

UNIT TERMINAL OBJECTIVE

- 3-1 At the completion of this unit, the EMT-Enhanced 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 EMT-Enhanced student will be able to:

- 3-1.1 Describe the factors that influence the EMT-Enhanced's ability to collect medical history. (C-1)
- 3-1.2 Describe the techniques of history taking. (C-1)
- 3-1.3 Discuss the importance of using open and closed ended questions. (C-1)
- 3-1.4 Describe the use of facilitation, reflection, clarification, empathetic responses, confrontation, and interpretation. (C-1)
- 3-1.5 Differentiate between facilitation, reflection, clarification, sympathetic responses, confrontation, and interpretation. (C-3)
- 3-1.6 Describe the structure and purpose of a health history. (C-1)
- 3-1.7 Describe how to obtain a health history. (C-1)
- 3-1.8 List the components of a history of an adult patient. (C-1)
- 3-1.9 List and describe strategies to overcome situations that represent special challenges in obtaining a medical history. (C-3)

AFFECTIVE OBJECTIVES

At the completion of this unit, the EMT-Enhanced student will be able to:

- 3-1.10 Demonstrate the importance of empathy when obtaining a health history. (A-1)
- 3-1.11 Demonstrate the importance of confidentiality when obtaining a health history. (A-1)

PSYCHOMOTOR OBJECTIVES

None identified for this unit.

DECLARATIVE

- 1) Overview
 - a) Purpose
 - i) This information is gathered on a patient-by-patient, case-by-case basis
 - b) Several parts
 - i) Specific purpose
 - ii) Together they give structure
 - c) Does not dictate sequence

- 2) Influences on collecting a history
 - a) Source of history
 - i) Patient
 - ii) Family
 - iii) Friends
 - iv) Police
 - v) Others
 - b) Reliability
 - i) Variable
 - (1) Memory
 - (2) Trust
 - (3) Motivation
 - ii) Made at the end of the evaluation, not the beginning
 - c) Contents of history
 - i) Date
 - (1) Always important
 - (2) Time may also be a consideration
 - ii) Identifying data
 - (1) Age
 - (2) Sex
 - (3) Race
 - d) Chief complaint
 - i) Main part of the health history
 - ii) The one or more symptoms for which the patient is seeking medical care
 - e) History of the present illness
 - i) Detailed evaluation of the chief complaint
 - ii) Provides a full, clear, chronological account of the symptoms
 - f) Past medical history
 - i) Pertinent information to the current condition
 - g) Current health status
 - i) Focuses on present state of health
 - ii) Environmental conditions
 - iii) Individual factors
 - (1) Current medications
 - (2) Allergies
 - (3) Tobacco use
 - (4) Alcohol, drugs, and related substances
 - (5) Diet
 - (6) Screening tests
 - (7) Immunizations

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- (8) Sleep patterns
 - (9) Exercise and leisure activities
 - (10) Environmental hazards
 - (11) Use of safety measures
 - (12) Family history
 - (13) Home situation and significant other
 - (14) Daily life
 - (15) Important experiences
 - (16) Religious beliefs
 - (17) Patient's outlook
- 3) Techniques of history taking
- a) Setting the stage
 - i) Environment
 - (1) Proper environment enhances communication
 - (2) Be cautious of power relationship
 - (3) Personal space
 - ii) Your demeanor and appearance
 - (1) Just as you are watching the patient, the patient will be watching you
 - (2) Messages of body language
 - (3) Clean, neat, professional appearance
 - iii) Note taking
 - (1) Difficult to remember all details
 - (2) Most patients are comfortable with note taking
 - (a) If concerns arise, explain your purpose
 - (b) Do not divert your attention from the patient to take notes
 - b) Learning about the present illness
 - i) Refer to the patient by name
 - ii) Avoid the use of unfamiliar or demeaning terms such as "Granny" or "Hon"
 - c) Questioning
 - i) Types of questions
 - (1) Open-ended
 - (2) Closed (direct)
 - ii) Determine chief complaint
 - (1) Use a general, open-ended question
 - (2) Follow the patient's lead
 - (a) Facilitation
 - (i) Posture, actions, or words should encourage the patient to say more
 - (ii) Making eye contact or saying phrases such as "Go on" or "I'm listening" may help the patient to continue
 - (b) Reflection
 - (i) Repeating the patient's words encourages additional responses
 - (ii) Typically does not bias the story or interrupt the patient's train of thought
 - (c) Clarification
 - (i) Used to clarify ambiguous statements or words
 - (d) Empathetic responses
 - (i) Use techniques of therapeutic communication to interpret feelings and your response

- (e) Confrontation
 - (i) Some issues or responses may require you to confront patients about their feelings
- (f) Interpretation
 - (i) Goes beyond confrontation, requires you to make an inference
- iii) History of the present illness
 - (1) Location
 - (a) Where is it
 - (b) Does it radiate
 - (2) Quality
 - (a) What is it like
 - (3) Quantity or severity
 - (a) How bad is it
 - (b) Attempt to quantify the pain
 - (i) 1 - 10 scale
 - (ii) Other scales
 - (4) Duration/ timing
 - (a) When did it start
 - (b) How long does it last
 - (5) Onset/ setting
 - (a) Emotional response
 - (b) Environmental factors
 - (6) Aggravation/ alleviation
 - (7) Associated complaints
- iv) Assess past medical history
 - (1) Pre-existing medical problems or surgeries
 - (2) Medications
 - (3) Allergies
 - (4) Physician
 - (5) Family history
 - (6) Social history
 - (a) Housing environment
 - (b) Economic status
 - (c) Occupation
 - (d) High risk behavior
 - (e) Travel history
- v) Current health status
 - (1) Tobacco use
 - (2) Use of alcohol, drugs, and other related substances
 - (3) Diet
- d) Standardized approach to history taking
 - i) SAMPLE
 - ii) OPQRST
- e) Taking a history on sensitive topics
 - i) Alcohol and drugs
 - ii) Physical abuse or violence
 - iii) Sexual history
- 4) Special challenges
 - a) Silent patient

- i) Silence is often uncomfortable
- ii) Silence has meaning and many uses
 - (1) Patients may use this to collect their thoughts, remember details, or decide whether or not they trust you
 - (2) Be alert for nonverbal clues of distress
- iii) Silence may be a result of the interviewer's lack of sensitivity
- b) Overly talkative patient
 - i) Faced with a limited amount of time, interviewers may become impatient
 - ii) Although there are no perfect solutions, several techniques may be helpful
 - (1) Lower your goals, accept a less comprehensive history
 - (2) Give the patient free reign for the first several minutes
 - (3) Summarize frequently
- c) Patient with multiple symptoms
- d) Anxious patient
 - i) Anxiety is natural
 - ii) Be sensitive to nonverbal clues
- e) Reassurance
 - i) It is tempting to be overly reassuring
 - ii) Premature reassurance blocks communication
- f) Angry and hostile patient
 - i) Understand that anger and hostility are natural
 - ii) Often the anger is displaced toward the clinician
 - iii) Do not get angry in return
- g) Intoxicated patient
 - i) Be accepting, not challenging
 - ii) Do not attempt to have the patient lower their voice or stop cursing; this may aggravate them
 - iii) Avoid trapping them in small areas
- h) Crying patient
 - i) Crying, like anger and hostility, may provide valuable insight
 - ii) Be sympathetic
- i) Depressed patient
 - i) Be alert for signs of depression
 - ii) Be sure you know how bad it is
- j) Sexually attractive or seductive patient
 - i) Clinicians and patients may be sexually attracted to each other
 - ii) Accept these as normal feelings, but prevent them from affecting your behavior
 - iii) If a patient becomes seductive or makes sexual advances, frankly but firmly make clear that your relationship is professional not personal
- k) Patient with confusing behavior or history
 - i) Be prepared for the confusion and frustration of varying behaviors and histories
 - ii) Be alert for mental illness, delirium, or dementia
- l) Patient with limited intelligence
 - i) Do not overlook the ability of these patients to provide you with adequate information
 - ii) Be alert for omissions
 - iii) Severe mental retardation may require you to get information from family or friends
- m) EMT-Enhanced-patient language barrier
 - i) Take every possible step to find a translator
 - ii) A few broken words are not an acceptable substitute
- n) Patient with a hearing problem

- i) Very similar to patients with a language barrier
 - ii) If the patient can sign, make every effort to find a translator
- o) Blind patient
 - i) Be careful to announce yourself and to explain who you are and why you are there
- p) Talking with family and friends
 - i) Some patients may not be able to provide you with all information
 - ii) Try to find a third party who can help you get the whole story

UNIT TERMINAL OBJECTIVE

- 3-2 At the completion of this unit, the EMT-Enhanced student will be able to explain the significance of physical exam findings commonly found in emergency situations.

COGNITIVE OBJECTIVES

At the completion of this unit, the EMT-Enhanced student will be able to:

- 3-2.1 Define the terms inspection, palpation, percussion, auscultation. (C-1)
- 3-2.2 Describe the techniques of inspection, palpation, percussion, and auscultation. (C-1)
- 3-2.3 Review the procedure for taking and significance of vital signs (pulse, respiration, and blood pressure.)(C-2)
- 3-2.4 Describe the evaluation of mental status. (C-1)
- 3-2.5 Evaluate the importance of a general survey. (C-3)
- 3-2.6 Describe the examination of skin and nails. (C-1)
- 3-2.7 Differentiate normal and abnormal findings of the assessment of the skin. (C-3)
- 3-2.8 Distinguish the importance of abnormal findings of the assessment of the skin. (C-3)
- 3-2.9 Describe the normal and abnormal assessment findings of the head (including the scalp, skull, face and skin). (C-1)
- 3-2.10 Describe the examination of the head (including the scalp, skull, face, and skin). (C-1)
- 3-2.11 Describe the examination of the eyes. (C-1)
- 3-2.12 Distinguish between normal and abnormal assessment findings of the eyes. (C-3)
- 3-2.13 Describe the examination of the ears. (C-1)
- 3-2.14 Differentiate normal and abnormal assessment findings of the ears. (C-3)
- 3-2.15 Describe the examination of the nose. (C-1)
- 3-2.16 Differentiate normal and abnormal assessment findings of the nose. (C-3)
- 3-2.17 Describe the examination of the mouth and pharynx. (C-1)
- 3-2.18 Differentiate normal and abnormal assessment findings of the mouth and pharynx. (C-3)
- 3-2.19 Describe the examination of the neck and cervical spine. (C-1)
- 3-2.20 Differentiate normal and abnormal assessment findings the neck and cervical spine. (C-3)
- 3-2.21 Describe the inspection, palpation, and auscultation of the chest. (C-1)
- 3-2.22 Describe the examination of the thorax and ventilation. (C-1)
- 3-2.23 Describe the examination of the anterior and posterior chest. (C-1)
- 3-2.25 Differentiate the characteristics of breath sounds. (C-3)
- 3-2.26 Differentiate normal and abnormal assessment findings of the chest examination. (C-3)
- 3-2.27 Describe the examination of the arterial pulse including rate, rhythm, and amplitude. (C-1)
- 3-2.28 Distinguish normal and abnormal findings of arterial pulse. (C-3)
- 3-2.29 Describe the assessment of jugular venous pressure and pulsations. (C-1)
- 3-2.30 Distinguish normal and abnormal examination findings of jugular venous pressure and pulsations. (C-3)
- 3-2.31 Describe the examination of the heart. (C-1)
- 3-2.32 Differentiate normal and abnormal assessment findings of the heart. (C-3)
- 3-2.33 Describe the auscultation of the heart. (C-1)
- 3-2.34 Differentiate the characteristics of normal and abnormal findings associated with the auscultation of the heart. (C-3)
- 3-2.35 Describe the examination of the abdomen. (C-1)
- 3-2.36 Differentiate normal and abnormal assessment findings of the abdomen. (C-3)
- 3-2.37 Describe the examination of the female external genitalia. (C-1)
- 3-2.38 Differentiate normal and abnormal assessment findings of the female external genitalia. (C-3)
- 3-2.39 Describe the examination of the male genitalia. (C-1)
- 3-2.40 Differentiate normal and abnormal findings of the male genitalia. (C-3)
- 3-2.41 Describe the examination of the extremities. (C-1)
- 3-2.42 Differentiate normal and abnormal findings of the extremities. (C-3)
- 3-2.43 Describe the examination of the peripheral vascular system. (C-1)

- 3-2.44 Differentiate normal and abnormal findings of the peripheral vascular system. (C-3)
- 3-2.45 Describe the examination of the nervous system. (C-1)
- 3-2.46 Differentiate normal and abnormal findings of the nervous system. (C-3)
- 3-2.47 Discuss the considerations of examination of an infant or child. (C-1)
- 3-2.48 Describe the general guidelines of recording examination information. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this unit, the EMT-Enhanced student will be able to:

- 3-2.49 Demonstrate a caring attitude when performing physical examination skills. (A-3)
- 3-2.50 Discuss the importance of a professional appearance and demeanor when performing physical examination skills. (A-1)
- 3-2.51 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 EMT-Enhanced student will be able to:

- 3-2.52 Demonstrate the examination of skin and nails. (P-2)
- 3-2.53 Demonstrate the examination of the head and neck. (P-2)
- 3-2.54 Demonstrate the examination of the eyes. (P-2)
- 3-2.55 Demonstrate the examination of the ears. (P-2)
- 3-2.56 Demonstrate the examination of the nose. (P-2)
- 3-2.57 Demonstrate the examination of the mouth. (P-2)
- 3-2.58 Demonstrate the examination of the neck. (P-2)
- 3-2.59 Demonstrate the examination of the thorax and ventilation. (P-2)
- 3-2.60 Demonstrate the examination of the anterior and posterior chest. (P-2)
- 3-2.61 Demonstrate auscultation of the chest. (P-2)
- 3-2.62 Demonstrate percussion of the chest. (P-2)
- 3-2.63 Demonstrate the examination of the arterial pulse including location, rate, rhythm, and amplitude. (P-2)
- 3-2.64 Demonstrate the assessment of jugular venous pressure and pulsations. (P-2)
- 3-2.65 Demonstrate the examination of the heart. (P-2)
- 3-2.66 Demonstrate the examination of the abdomen. (P-2)
- 3-2.67 Demonstrate auscultation of the abdomen. (P-2)
- 3-2.68 Demonstrate the external visual examination of the female external genitalia. (P-2)
- 3-2.69 Demonstrate the examination of the male genitalia. (P-2)
- 3-2.70 Demonstrate the examination of the peripheral vascular system. (P-2)
- 3-2.71 Demonstrate the examination of the extremities. (P-2)
- 3-2.72 Demonstrate the examination of the nervous system. (P-2)

DECLARATIVE

- 1) Physical examination - approach and overview
 - a) Examination techniques and equipment
 - i) Examination techniques
 - (1) Inspection
 - (2) Palpation
 - (3) Percussion
 - (4) Auscultation
 - ii) Measurement of vitals
 - (1) Pulse
 - (2) Respirations
 - (3) Blood pressure
 - iii) Height and weight
 - iv) Equipment
 - (1) Stethoscope
 - (2) Blood pressure cuff
 - (3) Cardiac monitor
 - (4) Pulse oximetry
 - (5) Peak flow meter
 - (6) Capnometry
 - b) General approach
 - i) Examine the patient systematically
 - ii) Place special emphasis on areas suggested by the present illness and chief complaint
 - iii) Keep in mind that most patients view a physical exam with apprehension and anxiety - they feel vulnerable and exposed
 - c) Overview of a advanced examination
 - i) The categories of a physical exam should include
 - (1) Mental status
 - (2) General survey
 - (3) Vital signs
 - (4) Skin
 - (5) HEENT
 - (a) Head
 - (b) Eyes
 - (c) Ears
 - (d) Nose
 - (e) Throat
 - (6) Neck
 - (7) Chest
 - (8) Abdomen
 - (9) Posterior body
 - (10) Extremities
 - (a) Peripheral vascular
 - (b) Musculoskeletal
 - (11) Neurologic exam
- 2) Mental status
 - a) Appearance and behavior
 - i) Level of consciousness
 - (1) Alertness
 - (2) Response to verbal stimuli

- (3) Response to touch or shake of shoulder (tactile)
- (4) Response to painful stimuli
- (5) Unresponsive
- (6) Possible findings
 - (a) Normal
 - (b) Drowsy
 - (c) Obtunded
 - (i) Insensitivity to unpleasant or painful stimuli by reduced level of consciousness by an anesthetic or analgesic
 - (d) Stuporous
 - (i) State of lethargy and unresponsiveness
 - (ii) Person seems unaware of surroundings
- (7) Coma
 - (a) State of profound unconsciousness
 - (b) Absence of spontaneous eye movements
 - (c) No response to verbal or painful stimuli
 - (d) Patient can not be aroused by any stimuli
- ii) Posture and motor behavior
 - (1) Abnormal posture
 - (a) Purposeful
 - (b) Non purposeful
 - (2) Appropriateness of movement
 - (3) Possible findings
 - (a) Normal
 - (b) Restlessness
 - (c) Agitation
 - (d) Bizarre postures
 - (e) Immobility
 - (f) Involuntary movements
- iii) Dress, grooming, and personal hygiene
 - (1) Fastidiousness
 - (2) Neglect
- iv) Facial expression
 - (1) Anxiety
 - (2) Depression
 - (3) Elation
 - (4) Anger
 - (5) Response to imaginary people or objects
 - (6) Withdrawal
- v) Manner, affect, and relation to person and things
- b) Speech and language
 - i) Assess
 - (1) Quantity
 - (2) Rate
 - (3) Loudness
 - (4) Fluency
 - (5) Possible findings
 - (a) Aphasia
 - (b) Dysphonia
 - (c) Dysarthria
 - (d) Changes with mood disorders
- c) Mood

- i) Assess
 - (1) Stability of abnormal mood
 - (2) Risk of suicide
 - (3) Possible findings
 - (a) Happiness
 - (b) Elation
 - (c) Depression
 - (d) Anxiety
 - (e) Anger
 - (f) Indifference
 - d) Orientation
 - i) Assess
 - (1) Time
 - (2) Place
 - (3) Person
 - (4) Possible findings
 - (a) Disorientation
 - (5) Assess remote memory (i.e., birthdays)
 - (6) Assess recent memory (i.e., events of the day)
- 3) General survey
- a) Level of consciousness
 - i) AVPU
 - b) Signs of distress
 - i) Assess for signs of distress
 - ii) Examples (not inclusive)
 - (1) Cardiorespiratory insufficiency
 - (a) Labored breathing
 - (b) Wheezing
 - (c) Cough
 - (2) Pain
 - (a) Wincing
 - (b) Sweating
 - (c) Protectiveness of a painful part
 - (3) Anxiety
 - (a) Anxious face
 - (b) Fidgety movement
 - (c) Cold moist palms
 - c) Apparent state of health
 - i) Acutely or chronically ill
 - ii) Frail
 - iii) Feeble
 - iv) Robust
 - v) Vigorous
 - d) Skin color and obvious lesions
 - i) Pallor
 - ii) Cyanosis
 - iii) Jaundice
 - iv) Rashes
 - v) Bruises - ecchymosis
 - vi) Scars
 - vii) Discoloration

- e) Weight
 - i) Emaciated
 - ii) Obese
 - iii) Recent history of weight gain or loss
 - f) Posture, gait, and motor activity
 - i) Preferred posture
 - (1) Tripodal
 - (2) Paralysis
 - (3) Limpness
 - (4) Ataxia
 - (5) Restless or quiet
 - (6) Involuntary motor activity
 - (7) Ease of walking
 - (a) Balance
 - (b) Limp
 - (c) Discomfort
 - (d) Fear of falling
 - (e) Abnormal motor pattern
 - g) Dress, grooming, and personal hygiene
 - i) How is the patient dressed
 - (1) Appropriate for temperature and weather
 - (2) Clean
 - h) Odors of breath
 - i) May indicate underlying conditions
 - (1) Alcohol/ alcoholic beverage
 - (2) Acetone
 - (3) Putrid
 - (4) Other
 - i) Facial expression
 - i) Observe expression
 - ii) At rest, during conversation, and during the examination
 - j) Vital signs
 - i) Blood pressure
 - ii) Respirations
 - iii) Pulse
 - iv) Temperature
 - k) Additional assessment techniques
 - i) Pulse oximetry
 - ii) Blood glucose monitor
 - iii) Cardiac monitor
- 4) Anatomical regions
- a) Skin
 - i) Techniques of exam
 - (1) Inspect and palpate the skin
 - (a) Note the following characteristics
 - (i) Color
 - 1. The red color of oxyhemoglobin and pallor due to lack of oxygen are best seen where the epidermis is thinnest
 - 2. The fingernails and lips and the mucous membranes of the mouth and palpebral conjunctiva
 - 3. In dark skinned persons, the palms and the soles may

- also be useful
 - (ii) Moisture
 - (iii) Temperature
 - (iv) Texture
 - (v) Mobility and turgor
 - (vi) Lesions
- (2) Inspect the fingernails
 - (a) Note their color
- ii) Abnormalities
 - (1) Color
 - (2) Temperature
 - (3) Condition
- b) Head, ears, eyes, nose, and throat
 - i) Techniques of examination
 - (1) Head
 - (a) The scalp
 - (i) Inspect and palpate for evidence of trauma
 - (b) Skull
 - (i) Inspect and palpate, note any tenderness or deformities
 - (c) Face
 - (i) Note the facial expression and contours
 - (ii) Observe for asymmetry, involuntary movements, and edema
 - (iii) Inspect and palpate, note any tenderness or deformities
 - (d) Skin
 - (i) Note color, temperature, and condition
 - (2) Eyes
 - (a) Position and alignment
 - (i) Stand in front of the patient and survey the patient's eyes
 - (ii) Assess for conjugate gaze
 - (b) Eyelids
 - (i) Inspect the eyelids for any evidence of trauma
 - (c) Conjunctiva and sclera
 - (i) Inspect for discoloration
 - (d) Pupils
 - (i) Inspect the size, shape, and symmetry of the pupils
 - (ii) Test the pupillary reactions to light
 - 1. Look for
 - a. Direct reaction
 - b. Consensual reaction
 - (3) Ears
 - (a) The auricle
 - (i) Inspect each auricle and surrounding tissue for deformities, drainage, tenderness, and erythema
 - (b) Mastoid
 - (i) Discoloration
 - (ii) Tenderness
 - (4) Nose
 - (a) Inspect the anterior and inferior surface of the nose
 - (i) Asymmetry
 - (ii) Deformity
 - (iii) Foreign bodies
 - (b) Palpate for tenderness

- (5) Mouth and pharynx
 - (a) Inspect the lips, observe color, moisture, or cracking
 - (b) Note the color of the gums
 - (c) Inspect the teeth
 - (d) Inspect the tongue
 - (6) Neck
 - (a) Inspect the neck, noting its symmetry and any masses or scars
 - (b) Inspect and palpate the trachea for any deviation
 - (c) Inspect for jugular venous distention
 - (d) The cervical spine
 - (i) Inspection
 - (ii) Palpation
 - 1. Tenderness
 - 2. Deformities
 - (iii) Nuchal rigidity
- c) Chest
- i) Techniques of examination
 - (1) General approach
 - (a) Proceed in an orderly fashion
 - (i) Inspect
 - (ii) Palpate
 - (iii) Percuss
 - (iv) Auscultate
 - (v) Compare side to side
 - (b) Try to visualize the underlying lobes of the lungs
 - (2) Examination of the thorax and ventilation
 - (a) Observe rate, rhythm, depth, and effort of breathing
 - (b) Check for cyanosis
 - (c) Listen to the patient's breathing
 - (d) Observe the shape of the chest
 - (3) Examination of the anterior and posterior chest
 - (a) Inspect
 - (i) Any deformities or asymmetry
 - 1. Barrel chest
 - 2. Traumatic flail chest
 - 3. Open wounds
 - 4. Other evidence of trauma
 - (ii) Abnormal retractions
 - (iii) Impairment of respiratory movement
 - (b) Palpate
 - (i) Any tenderness
 - (ii) Assessment of observed abnormalities
 - (iii) Further assessment of respiratory expansion
 - (c) Percuss in symmetrical locations noting
 - (d) Auscultate breath sounds
 - (i) Normal
 - 1. Vesicular
 - 2. Bronchovesicular
 - 3. Bronchial
 - 4. Tracheal
 - (ii) Added sounds (adventitious lung sounds)

1. Discontinuous sounds (crackles)
 - a. Fine crackles
 - b. Course crackles
 2. Continuous sounds
 - a. Wheezes
 - b. Rhonchi
 - (iii) Diminished or absent
 1. Effusion
 2. Consolidation
- d) Cardiovascular system
- i) Techniques of examination
 - (1) Arterial pulse
 - (a) Heart rate
 - (b) Rhythm
 - (c) Amplitude
 - (d) Abnormal findings
 - (2) Blood pressure
 - (3) Jugular venous pressure and pulsation
 - (a) Abnormal findings
 - (4) Heart
 - (a) Inspection and palpation of the chest
 - (b) Auscultation-Listen for the heart tones
 - (i) Locate the point of maximum impulse (PMI) and assess apical pulse
 - (ii) Listen for distant or muffled heart tones
- e) Abdomen
- i) Techniques of examination
 - (1) General approach
 - (a) Place the patient in a supine position
 - (b) Before palpation ask the patient to point out any areas of pain - examine these areas last
 - (c) Approach slowly and avoid quick, unexpected movements
 - (d) Distract the patient as needed with conversation
 - (e) Proceed in an orderly manner
 - (i) Inspection
 - (ii) Palpation
 - (2) Inspection of the abdomen, including the flanks, noting
 - (a) Skin
 - (i) Scars
 - (ii) Rashes and lesions
 - (iii) Discoloration
 - (iv) Ascites
 - (b) The contour of the abdomen
 - (i) Bulges
 1. Flat
 2. Rounded
 3. Protuberant
 4. Scaphoid
 5. Bulges at the flanks
 6. Hernias
 - (ii) Symmetry
 - (c) Pulsations

- (d) Ascites
 - (3) Palpation
 - (a) Muscle guarding
 - (b) Rigidity
 - (c) Large masses
 - (d) Tenderness
- f) Female genitalia
 - i) Techniques of examination
 - (1) General approach
 - (a) This may be awkward or uncomfortable for the patient and the provider
 - (b) Male examiners are customarily attended by female assistants
 - (c) Female examiners may choose to work alone
 - (2) Examination
 - (a) Inspect the external genitalia
 - (b) Note any
 - (i) Inflammation
 - (ii) Discharge and bleeding
 - (iii) Swelling
 - ii) Abnormal findings
- g) Male genitalia
 - i) Techniques of examination
 - (1) General approach
 - (a) This may be awkward or uncomfortable for the patient and the provider
 - (b) Female examiners are customarily attended by male assistants
 - (c) Male examiners may choose to work alone
 - (2) Examination
 - (a) Inspect the external genitalia
 - (b) Note any
 - (i) Inflammation
 - (ii) Discharge and bleeding
 - (iii) Swelling
 - (iv) Hematomas
 - ii) Abnormal findings
- h) Extremities
 - i) Techniques of examination
 - (1) General approach
 - (a) Direct your attention to function as well as structure
 - (b) Assess general appearance, bodily proportions and ease of movement
 - (c) Note particularly
 - (i) Limitation in the range of motion
 - (ii) Unusual Increase in the mobility of a joint
 - (d) In general note
 - (i) Signs of inflammation
 - 1. Swelling
 - 2. Tenderness
 - 3. Increased heat
 - 4. Redness
 - 5. Decreased function
 - (ii) Crepitus
 - (iii) Deformities
 - (iv) Muscular strength
 - (v) Symmetry

- (vi) Atrophy
 - (vii) Pain
 - (viii) Tenderness
 - (ix) Peripheral pulses
 - (x) Motor function
 - (xi) Sensory function
- i) Peripheral vascular system
- i) Techniques of examination
 - (1) The arms
 - (a) Inspection from fingertips to shoulders noting
 - (i) Size
 - (ii) Symmetry
 - (iii) Swelling
 - (iv) Color of the skin and nail beds
 - (v) Texture of the skin
 - (b) Palpation
 - (i) If you suspect arterial insufficiency, feel for the brachial pulse
 - (ii) Compare amplitude of pulses
 - (2) Legs
 - (a) Patient should be lying down
 - (b) Successful examination cannot be completed with socks or stockings on
 - (c) Inspect from the groin and buttocks to the feet
 - (i) Size
 - (ii) Symmetry
 - (iii) Swelling
 - (iv) Rashes
 - (v) Scars
 - (vi) Ulcers
 - (vii) Color and texture of the skin
 - (d) Palpate the pulses in order to assess arterial circulation
 - (i) Femoral pulse
 - (ii) Popliteal pulse
 - (iii) Dorsalis pedis pulse
 - (iv) Posterior tibial pulse
 - (v) Note the temperature of the feet and legs
 - (vi) Look for edema
 - (vii) Check for pitting edema
 - 1. Press firmly but gently with your thumb for at least 5 seconds
 - a. Over the dorsum of each foot
 - b. Behind each medial malleolus
 - c. Over the shins
 - (viii) Assess and compare amplitude in all extremities
 - ii) Abnormal findings
- j) Spine
 - i) Techniques of examination
 - (1) Inspection
 - (a) Evidence of trauma
 - (i) Obvious deformity
 - (ii) Ecchymosis
 - (2) Palpation
 - (a) Palpate the spinous process with your thumb

- (i) Identify tenderness
 - (b) Palpate in the area of the costovertebral angle
 - (i) Identify tenderness
 - ii) Abnormal findings
- k) Nervous system
 - i) Techniques of examination
 - (1) General approach
 - (a) Are right and left-sided findings symmetrical
 - (b) Is this a peripheral or central nervous system problem
 - (c) Detail of an appropriate neurological exam varies greatly
 - (d) Components of the neurological exam may be completed during other assessments
 - (e) It may be best to organize your findings into three categories
 - (i) Mental status and speech
 - (ii) Motor system
 - (iii) Sensory system
 - (2) The motor system
 - (a) Body position
 - (i) Observe the position during movement and at rest
 - (b) Involuntary movements
 - (i) Watch for involuntary movements
 - (ii) Note
 - 1. Quality
 - 2. Rate
 - 3. Rhythm
 - 4. Amplitude
 - (iii) Note relation to
 - 1. Posture
 - 2. Activity
 - 3. Fatigue
 - 4. Emotion
 - (c) Muscle tone
 - (i) Feel the resistance to passive stretch
 - (d) Muscle strength
 - (i) Ask the patient to move actively against your resistance
 - 1. No muscular contraction detected
 - 2. A barely detectable flicker or trace of contraction
 - 3. Active movement of the body part with gravity eliminated
 - 4. Active movement against gravity
 - 5. Active movement against gravity and some resistance
 - 6. Active movement against full resistance without evident fatigue - this is normal muscle tone
 - (ii) Test flexion
 - (iii) Test extension
 - (iv) Test the grip
 - (v) Test finger abduction
 - (vi) Test dorsiflexion
 - (vii) Test plantar flexion
 - (e) Coordination
 - (i) Rapid alternating movements
 - (3) Sensory system
 - (a) General approach

- (i) Compare symmetrical areas on the two sides of the body
 - (ii) When testing pain, temperature, and touch, compare distal and proximal areas
 - (b) Pain
 - (c) Light touch
- 5) Physical examination of infants and children
 - a) Approach to the patient
 - b) Techniques of examination
- 6) Recording examination findings

UNIT TERMINAL OBJECTIVE

- 3-3 At the completion of this unit, the EMT-Enhanced student will be able to integrate the principles of history taking and techniques of physical exam to perform patient assessment on an emergency patient.

COGNITIVE OBJECTIVES

At the completion of this unit, the EMT-Enhanced student will be able to:

- 3-3.1 Recognize hazards/ potential hazards. (C-1)
- 3-3.2 Describe common hazards found at the scene of a trauma and a medical patient. (C-1)
- 3-3.3 Determine hazards found at the scene of a medical or trauma patient. (C-2)
- 3-3.4 Differentiate safe from unsafe scenes. (C-3)
- 3-3.5 Describe methods to making an unsafe scene safe. (C-1)
- 3-3.6 Discuss common mechanisms of injury/ nature of illness. (C-1)
- 3-3.7 Recognize the importance of determining the mechanism of injury. (C-2)
- 3-3.8 Discuss the reason for identifying the total number of patients at the scene. (C-1)
- 3-3.9 Organize the management of a scene following size-up. (C-3)
- 3-3.10 Explain the reasons for identifying the need for additional help or assistance. (C-1)
- 3-3.11 Summarize the reasons for forming a general impression of the patient. (C-1)
- 3-3.12 Discuss methods of assessing mental status. (C-1)
- 3-3.13 Categorize levels of consciousness. (C-3)
- 3-3.14 Discuss methods of assessing the airway. (C-1)
- 3-3.15 Describe why the cervical spine is immobilized during the assessment of the trauma patient. (C-1)
- 3-3.16 Analyze a scene to determine if spinal precautions are required. (C-3)
- 3-3.17 Describe methods used for assessing if a patient is breathing. (C-1)
- 3-3.18 Differentiate between a patient with adequate and inadequate minute ventilation. (C-3)
- 3-3.19 Discuss the need for assessing the patient for external bleeding. (C-1)
- 3-3.20 Describe normal and abnormal findings when assessing skin color. (C-1)
- 3-3.21 Describe normal and abnormal findings when assessing skin temperature. (C-1)
- 3-3.22 Describe normal and abnormal findings when assessing skin condition. (C-1)
- 3-3.23 Explain the reason for prioritizing a patient for care and transport. (C-1)
- 3-3.24 Identify patients who require expeditious transport. (C-3)
- 3-3.25 Describe orthostatic vital signs and evaluate their usefulness in assessing a patient in shock. (C-1)
- 3-3.26 Apply the techniques of physical examination to the medical patient. (C-1)
- 3-3.27 Differentiate between the assessment that is performed for a patient who has an altered mental status and other medical patients. (C-3)
- 3-3.28 Discuss the reasons for reconsidering the mechanism of injury. (C-1)
- 3-3.29 State the reasons for performing a rapid trauma assessment. (C-1)
- 3-3.30 Recite examples and explain why patients should receive a rapid trauma assessment. (C-1)
- 3-3.31 Apply the techniques of physical examination to the trauma patient. (C-1)
- 3-3.32 Describe the areas included in the rapid trauma assessment and discuss what should be evaluated. (C-1)
- 3-3.33 Differentiate cases when the rapid assessment may be altered in order to provide patient care. (C-3)
- 3-3.34 Discuss the reason for performing a focused history and physical exam. (C-1)
- 3-3.35 Describe when and why a detailed physical examination is necessary. (C-1)
- 3-3.36 Discuss the components of the detailed physical exam in relation to the techniques of examination. (C-1)
- 3-3.37 State the areas of the body that are evaluated during the detailed physical exam. (C-1)
- 3-3.38 Explain what additional care should be provided while performing the detailed physical exam. (C-1)
- 3-3.39 Distinguish between the detailed physical exam that is performed on a trauma patient and that of the medical patient. (C-3)
- 3-3.40 Differentiate between patients requiring a detailed physical exam from those who do not. (C-3)
- 3-3.41 Discuss the reasons for repeating the initial assessment as part of the on-going assessment. (C-1)
- 3-3.42 Describe the components of the on-going assessment. (C-1)
- 3-3.43 Describe the trending of assessment components. (C-1)

3-3.44 Discuss medical identification devices/ systems. (C-1)

AFFECTIVE OBJECTIVES

At the completion of this unit, the EMT-Enhanced student will be able to:

- 3-3.45 Explain the rationale for crew members to evaluate scene safety prior to entering. (A-2)
- 3-3.46 Serve as a model for others explaining how patient situations affect your evaluation of mechanism of injury or illness. (A-3)
- 3-3.47 Explain the importance of forming a general impression of the patient. (A-1)
- 3-3.48 Explain the value of performing an initial assessment. (A-2)
- 3-3.49 Demonstrate a caring attitude when performing an initial assessment. (A-3)
- 3-3.50 Attend to the feelings that patients with medical conditions might be experiencing. (A-1)
- 3-3.51 Value the need for maintaining a professional caring attitude when performing a focused history and physical examination. (A-3)
- 3-3.52 Explain the rationale for the feelings that these patients might be experiencing. (A-3)
- 3-3.53 Demonstrate a caring attitude when performing a detailed physical examination. (A-3)
- 3-3.54 Explain the value of performing an on-going assessment. (A-2)
- 3-3.55 Recognize and respect the feelings that patients might experience during assessment. (A-1)
- 3-3.56 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 EMT-Enhanced student will be able to:

- 3-3.57 Demonstrate the techniques for assessing mental status. (P-2)
- 3-3.58 Demonstrate the techniques for assessing the airway. (P-2)
- 3-3.59 Demonstrate the techniques for determining if the patient is breathing. (P-2)
- 3-3.60 Demonstrate the techniques for determining if the patient has a pulse. (P-2)
- 3-3.61 Demonstrate the techniques for determining the patient for external bleeding. (P-2)
- 3-3.62 Demonstrate the techniques for determining the patient's skin color, temperature, and condition. (P-2)
- 3-3.63 Using the techniques of examination, demonstrate the assessment of a medical patient. (P-2)
- 3-3.64 Demonstrate the techniques for assessing a patient who is responsive with no known history. (P-2)
- 3-3.65 Demonstrate the techniques for assessing a patient who has an altered mental status. (P-2)
- 3-3.66 Perform a rapid medical assessment. (P-2)
- 3-3.67 Perform a focused history and physical exam of the medical patient. (P-2)
- 3-3.68 Using the techniques of physical examination, demonstrate the assessment of a trauma patient. (P-2)
- 3-3.69 Demonstrate the rapid trauma assessment used to assess a patient based on mechanism of injury. (P-2)
- 3-3.70 Perform a focused history and physical exam on a non-critically injured patient. (P-2)
- 3-3.71 Perform a focused history and physical exam on a patient with life-threatening injuries. (P-2)
- 3-3.72 Perform a detailed physical examination. (P-2)
- 3-3.73 Demonstrate the skills involved in performing the on-going assessment. (P-2)

DECLARATIVE

- 1) Scene size-up/ assessment
 - a) Body substance isolation review
 - i) Eye protection if necessary
 - ii) Gloves if necessary
 - iii) Gown if necessary
 - iv) Mask if necessary
 - b) Scene safety
 - i) Definition - an assessment to assure the well-being of the EMT-Enhanced
 - ii) Personal protection - is it safe to approach the patient?
 - (1) Crash/ rescue scenes
 - (2) Toxic substances - low oxygen areas
 - (3) Crime scenes - potential for violence
 - (4) Unstable surfaces - slope, ice, water
 - iii) Protection of the patient - environmental considerations
 - iv) Protection of bystanders - if necessary, help the bystander avoid becoming a patient
 - v) Do not enter unsafe scenes
 - vi) Scenes may be dangerous even if they appear to be safe
 - c) Definition - an assessment of the scene and surroundings that will provide valuable information to the EMT-Enhanced
 - d) Mechanism of injury/ nature of illness
 - i) Medical
 - (1) Nature of illness - determine from the patient, family, or bystanders why EMS was activated
 - (2) Determine the total number of patients
 - (3) If there are more patients than the responding unit can effectively handle, initiate a mass casualty plan
 - (a) EMT-Enhanced is less likely to call for help if involved in patient care
 - (b) Prior to contact with patients, obtain additional help: law enforcement, fire, rescue, ALS, utilities
 - (c) Begin triage
 - ii) Trauma
 - (1) Mechanism of injury
 - (a) determine from the patient, family, or bystanders and inspection of the scene
 - (b) Immobilize the cervical spine
 - (2) Determine the total number of patients
 - (3) If there are more patients than the responding unit can effectively handle, initiate a mass casualty plan
 - (a) EMT-Enhanced is less likely to call for help if involved in patient care
 - (b) Prior to contact with patients, obtain additional help: law enforcement, fire, rescue, ALS, utilities
 - (c) Begin triage
 - (d) If the responding crew can manage the situation, consider spinal precautions and continue care
- 2) Initial assessment
 - a) General impression of the patient
 - i) Formed to determine priority of care and is based on the EMT-Enhanced's immediate assessment of the environment and the patient's chief complaint
 - ii) Determine if ill, i.e., medical or injured (trauma)

- (1) If injured, identify mechanism of injury
 - (2) If ill, identify nature of illness
 - b) Assess the patient and determine if the patient has a life-threatening condition
 - i) If a life threatening condition is found, treat immediately
 - ii) Assess nature of illness or mechanism of injury
 - c) Assess patient's mental status (maintain spinal immobilization if needed)
 - i) Levels of mental status (AVPU)
 - (1) Alert
 - (2) Responds to verbal stimuli
 - (3) Responds to painful stimuli
 - (4) Unresponsive - no gag or cough
 - d) Assess the patient's airway status
 - i) Patent
 - ii) Obstructed
 - (1) Suction
 - (2) Position
 - (3) Airway adjuncts
 - (4) Invasive techniques
 - (a) ET intubation
 - (b) Multi-lumen airways
 - e) Assess the patient's breathing
 - i) Adequate
 - ii) Inadequate
 - f) Assess the patient's circulation
 - i) Pulse
 - ii) If major bleeding is present - if bleeding is present, control bleeding
 - iii) Perfusion by evaluating skin color, temperature, capillary refill, and condition
 - g) Identify priority patient
 - i) Consider
 - (1) Poor general impression
 - (2) Altered mental status
 - (3) Responsive, not following commands
 - (4) Difficulty breathing
 - (5) Inadequate minute volume
 - (6) Shock (hypoperfusion)
 - (7) Complicated childbirth
 - (8) Chest pain with suspected cardiac origin
 - (9) Uncontrolled bleeding
 - (10) Severe pain anywhere
 - (11) Multiple injuries
 - ii) Expedite transport of the patient
 - h) Proceed to the appropriate focused history and physical examination
- 3) Focused history and physical exam - medical patient
 - a) Responsive medical patient
 - i) Assess patient history
 - (1) Chief complaint
 - (2) History of present illness
 - (a) Attributes of a symptom
 - (i) Location
 - 1. Where is it
 - 2. Does it radiate

- (ii) Quality
 - 1. What is it like
 - (iii) Quantity or severity
 - 1. How bad is it
 - (iv) Timing
 - 1. When did it start
 - 2. How long does it last
 - (v) Setting in which it occurs
 - 1. Emotional response
 - 2. Environmental factors
 - (vi) Factors that make it better or worse
 - (vii) Associated manifestations
 - (3) Past medical history
 - (4) Current health status
 - ii) Perform physical examination
 - (1) Utilize the techniques of physical examination to
 - (a) Assess the head as necessary
 - (b) Assess the neck as necessary
 - (c) Assess the chest as necessary
 - (d) Assess the abdomen as necessary
 - (e) Assess the pelvis as necessary
 - (f) Assess the extremities as necessary
 - (g) Assess the posterior body as necessary
 - iii) Assess baseline vital signs
 - (1) Consider orthostatic vital signs
 - iv) Provide emergency medical care based on signs and symptoms in consultation with medical direction
 - b) Unresponsive medical patient
 - i) Perform rapid assessment
 - ii) Utilize the techniques of patient assessment
 - (1) Position patient to protect airway
 - (2) Assess the head
 - (3) Assess the neck
 - (4) Assess the chest
 - (5) Assess the abdomen
 - (6) Assess the pelvis
 - (7) Assess the extremities
 - (8) Assess the posterior aspect of the body
 - iii) Assess baseline vital signs
 - iv) Obtain patient history from bystander, family, friends, and/ or medical identification devices/ services
 - (1) Chief complaint
 - (2) History of present illness
 - (3) Past medical history
 - (4) Current health status
- 4) Focused history and physical exam - trauma patient
 - a) Re-consider mechanism of injury
 - i) Helps to identify priority patients
 - ii) Helps to guide the assessment
 - iii) Significant mechanism of injury
 - (1) Ejection from vehicle

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- (2) Death in same passenger compartment
 - (3) Falls > 20 feet
 - (4) Roll-over of vehicle
 - (5) High speed vehicle crash
 - (6) Vehicle-pedestrian crash
 - (7) Motorcycle crash
 - (8) Unresponsive or altered mental status
 - (9) Penetrations of the head, chest, or abdomen
 - (10) Hidden injuries
 - (a) Seat belts
 - (i) If buckled, may have produced injuries
 - (ii) If patient had seat belt on, it does not mean they do not have injuries
 - (b) Airbags
 - (i) May not be effective without seat belt
 - (ii) Patient can hit steering wheel after deflation
 - (iii) Lift the deployed airbag and look at the steering wheel for deformation
 - 1. Lift and look under the bag after the patient has been removed
 - 2. Any visible deformation of the steering wheel should be regarded as an indicator of potentially serious internal injury, and appropriate action should be taken
 - 3. Child safety seats
 - a. Injury patterns with airbags
 - b. Proper use in vehicles with airbags
 - iv) Infant and child considerations
 - (1) Falls >10 feet
 - (2) Bicycle collision
 - (3) Vehicle in medium speed collision
 - b) Perform rapid trauma physical examination on patients with significant mechanism of injury to determine life-threatening injuries
 - i) In the responsive patient, symptoms should be sought before and during the trauma assessment
 - ii) Continue spinal stabilization
 - iii) Reconsider transport decision
 - iv) Assess mental status
 - v) As you inspect and palpate, look and feel for injuries or signs of injury
 - vi) Examination
 - (1) Assess the head, inspect and palpate for injuries or signs of injury
 - (2) Assess the neck, inspect and palpate for injuries or signs of injury
 - (3) Apply cervical spinal immobilization collar (CSIC)
 - (4) Assess the chest, inspect and palpate for injuries or signs of injury
 - (5) Assess the abdomen, inspect and palpate for injuries or signs of injury
 - (6) Assess the pelvis, inspect and palpate for injuries or signs of injury
 - (7) Assess all four extremities, inspect and palpate for injuries or signs of injury
 - (8) Roll patient with spinal precautions and assess posterior body, inspect and palpate for injuries or signs of injury
 - (9) Look for medical identification devices
 - (10) Assess baseline vital signs
 - (11) Assess patient history
 - (a) Chief complaint

- (b) History of present illness
 - (c) Past medical history
 - (d) Current health status
 - c) For patients with no significant mechanism of injury, e.g., cut finger
 - i) Perform focused history and physical exam of injuries based on the techniques of examination
 - ii) The focused assessment is performed on the specific injury site
 - iii) Assess baseline vital signs
 - iv) Assess patient history
 - (1) Chief complaint
 - (2) History of present illness
 - (3) Past medical history
 - (4) Current health status
- 5) Detailed physical exam
 - a) Patient and injury specific, e.g., cut finger would not require the detailed physical exam
 - b) Perform a detailed physical examination on the patient to gather additional information
 - c) General approach
 - i) Assess patient history
 - (1) Chief complaint
 - (2) History of present illness
 - (3) Past medical history
 - (4) Current health status
 - ii) Examine the patient systematically
 - iii) Place special emphasis on areas suggested by the present illness and chief complaint
 - iv) Keep in mind that most patients view a physical exam with apprehension and anxiety - they feel vulnerable and exposed
 - d) Overview of the detailed physical exam
 - i) Mental status
 - (1) Appearance and behavior
 - (2) Posture and motor behavior
 - (3) Speech and language
 - (4) Mood
 - (5) Thought and perceptions
 - (6) Thought content
 - (7) Perceptions
 - (8) Insight and judgement
 - (9) Memory and attention
 - (10) Remote memory (i.e., birthdays)
 - (11) Recent memory (i.e., events of the day)
 - (12) New learning ability
 - ii) General survey
 - (1) Level of consciousness
 - (2) Signs of distress
 - (3) Apparent state of health
 - (4) Skin color and obvious lesions
 - (5) Height and build
 - (6) Sexual development
 - (7) Weight
 - (8) Posture, gait, and motor activity
 - (9) Dress, grooming and personal hygiene
 - (10) Odors of breath or body

- (11) Facial expression
 - iii) Skin
 - iv) Head
 - v) Eyes
 - vi) Ears
 - vii) Nose and sinuses
 - viii) Mouth and pharynx
 - ix) Neck
 - x) Thorax and lungs
 - xi) Cardiovascular system
 - xii) Abdomen
 - xiii) External genitalia
 - xiv) Peripheral vascular system
 - xv) Musculoskeletal system
 - xvi) Nervous system
 - e) Recording examination findings
 - f) Assess baseline vital signs
- 6) On-going assessment
- a) Repeat initial assessment
 - i) For a stable patient, repeat and record every 15 minutes
 - ii) For an unstable patient, repeat and record at a minimum every 5 minutes
 - iii) Reassess mental status
 - iv) Reassess airway
 - v) Monitor breathing for rate and quality
 - vi) Reassess circulation
 - vii) Re-establish patient priorities
 - b) Reassess and record vital signs
 - c) Repeat focused assessment regarding patient complaint or injuries
 - d) Assess interventions
 - i) Assess response to management
 - ii) Maintain or modify management plan

UNIT TERMINAL OBJECTIVE

- 3-4 At the completion of this unit, the EMT-Enhanced student will be able to apply a process of decision making to use the assessment findings to help form a field impression.

COGNITIVE OBJECTIVES

At the completion of this unit, the EMT-Enhanced student will be able to:

- 3-4.1 Compare the factors influencing medical care in the out-of-hospital environment to other medical settings. (C-2)
- 3-4.2 Differentiate between critical life-threatening, potentially life-threatening, and non life-threatening patient presentations. (C-3)
- 3-4.3 Evaluate the benefits and shortfalls of protocols, standing orders, and patient care algorithms. (C-3)
- 3-4.4 Define the components, stages, and sequences of the critical thinking process for EMT-Enhanced. (C-1)
- 3-4.5 Apply the fundamental elements of critical thinking for EMT-Enhanced. (C-2)
- 3-4.6 Describe the effects of the “fight or flight” response and the positive and negative effects on a EMT-Enhanced’s decision making. (C-1)
- 3-4.7 Develop strategies for effective thinking under pressure. (C-3)
- 3-4.8 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 completion of this unit, the EMT-Enhanced student will be able to:

- 3-4.9 Defend the position that clinical decision making is the cornerstone of effective EMT-Enhanced practice. (A-3)
- 3-4.10 Practice facilitating behaviors when thinking under pressure. (A-1)

PSYCHOMOTOR OBJECTIVES

None identified for this unit.

DECLARATIVE

- I. Introduction and key concepts
 - A. The cornerstones of effective EMT-Enhanced practice
 - 1. Gathering, evaluating, and synthesizing information
 - 2. Developing and implementing appropriate patient management plans
 - 3. Applying judgment and exercising independent decision making
 - 4. Thinking and working effectively under pressure
 - B. The out-of-hospital environment
 - 1. Unlike other environments where medical care is traditionally rendered
 - 2. Unique, heavily influenced by factors that do not exist in other medical settings
 - C. The spectrum of patient care in the out-of-hospital setting
 - 1. Obvious, critical life-threats
 - a. Major, multi-system trauma
 - b. Devastating single system trauma
 - c. End-stage disease presentations
 - d. Acute presentations of chronic conditions
 - 2. Potential life-threats
 - a. Serious, multi-system trauma
 - b. Multiple disease etiologies
 - 3. Non life-threatening presentations
 - D. Providing guidance and authority for EMT-Enhanced action and treatments
 - 1. Protocols, standing orders, and patient care algorithms
 - a. Can clearly define and outline performance parameters
 - b. Promote a standardized approach
 - 2. Limitations of protocols, standing orders, and patient care algorithms
 - a. Only address “classic” patient presentations
 - (1) Non-specific patient complaints do not follow model
 - (2) Limited clarity of presenting patient problems
 - b. Do not address multiple disease etiologies
 - c. Do not address multiple treatment modalities
 - d. Promote linear thinking, “cookbook medicine”
- II. Components, stages, and sequence of critical thinking process for EMT-Enhanced
 - A. Concept formation
 - 1. MOI/ scene assessment
 - 2. Initial assessment and physical examination
 - 3. Chief complaint
 - 4. Patient history
 - 5. Patient affect
 - 6. Technical tools
 - a. Pulse oximetry
 - b. Glucose monitoring
 - c. Et cetera
 - B. Data interpretation
 - 1. Data gathered
 - 2. EMT-Enhanced knowledge of anatomy and physiology and pathophysiology
 - 3. EMT-Enhanced attitude
 - 4. Previous experience base of the EMT-Enhanced
 - C. Application of principle
 - 1. Field impression/ working diagnosis
 - 2. Protocols/ standing orders

- 3. Treatment/ intervention
 - D. Evaluation
 - 1. Reassessment of patient
 - 2. Reflection in action
 - 3. Revision of impression
 - 4. Protocol/ standing orders
 - 5. Revision of treatment/ intervention
 - E. Reflection on action
 - 1. Run critique
 - 2. Addition to/ modification of experience base of the EMT-Enhanced
- III. Fundamental elements of critical thinking for EMT-Enhanced
 - A. Adequate fund of knowledge
 - B. Ability to focus on specific and multiple elements of data
 - C. Ability to gather and organize data and form concepts
 - D. Ability to identify and deal with medical ambiguity
 - E. Ability to differentiate between relevant and irrelevant data
 - F. Ability to analyze and compare similar situations
 - G. Ability to recall contrary situations
 - H. Ability to articulate assessment based decisions and construct arguments
- IV. Considerations with field application of assessment-based patient management
 - A. The patient acuity spectrum
 - 1. EMS is activated for countless reasons
 - 2. Few out-of-hospital calls constitute true life-threatening emergencies
 - a. Minor medical and traumatic events require little critical thinking and are relatively easy decisions
 - b. Patients with obvious life-threats pose limited critical thinking challenges
 - c. Patients who fall on the acuity spectrum between minor and life-threatening pose the greatest critical thinking challenge
 - B. Thinking under pressure
 - 1. Hormonal influence, i.e., “fight or flight” response impacts the EMT-Enhanced’s decision making both positively and negatively
 - a. Enhanced visual and auditory acuity
 - b. Improved reflexes and muscle strength
 - c. Impaired critical thinking skills
 - d. Diminished concentration and assessment ability
 - 2. Mental conditioning is the key to effective performance under pressure
 - a. Skills learned at a pseudo-instinctive performance level
 - b. Automatic response for technical treatment requirements
 - C. Mental checklist for thinking under pressure
 - 1. Stop and think
 - 2. Scan the situation
 - 3. Decide and act
 - 4. Maintain clear, concise control
 - 5. Regularly and continually reevaluate the patient
 - D. Facilitating behaviors
 - 1. Stay calm, don’t panic
 - 2. Assume and plan for the worst; err on the side of the patient
 - 3. Maintain a systematic assessment pattern
 - 4. Balance analysis, data processing, and decision making styles
 - a. Situation analysis style - reflective versus impulsive

- b. Data processing style - divergent versus convergent
- c. Decision making style - anticipatory versus reactive
- E. Situation awareness
 - 1. Reading the scene
 - 2. Reading the patient
- F. Putting it all together - "the six Rs"
 - 1. Read the patient
 - a. Observe the patient
 - (1) Level of responsiveness/ consciousness
 - (2) Skin color
 - (3) Position and location of patient - obvious deformity or asymmetry
 - b. Talk to the patient
 - (1) Determine the chief complaint
 - (2) New problem or worsening of preexisting condition
 - c. Touch the patient
 - (1) Skin temperature and moisture
 - (2) Pulse rate, strength, and regularity
 - d. Auscultate the patient
 - (1) Identify problems with the lower airway
 - (2) Identify problems with the upper airway
 - e. Status of ABC's - identifying life-threats
 - f. Complete and accurate set of vital signs
 - (1) Use as triage tool to estimate severity
 - (2) Can assist in identifying the majority of life-threatening conditions
 - (3) Influenced by patient age, underlying physical and medical conditions, and current medications
 - 2. Read the scene
 - a. General environmental conditions
 - b. Evaluate immediate surroundings
 - c. Mechanism of injury
 - 3. React
 - a. Address life-threats in the order they are found
 - b. Determine the most common and statistically probable cause that fits the patient's initial presentation
 - c. Consider the most serious condition that fits the patient's initial presentation
 - d. If a clear medical problem is elusive, treat based on presenting signs and symptoms
 - 4. Reevaluate
 - a. Focused and detailed assessment
 - b. Response to initial management/ interventions
 - c. Discovery of less obvious problems
 - 5. Revise management plan
 - 6. Review performance at run critique