patient packaging/ immobilization
- B,G,H** 8-2.27 List the physical and psychological signs of critical incident stress. (C-1)
- B,G,H** 8-2.28 Describe the role of critical incident stress management sessions in MCIs. (C-1)
- B, H** 8-2.29 Describe the role of the following exercises in preparation for MCIs: (C-1)
- Table top exercises
  - Small and large MCI drills

### **AFFECTIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H** 8-2.30 Understand the rationale for initiating incident command even at a small MCI event. (A-1)
- H** 8-2.31 Explain the rationale for having efficient and effective communications as part of an incident command/ management system. (A-1)
- H** 8-2.32 Explain why common problems of an MCI can have an adverse effect on an entire incident. (A-1)
- H** 8-2.33 Explain the organizational benefits for having standard operating procedures (SOPs) for using the incident management system or incident command system. (A-1)

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H** 8-2.34 Demonstrate the use of local/ regional triage tagging system used for primary and secondary triage. (P-1)
- H** 8-2.35 Given a simulated tabletop multiple casualty incident, with 5-10 patients: (P-1)
- Establish unified or singular command
  - Conduct a scene assessment
  - Determine scene objectives
  - Formulate an incident plan
  - Request appropriate resources
  - Determine need for ICS expansion and groups
  - Coordinate communications and groups leaders
  - Coordinate outside agencies
- H** 8-2.36 Demonstrate effective initial scene assessment and update (progress) reports. (P-1)
- H** 8-2.37 Given a classroom simulation of a MCI with 5-10 patients, fulfill the role of triage group leader. (P-3)
- H** 8-2.38 Given a classroom simulation of a MCI with 5-10 patients, fulfill the role of treatment group leader. (P-3)

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H 8-2.39 Given a classroom simulation of a MCI with 5-10 patients, fulfill the role of transportation group leader. (P-3)

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**UNIT TERMINAL OBJECTIVE**

- B, H** 8-3 At the completion of this unit, the paramedic student will be able to integrate the principles of rescue awareness and operations to safely rescue a patient from water, hazardous atmospheres, trenches, highways, and hazardous terrain.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- B,C,H** 8-3.1 Define the term rescue. (C-1)
- B, H** 8-3.2 Explain the medical and mechanical aspects of rescue situations. (C-1)
- B, H** 8-3.3 Explain the role of the paramedic in delivering care at the site of the injury, continuing through the rescue process and to definitive care. (C-1)
- B, H** 8-3.4 Describe the phases of a rescue operation. (C-1)
- B, H** 8-3.5 List and describe the types of personal protective equipment needed to safely operate in the rescue environment to include: (C-1)
- Head protection
  - Eye protection
  - Hand protection
  - Personal flotation devices
  - Thermal protection/ layering systems
  - High visibility clothing
  - Specialized footwear
- B, H** 8-3.6 Explain the differences in risk between moving water and flat water rescue. (C-1)
- B, H** 8-3.7 Explain the effects of immersion hypothermia on the ability to survive sudden immersion and self rescue. (C-1)
- B, H** 8-3.8 Explain the phenomenon of the cold protective response in cold water drowning situations. (C-1)
- B, H** 8-3.9 Identify the risks associated with low head dams and the rescue complexities they pose. (C-1)
- B, H** 8-3.10 Given a picture of moving water, identify and explain the following features and hazards associated with: (C-2)
- Hydraulics
  - Strainers
  - Dams/ hydro-electric sites
- B, H** 8-3.11 Explain why water entry or go techniques are methods of last resort. (C-1)
- B, H** 8-3.12 Explain the rescue techniques associated with reach-throw-row-go. (C-1)
- B, H** 8-3.13 Given a list of rescue scenarios, identify the victim survivability profile and which are rescue versus body recovery situations. (C-1)
- B, H** 8-3.14 Explain the self rescue position if unexpectedly immersed in moving water. (C-1)
- B, H** 8-3.15 Given a series of pictures identify which would be considered "confined spaces" and potentially oxygen deficient. (C-3)
- B, H** 8-3.16 Identify the hazards associated with confined spaces and risks posed to potential rescuers to include: (C-1)
- Oxygen deficiency
  - Chemical/ toxic exposure/ explosion
  - Engulfment
  - Machinery entrapment
  - Electricity
- B, H** 8-3.17 Identify components necessary to ensure site safety prior to confined space rescue attempts. (C-1)
- B, H** 8-3.18 Identify the poisonous gases commonly found in confined spaces to include: (C-1)
- Hydrogen sulfide (H<sub>2</sub>S)
  - Carbon dioxide (CO<sub>2</sub>)

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- c. Carbon monoxide (CO)
  - d. Low/ high oxygen concentrations (FiO<sub>2</sub>)
  - e. Methane (CH<sub>4</sub>)
  - f. Ammonia (NH<sub>3</sub>)
  - g. Nitrogen dioxide (NO<sub>2</sub>)
- B, H** 8-3.19 Explain the hazard of cave-in during trench rescue operations. (C-1)
- B, H** 8-3.20 Describe the effects of traffic flow on the highway rescue incident including limited access superhighways and regular access highways. (C-1)
- B, H** 8-3.21 List and describe the following techniques to reduce scene risk at highway incidents: (C-1)
- a. Apparatus placement
  - b. Headlights and emergency vehicle lighting
  - c. Cones, flares
  - d. Reflective and high visibility clothing
- B, H** 8-3.22 List and describe the hazards associated with the following auto/ truck components: (C-1)
- a. Energy absorbing bumpers
  - b. Air bag/ supplemental restraint systems
  - c. Catalytic converters and conventional fuel systems
  - d. Stored energy
  - e. Alternate fuel systems
- B, H** 8-3.23 Given a diagram of a passenger auto, identify the following structures: (C-1)
- a. A, B, C, D posts
  - b. Fire wall
  - c. Unibody versus frame designs
- B, H** 8-3.24 Describe methods for emergency stabilization using rope, cribbing, jacks, spare tire, and come-alongs for vehicles found on their: (C-1)
- a. Wheels
  - b. Side
  - c. Roof
  - d. Inclines
- B,C,H** 8-3.25 Describe the electrical hazards commonly found at highway incidents (above and below ground). (C-1)
- B,C,H** 8-3.26 Explain the difference between tempered and safety glass, identify its locations on a vehicle and how to break it safely. (C-3)
- B,C,H** 8-3.27 Explain typical door anatomy and methods to access through stuck doors. (C-1)
- B,C,H** 8-3.28 Explain SRS or "air bag" systems and methods to neutralize them. (C-1)
- B, H** 8-3.29 Define the following terms: (C-1)
- a. Low angle
  - b. High angle
  - c. Belay
  - d. Rappel
  - e. Scrambling
  - f. Hasty rope slide
- B, H** 8-3.30 Describe the procedure for stokes litter packaging for low angle evacuations. (C-1)
- B, H** 8-3.31 Explain the procedures for low angle litter evacuation to include: (C-1)
- a. Anchoring
  - b. Litter/ rope attachment
  - c. Lowering and raising procedures
- B, H** 8-3.32 Explain techniques to be used in non-technical litter carries over rough terrain. (C-1)
- B, H** 8-3.33 Explain non-technical high angle rescue procedures using aerial apparatus. (C-1)
- B, H** 8-3.34 Develop specific skill in emergency stabilization of vehicles and access procedures and an awareness of specific extrication strategies. (C-1)
- B, H** 8-3.35 Explain assessment procedures and modifications necessary when caring for entrapped patients. (C-1)
- B, H** 8-3.36 List the equipment necessary for an "off road" medical pack. (C-1)

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- B, H** 8-3.37 Explain specific methods of improvisation for assessment, spinal immobilization and extremity splinting. (C-1)
- B, H** 8-3.38 Explain the indications, contraindications and methods of pain control for entrapped patients. (C-1)
- B, H** 8-3.39 Explain the need for and techniques of thermal control for entrapped patients. (C-1)
- B, H** 8-3.40 Explain the pathophysiology of "crush trauma" syndrome. (C-1)
- B, H** 8-3.41 Develop an understanding of the medical issues involved in providing care for a patient in a rescue environment. (C-1)
- B, H** 8-3.42 Develop proficiency in patient packaging and evacuation techniques that pertain to hazardous or rescue environments. (C-1)
- B, H** 8-3.43 Explain the different types of "stokes" or basket stretchers and the advantages and disadvantages associated with each. (C-1)

**AFFECTIVE OBJECTIVES**

None identified for this unit.

**PSYCHOMOTOR OBJECTIVES**

At the completion of this lesson, the paramedic student should be able to:

- H** 8-3.44 Using cribbing, ropes, lifting devices, spare tires, chains, and hand winches, demonstrate the following stabilization procedures: (P-1)
  - a. Stabilization on all four wheels
  - b. Stabilization on its side
  - c. Stabilization on its roof
  - d. Stabilization on an incline/ embankments
- H** 8-3.45 Using basic hand tools demonstrate the following: (P-1)
  - a. Access through a stuck door
  - b. Access through safety and tempered glass
  - c. Access through the trunk
  - d. Access through the floor
  - e. Roof removal
  - f. Dash displacement/ roll-up
  - g. Steering wheel/ column displacement
  - h. Access through the roof
- H** 8-3.46 Demonstrate methods of "stokes" packaging for patients being: (P-1)
  - a. Vertically lifted (high angle)
  - b. Horizontally lifted (low angle)
  - c. Carried over rough terrain
- H** 8-3.47 Demonstrate methods of packaging for patients being vertically lifted without stokes litter stretcher packaging. (P-1)
- H** 8-3.48 Demonstrate the following litter carrying techniques: (P-1)
  - a. Stretcher lift straps
  - b. "Leap frogging"
  - c. Passing litters over and around obstructions
- H** 8-3.49 Demonstrate litter securing techniques for patients being evacuated by aerial apparatus. (P-1)
- H** 8-3.50 Demonstrate in-water spinal immobilization techniques. (P-1)
- H** 8-3.51 Demonstrate donning and properly adjusting a PFD. (P-1)
- H** 8-3.52 Demonstrate use of a throw bag. (P-1)

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**UNIT TERMINAL OBJECTIVE**

H 8-4 At the completion of this unit, the paramedic student will be able to evaluate hazardous materials emergencies, call for appropriate resources, and work in the cold zone.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- C,H 8-4.1 Explain the role of the paramedic/ EMS responder in terms of the following: (C-1)
- Incident size-up
  - Assessment of toxicologic risk
  - Appropriate decontamination methods
  - Treatment of semi-decontaminated patients
  - Transportation of semi-decontaminated patients
- C,H 8-4.2 Size-up a hazardous materials (haz-mat) incident and determine the following: (C-1)
- Potential hazards to the rescuers, public and environment
  - Potential risk of primary contamination to patients
  - Potential risk of secondary contamination to rescuers
- C,H 8-4.3 Identify resources for substance identification, decontamination and treatment information including the following: (C-1)
- Poison control center
  - Medical control
  - Material safety data sheets (MSDS)
  - Reference textbooks
  - Computer databases (CAMEO)
  - CHEMTREC
  - Technical specialists
  - Agency for toxic substances and disease registry
- H 8-4.4 Explain the following terms/ concepts: (C-1)
- Primary contamination risk
  - Secondary contamination risk
- H 8-4.5 List and describe the following routes of exposure: (C-1)
- Topical
  - Respiratory
  - Gastrointestinal
  - Parenteral
- H 8-4.6 Explain the following toxicologic principles: (C-1)
- Acute and delayed toxicity
  - Route of exposure
  - Local versus systemic effects
  - Dose response
  - Synergistic effects
- C,H 8-4.7 Explain how the substance and route of contamination alters triage and decontamination methods. (C-1)
- H 8-4.8 Explain the limitations of field decontamination procedures. (C-1)
- H 8-4.9 Explain the use and limitations of personal protective equipment (PPE) in hazardous material situations. (C-1)
- H 8-4.10 List and explain the common signs, symptoms and treatment for the following substances: (C-1)
- Corrosives (acids/ alkalis)
    - Pulmonary irritants (ammonia/ chlorine)
    - Pesticides (carbamates/ organophosphates)
    - Chemical asphyxiants (cyanide/ carbon monoxide)

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Q=EMC 461, R=EMC 382, S=EMC 483, T=EMC 485, U=EMC 484, V=EMC 350, W=EMC 351, X=EMC 452,  
Y=EMC 453, Z=EMC 451, AA=SIMLAB, BB=EMC 445

- H 8-4.11 e. Hydrocarbon solvents (xylene, methylene chloride)  
Explain the potential risk associated with invasive procedures performed on contaminated patients. (C-1)
- H 8-4.12 Given a contaminated patient determine the level of decontamination necessary and : (C-1)
  - a. Level of rescuer PPE
  - b. Decontamination methods
  - c. Treatment
  - d. Transportation and patient isolation techniques
- H 8-4.13 Identify local facilities and resources capable of treating patients exposed to hazardous materials. (C-1)
- H 8-4.14 Determine the hazards present to the patient and paramedic given an incident involving hazardous materials. (C-2)
- H 8-4.15 Define the following and explain their importance to the risk assessment process: (C-1)
  - a. Boiling point
  - b. Flammable/ explosive limits
  - c. Flash point
  - d. Ignition temperature
  - e. Specific gravity
  - f. Vapor density
  - g. Vapor pressure
  - h. Water solubility
  - i. Alpha radiation
  - j. Beta radiation
  - k. Gamma radiation
- H 8-4.16 Define the toxicologic terms and their use in the risk assessment process: (C-1)
  - a. Threshold limit value (TLV)
  - b. Lethal concentration and doses (LD)
  - c. Parts per million/ billion (ppm/ ppb)
  - d. Immediately dangerous to life and health (IDLH)
  - e. Permissible exposure limit (PEL)
  - f. Short term exposure limit (TLV-STEL)
  - g. Ceiling level (TLV-C)
- H 8-4.17 Given a specific hazardous material be able to do the following: (C-1)
  - a. Research the appropriate information about it's physical and chemical characteristics and hazards
  - b. Suggest the appropriate medical response
  - c. Determine risk of secondary contamination
- H 8-4.18 Determine the factors which determine where and when to treat a patient to include: (C-1)
  - a. Substance toxicity
  - b. Patient condition
  - c. Availability of decontamination
- H 8-4.19 Determine the appropriate level of PPE to include: (C-1)
  - a. Types, application, use and limitations
  - b. Use of chemical compatibility chart
- H 8-4.20 Explain decontamination procedures when functioning in the following modes: (C-1)
  - a. Critical patient rapid two step decontamination process
  - b. Non-critical patient eight step decontamination process
- H 8-4.21 Explain specific decontamination procedures. (C-1)
- H 8-4.22 Explain the four most common decontamination solutions used to include: (C-1)
  - a. Water
  - b. Water and tincture of green soap
  - c. Isopropyl alcohol
  - d. Vegetable oil
- H 8-4.23 Identify the areas of the body difficult to decontaminate to include: (C-1)
  - a. Scalp/ hair

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- a. Scalp/ hair

- b. Ears/ ear canals/ nostrils
- c. Axilla
- d. Finger nails
- e. Navel
- f. Groin/ buttocks/ genitalia
- g. Behind knees
- h. Between toes, toe nails

- H 8-4.24 Explain the medical monitoring procedures of hazardous material team members to be used both pre and post entry, to include: (C-1)
- a. Vital signs
  - b. Body weight
  - c. General health
  - d. Neurologic status
  - e. ECG
- H 8-4.25 Explain the factors which influence the heat stress of hazardous material team personnel to include: (C-1)
- a. Hydration
  - b. Physical fitness
  - c. Ambient temperature
  - d. Activity
  - e. Level of PPE
  - f. Duration of activity
- H 8-4.26 Explain the documentation necessary for Haz-Mat medical monitoring and rehabilitation operations. (C-1)
- a. The substance
  - b. The toxicity and danger of secondary contamination
  - c. Appropriate PPE and suit breakthrough time
  - d. Appropriate level of decontamination
  - e. Appropriate antidote and medical treatment
  - f. Transportation method
- C,H 8-4.27 Given a simulated hazardous substance, use reference material to determine the appropriate actions. (C-3)
- H 8-4.28 Integrate the principles and practices of hazardous materials response in an effective manner to prevent and limit contamination, morbidity, and mortality

### **AFFECTIVE OBJECTIVES**

None identified for this unit.

### **PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- H 8-4.29 Demonstrate the donning and doffing of appropriate PPE. (P-1)
- H 8-4.30 Set up and demonstrate an emergency two step decontamination process. (P-1)
- H 8-4.31 Set up and demonstrate an eight step decontamination process. (P-1)

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**UNIT TERMINAL OBJECTIVE**

H 8-5 At the completion of this unit, the paramedic student will have an awareness of the human hazard of crime and violence and the safe operation at crime scenes and other emergencies.

**COGNITIVE OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- C,F,H 8-5.1 Explain how EMS providers are often mistaken for the police. (C-1)
- C,F,H 8-5.2 Explain specific techniques for risk reduction when approaching the following types of routine EMS scenes: (C-1)
- a. Highway encounters
  - b. Violent street incidents
  - c. Residences and "dark houses"
- C,F,H 8-5.3 Describe warning signs of potentially violent situations. (C-1)
- C,F,H 8-5.4 Explain emergency evasive techniques for potentially violent situations, including: (C-1)
- a. Threats of physical violence.
  - b. Firearms encounters
  - c. Edged weapon encounters
- H,Q 8-5.5 Explain EMS considerations for the following types of violent or potentially violent situations: (C-1)
- a. Gangs and gang violence
  - b. Hostage/ sniper situations
  - c. Clandestine drug labs
  - d. Domestic violence
  - e. Emotionally disturbed people
  - f. Hostage/ sniper situations
- H,Q 8-5.6 Explain the following techniques: (C-1)
- a. Field "contact and cover" procedures during assessment and care
  - b. Evasive tactics
  - c. Concealment techniques
- C,H,Q 8-5.7 Describe police evidence considerations and techniques to assist in evidence preservation. (C-1)

**AFFECTIVE OBJECTIVES**

None identified for this unit.

**PSYCHOMOTOR OBJECTIVES**

At the completion of this unit, the paramedic student will be able to:

- Q 8-5.8 Demonstrate the following techniques: (P-1)
- a. Field "contact and cover" procedures during assessment and care
  - b. Evasive tactics
  - c. Concealment techniques