

EMT-Paramedic

Study Guide

Knowledge Objectives
Clinical Operating Guidelines
06.01.08

This study guide encompasses all the knowledge objectives for the Austin/Travis County EMS System Clinical Operating Guidelines (COG). Every exam question will reference one or several knowledge objectives found in this document. This study guide follows the COG released June of 2008. In addition, some knowledge objectives covered here address basic EMT-P knowledge, as it is expected that the EMT-P will have a knowledge base appropriate for his or her certification level.

Review of this study guide will cover every point on the COG exam. More importantly, it is designed to prepare the provider to use the COG to provide patient care to the citizens of Austin/Travis County.

It is suggested that the provider first read the appropriate section of the COG then review the objectives.

As always if there are any questions please feel free to contact the OMD at www.atcmd/contact.htm or call the office at 978-0000.



Professional Practice

System Design

- Describe the term “EMS System”
- Identify who comprises the EMS System
- Identify what the System provides our ill or injured patients
- Identify who may provide care within the environment specified in the COGs
- Explain licensure or certification requirements for credentialed providers
- Describe how a non-TDSHS certified/licensed individual can provide care within the System
- Explain how 911 requests for care will be managed.
- Identify what level of care all First Response Organizations (FROs) will be able to provide.
- Identify what supplies all FRO’s must maintain according to the COG’s.
- Identify what part(s) of the System are capable of delivering ALS care.
- Explain the use of “non-prescriptive” medications not specifically included in the COG.
- Identify under what conditions the System Design may be modified to best meet the needs of the EMS system.

Medical Oversight of the System

- Identify the Medical Director for the Austin/Travis County EMS System
- Explain the process used by the Office of the Medical Director to implement change.
- Identify who must approve all medical care within the Austin/Travis County EMS System
- Explain the purpose of a Medical Directive
- Explain the dissemination process for a Medical Directive
- Describe the purpose of the Quality and Medical Oversight team.
- Identify the issues the Office of the Medical Director will address during Special Circumstances.
- Identify the organization that determines demobilization and how and when the System will return to normal activities.
- Describe the process for implementing research or trials.

System Credentialing

- Explain the difference between “credentialed” and “certified/licensed”
- Explain how a credentialed provider is able to provide care.
- Explain delegated authority
- Describe “credentialing”
- Identify the different levels of Credentialing
- Explain the difference between “credential” and “qualification”
- Explain what a provider must do after being initially credentialed to continue providing care at a designated level over time.

- Describe what happens for individual providers with special circumstances such as FEMLA, Military Deployment, OJI, etc.

Skills/Interventions Authorized by Credential Level and Qualification

- List the skills allowed for the EMT-P – this includes those allowed for ECA's through EMT-I's as well

Credentialing Requirements

- Identify the initial credentialing requirements for the EMT-P
- Identify the maintenance requirements to remain credentialed as an EMT-P

System Identification Badges

- Identify who requires proper identification of System Providers
- Explain the reasons for proper identification
- Identify which department “owns” the credentialing badges
- Explain the circumstances under which the badge is valid
- Describe what happens to a badge if credentials are revoked or the provider leaves an organization
- Describe how the badges will be worn
- Identify the badge color appropriate for the EMT-P
- Explain what level you will operate as should you be credentialed but without your badge
- Identify who on scene is responsible for assuring badge compliance
- Explain what would happen should a Provider within the A/TCEMS System perform a procedure without being credentialed to do so
- Describe the actions the Provider must take should he or she perform a procedure without being credentialed to do so

Suspension or Revocation of Credentials

- Identify the *Five Deadly Sins*
- Explain what happens within the System should the provider have a lapse, loss, or suspension of TDSHS Certification, Licensure or Texas Nursing Board License
- Describe what happens within the System should the provider have a lapse, or loss of required national standards certifications required for his or her credentialing level
- Explain what a provider must do if he or she is no longer affiliated with the Registered System Provider Organization
- Explain what happens to a provider's credentials if he or she goes 30 days without affiliation with a System Provider Organization
- Describe the process for a provider who has had his or her credentials revoked but then associates with a System Provider Organization
- Explain what a provider must do should he or she be arrested for an activity that could be considered a threat to public health
- Describe what the provider must do if he or she has action taken against them by TDSHS or the Texas Nursing Board
- Identify who will be notified of a problem with a provider's credentials

Logistics of Patient Care On-Scene

- Identify the emphasis for on-scene care
- Describe the seniority of credentialed providers on-scene
- Identify what should happen should there be an unresolved on-scene conflict

Cancellation or Alteration of a Response

- Identify who may modify or cancel the response of another system provider
- Describe what you may do should you be cancelled but decide to continue on to the scene

Transfer of Care to a Provider of Lesser Credentialing

- Identify who on scene has the ultimate decision of whether or not to initiate transport
- Identify when it is appropriate to leave patients on-scene
- Describe incidences where it may be appropriate to transfer care from to a provider at a more basic credentialing level
- Identify what must happen prior to transport of the critically ill patient
- Explain what must happen should a patient requiring immediate advanced stabilization still be on scene
- Identify who makes transport decisions in mass and multi-casualty incidents

First Responder Accompanying Ambulance Transport of Critically Injured/III Patients

- Describe what happens if an EMT-P is requested to accompany transport providers during transport of critically ill/injured patients, particularly if first responders are not available

On-Line Medical Consultation (OLMC)

- Describe reasons you may wish to contact OLMC
- Identify where OLMC should be requested from
- Explain what should be done with orders received from OLMC or the patient's personal physician

Interacting with On-Scene Healthcare Professionals

- Explain the difference between a "Patient's Personal Physician" and an "Intervener Physician"
- Describe the general guidelines for use of a physician on-scene
- Describe the responsibilities of the patient's personal physician on-scene
- Describe the provider's responsibilities when using the patient's personal physician
- Explain what will happen if there is a disagreement between the patient's personal physician and the System COGs
- Explain the options the OLMC has with an intervener physician on-scene
- Describe what happens should there be a disagreement between the intervener physician and OLMC
- Describe where and how the intervener physician must document

- Explain how the decision for the intervener physician to accompany the patient to the hospital will be determined
- Explain whether or not non-physician healthcare providers may give medical orders

Applicability of COG's

What is the Definition of a "Patient"?

- Explain why it is important to define a patient
- Define "patient"
- Explain what you will do if there are questions or doubts as to whether or not a person should be considered a patient
- Define "adult"
- Define "minor"
- Explain the meaning of "emancipated"
- Define "pediatric patient"

Patient Consent and Refusal

- Explain the universal goal for patient care
- Describe the best policy should providers and patients disagree about patient care decisions
- Identify who has the right to refuse care
- Describe "informed consent"
- What are the providers' responsibilities when it comes to informed consent?
- Define "implied consent"
- Explain when the provider may provide care under implied consent
- Describe "substituted consent"
- Explain the five principles providers must follow to meet our obligation for consent
- Identify what information the provider must give the patient should he or she refuse further evaluation/treatment

Legal Competency and Present Mental Capacity to Consent or Refuse Evaluation or Treatment

- Explain "mental competency"
- Explain "present mental competency"
- Describe the things a provider must evaluate to determine if a patient's disposition is safe and appropriate given the circumstances
- Explain what may happen should a patient show evidence of suicidal ideations, suicide attempts, or indicate in some way that he or she may be a danger to themselves or others – but are also refusing care
- Describe what a thorough test of the patient's mental status actually tests (i.e. "orientation, etc...")
- Describe how to test for Level of Consciousness
- Explain how to determine if a patient is awake, alert, and oriented
- Explain how to test for memory, or registration

- Describe how to test attention and calculation
- Describe how to test for recall
- Explain what the provider must do if the patient does not have the legal competency and present mental capacity to consent, and the principles of implied consent do not apply
- Identify who must be contacted prior to any patient being transported against his or her will
- Describe the documentation required for a patient refusal

Consent to Evaluation/Treatment for a Minor and Refusal of Evaluation/Treatment for a Minor

- Identify who may provide consent for a minor
- Describe under what circumstances a minor can provide consent or refuse treatment
- Describe under what circumstances a provider may be denied access to minor children by a guardian
- Identify whether parents or guardians can refuse life-saving therapy for a child based on religious or other grounds

Restraint/Transport Against Patient Will

- Explain the steps the provider will take prior to transporting a patient against his or her will
- Explain what must be determined prior to restraining a patient with or without law enforcement assistance
- Describe the documentation related to the physically restrained patient
- Explain whether or not it is appropriate to ever leave a patient alone while restrained
- Explain how often a patient should be monitored while restrained

Initiation and Termination of Cardiopulmonary Resuscitation (CPR)

Initiation of CPR

- Explain when it is not appropriate to initiate CPR
- Identify reasons an ALS provider may determine not to start CPR

Termination of Resuscitation Efforts Without OLMC

- Describe the circumstances when a provider may discontinue resuscitation efforts WITHOUT OLMC
- Describe what to do if the provider elects to not initiate resuscitative efforts or to terminate efforts without involvement of OLMC in terms of notifying incoming units.
- List reasons an ALS provider MUST contact OLMC when considering discontinuation of resuscitation efforts

Out of Hospital Advanced Directives Pertaining to Resuscitation

- Explain when an Out of Hospital Do Not Resuscitate (OOH DNR) should NOT be honored

- Describe what to do if there is a question whether or not to honor an OOH DNR or other advanced directive
- Explain what must happen when OLMC is involved in the decision to terminate resuscitative efforts

Important Points to Remember

- Explain when it may be appropriate to transport a patient to the hospital for pronouncement when the COG's indicate that it might not be needed
- Identify where you would document the non-honoring of a DNR
- Describe care that might be provided to a patient with a DNR
- Explain what will be done if there is doubt as to the validity of a DNR or the patient's wishes

Crime Scene Preservation Principles/Access to Patients in a Potential Crime Scene

- Explain the first general principle of crime scene management
- Identify who will be notified should law enforcement prevent entrance to a scene
- Identify how a weapon will be handled if it is necessary
- Describe documentation required for a crime scene
- Explain what you would tell a patient who wants to take a shower/bath prior to transport
- Explain how you would handle bindings on a patient
- Describe how you would handle containers of a substance that may have been ingested in a suicide attempt
- Identify what you will do with disposable items used on scene
- Explain how to manage covering a body on scene
- Identify who takes responsibility of the body once a pronouncement time is obtained
- Explain whether or not it is acceptable to share patient care information with appropriate law enforcement officers if the patient has been pronounced dead
- Describe how the responder will make entry and exit from a crime scene where no resuscitation is initiated
- Explain how to document items left on scene
- Explain what the responder will do if law enforcement is not on scene prior to transport of the patient
- Explain what must be done with any unsuccessful intravenous or pleural attempts
- Describe what information must be passed to the receiving facility if the patient has been placed on a sheet

Patient Care Reporting Requirements

Guiding Principles of Documentation for All Organizations Using Any Paper Form or Automated Charting

- Describe the minimum requirements for all patient care documentation by any credentialed provider in the System

Minimum Data Elements Required for First Responder Patient Care Report Documentation

- List the minimum data to be collected on all patient encounters within the system
- Describe how data will be collected and stored

Clinical Errors and Reporting

- Describe the purpose of a review of a clinical error
- Explain how the provider will report clinical errors
- Explain the responsibility of the FRO regarding the incident
- Identify who will review all clinical incidents

Clinical Review Process

- Describe the purpose of the clinical review process
- Explain what the A/TCEMS Quality and Medical Oversight Team hopes to use the process for
- Identify the primary focus of the clinical review process

System Impact

- Explain whether or not providers are expected to participate in the clinical review process

Philosophy

- Identify who initiates and administers the clinical review process
- Describe the goal behind the clinical review process
- Describe the general structure of the clinical review process

Purpose

- Describe the desired outcomes of the clinical review process
- Identify which department is responsible for resolving clinical conflicts

Confidentiality

- Identify who should be directly involved in clinical performance concerns or complaints
- Explain why discussion of events is strongly discouraged

Definitions

- Define “organization”
- Define “event”
- Define “event review”

- Define “incident”
- Define “near miss”
- Define “sentinel event”
- Explain the expanded description of “sentinel event” as explained by the OMD
- Define “non-sentinel event”

Process

- Explain when a review will take place
 - Explain when notification must take place for a:
 - Sentinel event
 - Non-sentinel event
 - Near-miss event

Core Principle – Provider Safety and Well Being

Introduction

- List some of the inherent risks to the EMS provider
- Describe the first step in minimizing provider risk
- List some examples of scenes requiring caution

Infection Control

Basic Protection Guidelines and Immunizations

- List the currently recommended immunizations
- Describe proper handwashing technique

Personal Protective Equipment (PPE)

- Explain whether or not PPE eliminates the possibility of infection
- Describe the purpose of PPE
- Describe when gloves will be worn
- Describe what type(s) of PPE are appropriate during airway management procedures or during any other situation where fluid splash contact with the provider’s face is a possibility
- Explain when a provider should use a gown
- List patient signs/symptoms that indicate the need for some level of respiratory protection
- Describe the proper use of the N95 mask

Sharps Hazards

- Identify the most common occupational blood exposure

Cleaning and Disinfection of Equipment and Work Areas

- Explain whether or not it is appropriate to wear PPE during cleaning
- Describe how you would properly clean and disinfect a surface

Exposure Follow-Up

- Describe the general guidelines after an exposure
- Explain whether or not exposures require immediate intervention
- Identify who you will report a suspected exposure to
- Identify who you can contact with questions or for consultation regarding post exposure actions
- Describe what the provider should do post needle stick, spray to the mucous membrane, or patient blood contacting non-intact skin

Violence Against Providers

- Explain our first obligation on any medical scene
- Explain whether or not it is expected for providers to place themselves in a situation that has a high likelihood of causing harm to the provider

Staging and Retreat

- Explain whether or not it is appropriate to stage and/or retreat from a scene
- Identify who should be a part of any dangerous scene management

Psychological Stress and Burnout

- Explain how excessive stress and/or inadequate coping strategies affect job performance
- List health problems related to chronic stress

**Core Principle – Airway, Breathing, and Circulation
(Perfusion & Resuscitation)**

Introduction

- Describe our initial priority (on a secure scene)
- Describe perfusion
- Identify what must be in place to have adequate perfusion

Core Principle - Airway

Introduction

- Identify the purpose of establishing an adequate airway
- Identify risks that occur DURING airway intervention
- Explain what needs to be done if attempts at advanced airway placement are difficult or prolonged
- Describe how to know whether a BLS airway may be more appropriate for the patient than an advanced airway
- Identify who is responsible for identifying when periods of no ventilation exist and make efforts to correct the situation

The TEAM Leader

- Identify when a team leader should be designated
- Explain how the team leader is identified
- Describe how the decision for team leader should be determined
- Explain whether a team leader can give orders outside their designated credential level
- Identify the data the team leader will obtain and provide to the other providers on scene
- Explain what a team leader is NOT

Airway Management Approach

- Explain the process a provider should go through to decide how best to manage an airway
- Describe the “least to most invasive” process when determining airway management procedures
- Describe what to do if the patient’s airway cannot be maintained
- Describe the common sense approach to facilitate difficulty airway management of the ET tube

Monitoring Appropriate Advanced Airway Assessment

- Identify documentation requirements for the advance airway attempt
- Describe confirmation of advanced airway placement
- Describe how the provider will stabilize the spine/restrict spinal motion restriction immediately post advanced airway insertion
- Describe how the patient with an advanced airway will be transported
- Explain when the provider may disconnect the BVM/Ambubag from the airway
- Identify when the tube should be (will be) reassessed
- Describe the use of ETCO₂ for tube placement

Tools/Tricks of the Trade – Airway Management

- Define/describe:
 - Suctioning Device
 - Oropharyngeal Airway (OPA)
 - Nasal Pharyngeal Airway (NPA)
 - Endotracheal Intubation
 - Beck Airway Airflow Monitor (Baam)
 - Flex Guide Endotracheal Tube Introducer (a.k.a. gum-elastic bougie)
 - Combitube
 - Laryngeal Mask Airway
 - Needle Cricothyrotomy
 - Surgical Cricothyrotomy
 - Cook-Melker Cuffed Emergency Cricothyrotomy Catheter Set
 - External Laryngeal Manipulation (ELM)
 - Cricoid Pressure
 - King LTS-D Airway Device

Core Principle - Breathing

Introduction

- Describe the initial assessment as it applies to respirations (the “quick picture”)
- Describe the items that the provider will use to monitor ongoing assessment of adequate oxygenation and ventilation

Oxygen and Ventilation – The Important Relationship

- Define “ventilation”
- Define “oxygenation”
- Identify considerations the provider will use to determine a patient’s need for supplemental oxygen
- Describe signs and symptoms related to hyperventilation syndrome
- Explain the treatment for hyperventilation syndrome
- List the primary treatment goals for patients suffering from inadequate oxygenation
- Define and describe the appropriate use for a:
 - Nasal canula
 - Non-rebreather
 - Bag-Valve-Mask (BVM)

Ventilation Rate and Depth

- Describe a common pitfall in ventilation
- Explain what happens to circulation when the provider is overly aggressive with ventilation
- List the appropriate ventilation rates for:
 - Birth to 4/5 days old
 - 4/5 days old – 8 years old
 - Greater than 8 years old
- Describe ventilation concerns associated with patients with obstructive airway diseases and evidence of bronchospasm (wheezing)

Ventilation in Head Injuries

- Describe problems associated with over and under-ventilating head injured patients
- Describe initial signs/symptoms of herniation syndrome
- Describe immediate treatment (including change in ventilatory rate) for the patient you suspect is herniating.

Pneumothorax

- Describe signs and symptoms of a pneumothorax

Open Pneumothorax

- Describe management of an open pneumothorax

Closed Pneumothorax

- Describe treatment for the closed, non-tension pneumothorax

Tension Pneumothorax

- Describe signs and symptoms (early and late) of the tension pneumothorax
- List the criteria used to determine treatment decisions for the tension pneumothorax
- Identify the treatment for the tension pneumothorax

Tools of the Trade – Breathing

- Describe:
 - Pulse oximetry
 - End-tidal carbon dioxide (ETCO₂) detectors
 - ETCO₂ Monitoring Capnography
 - Mechanical Ventilation Device
 - Nebulized Medications
 - Pleural Decompression
 - CPAP
 - Gastric Tube Insertion

Core Principle – Circulation

Introduction

- Explain why it is crucial to determine WHY the patient's circulation is impaired
- Describe:
 - Tachycardia
 - Bradycardia
 - Hypertension
 - Hypotension
 - Permissive hypotension
- Explain how hypoperfusion is used as Trauma Alert Criteria
- Explain how to determine bradycardia in a child
- Identify how to determine hypotension in a child

General Management of Hypoperfusion

- Describe how the provider should position the hypoperfused patient
- Explain how to address external hemorrhage in the hypoperfused patient
- Explain how hypothermia is related to hypoperfusion
- Explain how standard fluid resuscitation is different with TBI and CHF patients
- Describe when PASG would be used

Fluid Resuscitation

- Identify what type of fluid will be used for fluid resuscitation
- Explain the goal of fluid resuscitation for the hypoperfused patient
- Describe the goal of fluid resuscitation for the hypoperfused pediatric patient
- Explain how many ml of fluid it takes to replace one ml of fluid and why

- Identify the good “starting point” for fluid resuscitation in terms of amount of fluid
- Identify what type of IV catheter should be used for trauma patients
- Identify what IV access can be used for shocky/hypotensive patients where it is not possible to rapidly establish a peripheral line
- Explain how the provider can monitor the effectiveness of fluid resuscitation
- Explain how the provider can evaluate for fluid overload

Guidelines for Medication Administration

- Explain how medications should be administered
- Explain when IO access can be used instead of IV
- Identify what size IV catheter is preferred for drug administration
- Describe what size IV catheter will be used on a patient requiring high viscosity medications or patients with suspected CVA's
- Identify what size IV catheter should be used for fluid resuscitation
- Identify what size IV catheter should be used for fluid resuscitation in the pediatric patient

Circulatory Support During Arrest (Non-Traumatic)

- Describe proper ventilation to compression ratios (one and two person) for:
 - Newborns
 - Infants and children
 - Adults
- Describe how the provider will do effective compressions
- Describe proper compressions for the:
 - Newborn
 - Infant and child
 - Adult
- Define “Witness” as it pertains to a “witnessed arrest”
- Explain how you will use the AED for a witnessed arrest
- Explain how you will use the AED for the unwitnessed arrest

Circulatory Support During Arrest (Traumatic)

- Explain when resuscitation attempts should be carried out for the traumatic arrest patient
- Explain why defibrillation with an AED for the traumatic arrest is usually unsuccessful

Tools of the Trade – Circulation Management Adjuncts

- Describe:
 - Electrocardiograph (ECG/EKG)
 - AED
 - Vidacare EZ-IO
 - Alternate Venous Access
 - Cardioversion
 - Emergent Cardiac Pacing
 - Manual Defibrillation
 - IM Medication Administration

- Intraosseous Infusion (manual device)
- Intravenous Fluid Therapy
- Pressure Infusion Bag
- Pneumatic Anti-Shock Garment
- Subcutaneous Medication Administration
- Nasal Drug Delivery Device (IN)
- Impedance Threshold Device (ITD) ResQPOD

Core Principle - Disability

Nervous System Dysfunction

- Explain “Primary Injuries”
- Describe “Secondary Injuries”
- Describe what happens when the brain is deprived of oxygen
- Explain how high quality CPR is crucial for the brain
- Describe the different metabolic abnormalities affecting neurologic function

Causes for Nervous System Dysfunction

Metabolic Abnormalities

Explain the following as they relate to nervous system dysfunction:

- Hypercarbia
- Hypoxia
- Hypotension
- Diabetic states
- Metabolite build up
- Poisoning and/or overdose
- Hypothermia
- Hyperthermia
- Sepsis

Structural Abnormalities

Stroke

- Describe the most common type of stroke
- Describe how patients with carotid artery occlusion present differently than patients with vertebral artery occlusion
- Identify risk factors for stroke
- Describe how early recognition of a CVA affects in-hospital treatment of a stroke

Traumatic Brain Injury

- Define “Traumatic Brain Injury” or TBI
- List the most common types of TBIs

Spinal Cord Injuries

- List the most common types of spinal cord injuries
- Describe a complete spinal cord injury
- Describe an incomplete spinal cord injuries
- Explain the Spinal Restriction Algorithm (Appendix A-D-4)
- Describe exceptions to the Spinal Restriction Algorithm

Nervous System Assessment

- Explain why it is important to do a rapid neurological assessment on our patients with apparent neurological deficits
- List the components of a complete neurological exam
- Discuss signs and symptoms of herniation syndrome
- Explain why you see different respiratory patterns with some neuro patients
- Describe the Glasgow Coma Scale (GCS)
- Explain what information the provider acquires from a pupil assessment
- Explain why we perform a glucose assessment on every patient with an altered mental status
- Identify whose responsibility it is to determine whether or not a patient should have spinal motion restriction implemented

Treatment for Nervous System Impairment

Head Injury

- Explain the focus for the treatment for brain injury
- Describe how fast ventilations should be for the adult with a suspected head injury
- Explain the level of ETCO₂ the provider should attempt to maintain for the head injured patient
- Describe how fast ventilations should be for the pediatric patient with a suspected head injury
- Explain how ventilation rates differ for the patient with the suspected stroke
- Describe positioning for patients with brain injuries

Spinal Cord Injury

- Describe basic airway management for the patient with the suspected spinal cord injury
- Explain why a patient may require ventilation
- Describe signs and symptoms of spinal shock
- Explain why patients with spinal cord injuries need to be kept warm
- Describe positioning for the pregnant patient in need of spinal motion restriction

Patient Comfort

Patient Interactions

- Describe the demeanor and approach for each provider in the System
- Explain why demeanor and approach are emphasized here in the COG

Pain

- Describe the three major factors influencing individual pain perception and response to pain
- List non-verbal cues to pain
- Describe the 10 non-pharmacological interventions the EMT-P provider can perform to help control pain

Guidelines for Pharmacology Pain Management

- Describe when vascular access should be gained
- Identify what should be available any time an opiate is administered
- Identify when the IM route is indicated
- Explain how ETCO₂ monitoring plays a role in pain management
- Describe indications that adequate sedation/pain relief has been achieved
- Explain how the sedated patient should be monitored
- Explain when medication should be used for anxiety
- Explain why it is important to understand the onset of action for each of the medications used for pain management
- Identify indications for the use of morphine sulfate
- Identify contraindications for the use of morphine sulfate
- Explain the dosing regimen for morphine for the adult patient
- Explain the dosing regimen for morphine for the pediatric patient
- Describe the actions of morphine sulfate (how it works)
- Identify indications for the use of fentanyl citrate
- Identify contraindications for the use of fentanyl citrate
- Explain the dosing regimen for fentanyl citrate for the adult patient
- Explain the dosing regimen for fentanyl citrate for the pediatric patient
- Describe the actions of fentanyl citrate (how it works)
- Identify indications for the use of midazolam
- Identify contraindications for the use of midazolam
- Explain the dosing regimen for midazolam for the adult patient
- Explain the dosing regimen for midazolam for the pediatric patient
- Describe the actions of midazolam (how it works)
- Identify indications for the use of diazepam
- Identify contraindications for the use of diazepam
- Explain the dosing regimen for diazepam for the adult patient
- Explain the dosing regimen for diazepam for the pediatric patient
- Describe the actions of diazepam (how it works)

Patient Care Guidelines

Medical Patient Care Guidelines

Allergic Reaction/Anaphylaxis

- List the appropriate EMT-P guidelines for the patient having an allergic reaction or anaphylaxis
- Explain whether or not it is appropriate to apply a cold pack to the site
- Describe an appropriate focused history and physical exam for the patient having an allergic reaction/anaphylaxis
- List common assessment findings for allergic reactions and anaphylaxis
- Describe indications for the administration of epinephrine to the adult patient
- Describe indications for the administration of albuterol for the adult patient having a severe allergic reaction
- Describe how the provider would give albuterol including dose and repeat dosing requirements
- Explain the actions of Albuterol (how/why it works)
- List contraindications to the administration of albuterol
- Describe adverse affects to the administration of albuterol
- Identify when you can repeat a second dose of albuterol
- Describe indications for the use of epinephrine for severe allergic reactions/anaphylaxis
- Identify what type of epinephrine will be used
- Explain the administration of epinephrine for the treatment of severe allergic reactions/anaphylaxis for the adult patient
- Explain the administration of epinephrine for the treatment of severe allergic reactions/anaphylaxis for the pediatric patient
- Identify contraindications to the use of epinephrine
- Describe how diphenhydramine can be used for the treatment of severe allergic reactions/anaphylaxis for the adult patient
- Describe how diphenhydramine can be used for the treatment of severe allergic reactions/anaphylaxis for the pediatric patient
- Describe contraindications to the use of diphenhydramine
- Explain how diphenhydramine will be administered
- Explain how epinephrine will/can be used as an IV infusion
- Explain when the provider would use epinephrine as an IV infusion
- Describe indications for the use of methylprednisolone
- Describe contraindications for the use of methylprednisolone
- Identify notes/precautions for the use of methylprednisolone

Environmental Temperature Emergencies

Heat Related

- Explain what you would do if the patient was still in the hot environment
- Describe an appropriate focused history and physical exam for the patient with heat-related emergency
- Describe how to relieve severe muscle cramps
- Describe ways to cool patients with heat-related emergencies but NO altered mental status
- Describe how to cool the patient with a heat related emergency WITH altered mental status
- Explain when aggressive cooling should be stopped
- Describe signs and symptoms of the patient with heat cramps
- Describe signs and symptoms of the patient with heat exhaustion
- Describe signs and symptoms of heat stroke

Cold Related

- Describe how to protect the patient from further heat loss
- Identify how long you will check pulse for the patient in cardiac arrest in a cold environment
- Identify what, in addition to the focused history and exam, the provider should check as part of the assessment of the patient in the cold environment
- Describe rewarming for the patient with a body temperature confirmed <86 degrees F.
- Describe rewarming for the patient with a body temperature confirmed between 86-93 degrees F
- Describe rewarming for the patient with a body temperature >93 degrees
- Describe general signs and symptoms for the patient experiencing a cold-related emergency
- Explain when you would hold antiarrhythmics

Excited Delirium Syndrome

- Explain why these patients must be constantly reassessed
- Describe what to do if these patients also present “hot” to the touch
- Describe the intravenous access and fluid resuscitation guidelines for these patients
- Describe the use of midazolam for the patient with excited delirium syndrome

Glucose Abnormalities/Hypoglycemia/Hyperglycemia

- Define “hypoglycemia”
- Describe signs and symptoms of hypoglycemia
- Describe signs and symptoms of hyperglycemia
- Explain how to perform a blood glucose assessment in the pediatric patient < 1 year
- Identify the dose for pediatric oral glucose
- Identify the dose for adult oral glucose
- Identify what the patient must be able to do prior to administration of oral glucose

- Identify what you do FIRST with the hypoglycemic patient with an insulin pump in place
- Describe the two methods for disconnecting an insulin pump
- Explain what you will tell the patient once his/her mental status returns to normal after a hypoglycemic episode
- Describe the intermediate treatment plan for the pediatric hypoglycemic patient
- Explain the intermediate treatment plan for the adult hypoglycemic patient
- Explain contraindications to the use of Dextrose
- Describe the intermediate treatment plan for the pediatric hyperglycemic patient
- Explain the intermediate treatment plan for the adult hyperglycemic patient
- Describe indications for the use of Glucagon
- Describe contraindications for the use of Glucagon
- Describe how the provider can administer Glucagon

Hypotension/Hypoperfusion (Non-Traumatic)

- Describe positioning for the hypotensive/hypoperfused patient
- Describe vascular access considerations for the hypotensive/hypoperfused patient
- Describe fluid resuscitation for the hypotensive/hypoperfused patient
- Describe indications for the use of dopamine
- Describe contraindications for the use of dopamine
- Explain any notes/precautions for the use of dopamine

Nausea/Vomiting

- Describe positioning for the vomiting patient
- Identify whether or not the vomiting patient should be allowed to eat or drink
- Describe vascular access considerations for the nauseated/vomiting patient
- Describe vascular access considerations for the nauseated/vomiting patient
- Identify the dose of ondansetron for the adult patient
- Identify the dose of ondansetron for the pediatric patient
- Explain indications for the use of ondansetron
- Explain contraindications for the use of ondansetron
- Identify any notes/precautions for the use of ondansetron

Obstetrical Emergencies

- Explain whether or not you would perform a pelvic exam on the OB patient
- Describe proper suctioning of the newborn
- Explain what you would do if the head delivers but the membrane is still intact
- Identify what “level” you would keep the newborn at once delivered
- Describe how you would clamp and cut the cord
- Describe how you would manage the newborn IMMEDIATELY after birth
- Identify when it is not appropriate to let a newborn nurse
- Describe APGAR scoring
- Explain when you would use APGAR scoring
- Explain what you would do if there is significant hemorrhage immediately following delivery or the placenta does not deliver

- Describe how you would address a nuchal cord
- Explain how you would manage a prolapsed cord or limb presentation
- Describe how you would manage a breech presentation
- Describe how to manage a shoulder presentation
- Explain how to manage a stillborn/spontaneous abortion
- Explain vascular access and fluid resuscitation guidelines for the patient having an OB emergency
- Identify indications for the use of magnesium sulfate
- Identify contraindications for the use of magnesium sulfate
- Provide the dose of magnesium sulfate
- Identify any notes/concerns to the use of magnesium sulfate
- Identify indications for the use of diazepam
- Identify contraindications to the use of diazepam
- Identify any notes/precautions to the use of diazepam
- Explain how diazepam works (actions)

Obstructive Airway Disease/Reactive Airway Disease

- Identify what allergy question we will specifically ask the patient with obstructive airway disease such as asthma
- Describe signs and symptoms of asthma
- Describe indications for the use of Ipratropium Bromide
- Describe contraindications for the use of Ipratropium Bromide
- Describe how the provider would administer Ipratropium Bromide
- Describe indications for the use of methylprednisolone
- Describe contraindications to the use of methylprednisolone

Overdose

- Describe an appropriate patient assessment for an overdose patient
- Describe indications for the use of Naloxone
- Describe contraindications for the use of Naloxone
- Describe Naloxone dosing for the adult overdose patient
- Describe Naloxone dosing for the pediatric overdose patient
- Explain how Naloxone can be administered for the cardiac arrest patient if there is no IV access
- Describe indications for the use of diphenhydramine for the overdose patient
- Describe dosing for diphenhydramine for the adult overdose patient
- Describe dosing for diphenhydramine for the pediatric overdose patient
- Describe indications for the use of sodium bicarbonate for the overdose patient
- Describe dosing for sodium bicarbonate for the adult overdose patient
- Describe dosing for sodium bicarbonate for the pediatric overdose patient
- Describe indications for the use of dopamine for the overdose patient
- Describe dosing for dopamine for the adult overdose patient
- Describe dosing for dopamine for the pediatric overdose patient
- Describe indications for the use of calcium gluconate for the overdose patient
- Describe dosing for calcium gluconate for the adult overdose patient
- Describe dosing for calcium gluconate for the pediatric overdose patient

Pain/Anxiety Management

- Describe BLS pain management techniques per the Core Principles for pain management
- Describe how a provider can decrease pain or discomfort related to nasal or oral intubation attempts
- Describe the treatment plan for adult patients experiencing pain from an IO insertion
- Describe treatment plan for the pediatric patient experiencing pain from an IO insertion
- Describe indications for the use of fentanyl for pain management for the adult patient
- Describe contraindications for the use of fentanyl for pain management for the adult patient
- Describe notes/precautions for the use of fentanyl
- Describe dosing for fentanyl for the adult patient
- Describe dosing for fentanyl for the pediatric patient
- Describe indications for the use of diazepam for pain management for the adult patient
- Describe contraindications for the use of diazepam for pain management for the adult patient
- Describe notes/precautions for the use of diazepam
- Describe dosing for diazepam for the adult patient
- Describe dosing for diazepam for the pediatric patient
- Describe indications for the use of midazolam for pain management for the adult patient
- Describe contraindications for the use of midazolam for pain management for the adult patient
- Describe notes/precautions for the use of midazolam
- Describe dosing for midazolam for the adult patient
- Describe dosing for midazolam for the pediatric patient
- Describe the use of morphine for ACS
- Describe the use of fentanyl for acute abdominal pain for the pediatric patient
- Describe the use of diazepam for anxiety for the adult patient
- Describe the use of fentanyl for acute abdominal pain for the adult patient

Reactive Airway Disease

- Describe BLS treatment for the patient with reactive airway disease
- Describe the ILS treatment plan for the patient with reactive airway disease
- Describe indications for the use of epinephrine in the patient with reactive airway disease
- Describe the dose and administration of epinephrine for the adult reactive airway patient
- Describe the dose and administration of epinephrine for the adult reactive airway patient
- Describe the dose and administration of Ipratropium Bromide for the adult reactive airway patient

- Describe the dose and administration of Ipratropium Bromide for the reactive airway patient
- Explain the use of albuterol for the patient experiencing a reactive airway
- Describe the use of methylprednisolone for use for reactive airway disease
- Describe the use of magnesium sulfate for reactive airway
- Provide the dosing for methylprednisolone for the pediatric patient with reactive airway disease
- Provide dosing for magnesium for the pediatric patient with reactive airway disease

Seizures

- List common causes of seizures
- Describe different types of seizures
- Describe the two assessment questions you will ask in addition to the general focused history and physical exam
- Explain how you will manage the patient having a seizure that you suspect is having a febrile seizure
- Explain what you will say to the parent of the pediatric seizure patient under 12 months of age
- Explain how often you can assist with a patient's Vagus Nerve Stimulator
- Identify how many times you can assist with this device
- Describe indications for the use of acetaminophen
- Discuss contraindications for the use of acetaminophen
- Explain how acetaminophen is administered
- Provide dosing for the use of diazepam for the adult seizing patient
- List contraindications for the use of diazepam
- Provide indications for the use of midazolam for the seizing patient
- Provide indications for the use of magnesium for the seizing patient
- Indicate dosing for diazepam for the pediatric patient
- Indicate dosing for diazepam for the adult patient
- Provide dosing for midazolam for the pediatric patient
- Provide dosing for midazolam for the adult patient

Stroke

- Describe the Cincinnati Prehospital Stroke Scale (CPSS) (Appendix C-5)
- Describe common signs and symptoms of a stroke
- Explain why it is important to swiftly assess for a stroke with all patients presenting with altered mental status or neuro deficits
- Describe IV size and placement guidelines for the patient having a CVA
- Explain the significance of discovering the time of onset of signs and symptoms of a CVA

Submersion/Drowning

- Describe how a patient will be moved from the water
- Describe positioning of the submersion/drowning patient
- Describe other considerations for the treatment of the submersion/drowning patient

- Explain what you will do with the scuba diver's dive computer or log book if it is available
- Describe all ILS treatment for the submersion/drowning patient
- Explain the use of and dosing of dopamine for the seizing patient

Violent Patient/Chemical Sedation

- Explain what you will ensure prior to touching any patient that has been subdued using a taser unit
- Describe how to remove a taser probe
- Identify when the provider should acquire IV access
- Explain the use of midazolam for chemical restraint
- Provide dosing for midazolam for the adult patient
- Provide dosing for midazolam for the pediatric patient

Cardiac Patient Care Guidelines

Acute Coronary Syndromes (ACS)/Acute Myocardial Infarction (AMI)

- Describe signs and symptoms of a heart attack/MI
- Describe interventions/treatments you will use for the patients having ACS or an AMI
- Describe what mnemonic you will use to remember how to assess pain – include what each letter means
- Identify what drugs we will specifically assess for
- What medication and dose can you administer to the patient you suspect is having an acute coronary syndrome/myocardial infarction
- Explain how often you can assist the patient with prescribed nitroglycerine
- Identify the minimum systolic blood pressure the patient must have in order to assist with the patient's nitroglycerine
- Identify contraindications of nitroglycerine
- Explain how nitroglycerine works
- Describe the dosing regimen for nitroglycerine
- Describe IV indications for the cardiac patient
- Explain the reason for early 12-lead acquisition
- Explain why the provider should acquire a 12-lead prior to nitrate therapy when possible
- Explain indications, contraindications, notes/precautions, actions, and doses for the following medications:
 - Nitroglycerine
 - Morphine Sulfate
 - Diazepam

Congestive Heart Failure/Pulmonary Edema

- Describe signs and symptoms of CHF
- Describe your treatment plan for the patient with signs and symptoms of CHF
- Identify under what circumstances you may use CPAP
- List medications used for the CHF patient

- Explain why each medication is useful for the treatment of CHF (or what does each medication actually DO?)
- Describe fluid administration considerations for the CHF patient
- Discuss IV access considerations for the CHF patient
- Explain indications, contraindications, notes/precautions, actions, and doses for the following medications:
 - Nitroglycerine
 - Dopamine
 - Furosemide

Determination of Death and Pronouncement Process

- Describe situations in which you would not initiate CPR on a pulseless, apneic patient
- Describe what you would do immediately after determination of an obvious death in terms of notifying incoming units
- Describe when resuscitation efforts may be discontinued
- Explain how long resuscitation will continue without ROSC
- Explain how this “time” changes if at any point the provider gets ROSC
- Describe exceptions to the “time” rule (meaning, if there is no ROSC but you will continue past the standard “time”)
- Describe when OLMC must be contacted before terminating resuscitative efforts
- Identify who the provider may contact if there is any question about termination of resuscitation efforts
- Identify resource(s) available for difficult calls
- Identify the entity responsible as the “official timekeeper” for pronouncements
- Identify who the pronouncing physician will be without OLMC

Hyperkalemic Arrest (presumed)

- Identify how the provider could suspect a hyperkalemic arrest
- Describe the treatment algorithm for the hyperkalemic arrest patient
- Explain the indications for the use of the ResQPOD/ITD
- Identify which medication is used for immediate membrane stabilization
- Identify which medication is used to shift potassium to the intracellular space
- Provide indications, contraindications, notes/precautions, actions, and doses for the following medications:
 - Calcium Gluconate
 - Sodium Bicarbonate
 - Albuterol

Newborn Resuscitation

- Describe how you will suction the newborn
- List, in order, the treatment plan for the apneic newborn
- List, in order, the treatment plan for the slow-to-respond newborn
- List, in order, the treatment plan for the newborn with a heart rate below 60 bpm
- Identify indications for tracheal intubation in newborn resuscitation
- Explain IV considerations for newborn resuscitation

- Describe fluid resuscitation considerations for newborn resuscitation with evidence of hypoperfusion or hypovolemia
- Provide indications, contraindications, notes/precautions, and dosing for epinephrine and dextrose

Postresuscitation

- Describe the ALS treatment plan for post resuscitation
- Explain what the provider will do with the ResQPOD with the return of spontaneous breathing and/or ROSC
- Identify things that need to be continuously monitored with ROSC
- Identify indications for a lidocaine drip and explain how to set that up
- Describe the use of dopamine post ROSC
- Describe why a provider would choose an epinephrine drip versus a dopamine drip for a pediatric patient post ROSC
- Describe how to set up an epinephrine drip

Algorithms

- Explain the following algorithms from BLS through ALS care:
 - Basic cardiac arrest algorithm
 - Adult Bradycardia
 - Pediatric Bradycardia
 - Adult Pulseless Arrest
 - Pediatric Pulseless Arrest
 - Adult Tachycardia with Pulses (good and poor perfusion)
 - Pediatric Tachycardia with Pulses (good and poor perfusion)
- Provide indications, contraindications, notes/precautions, actions, and doses (pediatric and adult) for the following medications:
 - Adenosine
 - Amiodarone
 - Atropine
 - Dopamine
 - Epinephrine
 - Lidocaine
 - Magnesium Sulfate
 - Midazolam

Toxic Exposures

Toxic Exposure – Ammonia (Liquid & Gas)

- Explain how the patient will be removed from the exposure
- Describe the treatment plan for the patient with the ammonia exposure
- Identify who will be decontaminating the patient
- Explain IV access and fluid resuscitation indications for the ammonia exposure patient
- Identify what monitoring will be done continuously on these patients
- Identify when not to transport these patients

- Identify what resources need to be notified early
- Explain when dopamine will be used for these patients

Toxic Exposure – Carbon Monoxide

- Describe what the provider will do with the patient immediately after determining scene safety
- Describe the treatment plan for the carbon monoxide exposure patient
- Explain IV access and fluid resuscitation indications for the carbon monoxide exposure patient
- Identify under what conditions patients should automatically be transported for further evaluation
- Identify when dopamine would be used for this patient population

Toxic Exposure – Chlorine and Related Compounds

- Identify who will remove these patients from the environment
- Describe the treatment plan for the chlorine exposure patient
- Explain what other signs/symptoms the provider will monitor for
- Identify airway management concerns for the chlorine exposure patient
- Explain IV access and fluid resuscitation indications for the chlorine exposure patient
- Identify when these patients may be transported
- Identify what resources will be contacted early for chlorine contamination
- Identify when diazepam would be used for these patients (including pediatric)
- Provide diazepam dosing for these patients (including pediatric)
- Identify what medication (and doses) will be provided for patients for whom the diazepam did not work (include pediatric)
- Identify when dopamine would be used for these patients

Toxic Exposure – Cyanide

- Identify who will remove these patients from the environment
- Identify associated signs and symptoms of a cyanide exposure
- Describe the treatment plan for the cyanide exposure patient
- Explain IV access and fluid resuscitation indications for the cyanide exposure patient
- Identify what type of monitoring would be used for these patients
- List medications in the Cyanide Antidote kit
- Provide pediatric doses for each medication in the Cyanide Antidote Kit
- Explain when dopamine might be used for this patient group

Toxic Exposure – Fumigants: Methyl Bromide, Sulfuryl Fluoride, Chloropicrin, & Phosphides

- Identify who will remove these patients from their environment
- Identify who will decontaminate these patients
- Explain why these patients need to be transported even if their initial signs and symptoms are minimal
- Describe the treatment plan for the fumigant exposure patient
- Identify what other signs and symptoms you will reassess for

- Explain IV access and fluid resuscitation indications for the fumigant exposure patient
- Identify which resources need to be notified early regarding this type of contamination
- Explain when diazepam would be used for these patients
- Provide doses for diazepam (including pediatric)
- Identify which medication would be used should diazepam not work
- Provide doses for that medication (including pediatric)
- Identify when dopamine would be used for this patient population
- Identify when transport will be implemented

Toxic Exposure – Hydrazines

- Identify who will remove these patients from the environment
- Identify who will decontaminate these patients
- Describe the treatment plan for the hydrazine exposure patient
- Explain IV access and fluid resuscitation indications for the hydrazine exposure patient
- Identify which resources need to be notified early regarding this type of contamination
- Explain when diazepam would be used for these patients
- Provide doses for diazepam (including pediatric)
- Identify which medication would be used should diazepam not work
- Provide doses for that medication (including pediatric)
- Identify when dopamine would be used for this patient population
- Identify when transport will be implemented

Toxic Exposure – Hydrofluoric Acid

- Describe the treatment plan for the patient who has only had a skin exposure
- Describe the treatment plan for the patient who has had an exposure in the eye(s)
- Describe the treatment plan for the patient who has ingested hydrofluoric acid
- Explain IV access and fluid resuscitation indications for the hydrofluoric exposure patient
- Describe ongoing monitoring for these patients
- Identify what resource will provide calcium treatment for these patients (if available)

Toxic Exposure – Hydrogen Sulfide, Sulfides and Mercaptans

- Identify who will remove these patients from the exposure
- Identify who will decontaminate these patients
- Explain what other issue the patient may be suffering due to the chemical characteristics of this type of chemical
- Explain the treatment plan for the sulfide exposure patient
- Explain IV access and fluid resuscitation indications for the sulfide exposure patient
- Identify which resources need to be notified early regarding this type of contamination

- Explain when diazepam would be used for these patients
- Provide doses for diazepam (including pediatric)
- Identify which medication would be used should diazepam not work
- Provide doses for that medication (including pediatric)
- Identify when dopamine would be used for this patient population
- Identify when transport will be implemented

Toxic Exposure – Sodium Hydroxide

- Identify who will remove the patient from the exposure
- Identify who will decontaminate this patient
- Identify whether or not to use an acid to neutralize the sodium hydroxide
- Describe the treatment plan for the patient with sodium hydroxide exposure
- Explain IV access and fluid resuscitation indications for the sodium hydroxide exposure patient
- Identify which resources need to be notified early regarding this type of contamination
- Identify when dopamine would be used for this patient population
- Identify actions, contraindications, notes/precautions, doses (including pediatric) and indications for the use of Fentanyl for this patient population.
- Identify when transport will be implemented

Toxic Exposure – Organophosphates/Nerve Agents

- Identify who will remove the patient from the environment
- Describe “S.L.U.D.G.E.”
- Describe when you would use a Nerve Agent Response Kit
- Explain IV access and fluid resuscitation indications for the organophosphate exposure patient
- Explain indications, contraindications, notes/precautions, and doses for atropine and 2PAM for this patient population (including pediatrics)
- Describe how dosing of both atropine and 2PAM changes depending on the level of patient exposure (including pediatrics)
- Identify where treatment of these patients will take place
- Identify when diazepam and midazolam will be used for these patients (including pediatrics)
- Provide doses for diazepam and midazolam for these patients (including pediatrics)

Trauma Patient Care Guidelines

Regional Trauma System

EMS Trauma Alert

- List all types of patients who qualify for the Trauma Alert Criteria

EMS Trauma Transport

- Identify the two differences between the adult and pediatric Trauma Transport designations
- List all patient types that meet the Trauma Transport Criteria

Amputations

- Describe the treatment plan for the incomplete amputation
- Describe the treatment for an amputated body part and/or tissue
- Describe the management of a tooth avulsion
- Explain IV access and fluid resuscitation indications for the amputation patient
- Identify who must be notified early regarding amputations

Traumatic Brain Injury

- Identify whether or not it is appropriate to implement the spinal movement restriction protocol for the TBI patient
- Identify positioning for the TBI patient
- Identify whether or not it is appropriate to apply direct pressure to bleeding from the nose
- Describe how to bandage the open skull fracture
- Explain IV access and fluid resuscitation indications for the TBI patient
- Identify total fluid bolus amounts for the TBI patient
- Identify desired ETCO₂ levels for the TBI patient
- Identify drug and dose to be used for persistent hypotension for the TBI patient (including pediatrics)

Burns – Electrical/Lightning

- Identify who should receive the highest priority of care if multiple patients are struck simultaneously by lightning or a high voltage source
- Describe dressings for burns
- Describe which patients could be transported directly to a burn center
- Describe the treatment plan for the patient burned from an electrical source
- Explain IV access and fluid resuscitation indications for the electrical burn patient
- Explain how to figure fluid resuscitation using the Parkland Burn Formula
- Identify continuous monitoring requirements
- Identify actions, indications, contraindications, notes/precautions, and doses for Sodium Bicarbonate (including pediatrics) for this patient group

Burns – Thermal

- Identify the first thing the provider should do after scene safety
- Describe general burn treatment
- Describe dressings for burns
- Identify which patients could be transported directly to a burn center
- Explain IV access and fluid resuscitation indications for the thermal burn patient
- Explain how to figure fluid resuscitation using the Parkland Burn Formula
- Identify continuous monitoring considerations for this patient group

Crush Injuries

- Describe general treatment for crush injuries
- Explain IV access and fluid resuscitation indications for the crush injury patient
- Identify when the IV should ideally be started
- Identify the correct type of fluid for infusion for the crush injury patient
- Identify indications and dose for Sodium Bicarbonate (including pediatrics) for the patient with a crush injury

Pneumothorax

- Describe wound care for the open pneumothorax
- Describe signs and symptoms of a pneumothorax
- Describe the difference between a pneumothorax and a tension pneumothorax
- Describe the treatment plan for a suspected tension pneumothorax
- Describe the treatment plan for a traumatic arrest with suspicion chest injury

Skeletal Injuries

- Describe treatment for the uncomplicated fracture/dislocation with adequate circulation
- Describe treatment for the fracture/dislocation with circulation deficits or severely angulated injuries
- Describe stabilization for a potential pelvic fracture
- Identify management for isolated proximal femur fractures (especially in the elderly)
- Identify contraindications to the use of the traction splint
- Explain IV access and fluid resuscitation indications for the patient with skeletal injuries
- Describe when an attempt may be made to reposition a fracture/dislocation

Snakebites

- List initial interventions for the snakebite patient
- Describe wound care and positioning of the affected limb
- Explain IV access and fluid resuscitation indications for the patient with a snakebite
- Identify what type of continuous monitoring will be done for these patients
- Identify when and how the provider would use dopamine for these patients

Soft Tissue Injuries

- Describe bandaging of lacerations or puncture wounds in the neck
- Describe management of a nosebleed
- Describe wound management of an abdominal evisceration
- Describe treatment for an eye injury
- Describe treatment for an impaled object that does not compromise the airway or interfere with chest compressions
- Explain IV access and fluid resuscitation indications for the patient with soft tissue injuries

Spinal Cord Injuries

- Describe the Spinal Motion Restriction algorithm
- Explain how packaging of the pregnant patient at or greater than 20 weeks pregnant will differ than “usual” packaging
- Explain IV access and fluid resuscitation indications for the patient with a suspected spinal cord injury
- Identify when dopamine would be used for this patient population

Appendices

Beck Airway Airflow Monitor (BAMM)

- Describe the BAMM
- List indications for the use of the BAMM
- List contraindications for the use of the BAMM
- List notes/precautions for the use of the BAMM
- Describe the procedure for the use of the BAMM

Cook-Melker Cuffed Emergency Cricothyrotomy Catheter Set (“Cook-Melker”)

- Describe the Cook-Melker
- Provide Indications for the use of the Cook-Melker
- List contraindications for the use of the Cook-Melker
- List notes/precautions for the use of the Cook-Melker
- Describe the procedure for the use of the Cook Melker

Nasotracheal Intubation

- Describe nasotracheal intubation
- List indications for the use of the nasotracheal intubation
- List contraindications for the use of the nasotracheal intubation
- Explain notes/precautions for the use of nasotracheal intubation
- Describe the procedure of nasotracheal intubation

Needle Cricothyrotomy

- Describe needle cricothyrotomy
- List indications for the use of the needle cricothyrotomy
- List contraindications for the use of the needle cricothyrotomy
- Explain notes/precautions for the use of needle cricothyrotomy
- Describe the procedure of needle cricothyrotomy

Orotracheal Intubation

- Describe oro-tracheal intubation
- List indications for the use of the oro-tracheal intubation
- List contraindications for the use of the oro-tracheal intubation
- Explain notes/precautions for the use of oro-tracheal intubation
- Describe the procedure of oro-tracheal intubation

Surgical Cricothyrotomy

- Describe surgical cricothyrotomy
- List indications for the use of the surgical cricothyrotomy
- List contraindications for the use of the surgical cricothyrotomy
- Explain notes/precautions for the use of surgical cricothyrotomy
- Describe the procedure of surgical cricothyrotomy

Combitube

- Identify who may use the combitube
- Describe the combitube
- List indications for the use of the combitube
- List contraindications for the use of the combitube
- Explain notes/precautions for the use of combitube
- Describe the procedure for the use of the combitube

Flex Guide Endotracheal Tube Introducer (gum-elastic bougie)

- Describe the Flex Guide Endotracheal Tube Introducer (“bougie”)
- List indications for the use of the bougie
- List contraindications for the use of the bougie
- Explain notes/precautions for the use of bougie
- Describe the procedure for the use of the bougie

Cricoid Pressure

- Describe “cricoid pressure” (a.k.a. “Sellick Maneuver”)
- List indications for the use of cricoid pressure
- List contraindications for the use of cricoid pressure
- List notes/precautions for the use of this procedure
- Describe the procedure for performing the Sellick maneuver

Airway/Ventilation Decision Tree

- Describe the decision-making choices for selecting and using the correct airway/ventilation maneuvers/devices based on the patient’s presentation

King LTS-D Airway Device

- Identify who can use the King LTS-D Airway Device (“King LT”)
- Describe the King LT
- List indications for the use of the King LT
- List contraindications for the use of the King LT
- Explain notes/precautions for the use of King LT
- Describe the procedure for the use of the King LT

CPAP

- List indications for the use of CPAP
- Describe CPAP
- List contraindications to CPAP
- Explain notes/precautions to the use of CPAP
- Explain the process for the use of CPAP

End-Tidal CO₂ Monitoring/Capnography and Capnometry (ETCO₂)

- Describe what ETCO₂ is
- Describe what capnography is
- List indications for the use of capnography
- List contraindications for the use of capnography
- List notes/precautions for the use of capnography
- Explain the process for the use of capnography
- Describe “expected” ETCO₂ findings for the following types of patients:
- Describe ETCO₂ detectors
- Explain the indication for the use of an ETCO₂ detector
- Describe contraindications for the use of an ETCO₂ detector
- List notes/precautions for the use of an ETCO₂ detector
- Describe the procedure for the use of an ETCO₂ detector

Gastric Tube Insertion (“NG-Tube”)

- List indications for the use of a NG tube
- Describe the NG tube
- List contraindications to the use of an NG tube
- Explain notes/precautions to the use of an NG tube
- Explain the process for the use of an NG tube

Pleural Decompression

- Describe pleural decompression
- List indications for the use of the pleural decompression
- List contraindications for the use of the pleural decompression
- Explain notes/precautions for the use of pleural decompression
- Describe the procedure of pleural decompression

Pulse Oximetry

- Describe pulse oximetry including how the oximeter works
- List indications for pulse oximetry
- Identify notes/precautions for pulse oximetry

Mechanical Ventilation

- Explain the use of mechanical ventilation
- List the indications for the use of mechanical ventilation
- List contraindications to the use of mechanical ventilation
- List notes/precautions for the use of mechanical ventilation
- Describe the procedure for using mechanical ventilation

Nebulized Medication

- Explain the use of nebulized medication
- List the indications for the use of nebulized medications
- List contraindications to the use of nebulized medications
- List notes/precautions for the use of nebulized medications
- Describe the procedure for using nebulized medications

Alternative Venous Access

- Describe alternative venous access and why you might need to use it
- Describe the following:
 - Broviac/Hickman/Groshong and other Double and Triple Lumen Catheter
 - PICC Line
 - Internal Subcutaneous Infusion Ports
 - Hemodialysis AV-Fistulas/AV-Grafts
- List indications for the use of an alternative venous access
- List contraindications for the use of an alternative venous access
- Explain notes/precautions for the use of an alternative venous access
- Describe the procedure for accessing a broviac/hickman/groshong or other double or triple lumen catheter
- Describe the procedure for accessing a PICC line
- Describe the procedure for accessing an internal subcutaneous infusion port
- Describe the procedure for accessing a hemodialysis AV-fistula/Graft

Cardiac Pacing – LIFEPAK 11 or 12

- Describe cardiac pacing
- Identify indications for the use of cardiac pacing
- List contraindications for cardiac pacing
- List notes/precautions for the use of cardiac pacing
- Describe the procedure for cardiac pacing

Synchronized Cardioversion

- Describe synchronized cardioversion
- Identify indications for the use of synchronized cardioversion
- List contraindications for synchronized cardioversion
- List notes/precautions for the use of synchronized cardioversion
- Describe the procedure for synchronized cardioversion

ECG Monitoring/12-lead

- Identify notes/precautions for placing leads on a patient
- Identify which providers may place leads and acquire 12-lead ECG's
- Identify which providers are responsible for interpretation of ECG reports
- Describe the procedure for skin prep prior to lead placement
- Describe where the provider will place limb leads

Endotracheal Medication Administration

- Explain when you might want to give a medication through the ET tube
- Identify indications for the use of the ET tube for a medication route
- Identify contraindications for the use of the ET tube for a medication route
- List the medications and doses allowable via endotracheal route
- Describe the process for administration of medications through the ET tube

Intramuscular Injections (“IM”) Patient Care Setting

- Explain the use of the IM injection
- Identify indications for the use of the IM
- Identify contraindications for the use of the IM
- List the medications allowable via IM
- Identify the maximum amount of fluid that can be administered IM
- Describe the process for administering an IM injection
- Describe preferred sites for IM injection administration

Intraosseous Infusion Manual (“IO”)

- Explain the use of IO
- Identify indications for the use of the IO
- Identify contraindications for the use of the IO
- List the medications and allowable via IO
- Describe the process for inserting an IO
- Describe allowed sites for IO insertion

Intraosseous Infusion Vidacare EZ IO (“EZ IO”)

- Identify who may use the EZ IO
- Explain the use of the EZ IO
- Identify indications for the use of the EZ IO
- Identify contraindications for the use of the EZ IO
- List the medications and allowable via the EZ IO
- Describe the process for inserting an EZ IO
- Describe allowed sites for EZ IO insertion

Intravenous Fluid Therapy (“IV”)

- Identify who may place an IV
- Explain the use of an IV
- Identify indications for the use of an IV
- Identify contraindications for the use of an IV
- List the medications and allowable via the IV
- Describe the process for inserting an IV
- Describe preferred sites for IV

Manual Defibrillation

- Describe manual defibrillation
- Identify indications for the use of manual defibrillation
- List contraindications for manual defibrillation
- List notes/precautions for the use of manual defibrillation
- Describe the procedure for manual defibrillation

Impedance Threshold Device (ITD) or ResQPOD

- Identify who may place an ITD
- Explain the use of an ITD
- Identify indications for the use of an ITD
- Identify contraindications for the use of an ITD
- Describe the process for using an ITD
- Describe when you would remove an ITD

Pneumatic Anti-Shock Garment (PASG)

- Describe the PASG
- Explain when it would be appropriate to use the PASG
- List indications for the use of PASG
- List contraindications for the use of PASG
- Explain notes/precautions for the use of PASG
- Describe the procedure for the use of PASG

Subcutaneous Injections (“SQ”) Patient Care Setting

- Explain the use of the SQ injection
- Identify indications for the use of the SQ
- Identify contraindications for the use of the SQ
- List the medications allowable via SQ
- Identify the maximum amount of fluid that can be administered SQ
- Describe the process for administering an SQ injection
- Describe preferred sites for SQ injection administration

Pressure Infusion Bag

- Explain the use of a pressure infusion bag
- Identify indications for the use of a pressure infusion bag
- Identify contraindications for the use of a pressure infusion bag
- Describe the process for using a pressure infusion bag

- Describe when you would remove a pressure infusion bag

Nasal Drug Delivery Device (“atomizer”)

- Explain the use of an atomizer
- Describe conditions so the use of this route is effective
- Identify indications for the use of an atomizer
- Identify what drugs may be given through the atomizer
- List benefits for using this route
- Identify contraindications for the use of an atomizer
- Describe the process for using an atomizer

12-Lead Transmission Procedure

- Describe the procedure for transmitting 12-leads

Glucose Assessment

- Identify indications for glucose assessment
- Identify contraindications for glucose assessment
- Identify notes/precautions for glucose assessment
- Describe the procedure for using the glucometer to perform a glucose assessment

Kendrick Traction Device (KTD)

- Describe the KTD
- List indications for the use of the KTD
- Identify contraindications for the use of the KTD
- Identify any notes/precautions for the use of the KTD
- Describe the procedure for the use of the KTD

Pelvic Binder (SAM Sling)

- Identify the mortality rate for pelvic ring fractures
- Describe the SAM Sling
- Identify indications for the use of the pelvic binder
- Identify contraindications for the use of a pelvic binder
- Identify any notes/precautions for the use of the pelvic binder
- Describe the procedure for the use of the Sam Sling

Spinal Motion Restriction Algorithm

- Explain the need for a Spinal Motion Restriction Algorithm
- Identify indications for the use of the algorithm
- Identify sensory/motor considerations for the use of spinal motion restriction
- Identify spinal pain/tenderness considerations for the use of spinal motion restriction
- Identify distracting injury considerations for the use of spinal motion restriction
- Identify patient exam considerations for the use of spinal motion restriction

Eye Irrigation

- Identify indications for eye irrigation
- Describe the procedure for eye irrigation

Hospital Transfer Guidelines

- Describe where to find the list of medications and procedures approved for ALS transfer
- Describe where to find information on medication and/or procedures which require hospital or clinical staff for transport
- Identify what equipment is required for all transfers to be prepared for potential patient decompensation
- Describe the procedure for transfer

Patient Transport Condition Classification System

- Explain the need for a Patient Transport Condition Classification System
- Identify notes/precautions for the use of this system
- Explain how patient categorization changes during a mass casualty incident
- Explain how trauma patients are categorized beyond this system
- Explain the basis behind patient transport condition classification
- Describe a patient who would be designated an “Alpha” patient
- Identify the equivalent MCI designation for an Alpha patient
- Describe a patient who would be designated a “Bravo” patient
- Describe a patient who would be designated a “Charlie” patient
- Describe a patient who would be designated a “Delta” patient
- Identify the equivalent MCI category for a Delta patient
- Describe a patient who would be designated an “Echo” patient
- Identify the equivalent MCI category for an Echo patient
- Explain the decision-making process to determine where a patient will be transported to
- Identify where an adult Trauma Alert or Trauma Transport will be brought
- Identify where a pediatric Trauma Alert or Trauma Transport will be brought
- Identify where Stroke Alert patients will be brought
- Identify where OB patients can and cannot be transported to

APGAR Scoring

- Identify at what time(s) the provider will perform an APGAR assessment
- Identify any notes/precautions for the use of APGAR Scoring
- Assign an APGAR score for a baby with:
 - Pink skin except for his hands and feet
 - A pulse >100/min
 - Active pulling away to stimuli
 - Active movement
 - Strong cry

Patient Assessment

- Identify why a Patient Assessment guideline is necessary for the System
- Identify the age ranges for the:
 - Neonate
 - Infant
 - Child
 - Adolescent
 - Adult
- Identify vital sign “averages” for the:
 - Adult patient
 - Pediatric patient
- Identify compensated shock in a pediatric patient in terms of vital signs
- Identify the point at which the patient moves into decompensated shock in terms of vital signs

H's & T's

- Identify appropriate BLS assessments to determine:
 - Hypovolemia
 - Hypoxia
 - Hypothermia/Hyperthermia
 - High and Low Electrolyte Levels
 - Hypo and Hyperglycemia
 - Hydrogen ion (acidosis)
 - Trauma
 - Tension Pneumothorax
 - Thrombosis, lungs
 - Thrombosis, heart
 - Tamponade, cardiac
 - Tablets (drug and toxin overdoses)
- Identify appropriate BLS interventions to address (some may not be listed on this table but are appropriate BLS treatments for the EMT-P per core principle or EMT-P education):
 - Hypovolemia
 - Hypoxia
 - Hypothermia/Hyperthermia
 - Hypo and Hyperglycemia
 - Hydrogen ion (acidosis)
 - Trauma
 - Tablets (drug and toxin overdoses)

Glasgow Coma Scale (GCS)

- Describe the GCS
- Identify indications for the use of the GCS
- Identify any contraindications to the use of the GCS
- Identify the GCS for the patient who opens his eyes to pain, is confused in his verbal responses, but will obey simple commands
- Identify the lowest possible GCS score

Cincinnati Prehospital Stroke Scale (CPSS)

- Describe the CPSS
- Identify indications for the use of the CPSS
- Identify any contraindications for the use of the CPSS
- Identify any notes/cautions for the use of the CPSS
- List the three tests for the CPSS
- Describe each of the tests, including abnormal and normal findings for each

Newborn Resuscitation

- Identify how you would assess the newborn's:
 - Airway
 - Breathing
 - Circulation
- Describe the newborn assessment/intervention triangle
- Identify the first things to do for the newborn that are ALWAYS needed
- Identify key thoughts for the assessment/intervention for the newborn

OPQRST and Wong Baker

- Describe the OPQRST pain scale
- Explain the reasons for its use
- Identify questions the provider would ask to assess:
 - Onset
 - Provocation/Palliation
 - Quality
 - Radiation
 - Severity
 - Time
- Identify patient types appropriate for the use of the Wong Baker assessment tool instead of OPQRST

Rule of Nines

- Explain the reasons for the use of the Rule of Nines
- Describe the Rule of Palm
- Identify indications for the use of the rule of nines
- Identify any contraindications to the use of the rule of nines
- Explain how the rule of nines is different for an infant/small child compared to the use of the rule of nines for an adult
- Identify percentage of burn when given different scenarios where the body areas are given: i.e. "the patient is burned down the entire front of her right leg and her abdomen – estimate the percent of body burned"

Determination of Mental Status/Level of Consciousness (AVPU)

- Explain why it is important to determine an appropriate determination of mental status on patients.
- Describe the considerations for evaluating mental status
- Identify indications for the assessment of level of consciousness
- Describe the use of "noxious stimuli"

- Describe how to assess A&Ox3
- Describe “registration” and how you would assess for it
- Describe “attention and calculation” and how you would assess for it
- Describe “recall” and how you would assess for it
- Describe how you would assess “language”

Stroke Alert Criteria

- Explain what a “stroke alert” is
- Explain why early notification is important for the potential stroke patient

Mass Casualty Incident (MCI) Levels

- Describe the Simple Triage and Rapid Treatment concept
- Describe indications for the use of MCI levels
- Explain Patient Categorization
- Describe exceptions to the triage criteria “Immediate” category
- Describe MCI Operational Levels
- Describe Level 1
- Describe Level 2
- Describe Level 3
- Describe the procedure for MCI
- Describe the assessment for MCI

Suspected Child Abuse - Reporting

- Describe “child abuse and neglect” per the Child Abuse Prevention and Treatment Act
- Describe the State of Texas definitions of Abuse and Neglect
- Identify WHO must report suspected child abuse and neglect
- Identify who the provider should report cases of suspected child abuse or neglect to
- Explain the process for reporting suspected child abuse and neglect
- Describe findings on scene that would suggest child abuse and/or neglect
- Explain procedures for caring for suspected abuse patients
- Describe documentation considerations for this group of patients

Glossary

Define:

- Acidosis
- Adequate Airway
- Algorithm
- Alkalosis
- Amnestic
- Analgesic
- Anaphylaxis
- Angina pectoris
- Antiarrhythmics
- Antiemetic

- Apnea
- Aspiration
- Asystole
- Atrial Fibrillation
- Atrial Flutter
- Atrophy
- Auscultate
- Avulsion
- Axilla
- Baseline Assessment
- Benzodiazepines
- Body Substance Isolation
- Bolus
- Bradysystolic Arrest
- Bradycardia
- Breech Presentation
- Bronchi
- Bronchospasm
- BURP
- Cardiac Pacing
- Cardioversion
- Carotid Sinus Massage
- Catecholamine
- Caudal
- Clinical Review Process
- Coagulopathies
- Combitube
- Congestive Heart Failure
- Continuous Positive Airway Pressure (CPAP)
- Credential
- Cribiform Plate
- Cricoid Pressure
- Cricothyroid Membrane
- Criterion
- Critical Incident Stress Management (CISM)
- Cyanosis
- Decredential
- Diaphoresis/Diaphoretic
- Diastolic Blood Pressure
- Eclampsia
- Electrocardiograph (ECG/EKG)
- Endtidal Carbon Dioxide (ETCO₂)
- Endotracheal Intubation
- Endovascular Procedures
- Epiglottis
- Episodic Ventricular Tachycardia

- Epistaxis
- ETCO₂ Monitoring Capnography
- ETCO₂ Monitoring Capnometry
- Evisceration
- Excited Delirium Syndrome (ED)
- Exsanguination
- External Laryngeal Manipulation (ELM)
- Extracellular
- Extruded
- Five Deadly Sins
- Foramen Magnum
- Functional Residual Capacity
- Glasgow Coma Scale
- Hemoptysis
- Hemorrhage
- Herniation Syndrome
- Hypercarbia
- Hyperglycemia
- Hyperresonance
- Hypertension
- Hyperthermia
- Hypertrophy
- Hyperventilation
- Hypoglycemia
- Hypoperfusion
- Hypopharynx
- Hypotension
- Hypothermia
- Hypovolemia
- Impedance Threshold Device (ITD)
- Implanted Cardioverter Defibrillator (ICD)
- Implied Consent
- Infarct
- Infection Control Officer
- Informed Consent
- Intervener Physician
- Intracellular
- Intraosseous space (IO)
- Intrathoracic Pressure
- Ischemia
- Jugular Vein Distention
- Kiesselbach's plexus
- Laceration
- Laryngoscope
- Los Angeles Prehospital Stroke Scale (LAPSS)
- Magnet Stimulation Device

- Maxillofacial trauma
- Meconium
- Mediastinum
- Medical Directive
- Medula Oblongata
- Metered Dose Inhaler (MDI)
- Minimal Data Elements
- Morbidity
- Mortality
- Myocardium
- Narcotic
- Nasotracheal Intubation
- Nebulized Medications
- Needle Cricothyrotomy
- Neurotrauma
- Nuchal Cord
- Nuchal Rigidity
- Obstructive Airway Disease
- Obtunded Patient
- Office of the Medical Director
- On-Line Medical Consultation (OLMC)
- Orotracheal Intubation
- Osteogenesis Imperfecta
- Osteomyelitis
- Oxygenation
- P-wave
- Parasympathetic Nervous System
- Parenteral
- Patent Airway
- Patient
- Patient Care Record (PCR)
- Peer Review Process
- Perfusion
- Permissive Hypotension
- Personal Physician
- Personal Protective Equipment
- Pleural Decompression
- Pneumatic Anti-Shock Garment (PASG)
- Pneumothorax
- Pons
- Primary Injuries
- Professional Practice
- Prolapsed Cord
- Prophylaxis
- Pulmonary Edema
- Pulse Oximetry

- Pulse Pressure
- Pulseless Electrical Activity (PEA)
- Pulseless Ventricular Tachycardia
- QRS Complex
- Qualification
- Return of Spontaneous Circulation (ROSC)
- Secondary Injuries
- Sedative
- Shoulder Dystocia
- STEMI
- Sternomanubrial Junction (Angle of Louis)
- Substituted Consent
- Supraventricular Tachycardia (SVT)
- Surgical Cricothyrotomy
- Sympathetic Nervous System
- Syncope
- Systolic Blood Pressure
- T-wave
- Tachycardia
- Tachypnea
- Tension Pneumothroax
- Tentorium
- Thermoregulation
- Torsades de Pointes
- Tracheal Deviation
- Tracheal Transection
- Transcutaneous Pacing (TCP)
- Traumatic Brain Injury (TBI)
- Trendelenburg Position
- Tricyclic Antidepressant
- Turbinate
- Unwitnessed Arrest
- Vagal Maneuvers
- Vallecula
- Valsalva Maneuver
- Vasoconstriction
- Vasodilation
- Ventilation
- Ventricular Fibrillation
- Wide QRS Complex
- Witnessed Arrest

Approved Abbreviations

- Be familiar with all abbreviations approved for use in the A/TCEMS system