

# **Prehospital Standing Orders and Treatment Protocols**

**EMERGENCY MEDICAL  
SERVICES SYSTEM  
VOLUSIA COUNTY, FLORIDA**



Effective: July 1, 2014

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## Overview

The Volusia County Prehospital Standing Orders and Treatment Protocols contained within this document are developed in an effort to ensure uniform treatment for all patients who receive prehospital care within the county. These protocols apply exclusively to EMS providers operating in the out-of-hospital setting who are working under the oversight of the Volusia County EMS Medical Director. While attempts have been made to cover all patients who access our system, the medical director realizes that unforeseen scenarios or situations may arise. He or she suggests that for such instances, medical personnel follow all appropriate protocols, exercise sound medical judgment, and contact the emergency department medical control physician (EDMCP) should any questions or problems arise. The EDMCP is designated as the emergency physician at the receiving facility.

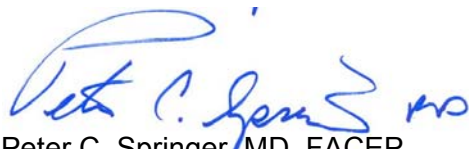
Our goal is to provide care when appropriate, relieve pain and suffering, and do no harm. The patient's best interest should be the final determinant for all decisions.

This document contains the following sections:

- Overview and Authorization
- General (100)
- Adult Protocols (200)
- Pediatric Protocols (300)
- Procedural Protocols (400)
- Medication Resume (500)
- Reference (600)
- Memorandum Indicating Change or Clarification (700), as required

## Authorization

These protocols were developed under the authorization of the below-signed medical director in accordance with Chapter 401, Florida Statute and Chapter 64J, Florida Administrative Code. Changes to these protocols can be made only with the written authorization of the Volusia County EMS Medical Director.

A handwritten signature in blue ink, appearing to read "Peter C. Springer MD", is written over a horizontal line.

Peter C. Springer, MD, FACEP  
Volusia County EMS Medical Director

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**Section 100.00: Administrative Protocols**

This section contains administrative protocols that address instances in which field providers must interact with that are not covered under standing orders located throughout this manual.

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## Section 100.01: General Principles

The following measures shall be applied to help promote speed and efficiency when rendering emergency medical care to the ill or injured. They were developed for the use of the personnel in the field and the EDMCP.

1. The safety of EMS personnel is paramount to quality patient care. Each scene should be properly evaluated for scene safety and assess the need for additional EMS support.
2. The first arriving EMS provider is responsible for the assessment of the patient and conveying to subsequent responding units if the response mode should be reduced or the unit cancelled. Communication of the reduction or cancellation, if necessary, should occur as soon as possible through the communications center.
3. The first agency on the scene of an accident or illness shall establish command. Responsibility for management of the overall scene and medical command will be transferred to representatives of the authority having jurisdiction upon arrival as defined by State and National Incident Management System (NIMS) guidelines. Fire-rescue departments shall routinely maintain responsibility for controlling incident scenes. It is the responsibility of the scene commander to ensure the proper and timely utilization of resources to meet the goals of scene safety, quality patient care, and rapid movement to medical facilities.
4. Proper body substance isolation must be utilized at all times.
5. For all calls, be prepared for immediate basic life support (BLS) and advanced life support (ALS) interventions upon initial patient contact and patient transfer, as appropriate.
6. Notify your dispatcher or document the *patient contact time* for all calls, the time of *initial defibrillation*, *patient care transfer between field providers*; and *patient care transfer to emergency department staff*.
7. Try to always obtain verbal consent prior to treatment. Respect the patient's right to privacy and dignity. Courtesy and concern are expected at all times.
8. The paramedic should be able to decide within three minutes after patient contact if advanced life support measures will be needed. These measures should be instituted almost simultaneously with the initial assessment. A comprehensive exam is appropriate after the patient has been stabilized.
9. The initial assessment and initial therapy should be completed within the first ten minutes after patient contact. Except for extensive extrication, or other significantly atypical situations, the trauma alert patient should be enroute to a receiving facility within ten minutes and the medical patient should be enroute to the receiving facility within twenty minutes. Additional therapy, if indicated, should be continued during transport.
10. All patients who are evaluated or receive treatment are to be transported by EMS to a receiving facility for further evaluation unless the refusal process is executed.
11. For all calls where EMT's and paramedics are involved in patient care, the paramedic is responsible for all patient care and shall be considered each agency's lead care provider. Patient care should be effectively and efficiently transferred to the transport agency.
12. An EMS patient care report (PCR) will be generated at the conclusion of each patient encounter. A complete copy of the full report or the approved abbreviated report must be left with the receiving facility at the time of transport. No copies or patient information will be given to anyone other than personnel authorized through Florida Statute without written permission from the patient or via court order.
13. The following information (mini-SOAPP information) should be provided to the transporting agency:

- 13.1. Subjective: The patient's chief complaint(s), and history of present illness (including history of events surrounding call).
- 13.2. Objective: Vital signs, normal and abnormal physical findings pertinent to chief complaint (i.e., document normal or abnormal heart and lung exam if chest pain, normal or abnormal abdominal exam if abdominal pain, normal or abnormal neurological exam if neurological complaint, etc.).
- 13.3. Assessment: What is the EMT's or paramedic's clinical impression? What is the working diagnosis? This can be the chief complaint, i.e., chest pain.
- 13.4. Plan: What protocols were followed?
- 13.5. Prehospital course: What management was performed and how did the patient respond?
14. Document the contents of a SOAPP note on a run report, for every patient. SOAPP note contents includes all pertinent Subjective patient information, all pertinent Objective information, a field Assessment, the Plan, (i.e., what was done for the patient), and the Prehospital course summarizing all events and changes during the entire patient encounter (see Protocol Manual for details).
15. The same information (SOAPP note information) shall also be documented and provided by the transporting agency to the ED in an expanded SOAPP format (more detail to include the first responder information and transporting agency information).
16. If any of the forms contained in these protocols (i.e., STEMI Alert, Stroke Alert, Refusal of Care, etc.) are going to be utilized electronically, the contents of the forms must be reproduced in their entirety.
17. Each agency will utilize the most recent edition of the Broselow™ Pediatric Emergency Care tape.

History: 07-2012; 07-2009; 02-2008.

## Section 100.02: Offer of Assistance by a Physician or Nurse

1. The control of the scene of an emergency should be the responsibility of the individual in attendance who is the most appropriately trained in providing prehospital stabilization and transport. As an agent of the Volusia County EMS Medical Director, the EMT or paramedic represents that individual.
2. Occasions will arise when a physician on the scene will desire to direct pre-hospital care. A standardized method for dealing with these contingencies will optimize the care given to the patient.
3. The physician desiring to assume care of the patient must:
  - 3.1. Be presented with the *Volusia County EMS Card*.
  - 3.2. Provide documentation of his or her status as a physician to practice medicine in Florida (MD or DO).
  - 3.3. Assume care of patient and allow documentation of his or her assumption of care on the patient care report.
  - 3.4. Agree to accompany the patient during transport.
4. Contact with the EDMCP must be established as soon as possible. The EDMCP must relinquish control of the patient to the physician on scene for the scene physician to take control.
5. Orders provided by the physician assuming responsibility for the patient should be followed as long as they do not, in the judgment of the paramedic, endanger patient well being. The paramedic may request the physician to attend to the patient during transport if the suggested treatment varies significantly from standing orders.
6. If the care, instructions or requests by a physician desiring to assume care of the patient is judged by the paramedic to be potentially harmful to the patient, the paramedic should:
  - 6.1. Politely voice his or her objections.
  - 6.2. Immediately place the physician on the scene in contact with the EDMCP for resolution of the problem.
  - 6.3. When conflicts arise between the physician on the scene and the EDMCP, EMS personnel should:
    - 6.3.1. Follow the directives of the EDMCP.
    - 6.3.2. Offer no assistance in carrying out the order in question, but provide no resistance to the physician performing this care.
    - 6.3.3. If the physician on scene continues to carry out the order in question, enlist aid from law enforcement.
7. All interactions with physicians on the scene must be completely documented in the patient care report with the physician signing the run sheet.
8. Should a Registered Nurse be present at an emergency scene and wish to participate in administering care for the patient, he or she must function within the realm of Chapters' 401 and 464, Florida Statute.
9. See *Volusia County EMS Card* at the end of this section:

History: 02-2008.

**Volusia County EMS Card  
Volusia County, Florida  
Office of the Medical Director**

Thank you for your offer of assistance. Be advised these Emergency Medical Technicians and Paramedics are operating under the authority of Florida Law and Volusia County EMS Protocols developed by the County EMS Medical Director. No physician or any other person may intercede in patient care without the Medical Command Physician on duty relinquishing responsibility for patient care / treatment via radio or telephone. If responsibility is given to a physician at the scene, that physician is responsible for any and all care given at the scene, and must accompany the patient(s) to the hospital. Furthermore, the physician accepting the above responsibilities must sign the patient's prehospital medical record.

Thank you.

A handwritten signature in blue ink, reading "Peter C. Springer MD". The signature is fluid and cursive, with the letters "P", "C", and "S" being particularly prominent.

Peter C. Springer, MD, FACEP  
Volusia County EMS Medical Director

**Section 100.03: Assistance During Transport**

The provision of emergency medical care is dynamic and often unpredictable. Circumstances for any given call dictate when more than one provider should accompany the patient during transport. In the interest of the patient, if either first response or transporting personnel feel an additional provider is warranted, an additional provider will accompany the patient during transport.

History: 02-2008.

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#### **Section 100.04: Initiating Cardiopulmonary Resuscitation/Determining Death**

1. EMT's and paramedics are responsible for the medical judgment as to whether a patient is obviously dead or resuscitation efforts should be initiated. This determination should be made by a paramedic, if on scene. Otherwise, the senior field EMT can make this decision.
2. If an EMT or paramedic has a question as to how to proceed with any EMS situation involving the start or termination of resuscitation, immediately contact the EDMCP. Provide the physician with a concise but comprehensive assessment of the situation, without compromise of patient care.
3. All patients found in cardiopulmonary arrest by EMS personnel will receive cardiopulmonary resuscitation with the following exceptions.
  - 3.1. A patient who has injuries incompatible with life.
  - 3.2. The patient who is apneic and pulseless, who exhibits no response to stimuli, no respiratory effort, is asystolic in two or more leads (confirming asystole with monitor does not mandate initiation of asystole protocol), and is not hypothermic, provided that one of the following is present:
    - 3.2.1. Rigor mortis.
    - 3.2.2. Decomposition of body tissues.
    - 3.2.3. Dependent lividity.
    - 3.2.4. Other obvious signs of death
  - 3.3. The victim of blunt trauma who is pulseless, apneic, and without a palpable blood pressure or heart tones upon arrival of BLS or ALS providers.
  - 3.4. The victim of a multi-casualty incident in cardiopulmonary arrest where use of prehospital care resources would jeopardize the care, health, or well-being of other critically ill or injured patients or the EMS providers at the scene.
  - 3.5. The patient who, upon arrival of EMS personnel, is attended by a physician licensed in the State of Florida; and where the physician is willing to write a statement of his relationship to the patient, a "do not resuscitate" order, and a rationale for this order on the run report. EMS personnel must attempt to verify the identity of the physician before withholding cardiopulmonary resuscitation.
  - 3.6. A patient whose personal physician communicates via telephone that resuscitative effort should not be initiated or resuscitative efforts should be discontinued. The physician must agree to accept the responsibility for pronouncing the patient dead to at least two (2) emergency personnel (EMT, paramedic, and law enforcement) via the telephone. The witnesses must sign the patient care report.
4. Do Not Resuscitate Order (DNRO):
  - 4.1. A patient who has in his or her possession, or at the bedside, a completed Florida Prehospital DNRO (DH Form 1896 or equivalent) or the appropriate DRNO patient identification device ("wallet card") will have the order honored by EMS personnel unless revoked or contested by the patient or legal representative.
  - 4.2. In order to be valid, a DNRO must contain:
    - 4.2.1. A statement indicating "do not resuscitate".
    - 4.2.2. Have an effective date.
    - 4.2.3. Include the patient's full typed or printed legal name.
    - 4.2.4. Be signed by the patient's attending physician, and include the physician's medical license number, telephone number and date completed.

- 4.2.5. Be signed and dated by the patient, patient's health care surrogate, or proxy (as appropriate).
- 4.3. EMS personnel must verify the identity of the patient with a DNRO through a driver's license, other photo identification, or from a witness in the presence of the patient.
- 4.4. If a witness is used to identify the patient, documentation in the run report must include the full name of the witness, address, telephone number and relationship to the patient.
- 4.5. A DNRO may be revoked at any time by the patient or designated health care surrogate. If any doubt exists as to the applicability or validity of a DNRO, EMS personnel will initiate resuscitation measures.
- 4.6. Law enforcement officers do not have the right to refuse resuscitative attempts for the patient.
- 4.7. The presentation of a DNRO does not preclude comforting, pain relieving, and other medically indicated care short of resuscitative measures.
- 4.8. Examples of forms may be found in the appendix.
5. A patient with a Living Will:
  - 5.1. A patient with a Living Will shall have this document honored unless invalidated by a suitable party. A Living Will may be revoked at any time by the patient, the patient's durable power of attorney or designated health care surrogate. If any doubt exists as to the applicability or validity of a Living Will, EMS personnel will initiate full treatment measures.
  - 5.2. If a family member not designated as a durable power of attorney or health care surrogate contests the Living Will, EMS personnel shall initiate resuscitative measures and contact the EDMCP as soon as possible.
6. Once initiated by EMS personnel, cardiopulmonary resuscitation may be halted when:
  - 6.1. Effective spontaneous ventilation and circulation have been restored.
  - 6.2. Resuscitation efforts have been transferred to persons of no less skill than the initial providers.
  - 6.3. The rescuer is exhausted and physically unable to continue resuscitation.
  - 6.4. A patient in asystole who has received care, including: endotracheal intubation or placement of a dual lumen airway; cardiopulmonary resuscitation; ventilation with supplemental oxygen via positive pressure ventilation device (PPVD); and administration of two appropriate doses of epinephrine; exhibits no hypothermia; and demonstrates continuous asystole and no response to care.
    - 6.4.1. An EDMCP must authorize the termination of resuscitation efforts once they have been initiated.
    - 6.4.2. The patient care report must indicate the name of the EDMCP authorizing termination of resuscitative efforts and the time of death.
7. When prehospital personnel pronounce a patient dead on-scene, they must remain with the deceased until the arrival of appropriate law enforcement agencies.
  - 7.1. All invasive apparatus must be left in place, and the body and scene not further disturbed.
  - 7.2. In cases of possible homicide or suicide, do not remove or cut clothing unless absolutely necessary. Do not disturb the death scene unless absolutely required to do so. Do not dispose of clothing that has been removed.
8. As a general guideline, patients in public settings should have resuscitative efforts continued and should be transported to the nearest receiving facility.

History: 07-2012; 02-2008.

## Section 100.05: Transport Protocols, General

1. General considerations
  - 1.1. If non-life threatening:
    - 1.1.1. Transport the patient to hospital of the patient's choice.
    - 1.1.2. If the patient is unable to make such a judgment (minors, etc.), transport the patient to the hospital of choice of an appropriate party acting on behalf of the patient (parent, et al).
    - 1.1.3. If the patient expresses no choice and if no other appropriate party is available or has reason to act on behalf of the patient, transport the patient to the closest appropriate facility.
  - 1.2. If life threatening:
    - 1.2.1. Transport the patient to the closest appropriate facility.
    - 1.2.2. If the closest appropriate facility conflicts with the choice of the patient or the party acting on behalf of the patient, contact the emergency department medical control physician (EDMCP) at the hospital of choice and request orders to transport the patient to the closest appropriate facility. Provide the receiving hospital with a complete patient report as soon as possible. Do not delay patient transport to the closest appropriate facility while waiting for a physician order to change destinations.
    - 1.2.3. If the patient insists on transport to an emergency department other than the closest, discussion with the patient should include a verbatim or summary recital of the following: *"Based on the prehospital assessment that has been performed there is a possibility the hospital you are selecting may not have the ability to perform certain procedures your medical condition may require. It is my recommendation that you be transported to a different facility for evaluation of your medical condition; however, the final choice of hospital destination remains yours."*
    - 1.2.4. The EDMCP's authorization to bypass closer emergency departments, divert to a closer emergency department or the patient's decision to choose an emergency department contrary to the recommendation of the EDMCP and transporting crew must be documented in the patient care report.
  - 1.3. In the absence of any specific state-mandated criteria, or as allowed elsewhere in this document, no pre-hospital care provider is to influence the choice of hospital by the patient in any way; nor is any pre-hospital care provider to assume that any hospital cannot offer its usual range of services and preferentially divert patients to selected facilities.
  - 1.4. The paramedic reserves the right to determine which facility is closest considering mileage, transport times, traffic patterns and density, and zone where incident occurred.
  - 1.5. The transporting paramedic will document specifics about this hospital destination selection in the patient care report, to include the EDMCP's authorization or refusal to bypass closer hospital(s).
  - 1.6. Volusia County Receiving Facilities:
    - 1.6.1. Bert Fish Medical Center: *401 Palmetto Avenue, New Smyrna Beach*
    - 1.6.2. Central Florida Regional Hospital: *1401 West Seminole Boulevard, Sanford*
    - 1.6.3. Florida Hospital DeLand: *701 West Plymouth Avenue, DeLand*
    - 1.6.4. Florida Hospital Fish Memorial: *1055 Saxon Boulevard, Orange City*

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- 1.6.5. Florida Hospital Oceanside: *264 South Atlantic Avenue, Ormond Beach*
- 1.6.6. Florida Hospital Memorial Medical Center: *301 Memorial Medical Parkway, Daytona Beach*
- 1.6.7. Halifax Health Medical Center: *303 North Clyde Morris Boulevard, Daytona Beach*
- 1.6.8. Halifax Health Medical Center of Port Orange: *1041 Dunlawton Avenue, Port Orange*

History: 07-2012; (reorganized)

## Section 100.06: Transport Protocols, Cardiac

1. STEMI (ST Elevation Myocardial Infarction) Alert
  - 1.1. Any patient meeting a single criterion outlined below will be declared a “STEMI alert” and be transported to a STEMI center.
    - 1.1.1. ST elevation of at least one millimeter in at least two anatomically contiguous limb leads or two millimeters in at least two anatomically contiguous precordial leads, **or**
    - 1.1.2. Signs and symptoms of myocardial ischemia in the presence of left bundle branch block.
  - 1.2. If any prehospital provider communicates a designation of STEMI alert, the designation shall not be negated by another prehospital provider without the approval of the receiving emergency department physician or the EMS medical director.
  - 1.3. Communications with the emergency department:
    - 1.3.1. Transmit the 12 lead ECG to the receiving emergency department as soon as feasible;
    - 1.3.2. Communicate the applicable field interpretation to the emergency department:
      - 1.3.2.1. In the presence of ST elevation or left bundle branch block with signs and/or symptoms of myocardial ischemia:
        - 1.3.2.1.1. Verbalize that the patient is a “STEMI alert”;
        - 1.3.2.1.2. Communicate the specific STEMI criteria;
        - 1.3.2.1.3. Treatment provided;
        - 1.3.2.1.4. Vital signs;
        - 1.3.2.1.5. If available, the name of the patient’s cardiologist. If the patient does not have a cardiologist, the name of the patient’s primary care physician; and
        - 1.3.2.1.6. Estimated time of arrival.
      - 1.3.2.2. If the subtlety of the changes prevents the field provider from determining the presence or absence of ST changes:
        - 1.3.2.2.1. Request the receiving physician review the 12 lead ECG;
        - 1.3.2.2.2. Treatment provided;
        - 1.3.2.2.3. Vital signs;
        - 1.3.2.2.4. If available, the name of the patient’s cardiologist. If the patient does not have a cardiologist, the name of the patient’s primary care physician; and
        - 1.3.2.2.5. Estimated time of arrival.
      - 1.3.2.3. In the absence of ST elevation or left bundle branch block with signs and/or symptoms of myocardial ischemia:
        - 1.3.2.3.1. Treatment provided;
        - 1.3.2.3.2. Vital signs;
        - 1.3.2.3.3. If available, the name of the patient’s cardiologist. If the patient does not have a cardiologist, the name of the patient’s primary care physician; and
        - 1.3.2.3.4. Estimated time of arrival.
  - 1.4. Appropriate transport destinations.
    - 1.4.1. Due to the potential definitive benefit of care available, patients meeting “STEMI alert” criteria with profound cardiovascular compromise, including

those that deteriorate into cardiopulmonary arrest, should be transported to the closest STEMI center.

- 1.4.2. STEMI receiving facilities: Any hospital capable of providing percutaneous coronary intervention (PCI) on a continual basis; whether through in house staff or through an on call team able to assemble within thirty minutes of patient arrival in the emergency department. Cardiothoracic surgical services are not required of a STEMI center, providing transfer agreements exist and adequate hospital staff is available to accompany the patient during transport.
  - 1.4.2.1. Bert Fish Medical Center: *401 Palmetto Avenue, New Smyrna Beach*
  - 1.4.2.2. Central Florida Regional Hospital: *1401 West Seminole Boulevard, Sanford*
  - 1.4.2.3. Florida Hospital DeLand: *701 West Plymouth Avenue, DeLand*
  - 1.4.2.4. Florida Hospital Memorial Medical Center: *301 Memorial Medical Parkway, Daytona Beach*
  - 1.4.2.5. Halifax Health Medical Center: *303 North Clyde Morris Boulevard, Daytona Beach*
- 1.4.3. Initial receiving emergency departments that are **not** designated as STEMI receiving centers.
  - 1.4.3.1. Florida Hospital Fish Memorial: *1055 Saxon Boulevard, Orange City*
  - 1.4.3.2. Florida Hospital Oceanside: *264 South Atlantic Avenue, Ormond Beach*
  - 1.4.3.3. Halifax Health Medical Center of Port Orange: *1041 Dunlawton Avenue, Port Orange*

## 2. Cardiac Alert

- 2.1. All patients with presentation suspicious of myocardial ischemia and in the absence of clinically relevant ST changes will be declared a “cardiac alert” and transported to the nearest emergency department.
- 2.2. If any prehospital provider communicates a designation of cardiac alert, the designation shall not be negated by another prehospital provider without the approval of the receiving emergency department physician or the EMS medical director.

History: 07-2014; 07-2012 (reorganized, formerly 100.05)

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<sup>i</sup> Transmission of 12 lead ECG's is required on all transport units no later than April 1, 2016. If transmission capabilities are present, it must be maintained and field personnel are expected to comply with the transmission requirements listed above.

## Section 100.07: Transport Protocols, Obstetrical

1. Gravid patients experiencing a pregnancy-related problem who are less than twenty weeks gestation are considered gynecological patients due to the lack of maturation of the fetus. These patients may be transported to a Volusia County receiving facility of their choice.
2. Gravid patients experiencing a pregnancy-related problem who are twenty weeks gestation or greater must be transported to an obstetrical receiving facility unless one of the exceptions below are identified. In either of the instances outlined below, the patient should be transported to the closest emergency department for emergent delivery.
  - 2.1. Birth is imminent (i.e., crowning is present); or
  - 2.2. Birth has taken place and a potentially life-threatening situation arises with the mother or neonate.
3. Appropriate transport destinations.
  - 3.1. Obstetrical receiving facilities
    - 3.1.1. Central Florida Regional Hospital: *1401 West Seminole Boulevard, Sanford*
    - 3.1.2. Florida Hospital DeLand: *701 West Plymouth Avenue, DeLand*
    - 3.1.3. Florida Hospital Memorial Medical Center: *301 Memorial Medical Parkway, Daytona Beach*
    - 3.1.4. Halifax Health Medical Center: *303 North Clyde Morris Boulevard, Daytona Beach*
  - 3.2. Initial receiving emergency departments that are **not** designated as obstetrical receiving centers. Obstetrical patients may be transported to these facilities only when exceptions outlined in this obstetrical transport protocol exists.
    - 3.2.1. Bert Fish Medical Center: *401 Palmetto Avenue, New Smyrna Beach*
    - 3.2.2. Florida Hospital Fish Memorial: *1055 Saxon Boulevard, Orange City*
    - 3.2.3. Florida Hospital Oceanside: *264 South Atlantic Avenue, Ormond Beach*
    - 3.2.4. Halifax Health Medical Center of Port Orange: *1041 Dunlawton Avenue, Port Orange*

History: 07-2012 (reorganized, formerly 100.05)

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## Section 100.08: Transport Protocols, Stroke

1. All patients suspected of experiencing a stroke will be assessed utilizing the Florida Bureau of Emergency Medical Services Stroke Alert Checklist, or substantially similar form.
2. Patients meeting the criteria below shall be declared a “stroke alert” and be transported to the closest appropriate stroke center unless otherwise directed by this document or the EDMCP at the stroke center. Patient weight, when necessary, shall be used as a determinate when selecting a stroke center based upon the limitations identified below under *appropriate transport destinations*.
  - 2.1. Time of onset is less than five (5) hours;
  - 2.2. Any abnormal finding consistent with the clinical presentation of stroke;
  - 2.3. Deficit not likely caused by head trauma; and
  - 2.4. Blood glucose greater than fifty (50) milligrams per deciliter.
3. Communications with the Stroke Center.
  - 3.1. When declaring a “stroke alert” the following must be included in the communication.
    - 3.1.1. Providers must verbalize that the patient is a “stroke alert”.
    - 3.1.2. A brief description of the clinical presentation.
    - 3.1.3. Vital signs, to include pulse, respiratory rate, blood pressure, blood glucose level and itemized Glasgow Coma Score.
    - 3.1.4. Estimated time of arrival.
  - 3.2. If any prehospital provider communicates a designation of stroke alert, the designation shall not be negated by another prehospital provider without the approval of the receiving emergency department physician or the EMS medical director.
  - 3.3. Field providers shall not differentiate between *primary* and *comprehensive* stroke centers. Patients meeting stroke alert criteria will be transported to the closest stroke center, regardless of designation.
4. Appropriate transport destinations.
  - 4.1. Stroke receiving facilities (maximum weight capacity of computerized axial tomography (CT) scanner)
    - 4.1.1. Bert Fish Medical Center: *401 Palmetto Avenue, New Smyrna Beach* (450 pounds)
    - 4.1.2. Central Florida Regional Hospital: *1401 West Seminole Boulevard, Sanford* (450 pounds)
    - 4.1.3. Florida Hospital DeLand: *701 West Plymouth Avenue, DeLand* (500 pounds)
    - 4.1.4. Florida Hospital Fish Memorial: *1055 Saxon Boulevard, Orange City* (450 pounds)
    - 4.1.5. Florida Hospital Memorial Medical Center: *301 Memorial Medical Parkway, Daytona Beach* (450 pounds)
    - 4.1.6. Halifax Health Medical Center: *303 North Clyde Morris Boulevard, Daytona Beach* (650 pounds)
  - 4.2. Initial receiving emergency departments that are **not** designated as stroke centers. Stroke alert patients may be transported to these facilities only when Florida Stroke Alert criteria are not met.
    - 4.2.1. Florida Hospital Oceanside: *264 South Atlantic Avenue, Ormond Beach*
    - 4.2.2. Halifax Health Medical Center of Port Orange: *1041 Dunlawton Avenue, Port Orange*

## *Prehospital Standing Orders and Treatment Protocols*

History: 07-2014; 05-2013 (memorandum); 07-2012 (reorganized, formerly 100.05)

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## Section 100.09: Transport Protocols, Therapeutic Hypothermia

1. Any patient meeting all of the below criteria shall be declared a “Code Cool” and be transported to a therapeutic hypothermia receiving facility.
  - 1.1. Witnessed, non-traumatic cardiopulmonary arrest, and;
  - 1.2. Patient has a return of spontaneous circulation.
2. If any prehospital provider communicates a designation of code cool, the designation shall not be negated by another prehospital provider without the approval of the receiving emergency department physician or the EMS medical director.
3. Communications with the therapeutic hypothermia center:
  - 3.1. When declaring a “Code Cool”, prehospital providers will include the following in their communication:
    - 3.1.1. Verbalize that the patient is a “Code Cool”.
    - 3.1.2. Summary of treatment provided.
    - 3.1.3. Vital signs.
    - 3.1.4. Estimated time of arrival.
  - 3.2. If a patient is identified by field providers as a STEMI alert either before of following arrest, “Code Cool” patients shall be transported to a receiving facility with both therapeutic hypothermia and STEMI center capabilities.
4. Appropriate transport destinations.
  - 4.1. Therapeutic hypothermia receiving facilities
    - 4.1.1. Bert Fish Medical Center: *401 Palmetto Avenue, New Smyrna Beach*
    - 4.1.2. Central Florida Regional Hospital: *1401 West Seminole Boulevard, Sanford*
    - 4.1.3. Florida Hospital DeLand: *701 West Plymouth Avenue, DeLand*
    - 4.1.4. Florida Hospital Fish Memorial: *1055 Saxon Boulevard, Orange City*
    - 4.1.5. Florida Hospital Memorial Medical Center: *301 Memorial Medical Parkway, Daytona Beach*
    - 4.1.6. Halifax Health Medical Center: *303 North Clyde Morris Boulevard, Daytona Beach*
  - 4.2. Initial receiving emergency departments that are **not** designated as therapeutic hypothermia receiving centers.
    - 4.2.1. Florida Hospital Oceanside: *264 South Atlantic Avenue, Ormond Beach*
    - 4.2.2. Halifax Health Medical Center of Port Orange: *1041 Dunlawton Avenue, Port Orange*

History: 07-2014; 02-2013 (corrected); 01-2013 (new).

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## Section 100.10: Transport Protocols, Trauma

1. Trauma Transport Protocol
  - 1.1. Receipt and dispatch
    - 1.1.1. Persons in Volusia County seeking access to emergency medical services, including access for trauma care and transport, may do so through the countywide enhanced 9-1-1 system by way of any land line or cellular telephone. Conventional and published seven-digit telephone access is also available for each public safety answering point (PSAP).
    - 1.1.2. While circumstances may preclude the gathering of complete information in every instance, each communications center shall make every effort to gather the following information, at a minimum, and relay such information to responding agencies. The elicitation of additional information is encouraged and left to the individual policies of each communications center.
      - 1.1.2.1. Location of the incident;
      - 1.1.2.2. The extent and severity of reported injuries; and
      - 1.1.2.3. Number of patients.
    - 1.1.3. By way of interagency cooperation and closest unit response agreements, the various communication centers will ensure timely dispatch of the most readily available and appropriately staffed and equipped emergency medical service vehicle(s). Communication centers will be responsible for initiating the response of additional units within the scope of their policies, based upon information garnered from the caller(s).
    - 1.1.4. The initial arriving unit shall assess the scene and communicate the need for any additional resources (additional fire units, technical rescue, additional ground or air ambulances, etc.) that are needed or anticipated to be needed to their respective communications center.
  - 1.2. Assessment of the trauma patient
    - 1.2.1. Differentiating adult and pediatric patients.
      - 1.2.1.1. Adult patients will be those having the anatomical and physical characteristics of a person sixteen years of age, or older.
      - 1.2.1.2. Pediatric patients will be those having the anatomical and physical characteristics of a person fifteen years of age, or younger.
      - 1.2.1.3. If question exists as to whether a patient should be assessed under the adult or pediatric scorecard criteria, measure the patient utilizing the Broselow™ Pediatric Emergency Care tape. If the patient falls within the maximum parameter as established by the devices, assess the patient utilizing the pediatric criteria.
    - 1.2.2. Adult trauma scorecard methodology.
      - 1.2.2.1. Any adult patient meeting a single criteria outlined below will be declared a “trauma alert” and be transported to the nearest trauma center, providing no other exceptions exist in this section.
        - 1.2.2.1.1. The patient receives active airway assistance beyond the administration of oxygen.
        - 1.2.2.1.2. The patient lacks a radial pulse and has a sustained heart rate greater than 120 beats per minute.

- 1.2.2.1.3. The patient's systolic blood pressure is less than 90 millimeters of mercury.
- 1.2.2.1.4. The patient's *best motor response* component of the Glasgow Coma Score is four or less.
- 1.2.2.1.5. The patient exhibits the presence of paralysis.
- 1.2.2.1.6. There is suspicion of spinal cord injury.
- 1.2.2.1.7. The patient sustains second or third degree burns to fifteen percent of the total body surface area, or greater.
- 1.2.2.1.8. The patient has an amputation proximal to the wrist or ankle.
- 1.2.2.1.9. The patient has a penetrating injury to the head, neck or torso when the wound is not readily identifiable as superficial.
- 1.2.2.1.10. There are signs or symptoms of two or more long bone fracture sites. Fracture sites include: 1) humerus, 2) radius and/or ulna, 3) femur, and 4) tibia and/or fibula.
- 1.2.2.1.11. The total sustained Glasgow Coma Score is twelve or less, unless the depressed Glasgow Coma Score can be attributed to a preexisting medical condition.
- 1.2.2.2. Any adult patient meeting any two of the criteria outlined below will be termed a "trauma alert" and be transported to a trauma center, providing no other exceptions exist in this section.
  - 1.2.2.2.1. The patient exhibits a sustained respiratory rate of thirty, or greater.
  - 1.2.2.2.2. The patient has a sustained heart rate of 120 beats per minute, or greater.
  - 1.2.2.2.3. The patient's *best motor response* component of the Glasgow Coma Score is five.
  - 1.2.2.2.4. Major degloving injury.
  - 1.2.2.2.5. Major flap avulsion greater than five inches.
  - 1.2.2.2.6. Gunshot wound to an extremity.
  - 1.2.2.2.7. Long bone fracture resulting from a motor vehicle collision.
  - 1.2.2.2.8. Long bone fracture resulting from a fall from an elevation of ten feet, or greater.
  - 1.2.2.2.9. Patient is age fifty-five or greater.
  - 1.2.2.2.10. Ejection from a motor vehicle; excluding motorcycles, all-terrain vehicles, open bed of a pick up truck, etc.
  - 1.2.2.2.11. Steering wheel deformity as a result of impact by the driver.
- 1.2.2.3. When no objective criteria is met from either category above and the EMT or paramedic feels that the patient would best be served by being evaluated at a trauma center, a Florida-certified emergency medical technician or paramedic may declare a "trauma alert" based solely upon judgment. When judgment is used as the sole parameter, the emergency medical technician or paramedic shall comprehensively

document objective and subjective decision points that resulted in the judgment determination.

- 1.2.2.4. Patients meeting neither objective nor subjective Florida trauma scorecard criteria will further be assessed for local “high index of suspicion” criteria. Patients meeting any of the criteria below shall be transported to the trauma center, but are not designated as a “trauma alert”.

- 1.2.2.4.1. Electrocution injuries with evidence of an exit wound;
- 1.2.2.4.2. Falls of twenty feet or greater;
- 1.2.2.4.3. Lightning injuries;
- 1.2.2.4.4. Pedestrians struck by a motor vehicle and thrown greater than twenty feet; or
- 1.2.2.4.5. EMT or paramedic discretion.

- 1.2.3. Pediatric trauma scorecard methodology.

- 1.2.3.1. Any pediatric patient meeting a single criteria outlined below will be termed a “trauma alert” and be transported to a trauma center, providing no other exceptions exist in this section.

- 1.2.3.1.1. Effort is required to maintain an open airway. Such effort may include continuous suctioning, jaw-thrust maneuver or basic or advanced airway management.
- 1.2.3.1.2. The patient exhibits an altered mental status that includes drowsiness, lethargy, inability to follow commands, or unresponsiveness.
- 1.2.3.1.3. The patient exhibits paralysis.
- 1.2.3.1.4. There is suspicion of spinal cord injury.
- 1.2.3.1.5. There is loss of sensation.
- 1.2.3.1.6. The patient has either faint or non-palpable femoral or carotid pulses.
- 1.2.3.1.7. The patient’s systolic blood pressure less than 50 millimeters of mercury.
- 1.2.3.1.8. There are signs or symptoms of a single open long bone fracture. Fracture sites include 1) humerus, 2) radius and/or ulna, 3) femur, and 4) tibia and/or fibula.
- 1.2.3.1.9. There are signs or symptoms of multiple long bone fractures (excluding isolated wrist and ankle fractures).
- 1.2.3.1.10. There are signs or symptoms of multiple dislocations (excluding isolated wrist and ankle dislocations).
- 1.2.3.1.11. Major degloving injury.
- 1.2.3.1.12. Major flap avulsion.
- 1.2.3.1.13. The patient sustains second or third degree burns to ten percent of the total body surface area, or greater.
- 1.2.3.1.14. The patient has an amputation at, or proximal to, the wrist or ankle.
- 1.2.3.1.15. The patient has a penetrating injury to the head, neck or torso when the wound is not readily identifiable as superficial.

- 1.2.3.2. Any pediatric patient meeting any two of the criteria outlined below will be termed a “trauma alert” and be transported to a trauma center, providing no other exceptions exist in this section.
  - 1.2.3.2.1. The patient exhibits symptoms of amnesia.
  - 1.2.3.2.2. There is loss of consciousness.
  - 1.2.3.2.3. Carotid or femoral pulses are palpable, but the radial or pedal pulses are not palpable.
  - 1.2.3.2.4. The patient’s systolic blood pressure less than 90 millimeters of mercury.
  - 1.2.3.2.5. Evidence of a single closed long bone fracture (excluding isolated wrist or ankle fractures).
  - 1.2.3.2.6. Patient weighs eleven kilograms or less or the body length is equivalent to this weight on the Broselow™ Pediatric Emergency Care tape.
- 1.2.3.3. When no objective criteria is met from either category above and the EMT or paramedic feels that the patient would best be served by being evaluated at a trauma center, a Florida-certified emergency medical technician or paramedic may declare a “trauma alert” based solely upon judgment. When judgment is used as the sole parameter, the emergency medical technician or paramedic shall comprehensively document objective and subjective decision points that resulted in the judgment determination.
- 1.2.3.4. Patients meeting neither objective nor subjective Florida trauma scorecard criteria will further be assessed for local “high index of suspicion” criteria. Patients meeting any of the criteria below shall be transported to the trauma center, but are not designated as a “trauma alert”.
  - 1.2.3.4.1. Electrocution injuries with evidence of an exit wound;
  - 1.2.3.4.2. Falls of twenty feet or greater;
  - 1.2.3.4.3. Lightning injuries;
  - 1.2.3.4.4. Pedestrians struck by a motor vehicle and thrown greater than twenty feet; or
  - 1.2.3.4.5. EMT or paramedic discretion.
- 1.3. Trauma Destination Requirements
  - 1.3.1. Adult and pediatric patients meeting Florida trauma scorecard methodology will be transported to the closest trauma center unless otherwise provided for in this section.
  - 1.3.2. “Trauma alert” patients meeting any one of the below criteria shall be transported to the closest emergency department for stabilization.
    - 1.3.2.1. Patients experiencing airway complications that cannot be adequately managed in the field.
    - 1.3.2.2. Patients with uncontrollable, external hemorrhage.
    - 1.3.2.3. Patients in cardiopulmonary arrest.
  - 1.3.3. Additional allowances for diverting “trauma alert” patients to a non-trauma center include:
    - 1.3.3.1. Mass casualty situations when dispersal of patients is necessary in order to prevent overwhelming the trauma center.
    - 1.3.3.2. Unavailability of trauma services at the local trauma center. Such instances (a number of trauma alert patients that exhaust



internal resources at the trauma center, unavailability of CT, internal catastrophe, etc.) are anticipated to rarely occur and will be validated by the EMS Medical Director.

- 1.3.4. When the initial assessment does not indicate an immediate life threat and field providers feel there may be benefit in exploring alternate transport destinations for discipline-specific care, the field provider may contact the EDMCP at the local trauma center for consultation. Such discipline-specific care may include burn care and hyperbaric medicine. The decision to bypass the local trauma center for specialized services rests solely with the EDMCP and is based on information provided from field providers.
- 1.4. Communications with the trauma center.
  - 1.4.1. Means of communicating with the trauma center.
    - 1.4.1.1. The primary means for contacting the trauma center shall be through the countywide 800 megahertz system by way of a talk group assigned and coordinated by the Volusia County Sheriff's Office Communications Center.
    - 1.4.1.2. The statewide hailing channel, MED 8 (UHF), provides an alternate means of radio communication with the trauma center. Local communication centers will acknowledge the hail and assign a designated channel to the prehospital unit.
    - 1.4.1.3. Field personnel may utilize a communications center to relay information to the trauma center.
    - 1.4.1.4. Alternatively, field personnel may contact the trauma center directly by telephone. Personnel must speak directly to the EDMCP or the charge nurse.
  - 1.4.2. Regardless of the means utilized to contact the trauma center, when declaring a "trauma alert" the following must be included in the communication.
    - 1.4.2.1. Providers must verbalize that the patient is a "trauma alert".
    - 1.4.2.2. Indicate the specific trauma alert criteria.
    - 1.4.2.3. A brief description of the sustained and suspected injuries and the mechanism of injury.
    - 1.4.2.4. Vital signs, to include pulse, respiratory rate, blood pressure, pulse oximetry and itemized Glasgow Coma Score.
    - 1.4.2.5. Estimated time of arrival and method of transport.
  - 1.4.3. Trauma patient transport
    - 1.4.3.1. Assistance during transport.
      - 1.4.3.1.1. Patient condition, any anticipated decline in patient condition and patient care complications will be used in determining the need for additional assistance during transport.
      - 1.4.3.1.2. All responding emergency medical service providers will be available to assist transporting agencies, if patient condition warrants.
    - 1.4.3.2. Aeromedical services
      - 1.4.3.2.1. The determination as to whether a patient will be transported by ground or air must take many factors into consideration. Those factors include, but are not limited to: patient acuity, proximity to the trauma center, traffic patterns, necessity of a remote landing

- zone, weather, remote destinations offering discipline-specific care and the number of patients requiring transport. Regardless of the factors involved, the method of transport should be determined by the means that will best and most effectively serve the patient.
- 1.4.3.2.2. The Volusia County Sheriff's Office maintains helicopter service in order to respond to medical emergencies. Public safety organizations may request this service through the Volusia County Sheriff's Office Communications Center. Priority dispatch is given to trauma or medically related calls.
  - 1.4.3.2.3. Regardless of the incident location, the Volusia County Sheriff's Office helicopter (Air-1) is the primary aeromedical resource in Volusia County. If the need for additional air ambulances is anticipated or determined, requests for such resources will be made through Air-1 in order to coordinate the response and to allow for the most appropriate air ambulance to be selected based upon location to scene and availability.
  - 1.4.3.2.4. Only the incident commander may cancel a responding air transport unit.
    - 1.4.3.2.4.1. Under a unified command system, the Medical Commander will maintain sole discretion for utilization of aeromedical transport services.
- 1.5. Transfer of Patient Care information
- 1.5.1. Following transfer of the trauma patient to emergency department staff, the transporting agency will complete the appropriate documentation outlined in Chapter 64J-1, Florida Administrative Code and provide the required documentation to the emergency department staff.
- 1.6. Emergency Interfacility Transfer Procedures
- 1.6.1. Any Volusia County receiving emergency department may declare a "trauma alert" based upon either initial assessment or subsequent deterioration when the patient meets Florida trauma scorecard methodology criteria.
  - 1.6.2. When such a condition exists, the emergency department physician, or his or her designee, shall contact the Volusia County Sheriff's Office Communications Center and initiate an emergency transfer. The patient shall be identified as a "trauma alert" to the communications center staff.
  - 1.6.3. The responsible transporting agency will assign such transfers an "emergency" status.
  - 1.6.4. When trauma alert patients are diverted to non-trauma centers for stabilization (i.e., airway management, etc.), the agency responsible for the initial transport shall make every reasonable effort to remain at the emergency department in order to facilitate a prompt transfer of the patient to a trauma center following stabilization. Only prehospital emergency calls will take priority over emergency transfers of trauma alert patients.
- 1.7. Appropriate transport destinations.

- 1.7.1. Trauma center
  - 1.7.1.1. Halifax Health Medical Center: 303 North Clyde Morris Boulevard, Daytona Beach
- 1.7.2. Initial receiving emergency departments that are not designated as trauma centers. Trauma alert patients may be transported to these facilities only when exceptions outlined in these trauma transport protocols exist.
  - 1.7.2.1. Bert Fish Medical Center: 401 Palmetto Avenue, New Smyrna Beach
  - 1.7.2.2. Central Florida Regional Hospital: 1401 West Seminole Boulevard, Sanford
  - 1.7.2.3. Florida Hospital DeLand: 701 West Plymouth Avenue, DeLand
  - 1.7.2.4. Florida Hospital Fish Memorial: 1055 Saxon Boulevard, Orange City
  - 1.7.2.5. Florida Hospital Memorial Medical Center: 301 Memorial Medical Parkway, Daytona Beach
  - 1.7.2.6. Florida Hospital Oceanside: 264 South Atlantic Avenue, Ormond Beach
  - 1.7.2.7. Halifax Health Medical Center of Port Orange: 1041 Dunlawton Avenue, Port Orange
- 2. Mass Casualty Incidents
  - 2.1. Field personnel will notify the Volusia County Sheriff's Office Communications Center of all situations involving multiple casualty scenarios. Notification will include:
    - 2.1.1. Total number of critical (i.e., tagged as "red") patients.
    - 2.1.2. Total number of serious (i.e., tagged as "yellow") patients.
    - 2.1.3. Total number of non-critical/serious (i.e., tagged as "green") patients.
    - 2.1.4. Total number of deceased (i.e., tagged as "black") patients.
  - 2.2. The Volusia County Sheriff's Office Communications Center will contact area hospitals to determine:
    - 2.2.1. Present bed availability, and
    - 2.2.2. Quantities of the above patients which can be cared for.
  - 2.3. No single emergency department should be inundated with multiple patients. Bed availability and hospital resources at the time of the event should be utilized to make a determination regarding how many patients any hospital should receive.

History: 07-2014; 07-2012 (reorganized, formerly 100.05); 07-2011 (memorandum 700.08); 07-2009 (memorandum 700.05); 07-2009 (memorandum 700.01); 07-2009; 01-2009 (memorandum 700.04); 02-2008.

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## Section 100.11: Emergency Department Resource at Capacity

1. Emergency department diversion
  - 1.1. Hospital request
    - 1.1.1. Hospitals desiring to be placed on diversion status shall make this request to the Volusia County EMS Medical Director, or designee, through the Volusia County Sheriff's Office Communications Center.
      - 1.1.1.1. The requesting hospital shall provide the basis of the request and a contact person with contact telephone number at the hospital for the EMS Medical Director, or designee, to contact.
      - 1.1.1.2. The Volusia County Sheriff's Office Communications Center shall contact the Medical Director, or designee, who will then contact the hospital representative.
      - 1.1.1.3. If the diversion status is approved, the medical director, or designee, shall contact the Volusia County Sheriff's Office Communications Center and advise of the hospital's diversion status and projected length of the diversion.
      - 1.1.1.4. No pre-hospital provider shall honor a hospital diversion status unless informed of such by the medical director, or designee, through the Volusia County Sheriff's Office Communications Center.
  - 1.2. Medical Director initiated
    - 1.2.1. The Volusia County EMS Medical Director, or designee, may place an emergency department on diversion status when he or she believes the patients serviced by the EMS system would be best served by bypassing the specific emergency department. Examples may include:
      - 1.2.1.1. Extensive delays in off loading patients from ambulances into the emergency department.
      - 1.2.1.2. Challenges to or failure of critical infrastructure within the emergency department (i.e., computerized tomography capability, cardiac monitor availability, etc.).
    - 1.2.2. The EMS Medical Director, or designee, shall contact the emergency department physician at the emergency department being considered for diversion status and discuss the current capabilities and limitations.
    - 1.2.3. If sufficient cause exists, the hospital shall be placed on diversion status and the medical director, or designee, shall communicate this to the Volusia County Sheriff's Office Communications Center, including the anticipated duration of the diversion status.
    - 1.2.4. Should the facility to which the patient would be transported be on diversion, identify patient wishes for transport.
      - 1.2.4.1. Explain nature and reason for hospital bypass.
      - 1.2.4.2. Explain potential wait times and wait status to patient.
      - 1.2.4.3. Explain risks of potential delays in medical attention due to facility congestion or lack of resources including a verbatim or summary recital of the following: *"The hospital you have been requested to be transported to has informed us that they are on a diversionary status. Diversions are initiated when hospital emergency department facilities are considered to be overwhelmed by excessive patient volume or by critical resource shortages to the extent where such volume or shortage may potentially compromise patient care. You may*

*go to another hospital of your choice, where you may receive faster treatment. What do you choose to do?"*

- 1.2.4.4. Identify patient's ability to make informed decisions regarding transport destination.
- 1.2.4.5. Re-inquire of patient's desire for transport to facility on diversion status.
- 1.2.4.6. Identify closest appropriate facility for patient destination.
- 1.2.5. Should patient opt to continue to destination facility:
  - 1.2.5.1. Inform on-line medical control at receiving facility of patient's decision.
  - 1.2.5.2. Document explanations of risks and benefits of transport to facility wishing to divert patient.
- 1.2.6. Should patient opt for diversion:
  - 1.2.6.1. Provide patient report to new receiving facility, including notice of diversion.
  - 1.2.6.2. Document explanations of risks and benefits of bypass to patient.
- 1.2.7. Hospitals on diversion status will continue to accept the unstable, critically ill, or injured patient who requires transport to the closest facility to preserve life or limb.
- 1.2.8. In the event of a mass casualty incident within Volusia County, all diversions may be nullified on direction of the Volusia County EMS Medical Director, or designee.

History: 07-2012 (reorganized, formerly emergency department diversion under 100.05).

## Section 100.12: Reporting Requirements to the EMS Medical Director

1. The Volusia County EMS Medical Director recognizes that on occasion the out-of-hospital environment presents challenges in delivering patient care that may result in: deviations from care, complications resulting from care delivered with the best of intentions and the utilization of certain invasive skills. It is the aim of this section to identify these deviations so efforts can be made to prevent like recurrences and effectively review performance measures on skills.
2. The following matters will dictate a cursory notification to the Volusia County EMS Medical Director's office by the agency's administration immediately upon learning of the occurrence.
  - 2.1. Reporting requirements:
    - 2.1.1. Deviations, or perceived deviations, by field providers from current clinical guidelines, including deviations from established transport protocols;
    - 2.1.2. Complications in patient care resulting from treatment rendered by field providers;
    - 2.1.3. Unauthorized utilization of prescription fluids, medications, devices or controlled substances.
    - 2.1.4. Any other unusual or atypical clinical events not specified above.
    - 2.1.5. Any lapse in state or locally required medical credentials by a field provider.
  - 2.2. A completed copy of the patient care report and any other internal documentation pertinent to clinical events further detailing the occurrence will be provided to the Volusia County EMS Medical Director within twenty-four hours of the initial report, or the next business day.
  - 2.3. It is the responsibility of the employing agency to immediately report to the Volusia County EMS Medical Director's office any certified emergency medical technician or paramedic that is suspected of violating standards established under Chapter 401, Florida Statute. While the disciplinary process remains under the control of the employing agency, the medical director reserves the right to independently review clinically-related matters involving his or her medical license.
  - 2.4. All documents provided under this section are requested under a quality assurance review process and should be clearly marked as such. All such documentation is considered privileged under section 401.425, Florida Statute.
  - 2.5. Documents required above shall be sent directly to the Volusia County Emergency Medical Administration division office physical address.
  - 2.6. In addition to the above reporting criteria, the EMS Medical Director will provide a written memorandum outlining routine quality assurance review parameters.
3. Quality assurance review committee
  - 3.1. Quality assurance review will be performed by an emergency medical review committee:
    - 3.1.1. Members:
      - 3.1.1.1. Volusia County EMS Medical Director
      - 3.1.1.2. Volusia County Deputy EMS Medical Directors'
      - 3.1.1.3. Volusia County Emergency Medical Administration director
    - 3.1.2. The Volusia County EMS Medical Director will chair this committee.
    - 3.1.3. This emergency medical review committee will operate under the parameters established under section 401.425, Florida Statute.
  - 3.2. Matters subject to review

- 3.2.1. All reports submitted to the EMS Medical Director as required under this section, and
- 3.2.2. All other reports as required by the EMS Medical Director.
- 3.3. Review process:
  - 3.3.1. The committee will convene as dictated by the frequency of matters requiring such review. It is the intent of this committee to impartiality and objectively review all such matters submitted for review.
  - 3.3.2. All documentation will be reviewed and, if necessary, interviews will be conducted with persons on scene to determine the facts and timeline surrounding the event.
  - 3.3.3. The EMS Medical Director reserves the right to seek input from other persons as necessary in order to gain a comprehensive understanding of the event.
- 3.4. Disposition
  - 3.4.1. The disposition of all reviews is solely the decision of the Volusia County EMS Medical Director and may include recommendations or action up to, and including, revocation of a field provider's ability to function under the EMS Medical Director's license.
  - 3.4.2. The Volusia County EMS Medical Director will render a written decision to the individual within ten business days from the date in which all incident relevant material has been compiled. The correspondence will be addressed to the individual or individuals at their department's address.
  - 3.4.3. A representative from the agency employing the individual will be copied on correspondences.
- 3.5. Appeal
  - 3.5.1. The field provider involved will have five business days to make a written request to the Volusia County EMS Medical Director if he or she feels the severity of the EMS Medical Director's decision is too severe.
  - 3.5.2. The Volusia County EMS Medical Director will respond with a final position on the matter within five business days.

History: 07-2012; 07-2009; 02-2008.



### **Section 100.13: Radio Report Format**

1. Suggested radio report format
  - 1.1. The ideal radio report should relate all pertinent information regarding both the patient and the plan for treatment in less than two minutes. The report itself must be prefaced with an explanation of the type of report to follow. Reports must be described as emergent or non-emergent. This statement must be followed by noting if EDMCP orders are to be requested or if the report is for information only.
  - 1.2. It is understood that some prehospital situations preclude providing a complete report to the destination facility. However, paramedics should strive to furnish a complete report at the earliest possible opportunity, and deviations from this standard must be for the benefit of the patient.
  - 1.3. Radio report format
    - 1.3.1. EMS unit identification;
    - 1.3.2. Patient age, sex and chief complaint;
    - 1.3.3. Brief history of the present illness or injury;
    - 1.3.4. Pertinent past medical history and pertinent medications
    - 1.3.5. Vital signs, to include: level of consciousness, pulse, respirations, blood pressure, oxygen saturation; and ECG rhythm, if appropriate;
    - 1.3.6. If pediatric patient, appropriate color from Broselow™ Pediatric Emergency Care tape;
    - 1.3.7. Care provided; and
    - 1.3.8. Request for orders, if necessary.
      - 1.3.8.1. All orders provided to field providers must be repeated to the EDMCP.

History: 07-2012; 02-2008.

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## **Section 100.14: Refusal of Medical Care/Transport**

1. For all calls whereby a basic or advanced life support unit is dispatched in response to activation of the 9-1-1 system, all patients will be offered transport to the nearest appropriate hospital. In determining the necessity of acquiring a patient refusal, a patient is defined as:
  - 1.1. Any individual who activates EMS for themselves;
  - 1.2. Any individual with an illness or injury;
  - 1.3. Any individual with a medical or traumatic complaint;
  - 1.4. Any individual with a new altered level of consciousness; or
  - 1.5. Any individual where the EMT/paramedic suspects injury due to mechanism.
2. Eligibility to decline care and/or transport.
  - 2.1. Competent adult or emancipated minors are permitted to decline care and/or transport, providing they do not fall under another category within this section. Competent adult or emancipated minors include:
    - 2.1.1. Persons eighteen years of age, or greater.
    - 2.1.2. Emancipated minors:
      - 2.1.2.1. Mother of a child; or
      - 2.1.2.2. A married minor of either sex regardless of current marital status.
  - 2.2. Competent guardian refusing on behalf of another adult (i.e., durable power of attorney, health care surrogate, etc.).
    - 2.2.1. An individual appointed by a court as durable power of attorney may decline care and/or transport on behalf of the individual providing:
      - 2.2.1.1. The power of attorney can produce documentation demonstrating their authority.
      - 2.2.1.2. If the field provider feels that the decision is not in the best interest of the patient, contact the EDMCP.
    - 2.2.2. An individual designated as a health care surrogate may decline care and/or transport on behalf of the individual providing:
      - 2.2.2.1. The healthcare surrogate can produce documentation demonstrating their designation as such.
      - 2.2.2.2. If the field provider feels that the decision is not in the best interest of the patient, contact the EDMCP.
  - 2.3. Competent adult refusing on behalf of a minor.
    - 2.3.1. Consent:
      - 2.3.1.1. Serious or critical medical condition or injury:
        - 2.3.1.1.1. Field personnel will render all necessary care and transport to minors when seeking consent would delay and potentially compromise the medical condition or injury.
      - 2.3.1.2. Non-serious or non-critical medical condition or injury:
        - 2.3.1.2.1. In situations where a delay in delivering care or transport would not result in a deterioration of a medical condition or injury, field personnel will make every reasonable effort to contact a parent or guardian to obtain consent.
        - 2.3.1.2.2. If the parent or guardian refuses care, he or she must sign the patient refusal. If the declination of treatment and/or transport is obtained over a telephone or other means in which a signature

- cannot be captured, the conversation must be documented in the patient care report and a witness (preferably from another agency) must sign the patient refusal as a witness.
- 2.3.2. If a parent or guardian refuses treatment and/or transport on behalf of a minor and the field provider disagrees, the field provider shall:
  - 2.3.2.1. Clearly state his or her concern to the parent or guardian.
  - 2.3.2.2. Contact the EDMCP for his or her recommendation.
  - 2.3.2.3. Enlist the aid of law enforcement.
- 2.3.3. Persons eligible to sign a declination of care and/or transport on behalf of a minor include the following, providing they are free from alcohol intoxication, drug intoxication or other condition that would prevent them from making an informed decision:
  - 2.3.3.1. Parent of minor;
  - 2.3.3.2. Step parent of minor;
  - 2.3.3.3. Grand parent of the minor;
  - 2.3.3.4. An adult brother or sister of the minor;
  - 2.3.3.5. An adult aunt or uncle of the minor; or
  - 2.3.3.6. Other person granted such authority by a parent.
- 2.4. Incompetent adult
  - 2.4.1. Persons not capable of declining care or transport on behalf of themselves or another include:
    - 2.4.1.1. Individuals declared so by a judicial process;
    - 2.4.1.2. An individual with suicidal ideations;
    - 2.4.1.3. An individual with a psychiatric illness; or
    - 2.4.1.4. An individual under the influence of drugs or alcohol.
  - 2.4.2. Chapter 401.445, Florida Statute allows for emergency medical services personnel to examine and treat an individual without informed consent providing:
    - 2.4.2.1. At the time of the examination and treatment, the individual is under the influence of alcohol or drugs, or otherwise incapable of providing informed consent;
    - 2.4.2.2. At the time of the examination and treatment, the individual is experiencing an emergency medical condition; and
    - 2.4.2.3. The patient would, under all of the surrounding circumstances, reasonably undergo such examination and treatment if he or she were advised to do such.
  - 2.4.3. The custodian of the person in custody is responsible for access to and allowance of medical care. Therefore, the accompanying law enforcement officer or correctional officer may decline treatment and/or transport on behalf of the patient.
    - 2.4.3.1. The law enforcement officer or correctional officer must sign the declination of care and/or transport.
    - 2.4.3.2. If the law enforcement officer or correctional officer refuses to sign, document the refusal to sign in the patient care report. Have a witness sign the refusal.
- 3. Procedure for executing refusal.
  - 3.1. Each of the elements below must be addressed and documented in the patient care report. Alternatively, an explanation of why this information was not obtained should be documented in the uncooperative patient.

- 3.1.1. All complaints expressed by the patient that precipitated the response, to include improvement, resolution or worsening of problem;
- 3.1.2. Patient's mental status to include alertness to person, place, time and events;
- 3.1.3. Assessment of vital signs;
- 3.1.4. Patient is free from impairment; including alcohol and drug intoxication, suicidal ideations and other psychological conditions; that may limit their ability to understand risks associated with refusal of treatment and/or transport or make an informed decision;
- 3.1.5. Patient has been offered treatment and/or transport;
- 3.1.6. Patient acknowledges the risks associated with the declination of treatment and/or transport and accepts those risks;
- 3.1.7. The patient should be encouraged to call on EMS to respond again or seek other medical assistance if the problem persists or worsens.
- 3.1.8. Obtain signature of patient or legal guardian.
- 3.2. Patient's refusing treatment and/or transport should be left with another competent adult, if possible.

History: 07-2012; 02-2008.

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### **Section 100.15: Scope of Practice**

1. Prehospital personnel working with Volusia County prehospital agencies may, in the course of duty, be required to participate in patient care at locations outside of Volusia County.
  - 1.1. Participation in patient care outside of Volusia County may occur as a result of disaster responses, inter-county transports or mutual aid agreements.
  - 1.2. Volusia County prehospital providers are authorized to perform within the scope of the Volusia County EMS Medical Protocols under these circumstances. Authorization is extended only to Volusia County paramedics working for a Volusia County agency during duty time.
2. Providers working with Volusia County prehospital agencies may happen upon or be requested to assist at the scene of injury or illness outside of duty hours.
  - 2.1. Prehospital providers are authorized to perform within the scope of the Volusia County EMS Medical Protocols if the scene of illness or injury is fully within the confines of Volusia County.
  - 2.2. ALS certified providers responding as a volunteer for a BLS agency are authorized only to perform at the BLS level.
3. Prehospital providers working with prehospital agencies external to Volusia County may, in the course of duty, be required to participate in patient care at locations within Volusia County.
  - 3.1. External prehospital providers may perform within the scope of EMS medical protocols established for their employing agency. This authorization is extended only for prehospital providers working within Volusia County during duty time.
  - 3.2. Prehospital providers from outside of Volusia County who are not on duty are not authorized to practice prehospital care within Volusia County.
4. EMT's that are enrolled in a paramedic program are expressly prohibited from performing paramedic-level skills outside of sanctioned and designated clinical hours established by his or her respective EMS program.
5. EMT's and paramedics are strictly prohibited from working under the authorization of the Volusia County EMS Medical Director or these protocols for employment opportunities not sanctioned by a recognized Volusia County emergency medical services provider.

History: 07-2012; 02-2008.

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## Section 100.16: Certification and Educational Requirements

1. First Responder
  - 1.1. First Responders within Volusia County working under the auspices of the Volusia County Medical Director will be required to meet certain educational and certification requirements.
    - 1.1.1. Certified First Responders
      - 1.1.1.1. First responders working with a fire/rescue agency will be considered as “certified first responders.” Certified First Responders will be required to complete fourteen (14) hours of continuing education every two (2) years in order to maintain the ability to work within the Volusia County EMS system. The content of these hours will consist of:
        - 1.1.1.1.1. Four (4) hours of CPR training including use of an AED.
        - 1.1.1.1.2. Two (2) hours of training in HIV/AIDS and bloodborne pathogens.
        - 1.1.1.1.3. Four (4) hours of medical assessment and management.
        - 1.1.1.1.4. Four (4) hours of trauma assessment and management.
      - 1.1.1.2. The medical and/or trauma modules will include training regarding the theory and practice of oxygen therapy. The Volusia County Medical Director must certify continuing education programs in order to be credited to this total.
    - 1.1.2. Non-Certified First Responders
      - 1.1.2.1. Non-certified first responders are those working with agencies whose primary function is not the provision of fire/rescue services, but whose medical operations fall under the auspices of the EMS Medical Director. Non-Certified First Responders will be required to complete ten (10) hours of continuing education every two (2) years in order to maintain the ability to work within the Volusia County EMS system. The content of these hours will consist of:
        - 1.1.2.1.1. Four (4) hours of CPR training including use of an AED.
        - 1.1.2.1.2. Two (2) hours of training in HIV/AIDS and bloodborne pathogens.
        - 1.1.2.1.3. Two (2) hours of medical assessment and management.
        - 1.1.2.1.4. Two (2) hours of trauma assessment and management.
      - 1.1.2.2. The medical and/or trauma modules will include training regarding the theory and practice of oxygen therapy. Modules may include other material as required by agency needs. The Volusia County Medical Director must certify continuing education programs in order to be credited to this total.
2. Emergency Medical Technician
  - 2.1. Emergency Medical Technicians (EMT’s) working within Volusia County under the auspices of the Medical Director will be required to meet the following certification requirements.

- 2.1.1. Maintain current EMT-B certification issued by the Florida Department of Health.
    - 2.1.2. Maintain current CPR credential as allowed by the Medical Director and the Florida Department of Health.
    - 2.1.3. Attain a score of no less than 80% correct on a test of current basic life support EMS protocols administered as part of the initial employment process and periodically as dictated by individual and systemic needs. If a score of less than 80% is received, the EMT may be retested upon request.
  - 2.2. Emergency Medical Technicians (EMT's) working within Volusia County under the auspices of the Medical Director will be required to meet the following educational requirements every two years.
    - 2.2.1. 24 hours of EMT or EMT-P refresher curriculum according to United States Department of Transportation standards, or equivalent as approved by the Volusia County EMS Medical Director.
- 3. Paramedic
  - 3.1. Paramedics working within Volusia County under the auspices of the Medical Director will be required to meet the following certification requirements.
    - 3.1.1. Maintain a current Paramedic certification issued by the Florida Department of Health.
    - 3.1.2. Maintain current CPR credential as allowed by the Medical Director and the Florida Department of Health.
    - 3.1.3. Maintain a current Advanced Cardiac Life Support credential as allowed by the Medical Director and the Florida Department of Health.
    - 3.1.4. Attend a 16-hour trauma course International Trauma Life Support (ITLS) or Prehospital Trauma Life Support (PHTLS) within one year from the date of new employment, or demonstrate certification in ITLS or PHTLS attained during paramedic training. Eight (8) hours of refresher training leading to recertification is required every two years.
    - 3.1.5. Attend a 16-hour pediatric course Pediatric Advanced Life Support (PALS) or Pediatric Education for the Prehospital Professional (PEPP) within one year from the date of new employment, or demonstrate certification in PALS or PEPP attained during paramedic training. Eight (8) hours of refresher training leading to recertification is required every two years.
    - 3.1.6. Attend a medical director-approved four-hour Paramedic Procedure Course within one year from the date of new employment, or demonstrate competency in these skills as attained during paramedic training. Such procedural course or laboratory attendance is required every two years.
    - 3.1.7. Attain a score of no less than 80% correct on a test of current advanced life support EMS protocols administered as part of the initial employment process and periodically as dictated by individual and/or systemic needs. If a score of less than 80% is received, the Paramedic may be retested upon request.
    - 3.1.8. Flight paramedics working on Air-1 must complete a 32-hour Air Medical Crew Curriculum Course prior to assuming air medical duties.
  - 3.2. Paramedics working within Volusia County under the auspices of the Medical Director will be required to meet the following educational requirements every two years.
    - 3.2.1. 16 hours of EMT-P refresher curriculum according to DOT standards or equivalent as approved by the Volusia County Medical Director.

4. Special Considerations

- 4.1. If any First Responder, EMT, or Paramedic is not in compliance with the above regulations, the Paramedic or EMT shall not practice under the auspices of the Volusia County EMS Medical Director until such time as these requirements are met. The Medical Director reserves the right to waive any or all regulations due to extenuating circumstances.
- 4.2. Instructors for EMT and EMT-P refresher courses, or other continuing education activities, must be approved for teaching by the EMS Medical Director and the EMS officer of the appropriate agency. Whenever possible, within the structure of an agency, instructors should be certified at a higher level than the students (i.e. EMT's should receive instruction from an EMT-P as possible).
- 4.3. An EMT may receive credit for attendance at a combined EMT/EMT-P refresher course, in congruence with the system philosophy of viewing EMS as a continuum of care and not as two separate BLS and ALS systems. An EMT-P may not receive credit for attendance at an EMT refresher course.
- 4.4. All EMS agencies within Volusia County are encouraged to consider the use of nationally certified courses as a primary option to meet these requirements, and to utilize the resources of local EMS educational institutions to fulfill these needs.

History: 07-2012; 07-2009; 02-2008.

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## Section 100.17: General Provisions

The following standards of care shall apply to all patients served by prehospital providers within Volusia County:

1. The goal of the EMS system is to provide optimal patient care on scene and expedite patient transport to definitive care. Patient care may require transfer to other EMS providers to accomplish this mission.
  - 1.1. The EMT or Paramedic first “on scene” will assume responsibility for patient care until such care is transferred to another provider.
  - 1.2. A prehospital provider certified at the basic life support level will transfer care to a provider certified at the advanced life support level.
  - 1.3. A prehospital provider certified at the advanced life support level working with a non-transport agency will transfer care to an advanced life support level provider working with an air or ground transport agency.
  - 1.4. A prehospital provider certified at the advanced life support level working with a ground transport agency will transfer care to an advanced life support level provider working with an air transport agency.
  - 1.5. Under no circumstances may care be transferred from a higher level care provider to a lower level care provider.
  - 1.6. There are no medical conditions where delays on the scene benefit the patient. Transfer of patient care should begin in an effective and efficient manner upon arrival of the transporting agents. Patients will be removed from hazardous situations as quickly as possible. Transfer of care in no way removes the obligation of initial responders to continue to act as integral members of the prehospital care team under the direction of the supervising provider.
  - 1.7. If disagreement exists between prehospital care providers of any level regarding patient treatment or transport, the EDMCP at the intended destination facility should be contacted for physician orders and conflict resolution.
2. Paramedics who have successfully completed the Paramedic Procedural Course are authorized to utilize advanced skills on resuscitation cases when other options have resulted in no response. Advanced procedures will be defined as cricothyrotomy and needle thoracostomy.
3. In accordance with Chapter 64J-1, Florida Administrative Code, emergency medical technicians may be authorized to perform certain advanced procedures. Procedures authorized by the Florida Department of Health - Bureau of Emergency Medical Services and the Volusia County EMS Medical Director include blood glucose monitoring, dual lumen airway insertion, administration of epinephrine using an auto-injector, assistance with patient self-administration of nitroglycerin and inhaled bronchodilators, and initiation, monitoring, and maintenance of non-medicated intravenous lines under the supervision of a paramedic affiliated with their agency. EMT's may be authorized to perform the above procedures after any prerequisites have been satisfied and qualified individuals are approved in writing by the Volusia County EMS Medical Director.
4. Each patient will have vital signs continuously monitored. Vital signs include but are not limited to pulse, blood pressure, respiratory rate, oxyhemoglobin saturation, and neurological status. Initial vital signs will be obtained manually. Thereafter, vital signs will be obtained and recorded at least once at the scene and once during transport. Paramedics should record additional vital signs every five minutes during transport and at more frequent intervals as warranted.
5. Unless otherwise specified, patients should be continued on intravenous fluids, medications, and therapeutic devices initiated by referring agencies and institutions.

### *Prehospital Standing Orders and Treatment Protocols*

6. Orders communicated directly from the EDMCP to the paramedics caring for the patient may supersede established protocol.
7. Complications, problems, or requests for additional orders during care will be directed toward the EDMCP. If orders are given that supersede protocol, the name and hospital location of the EDMCP issuing the orders must be documented on the run report. The signature of the ordering physician is not required.

History: 07-2012; 07-2009; 02-2008.

## Section 100.18: Patient Assessment

1. Approach to the scene
  - 1.1. The purpose of the initial assessment is to detect life-threatening problems. The primary survey begins as you approach the scene.
    - 1.1.1. Survey the scene and location of the patient.
    - 1.1.2. The prime concern is the safety of one's self and for the patient. Look for hazardous conditions that may be present (i.e., fire, electrical wires, possibility of explosion, etc.).
    - 1.1.3. Look for signs that may identify the mechanisms of injury and suggest injured areas on the patient.
    - 1.1.4. Identify yourself and seek permission to examine and treat the patient.
  - 1.2. Simultaneously Survey the Patient
    - 1.2.1. Determine patient's level of consciousness.
    - 1.2.2. Determine rise and fall of patient's chest.
    - 1.2.3. Look for profuse bleeding and/or blood soaked clothing.
    - 1.2.4. Look for obvious deformity or unnatural angulation of the extremities.
  - 1.3. Scene survey
    - 1.3.1. Identify patient numbers, patient locations, and any hazardous conditions on the scene.
    - 1.3.2. Identify signs that may clarify mechanisms of injury or illness.
    - 1.3.3. Identify self to patient and seek permission for care.
2. Initial Assessment
  - 2.1. All patient encounters will be characterized by use of the initial assessment and focused history and examination.
  - 2.2. Initial assessment.
    - 2.2.1. Airway and cervical spine precaution.
      - 2.2.1.1. Establish status of airway and cervical spine.
        - 2.2.1.1.1. If cervical injury is suspected, do not manipulate head.
        - 2.2.1.1.2. Cervical spine stabilization should be performed immediately.
      - 2.2.1.2. Maintain airway as required.
        - 2.2.1.2.1. Jaw thrust maneuver.
        - 2.2.1.2.2. Oral or nasal airways.
        - 2.2.1.2.3. Dual lumen airway.
        - 2.2.1.2.4. Endotracheal intubation.
  - 2.3. Establish presence, rate, and quality of respirations.
    - 2.3.1. If respiration's are absent, initiate ventilatory support.
    - 2.3.2. If respirations are present, assess for presence of respiratory distress.
      - 2.3.2.1. Administer oxygen as appropriate.
        - 2.3.2.1.1. Nasal cannula.
        - 2.3.2.1.2. Simple face mask.
        - 2.3.2.1.3. Venturi mask.
        - 2.3.2.1.4. Non-rebreathing mask.
        - 2.3.2.1.5. Bag-mask ventilation.
      - 2.3.2.2. Identify and treat reversible causes of respiratory distress.
        - 2.3.2.2.1. Tension pneumothorax.
        - 2.3.2.2.2. Bronchospasm from asthma/COPD.
        - 2.3.2.2.3. Traumatic chest injury.
  - 2.4. Establish presence of effective circulation.

- 2.4.1. Identify presence, rate, and quality of pulse.
  - 2.4.2. If carotid pulse absent, initiate cardiopulmonary resuscitation.
  - 2.4.3. If pulses present, assess systolic blood pressure.
    - 2.4.3.1. If carotid pulse present, systolic blood pressure >60 mmHg.
    - 2.4.3.2. If femoral pulse present, systolic blood pressure >70 mmHg.
    - 2.4.3.3. If radial pulse present, systolic blood pressure >80 mmHg.
  - 2.4.4. Assess capillary refill.
  - 2.4.5. Control external hemorrhage.
  - 2.5. Assess neurological function.
    - 2.5.1. AVPU assessment of response.
    - 2.5.2. Request purposeful movement of hands and feet.
    - 2.5.3. Calculate initial Glasgow Coma Score.
  - 2.6. Expose and examine the site of patient injury or complaint.
    - 2.6.1. Assess baseline pain level (0-10 scale).
  - 2.7. Assess and record vital signs. The initial assessment shall be obtained manually. Subsequent assessments may be obtained automatically with manual confirmation of substantial variations.
3. The Focused History and Exam
- 3.1. The objective of the focused history and examination is to discover medical and injury related problems that do not pose an immediate threat to patient survival, but may do so if allowed to go untreated. The secondary survey is composed of the subjective interview and the objective examination. These tasks may be performed concurrently.
    - 3.1.1. Subjective Interview
      - 3.1.1.1. Gain essential information relative to the patient's condition, by questioning the patient, if conscious; or bystanders and/or relatives if the patient is unconscious.
    - 3.1.2. Objective Examination
      - 3.1.2.1. This is a comprehensive hands-on head-to-toe survey. The findings are combined and related to allow you to make an assessment of your patient's condition and form a plan of emergency care.
      - 3.1.2.2. History (SAMPLE/OPQRST)
      - 3.1.2.3. Physical examination
        - 3.1.2.3.1. Head
          - 3.1.2.3.1.1. Scalp (tenderness, deformities, foreign bodies, signs of trauma)
          - 3.1.2.3.1.2. Ears (CSF leakage, Battle sign)
      - 3.1.2.4. Face
        - 3.1.2.4.1. Eyes (pupil equality, diameter, reactivity, raccoon eyes)
        - 3.1.2.4.2. Nose (signs of trauma, CSF leak)
        - 3.1.2.4.3. Mouth (foreign bodies, trauma, blood, odor of breath)
      - 3.1.2.5. Neck
        - 3.1.2.5.1. Anterior (tracheal deviation, JVD, stoma, wounds, presence of Medic Alert tags)
        - 3.1.2.5.2. Posterior (vertebral tenderness, deformity, wounds)
      - 3.1.2.6. Trunk (signs of trauma, instability, respiratory excursion, respiratory effort, respiratory rate, lung sounds, paradoxical chest wall motion, subcutaneous emphysema)



- 3.1.2.7. Abdomen (bowel sounds, tenderness, masses, rigidity, distension, signs of trauma)
  - 3.1.2.8. Pelvis and hips (pelvic stability, tenderness, signs of trauma, hip position and extremity rotation)
  - 3.1.2.9. Back and spine (signs of trauma, tenderness, deformity, instability).
    - 3.1.2.9.1. Assess and document the presence of motor and sensory integrity to all four extremities before and after immobilization.
  - 3.1.2.10. Extremities (deformity, edema, tenderness, signs of trauma, distal neurovascular and musculoskeletal function, presence of Medic Alert tags, constricting bands of clothing).
    - 3.1.2.10.1. Assess and document the presence of neurovascular integrity before and after immobilization.
  - 3.1.2.11. Neurological (review AVPU status, GCS, ability to move extremities).
  - 3.1.2.12. Skin (color, warmth, dryness, diaphoresis, cyanosis, jaundice).
- 4. Special notes
  - 4.1. The initial assessment takes precedence over all other procedures unless hazardous conditions are present. The primary survey should take no more than 30 seconds to complete.
  - 4.2. If the patient is suffering from a life-threatening condition, treat appropriately and transport immediately to an appropriate receiving facility. The focused history and examination may be initiated during transport.
  - 4.3. Always explain to the patient what is taking place. In patients who lack effective means of verbal communication, watch the face for reaction to pain.
  - 4.4. Answer patient inquiries in a positive and reassuring fashion. Do not frighten, intimidate, or judge the patient.
  - 4.5. Remove clothing as required for complete assessment. Discretion is encouraged, but exposure will always be dictated by clinical needs.
  - 4.6. Observe for medical identification information (bracelets, necklace, card, etc.)
  - 4.7. Any foreign bodies should be stabilized in place. Removal is only indicated for foreign bodies in the airway.
  - 4.8. Patient transport may not be delayed in order to accomplish the complete secondary survey.
  - 4.9. The entire patient examination should take from one (1) to three (3) minutes.
  - 4.10. This protocol is meant to serve as a guideline for complete and comprehensive patient assessment. Rarely will a paramedic perform an examination of this depth. The paramedic will concentrate his or her examination based upon the complaint(s) of the patient.
  - 4.11. Capillary refill may be falsely impaired by the presence of peripheral vascular disease, COPD, diabetes, carbon monoxide intoxication, and smoking; it may be falsely normal in patients with focal extremity vascular congestion. If available, consider acquiring carboxyhemoglobin levels through non-invasive technique.

History: 07-2012; 02-2008.

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**Section 200.00: Adult Protocols**

This section contains prehospital standing orders and treatment protocols for adult patients.

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## Section 200.01: Abdominal Pain/Gastrointestinal Hemorrhage

1. History
  - 1.1. Onset and duration
  - 1.2. Location and radiation
  - 1.3. Quality (sharp, intermittent, etc.)
  - 1.4. Menstrual history
  - 1.5. Previous trauma
  - 1.6. Surgery
  - 1.7. Abnormal ingestion
2. Symptoms
  - 2.1. Nausea
  - 2.2. Vomiting
  - 2.3. Constipation
  - 2.4. Melena
  - 2.5. Urinary problems
  - 2.6. Fever
  - 2.7. Diarrhea
3. Signs
  - 3.1. Gastrointestinal: abdominal tenderness, guarding, distention, pulsatile mass, emesis
  - 3.2. Skin: diaphoresis, pallor
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Nothing by mouth.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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## Section 200.02: Airway Management

1. History
  - 1.1. Onset
  - 1.2. Duration
  - 1.3. Exacerbating or alleviating factors
  - 1.4. Oral exposure, including foreign bodies
  - 1.5. Previous trauma
  - 1.6. Environmental exposure
  - 1.7. Smoking
2. Symptoms
  - 2.1. Respiratory distress
3. Signs
  - 3.1. Neurological: altered mental status
  - 3.2. Respiratory: insufficient ventilatory effort, apnea, paradoxical chest wall movement
  - 3.3. Skin: cyanosis
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. Administer supplemental oxygen; maintain saturation of ninety-four percent, or greater ( $\geq 94\%$ ). The following sequence of interventions should be followed with the achievement of adequate ventilation and oxygenation as an acceptable stopping point:
    - 4.2.1. Bag-mask ventilation with oropharyngeal or nasopharyngeal airway.
    - 4.2.2. Non-cardiopulmonary arrest
      - 4.2.2.1. Continue bag-mask ventilation
    - 4.2.3. Cardiopulmonary arrest
      - 4.2.3.1. Dual lumen airway
      - 4.2.3.2. Continuous end-tidal carbon dioxide detection must occur in all instances of subpharyngeal airway adjunct placement. Utilization of a colorimetric device is acceptable for basic life support providers.
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management as needed. The following sequence of interventions should be followed with the achievement of adequate ventilation and oxygenation as an acceptable stopping point:
    - 5.1.1. Orotracheal intubation
      - 5.1.1.1. Only one attempt at orotracheal intubation may be made per patient (not per provider) **in cardiopulmonary arrest**. An *attempt* is defined as insertion of the laryngoscope blade past the patient's incisors.
      - 5.1.1.2. Only two attempts at orotracheal intubation may be made per patient (not per provider) **in non-cardiopulmonary arrest**. An *attempt* is defined as insertion of the laryngoscope blade past the patient's incisors.
    - 5.1.2. Dual lumen airway
    - 5.1.3. Cricothyrotomy

- 5.1.4. Continuous end-tidal carbon dioxide monitoring must occur in all instances of subpharyngeal airway adjunct placement. Utilization of waveform capnography is required of all advanced life support providers.
- 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
  - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
    - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
- 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography.
  - 5.3.1. Continuous end-tidal carbon dioxide monitoring is required in all instances of subpharyngeal airway adjunct placement, including dual lumen airway placement, endotracheal intubation, and cricothyrotomy.
- 5.4. Establish vascular access, if appropriate.
  - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
- 5.5. Premedicate with **lidocaine, 1.5 milligrams per kilogram** intravenously or intraosseously, in the presence of cerebral insult.
- 5.6. **Lorazepam (Ativan), 2-4 milligrams** intravenously or intraosseously.
- 5.7. **Etomidate (Amidate), 0.3 milligram per kilogram** intravenously or intraosseously. Maximum dose is 20 milligrams.
- 5.8. Prehospital personnel that have written approval from the Volusia County EMS Medical Director may utilize:
  - 5.8.1. **Succinylcholine (Anectine), 1.5 milligrams per kilogram** intravenously or intraosseously.
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 05-2008 (memorandum 700.02); 03-2008 (memorandum 700.01); 02-2008.



## Section 200.03: Allergic Reactions

1. History
  - 1.1. Exposure, ingestion or contact (stings, drugs, foods, etc.)
  - 1.2. Prior allergic history
  - 1.3. Current medications
2. Symptoms
  - 2.1. Itching
  - 2.2. Rash
  - 2.3. Swelling
  - 2.4. Respiratory distress<sup>ii</sup>
  - 2.5. Abdominal pain
  - 2.6. Nausea, vomiting
  - 2.7. Syncope
  - 2.8. Weakness
  - 2.9. Anxiety
  - 2.10. Choking sensation<sup>iii</sup>
  - 2.11. Cough
3. Signs
  - 3.1. HEENT: tongue or upper airway (uvula) edema
  - 3.2. Respiratory: wheezing, stridor<sup>iv</sup>, hoarseness, cough, upper airway noise
  - 3.3. Skin: rash, redness, urticaria (hives), generalized or local edema
  - 3.4. Vital signs: hypotension<sup>v</sup>
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. In the presence of a moderate allergic reaction or severe systemic reaction:
    - 4.4.1. Epi-Pen, 0.3 milligram, in patients greater than thirty (30) kilograms.
  - 4.5. In the presence of marine envenomation, irrigate affected area with vinegar.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
    - 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
  - 5.5. Mild Reaction (Itching/Hives)
    - 5.5.1. **Diphenhydramine (Benadryl) 1 milligram per kilogram** intravenously or intramuscularly (maximum 50 milligrams)

- 5.5.1.1. May be administered intramuscularly if no venous access available.
- 5.6. Moderate Reaction (Dyspnea, Wheezing, Chest tightness)
  - 5.6.1. **Epinephrine (1:1,000) 0.3 milligram** subcutaneously.
  - 5.6.2. **Albuterol (Proventil) 2.5 milligrams** nebulized.
    - 5.6.2.1. Albuterol (Proventil) may be repeated to a total of three (3) treatments.
  - 5.6.3. **Diphenhydramine (Benadryl) 1 milligram per kilogram** intravenously or intramuscularly (maximum 50 milligrams)
    - 5.6.3.1. May be administered intramuscularly if no venous access available.
  - 5.6.4. **Methylprednisolone (Solu-Medrol) 125 milligrams** intravenously.
- 5.7. Severe systemic reaction (BP <90 mmHg, stridor, severe respiratory distress)
  - 5.7.1. **Epinephrine (1:1,000) 0.3 milligram** subcutaneously.
    - 5.7.1.1. If patient does not show immediate improvement or continues to deteriorate, **epinephrine (1:10,000) 0.5 milligram** intravenously or intraosseously.
  - 5.7.2. **Albuterol (Proventil) 2.5 milligrams** nebulized.
    - 5.7.2.1. Albuterol (Proventil) may be repeated to a total of three (3) treatments.
  - 5.7.3. **Methylprednisolone (Solu-Medrol) 125 milligrams** intravenously or intraosseously.
  - 5.7.4. **Diphenhydramine (Benadryl) 1 milligram per kilogram** intravenously or intramuscularly (maximum 50 milligrams)
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 02-2008.

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<sup>ii</sup> Denotes moderate to severe allergic reaction.

<sup>iii</sup> Denotes moderate to severe allergic reaction.

<sup>iv</sup> Denotes moderate to severe allergic reaction.

<sup>v</sup> Denotes moderate to severe allergic reaction.

## Section 200.04: Altered Mental Status

1. History
  - 1.1. Onset (acute vs. gradual)
  - 1.2. Duration
  - 1.3. History of trauma
  - 1.4. Description of scene (pills found, notes, syringes, etc.)
  - 1.5. Unusual odor in residence or at scene
  - 1.6. Recent emotional trauma or crisis (including suicidal or homicidal ideation)
  - 1.7. Drug or alcohol ingestion
  - 1.8. Toxic exposure
  - 1.9. Exertion or heat exposure
  - 1.10. Psychiatric disorders
  - 1.11. Medical illnesses (diabetes, seizures, etc.)
  - 1.12. Head trauma
  - 1.13. Drug overdose
  - 1.14. Seizures
  - 1.15. CVA
  - 1.16. Diabetes
  - 1.17. Other metabolic disorders, such as kidney or liver failure
  - 1.18. Sepsis
  - 1.19. Psychiatric illness
2. Symptoms
  - 2.1. Abrupt or bizarre behavior changes
3. Signs
  - 3.1. HEENT: breath odor (alcohol, ketones), pupil size and reactivity
  - 3.2. Neck: suspect c-spine injury in the presence of head trauma; nuchal rigidity (stiff neck)
  - 3.3. Neurological: decreased level of consciousness, abnormal pupil size, abnormal pupil symmetry and reactivity, seizures, focal deficits, hallucinations
  - 3.4. Other: evidence of trauma, medical alert tag
  - 3.5. Respiratory: abnormal breathing patterns
  - 3.6. Skin: needle tracks, cyanosis, diaphoresis
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement.
  - 4.4. Nothing by mouth, unless patient is a known diabetic and is able to self-administer glucose paste, orange or apple juice
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.

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- 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
- 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
- 5.5. Blood glucose <60 milligrams per deciliter.
  - 5.5.1. **Dextrose (50%), 25 grams** intravenously or intraosseously.
  - 5.5.2. **Glucagon, 1 milligram**, intramuscularly, in the absence of vascular access.
- 5.6. Blood glucose >300 milligrams per deciliter.
  - 5.6.1. **0.9% sodium chloride, 250-500 milliliters** fluid bolus.
  - 5.6.2. Fluid bolus should be repeated if serial blood glucose reading remain >300 milligrams per deciliter.
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

## Section 200.05: Behavioral Emergencies

1. History
  - 1.1. Onset
  - 1.2. Duration
2. Symptoms
  - 2.1. Agitation
3. Signs
  - 3.1. CNS: bizarre behavior
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Restrain as needed for patient and crew safety.
    - 4.4.1. EMS personnel are responsible for ensuring that the patient has an adequate airway and sufficient ventilatory effort during the application of restraint and throughout care.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
    - 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
  - 5.5. If patient and crew safety dictate:
    - 5.5.1. **Lorazepam (Ativan), 2 milligrams** intravenously. Alternatively, 2 milligrams may be administered by the intramuscular route if safety is a factor for the patient or crew in establishing vascular access.
      - 5.5.1.1. May repeat lorazepam (Ativan) once for a maximum of 4 milligrams.
      - 5.5.1.2. Avoid use of lorazepam in patients with suspected behavioral disturbances with associated use of alcohol.
    - 5.5.2. Chemical sedation requires continuous assessment with pulse oximetry and waveform capnography.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 6.2. Field personnel are responsible for ensuring that all underlying medical problems are appropriately addressed and vigilant monitoring of the patient occurs to prevent positional asphyxia.

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- 6.3. All chemically sedated patients require ambulance transport to an emergency department.
  - 6.3.1. In the presence of suspected delirium tremens, contact the EDMCP for consideration of lorazepam (Ativan). If ordered, continuous assessment with pulse oximetry and waveform capnography is required.

History: 07-2012; 07-2009; 05-2008 (memorandum 700.01); 02-2008.

## Section 200.06: Carbon Monoxide Exposure and Toxic Inhalations

1. History
  - 1.1. Description of scene (enclosed space, broken containers, distinctive odors, signs of fire or smoke, poor ventilation)
  - 1.2. Nature of inhalant or combustible material
  - 1.3. Duration of exposure
  - 1.4. Time since exposure
  - 1.5. Medical illnesses (especially prior cardiac or respiratory disease)
2. Symptoms
  - 2.1. Burning sensation in mouth, nose, throat, or chest
  - 2.2. Eye irritation or burning
  - 2.3. Cough/wheezing
  - 2.4. Dyspnea/labored breathing
  - 2.5. Loss of consciousness
  - 2.6. Nausea and vomiting
  - 2.7. Headache
  - 2.8. Dizziness
  - 2.9. Weakness
3. Signs
  - 3.1. HEENT: singed nasal/facial hair, soot in mouth or sputum, pharyngeal inflammation
  - 3.2. Neurological: decreased level of consciousness, seizures, behavior changes
  - 3.3. Respiratory: laryngeal edema (stridor, hoarseness, brassy cough), rales, rhonchi, wheezing
  - 3.4. Skin: thermal burns, particularly of face, mouth, throat, and chest, cyanosis (cherry-red skin not reliable sign of CO poisoning)
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Monitor and record carboxyhemoglobin levels, if available.
  - 5.5. Establish vascular access, if appropriate.

- 5.5.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
- 5.5.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
- 5.5.3. Cyanide poisoning (intended for patients in cardiopulmonary arrest secondary to toxic inhalation in structure fires)
  - 5.5.3.1. **Hydroxocobalamin (Cyanokit) infusion, 5 grams** over 15 minutes, if available.
  - 5.5.3.2. A single repeat dose may be administered with concurrence of the EDMCP.
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 6.2. Oxygen saturation readings may be falsely high in the presence of significantly elevated carbon monoxide levels. Don't be misled by "normal" SaO<sub>2</sub> readings. Apply 100% oxygen if any indication of toxic inhalation, significant flame or smoke exposure, or respiratory distress noted).
  - 6.3. Inhalation of toxic products of combustion or chemical irritants produces varying damage, depending on nature and duration of exposure.
  - 6.4. Signs and symptoms may be minimal or absent initially; fatal burns to respiratory tract may occur with little or no external evidence; non-cardiogenic pulmonary edema may develop as late as 24 to 72 hours after inhalation of some irritant substances.
  - 6.5. Suspect airway injury for burns sustained in confined space, if facial burns or singeing are present. Airway edema usually does not become severe until after the first hour, but it may develop rapidly in respiratory burns.
  - 6.6. Many irritant gases (ammonia, nitrogen oxide, sulfur dioxide, sulfur trioxide) combine with water to form corrosive acid or alkali that cause burns of the upper respiratory tract with potential early upper airway compromise.

History: 07-2012; 02-2008.



## Section 200.07: Cardiac Dysrhythmia

1. History
  - 1.1. Onset (acute, gradual)
  - 1.2. Duration
  - 1.3. Precipitating events
  - 1.4. Medical illnesses (especially cardiac and respiratory disease)
2. Symptoms
  - 2.1. Chest pain/discomfort
  - 2.2. Dyspnea
  - 2.3. Nausea
3. Signs
  - 3.1. Cardiovascular: dysrhythmias
  - 3.2. Extremity: peripheral edema
  - 3.3. Neck: flat or distend neck veins.
  - 3.4. Neurological: anxiousness, decreased level of consciousness.
  - 3.5. Respiratory: rales, rhonchi, respiratory distress
  - 3.6. Skin: cool, diaphoretic, pallor, cyanosis.
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Establish vascular access, if appropriate.
    - 5.3.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
    - 5.3.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
  - 5.4. Ventricular ectopy (>6 premature ventricular complexes per minute, couplets, multi-formed premature ventricular complexes, runs of ventricular tachycardia and symptomatic)
    - 5.4.1. Assess patient for chest pain, dyspnea, hypotension or other symptoms of ischemic cardiac disease. If asymptomatic, observe frequency of ventricular ectopy and patient status.
    - 5.4.2. **Lidocaine, 1-1.5 milligrams per kilogram**, intravenously.
      - 5.4.2.1. Repeat **lidocaine, 0.5-0.75 milligram per kilogram** intravenously, bolus every eight to ten minutes if rhythm persists to a maximum of 3 milligrams per kilogram.
    - 5.4.3. If dysrhythmia resolves, begin **lidocaine infusion, 2-4 milligrams per minute**, titrating to effect.
  - 5.5. Bradycardias

- 5.5.1. Bradycardic dysrhythmias include:
  - 5.5.1.1. Sinus bradycardia
  - 5.5.1.2. Junctional rhythms
  - 5.5.1.3. First degree atrioventricular block
  - 5.5.1.4. Second degree, type I (Wenckebach) atrioventricular block
  - 5.5.1.5. Second degree, type II (Classical) atrioventricular block
  - 5.5.1.6. Third degree atrioventricular block
- 5.5.2. Hemodynamically stable
  - 5.5.2.1. Observe for deterioration.
- 5.5.3. Hemodynamically unstable
  - 5.5.3.1. **Atropine, 0.5-1 milligram.**
    - 5.5.3.1.1. Repeat **atropine, 0.5-1 milligram** intravenously, bolus every three to five minutes if rhythm persists to a maximum of 3 milligrams.
  - 5.5.3.2. **Transcutaneous pacemaker.**
    - 5.5.3.2.1. **Lorazepam (Ativan), 2 milligrams** intravenously, may be considered for sedation. May be repeated once, if necessary.
    - 5.5.3.2.2. Pacing should be considered as first line therapy in the presence of overt hemodynamic instability.
  - 5.5.3.3. **Epinephrine (1:1,000) infusion, 2-10 micrograms per minute.** Titrate to effect.
    - 5.5.3.3.1. Preparing epinephrine infusion:
      - 5.5.3.3.1.1. Instill epinephrine (1:1,000), 1 milligram into a 50 milliliter bag of 0.9% sodium chloride.
      - 5.5.3.3.1.2. Yield: 20 micrograms per milliliter.
- 5.6. Tachycardias with a narrow complex
  - 5.6.1. Narrow-complex tachycardic dysrhythmias include:
    - 5.6.1.1. Atrial fibrillation
    - 5.6.1.2. Atrial flutter
    - 5.6.1.3. Paroxysmal supraventricular tachycardia (PSVT)
  - 5.6.2. Hemodynamically stable (awake and oriented x 4; lack of chest pain, hypotension or other signs of shock).
    - 5.6.2.1. Observe for deterioration.
  - 5.6.3. Atrial fibrillation or atrial flutter: hemodynamically unstable
    - 5.6.3.1. **Diltiazem (Cardizem), 20 milligrams** intravenously.
    - 5.6.3.2. **Synchronized cardioversion**
      - 5.6.3.2.1. **Lorazepam (Ativan), 2 milligrams** intravenously, may be considered for sedation. May be repeated once, if necessary.
      - 5.6.3.2.2. Cardiovert at manufacturer recommended joule setting for specific device.
      - 5.6.3.2.3. If dysrhythmia unresolved, perform all subsequent cardioversions at manufacturer recommended joule setting for specific device.
  - 5.6.4. Paroxysmal supraventricular tachycardia (PSVT) : hemodynamically unstable
    - 5.6.4.1. **Adenosine (Adenocard), 6 milligrams** intravenously.
      - 5.6.4.1.1. **Adenosine (Adenocard), 12 milligrams** intravenously, if initial dose fails to control rate.

- 5.6.4.2. **Diltiazem (Cardizem), 20 milligrams** intravenously.
- 5.6.4.3. **Synchronized cardioversion**
  - 5.6.4.3.1. **Lorazepam (Ativan), 2 milligrams** intravenously, may be considered for sedation. May be repeated once, if necessary.
  - 5.6.4.3.2. Cardiovert at manufacturer recommended joule setting for specific device.
  - 5.6.4.3.3. If dysrhythmia unresolved, perform all subsequent cardioversions at manufacturer recommended joule setting for specific device.
- 5.7. Tachycardias with a wide complex
  - 5.7.1. Wide-complex tachycardic dysrhythmias include:
    - 5.7.1.1. Wide complex tachycardia of unknown origin
    - 5.7.1.2. Ventricular tachycardia (with a pulse)
  - 5.7.2. Hemodynamically stable
    - 5.7.2.1. **Amiodarone (Cordarone), 150 milligrams** infused over ten minutes.
    - 5.7.2.2. **Lidocaine, 1-1.5 milligrams per kilogram** intravenously.
      - 5.7.2.2.1. Repeat doses of **lidocaine, 0.5-0.75 milligram per kilogram** intravenously, every eight to ten minutes if rhythm persists to a maximum of 3 milligrams per kilogram.
      - 5.7.2.2.2. If dysrhythmia resolves, begin **lidocaine infusion, 2-4 milligrams per minute**, titrating to effect.
  - 5.7.3. Hemodynamically unstable
    - 5.7.3.1. **Synchronized cardioversion**
      - 5.7.3.1.1. **Lorazepam (Ativan), 2 milligrams** intravenously, may be considered for sedation. May be repeated once, if necessary.
      - 5.7.3.1.2. Cardiovert at manufacturer recommended joule setting for specific device.
      - 5.7.3.1.3. If dysrhythmia unresolved, perform all subsequent cardioversions at manufacturer recommended joule setting for specific device.
      - 5.7.3.1.4. If dysrhythmia resolves, administer Lidocaine, 1-1.5 milligrams per kilogram intravenously.
        - 5.7.3.1.4.1. Begin **lidocaine infusion, 2-4 milligrams per minute**, titrating to effect.
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 03-2008 (memorandum 700.01); 02-2008.

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## Section 200.08: Cardiopulmonary Arrest

1. History
  - 1.1. Onset (acute, gradual)
  - 1.2. Duration
  - 1.3. Precipitating events
  - 1.4. Medical illnesses (especially cardiac and respiratory disease)
2. Symptoms
  - 2.1. None
3. Signs
  - 3.1. Respiratory: absent
  - 3.2. Vital Signs: absent
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. Witnessed arrest
    - 4.2.1. If arrest is witnessed by prehospital personnel, apply automatic external defibrillator and defibrillate, if indicated.
    - 4.2.2. Begin cardiopulmonary resuscitation.
      - 4.2.2.1. Mechanical CPR devices are an acceptable alternative to manual compressions. Use of these devices is encouraged if they are available during transport.
      - 4.2.2.2. Interruption of chest compressions should be limited to the performance of therapies that require doing so.
  - 4.3. Unwitnessed arrest
    - 4.3.1. Begin cardiopulmonary resuscitation.
      - 4.3.1.1. Mechanical CPR devices are an acceptable alternative to manual compressions. Use of these devices is encouraged if they are available during transport.
      - 4.3.1.2. Interruption of chest compressions should be limited to the performance of therapies that require doing so.
    - 4.3.2. Provide positive pressure ventilation with supplemental oxygen.
  - 4.4. Apply automatic external defibrillator and defibrillate, if indicated.
  - 4.5. Obtain and record blood glucose measurement, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip.
  - 5.3. Establish vascular access, if appropriate.
  - 5.4. Asystole
    - 5.4.1. Confirm asystole in two leads.
    - 5.4.2. **Epinephrine (1:10,000), 1 milligram** intravenously or intraosseously.
      - 5.4.2.1. Repeat **epinephrine (1:10,000), 1 milligram** intravenously or intraosseously every three to five minutes so long as rhythm persists.
    - 5.4.3. Consider:
      - 5.4.3.1. **Transcutaneous pacemaker.**
      - 5.4.3.2. **Calcium chloride (10%), 1 gram** intravenously or intraosseously, if suspicious of calcium channel blocker overdose or hyperkalemia.
      - 5.4.3.3. **Dextrose (50%), 25 grams** intravenously or intraosseously, bolus if blood glucose is <60 milligrams per deciliter.

- 5.4.3.4. **Naloxone (Narcan), 2 milligrams** intravenously or intraosseously, if opiate overdose suspected.
- 5.4.3.5. **Sodium bicarbonate, 1 milliequivalent per kilogram** intravenously or intraosseously.
- 5.4.3.6. Consider termination of resuscitative efforts.
- 5.5. Pulseless Electrical Activity
  - 5.5.1. **Epinephrine (1:10,000), 1 milligram** intravenously or intraosseously.
    - 5.5.1.1. Repeat **epinephrine (1:10,000), 1 milligram** intravenously or intraosseously every three to five minutes if rhythm persists.
  - 5.5.2. Consider underlying etiology:
    - 5.5.2.1. Cardiogenic shock or pericardial tamponade
      - 5.5.2.1.1. Establish second vascular access site and provide volume resuscitation in 500 milliliter increments.
      - 5.5.2.1.2. Consider **dopamine infusion, 5-20 micrograms per kilogram per minute infusion.**
    - 5.5.2.2. Tension pneumothorax
      - 5.5.2.2.1. Perform needle thoracostomy
    - 5.5.2.3. Hypovolemia
      - 5.5.2.3.1. Provide adequate volume resuscitation
    - 5.5.2.4. Hypoxemia
      - 5.5.2.4.1. Ensure adequate ventilation and oxygenation
    - 5.5.2.5. If suspicious of calcium channel blocker toxicity or hyperkalemia:
      - 5.5.2.5.1. **Calcium chloride (10%), 1 gram** intravenously or intraosseously.
    - 5.5.2.6. Other:
      - 5.5.2.6.1. **Dextrose (50%), 25 grams** intravenously or intraosseously, if blood glucose is <60 milligrams per deciliter.
      - 5.5.2.6.2. **Naloxone (Narcan), 2 milligrams** intravenously or intraosseously.
      - 5.5.2.6.3. **Sodium bicarbonate, 1 milliequivalent per kilogram**, intravenously or intraosseously.
- 5.6. Ventricular Fibrillation
  - 5.6.1. **Defibrillate.**
    - 5.6.1.1. Defibrillate at manufacturer recommended joule setting for specific device.
    - 5.6.1.2. If dysrhythmia unresolved, perform all subsequent defibrillations at manufacturer recommended joule setting for specific device.
    - 5.6.1.3. A pharmaceutical intervention should be delivered between defibrillations.
  - 5.6.2. **Epinephrine (1:10,000), 1 milligram** intravenously or intraosseously.
    - 5.6.2.1. Repeat **epinephrine (1:10,000), 1 milligram** intravenously or intraosseously every three to five minutes if rhythm persists.
  - 5.6.3. Antidysrhythmic
    - 5.6.3.1. **Amiodarone (Cordarone), 300 milligrams** intravenously.
      - 5.6.3.1.1. Repeat **amiodarone (Cordarone), 150 milligrams** intravenously once after ten minutes, if unresolved.
    - 5.6.3.2. **Lidocaine, 1.5 milligrams per kilogram.**

- Repeat **lidocaine**, **0.75 milligram per kilogram** intravenously or intraosseously every eight to ten minutes if rhythm persists to a maximum of 3 milligrams per kilogram.
      - If dysrhythmia resolves, begin **lidocaine infusion, 2-4 milligrams per minute**, titrating to effect.
    - In the presence of recurrent or refractory ventricular fibrillation:
      - Dextrose (50%), 25 grams** intravenously or intraosseously if blood glucose is <60 milligrams per deciliter.
      - Magnesium sulfate, 2 grams** intravenously or intraosseously. Consider early if *torsades de pointes* is identified.
      - Naloxone (Narcan), 2 milligrams** intravenously or intraosseously.
      - Sodium bicarbonate, 1 milliequivalent per kilogram** intravenously or intraosseously.
    - If suspicious of calcium channel blocker toxicity or hyperkalemia:
      - Calcium chloride (10%), 1 gram** intravenously or intraosseously.
  - Ventricular Tachycardia without Pulses
    - Refer to *Ventricular Fibrillation* protocol.
- EDMCP Contact and Special Considerations
  - Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 10-2011 (memorandum 700.09); 06-2010 (memorandum 700.03); 07-2009; 02-2008.

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## Section 200.09: Chest Pain

1. History
  - 1.1. Onset and duration
  - 1.2. Location and radiation
  - 1.3. Quality (pleuritic, heavy, crushing, etc.)
  - 1.4. Precipitating (rest, exercise, emotional stress, etc.) and relieving factors (nitro, antacids, etc.)
  - 1.5. Medical illnesses (especially cardiac and respiratory disease)
  - 1.6. Smoking
  - 1.7. Recent cardiac-related surgery
2. Symptoms
  - 2.1. Diaphoresis
  - 2.2. Shortness of breath
  - 2.3. Cough and sputum production
  - 2.4. Nausea, vomiting
  - 2.5. Fever
  - 2.6. Chills
3. Signs
  - 3.1. Cardiac: neck vein distention, irregular pulse
  - 3.2. Respiratory: rales, rhonchi, wheezing, chest wall tenderness
  - 3.3. Skin: diaphoresis, cyanosis, peripheral edema
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. **Nitroglycerin, as prescribed to the patient**, assist patient in self-administering.
    - 4.3.1. Repeat patient assisted nitroglycerin administration every three to five minutes as needed in the presence of continued chest pain.
    - 4.3.2. Nitroglycerin is contraindicated:
      - 4.3.2.1. Systolic blood pressure is less than 90 mmHg;
      - 4.3.2.2. Heart rate is less than 50;
      - 4.3.2.3. Patient has taken an agent used in the treatment of erectile dysfunction:
        - 4.3.2.3.1. Sildenafil citrate (Viagra), tadalafil (Cialis), or vardenafil (Levitra) within twenty-four hours.
  - 4.4. **Aspirin (chewable), 162 milligrams**, chewed and swallowed. Contraindicated if the patient has taken any of the following within the past twelve hours:
    - 4.4.1. Warfarin (Coumadin);
    - 4.4.2. Clopidigrel (Plavix);
    - 4.4.3. Ticlopidine (Ticlid);
    - 4.4.4. Dipyridamole (Aggrenox), or
    - 4.4.5. Any other aspirin product.
  - 4.5. Obtain and record blood glucose measurement, if appropriate.
  - 4.6. Refer to *Chest Pain Transport Protocol*.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.

- 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
    - 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
  - 5.5. **Nitroglycerin, 0.4 milligram** sublingually.
    - 5.5.1. Nitroglycerin may be repeated every three to five minutes as needed in the presence of continued chest pain.
    - 5.5.2. Nitroglycerin is contraindicated:
      - 5.5.2.1. Systolic blood pressure is less than 90 mmHg;
      - 5.5.2.2. Heart rate is less than 50;
      - 5.5.2.3. Patient has taken an agent used in the treatment of erectile dysfunction:
        - 5.5.2.3.1. Sildenafil citrate (Viagra), tadalafil (Cialis), or vardenafil (Levitra) within twenty-four hours.
      - 5.5.2.4. Use with caution in the presence of right ventricular wall injury or suspected unstable angina.
  - 5.6. **Morphine sulfate, 2 milligrams** intravenously.
    - 5.6.1. May be repeated every five minutes to a maximum of 10 milligrams.
      - 5.6.1.1. Contraindicated in the presence of:
        - 5.6.1.1.1. Systolic blood pressure is less than 90 mmHg;
        - 5.6.1.1.2. Use with caution in the presence of right ventricular wall injury.
- 6. EDMCP Contact and Special Considerations.
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 10-2011 (memorandum 700.09); 07-2009; 02-2008.

## Section 200.10: Decompression Sickness/Dysbarism

1. History
  - 1.1. Scuba Diving: Air tank failure; rapid ascent; prolonged/repetitive dive profile
  - 1.2. Altitude: Depressurization or inadequate pressurization while flying at high altitude; high altitude exposure after scuba diving.
2. Symptoms
  - 2.1. Chest pain
  - 2.2. Dyspnea
  - 2.3. Cough
  - 2.4. Joint pain
  - 2.5. Cramps
  - 2.6. Headache
  - 2.7. Dizziness
  - 2.8. Fatigue
  - 2.9. Nausea & vomiting
  - 2.10. Paralysis
3. Signs
  - 3.1. Neurological: confusion, coma, seizures, spinal deficits (hemi/para/multiplegias)
  - 3.2. Respiratory: cough, respiratory distress without pneumothorax (decompression illness), pneumothorax, tension pneumothorax (air embolism)
  - 3.3. Skin: tenderness, mottling, rash from bubble emboli, subcutaneous emphysema
  - 3.4. Vital signs: hypotension (severe cases)
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Transport supine
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
    - 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
  - 5.5. Observe for signs of tension pneumothorax.
    - 5.5.1. Pleural decompression as needed.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

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History: 07-2012; 02-2008.

## Section 200.11: Dyspnea

1. History
  - 1.1. Onset (acute or gradual)
  - 1.2. Duration
  - 1.3. Exacerbating or alleviating factors
  - 1.4. Oral exposure/foreign bodies (toys, drugs, alcohol, food, chemicals, etc.)
  - 1.5. Trauma
  - 1.6. Environmental exposure
  - 1.7. Smoking
  - 1.8. Medical illnesses (especially COPD, asthma, diabetes, CHF, thrombophlebitis)
  - 1.9. Home oxygen
  - 1.10. Drug or alcohol use
2. Symptoms
  - 2.1. Chest pain (location, quality, position)
  - 2.2. Dyspnea
  - 2.3. Cough
  - 2.4. Sputum production or change
  - 2.5. Paresthesia in hands or mouth
  - 2.6. Calf pain (Homan's Sign)
  - 2.7. Fever
3. Signs
  - 3.1. Cardiovascular: neck vein distention, dysrhythmias
  - 3.2. HEENT: upper airway, facial edema, drooling, nasal flaring
  - 3.3. Neurological: decreased level of consciousness, restlessness, slurred speech
  - 3.4. Respiratory: stridor, rales, rhonchi, wheezing, decreased breath sounds, crepitus, subcutaneous emphysema, accessory muscle usage
  - 3.5. Skin: cyanosis, peripheral edema, hives, evidence of neck or chest trauma
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Assist with self-administration with bronchodilators.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.

- 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
- 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
- 5.5. If Acute Bronchospasm/Asthma (excluding CHF and COPD)
  - 5.5.1. **Albuterol (Proventil), 2.5 milligrams**, nebulized.
    - 5.5.1.1. Albuterol (Proventil) may be repeated to a total of three (3) treatments.
  - 5.5.2. **Methylprednisolone (Solu-Medrol), 125 milligrams**, intravenously.
  - 5.5.3. In severe or refractory cases: **epinephrine (1:1,000) 0.3 milligram**, subcutaneously.
  - 5.5.4. In the presence of a deteriorating or non-responding asthmatic, **magnesium sulfate, 2 grams in 50 milliliters of 0.9% sodium chloride**, infused over twenty to thirty minutes.
- 5.6. If Bronchospasm/COPD
  - 5.6.1. **Albuterol (Proventil), 2.5 milligrams**, nebulized.
    - 5.6.1.1. Albuterol (Proventil) may be repeated to a total of three (3) treatments.
  - 5.6.2. **Methylprednisolone (Solu-Medrol), 125 milligrams**, intravenously.
- 5.7. If Acute Pulmonary Edema
  - 5.7.1. **Nitroglycerin, 0.4 milligram**, sublingually.
    - 5.7.1.1. Nitroglycerin may be repeated every three to five minutes as needed in the presence of chest pain.
    - 5.7.1.2. Nitroglycerin is contraindicated:
      - 5.7.1.2.1. Systolic blood pressure is less than 90 mmHg;
      - 5.7.1.2.2. Patient has taken an agent used in the treatment of erectile dysfunction:
        - 5.7.1.2.2.1. Sildenafil citrate (Viagra), tadalafil (Cialis), or vardenafil (Levitra) within twenty-four hours.
      - 5.7.1.2.3. Use with caution in the presence of right ventricular wall injury.
  - 5.7.2. **Continuous positive airway pressure (CPAP).**
    - 5.7.2.1. Utilize 7.5 cm H<sub>2</sub>O valve.
    - 5.7.2.2. Adjust oxygen flow as necessary; maintain saturation between of ninety-four percent, or greater (≥94%) in the adequately breathing patient.
  - 5.7.3. **Furosemide (Lasix), 1 milligram per kilogram** intravenously or intraosseously. Minimum dose is 40 milligrams. Maximum dose not to exceed 100 milligrams.
  - 5.7.4. **Morphine sulfate, 2 milligrams** intravenously. May be repeated every five minutes to a maximum of 10 milligrams.
    - 5.7.4.1. Contraindicated in the presence of:
      - 5.7.4.1.1. Systolic blood pressure is less than 90 mmHg;
      - 5.7.4.1.2. Use with caution in the presence of right ventricular wall injury.
  - 5.7.5. **Albuterol (Proventil), 2.5 milligrams**, nebulized.
    - 5.7.5.1. Albuterol (Proventil) may be repeated to a total of three (3) treatments.

6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 02-2008.

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**Section 200.12: Hypertensive Emergencies (no chest pain/pulmonary edema)**

1. History
  - 1.1. Onset and duration
  - 1.2. History of hypertension
  - 1.3. Seizures
  - 1.4. Medical illnesses (especially DM, respiratory and cardiac disease, CVA, TIA)
  - 1.5. Pre-eclampsia
  - 1.6. Drug or alcohol use
  - 1.7. Head trauma
2. Symptoms
  - 2.1. Headache
  - 2.2. Nose bleed
  - 2.3. Dizziness
  - 2.4. Syncope
  - 2.5. Weakness
  - 2.6. Speech difficulties
  - 2.7. Abdominal pain
  - 2.8. Visual disturbances
  - 2.9. Projectile vomiting
3. Signs
  - 3.1. Cardiovascular: distended neck veins, extremity edema, pulmonary edema
  - 3.2. Neurological: decreased level of consciousness, impaired movement, symmetry of face and extremities, seizures, unequal pupils
  - 3.3. Skin: flushed, diaphoresis, pallor
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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## Section 200.13: Hyperthermia

1. History
  - 1.1. Onset and duration
  - 1.2. Patient age
  - 1.3. Patient attire
  - 1.4. Activity level (exercise induced?)
  - 1.5. Air temperature, humidity
  - 1.6. Drug or alcohol use
  - 1.7. Trauma
  - 1.8. Past medical history
  - 1.9. Obesity
2. Symptoms
  - 2.1. Chills
  - 2.2. Weakness
  - 2.3. Loss of consciousness, behavioral changes, delirium
  - 2.4. Sweats
  - 2.5. Muscle cramps
  - 2.6. Headache
  - 2.7. Thirst
  - 2.8. Nausea/vomiting
  - 2.9. Visual disturbances
3. Signs
  - 3.1. Neck: stiff
  - 3.2. Neurological: restlessness, confusion, delirium, psychosis, coma, seizures
  - 3.3. Respiratory: rales, wheezing
  - 3.4. Skin: warm to hot, pallor or flushing, moist or dry
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Move patient to cooler environment
  - 4.5. Heat Cramps
    - 4.5.1. Oral fluids as tolerated.
    - 4.5.2. Apply cold packs, sponge with cool water and fan.
  - 4.6. Heat exhaustion
    - 4.6.1. Keep patient supine
    - 4.6.2. Remove outer clothing
    - 4.6.3. Apply cold packs, sponge with cool water and fan.
  - 4.7. Heat Stroke
    - 4.7.1. Semi-Fowlers, with head elevated 15-30°
    - 4.7.2. Apply cold packs, sponge with cool water and fan.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.

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- 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
- 5.4. Establish vascular access, if appropriate.
  - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

## Section 200.14: Hypothermia

1. History
  - 1.1. Length of exposure
  - 1.2. Wet or dry
  - 1.3. Air/water temperature
  - 1.4. Wind
  - 1.5. History and timing of changes in mental status
  - 1.6. Drug or alcohol use
  - 1.7. Medical illnesses (cirrhosis, epilepsy, diabetes)
2. Symptoms
  - 2.1. Extremity pain
  - 2.2. Paresthesia (frostbite)
  - 2.3. Shivering
3. Signs
  - 3.1. Neurological: decreased level of consciousness, coma
  - 3.2. Skin: evidence of local trauma (blanching, blistering) erythema of extremities, ears, nose
  - 3.3. Vital Signs: bradycardia, hypotension, decreased respiratory rate
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Remove wet garments and protect from further heat loss.
  - 4.5. Avoid rough handling and excessive agitation.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate. Dysrhythmias may not respond to treatment in the presence of hypothermia.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused
      - 5.4.1.1. Make reasonable efforts to warm 0.9% sodium chloride before administration.
    - 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
  - 5.5. For pain associated with localized injury (frostbite):
    - 5.5.1. **Morphine sulfate, 2 milligrams** intravenously.
      - 5.5.1.1. May be repeated every five minutes to a maximum of 10 milligrams
6. EDMCP Contact and Special Considerations

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- 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 02-2008.

## Section 200.15: Nausea

1. History
  - 1.1. Isolated nausea
  - 1.2. Nausea following the administration of prehospital medications.
2. Symptoms
  - 2.1. Nausea
3. Signs
  - 3.1. Gastrointestinal: vomiting
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused
    - 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
  - 5.5. In patients greater than forty kilograms, administer **ondansetron (Zofran), 4 milligrams** intravenously over two to five minutes or intramuscularly if intravenous access cannot be obtained.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012 (new).

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## Section 200.16: Near-Drowning (Submersion)

1. History
  - 1.1. Length of submersion
  - 1.2. Fresh or salt water
  - 1.3. Warm or cold water
  - 1.4. Water depth
  - 1.5. Water contamination
  - 1.6. Trauma (diving accident, scuba diving, child abuse)
2. Symptoms
  - 2.1. Cough
  - 2.2. Dyspnea
  - 2.3. Pleuritic chest pain
  - 2.4. Vomiting
3. Signs
  - 3.1. Cardiovascular: dysrhythmias
  - 3.2. HEENT: head or neck trauma
  - 3.3. Neurological: seizures, decreased level of consciousness
  - 3.4. Respiratory: rales, rhonchi, wheezing, frothy sputum, respiratory distress, airway obstruction
  - 3.5. Skin: cyanosis, pallor, cold
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Spinal immobilization, if suspicion of trauma exists.
  - 4.5. Protect from heat loss
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
    - 5.1.1. **Continuous positive airway pressure (CPAP)**, in the presence of pulmonary edema.
      - 5.1.1.1. Utilize 7.5 cm H<sub>2</sub>O valve.
      - 5.1.1.2. Adjust oxygen flow as necessary; maintain saturation between of ninety-four percent, or greater (≥94%) in the adequately breathing patient.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.

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- 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
- 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
- 5.5. If evidence of pulmonary edema:
  - 5.5.1. **Furosemide (Lasix), 40 milligrams** intravenously, in the absence of hypotension.
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

## Section 200.17: Obstetrical

1. History
  - 1.1. Due date
  - 1.2. Ruptured membranes
  - 1.3. Vaginal bleeding
  - 1.4. Prenatal care
  - 1.5. Age
  - 1.6. Number of prior pregnancies (gravida), number of live births (para), number of miscarriages (abortion)
  - 1.7. Problems with current pregnancy
  - 1.8. Problems with previous pregnancies
  - 1.9. Last menstrual period
2. Symptoms
  - 2.1. Location of pain
  - 2.2. Regularity and timing of contractions
  - 2.3. Urge to push
  - 2.4. Bleeding
  - 2.5. Swelling of face or extremities
3. Signs
  - 3.1. Genitourinary: contraction and relaxation of uterus, vaginal bleeding or fluid (color, odor), crowning, abnormal presentation (foot, arm, cord)
  - 3.2. Skin: facial, extremity edema
  - 3.3. Vital Signs: routine, hypertension (pre-eclampsia)
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Prolapsed cord
    - 4.4.1. Place mother in knee-chest position or supine with pillows under buttocks.
    - 4.4.2. Wrap the cord in a saline moistened dressing. Saline should be warm, if possible.
    - 4.4.3. Palpate the cord for a pulse.
      - 4.4.3.1. If pulse is palpable, transport immediately and reassess for the presence of a pulse regularly.
      - 4.4.3.2. If no pulse is palpable, insert gloved hand in to vagina and lift the presenting part of the fetus off of the cord. Simultaneously, indirectly displace the fetus by applying pressure cephalically on the outer and lower abdominal wall.
  - 4.5. Limb presentation
    - 4.5.1. Place mother in knee-chest position or supine with pillows under buttocks.
    - 4.5.2. Transport immediately.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.

- 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
- 5.4. Establish vascular access, if appropriate.
- 5.5. Pregnancy-induced hypertension (pre-eclampsia, eclampsia)
  - 5.5.1. If patient is actively seizing:
    - 5.5.1.1. **Lorazepam (Ativan), 2 milligrams** intravenously or intraosseously.
      - 5.5.1.1.1. May repeat lorazepam (Ativan) once for a maximum of 4 milligrams.
    - 5.5.1.2. **Magnesium sulfate, 4 grams** in 50 milliliters 0.9% sodium chloride, infused over twenty to thirty minutes following management of seizure.
  - 5.5.2. For Systolic BP >160 mmHg on two readings,
    - 5.5.2.1. **Magnesium sulfate, 4 grams** in 50 milliliters 0.9% sodium chloride, infused over twenty to thirty minutes.
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 6.2. Pre-Eclampsia: Hypertension, edema and proteinuria developing during pregnancy. Occurs in about five percent of gravid patients. Usually develops after twentieth week of pregnancy.
    - 6.2.1. Mild Pre-eclampsia
      - 6.2.1.1. Blood pressure greater than 140 systolic.
      - 6.2.1.2. Blood pressure greater than 90 diastolic.
      - 6.2.1.3. Non-dependent edema (facial or hand edema). Edema is not a reliable sign as it is often not present in pre-eclampsia/eclampsia.
      - 6.2.1.4. Persistent or recurring headache.
      - 6.2.1.5. Vision changes (flashing lights, dots before eyes, dimming or blurring of vision).
      - 6.2.1.6. Abdominal pain.
      - 6.2.1.7. Diminished or infrequent urination (oliguria).
      - 6.2.1.8. Weight gain >2 pounds per week.
    - 6.2.2. Severe pre-eclampsia
      - 6.2.2.1. Blood pressure greater than 160/110.
      - 6.2.2.2. Generalized edema.
      - 6.2.2.3. Weight gain >6 pounds per week.
      - 6.2.2.4. Persistent or recurring headache.
      - 6.2.2.5. Vision changes (flashing lights, dots before eyes, dimming or blurring of vision).
      - 6.2.2.6. Abdominal pain.
      - 6.2.2.7. Diminished or infrequent urination (oliguria).
    - 6.2.3. Complications
      - 6.2.3.1. Complications of pre-eclampsia include early delivery and fetal complications due to prematurity as well as progression to eclampsia. Treatment of pre-eclampsia is bed rest and delivery.
  - 6.3. The occurrence of grand mal seizures, coma or pre-eclampsia can occur several weeks postpartum.

History: 07-2012; 07-2009 (formerly Pregnancy-induced Hypertension); 03-2008 (memorandum 700.01); 02-2008.

## Section 200.18: Ophthalmic Emergencies

1. History
  - 1.1. Mechanism of injury: blunt, penetrating, traumatic
  - 1.2. Description of scene
  - 1.3. Force involved
  - 1.4. Treatment prior to arrival
2. Symptoms
  - 2.1. Visual problems
3. Signs
  - 3.1. Eyes: lid laceration, blood anterior to pupil, pupil abnormalities
  - 3.2. Head: evidence of trauma
  - 3.3. Neurological: decreased level of consciousness
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. If direct trauma:
    - 4.3.1. Patch both eyes without pressure to globes; place shield over affected eye.
    - 4.3.2. If blood noted in anterior chamber (hyphema), transport with head of bed elevated at least 60 degrees.
  - 4.4. If chemical trauma:
    - 4.4.1. Irrigate affected eye with 0.9% sodium chloride for duration of transport or as tolerated.
  - 4.5. If atraumatic:
    - 4.5.1. Patch both eyes gently; apply raised cover (shield, styrofoam cup, etc.) to affected eye.
  - 4.6. If patient is being transported for treatment of diagnosed central retinal artery occlusion:
    - 4.6.1. Administer 100% oxygen via non-rebreathing mask.
    - 4.6.2. Place patient in trendelenburg position.
5. Advanced Life Support
  - 5.1. If oleum capsicum, "tear gas" or other like chemical irritant:
    - 5.1.1. **Tetracaine ophthalmic solution, two drops per eye**, following irrigation, if available.
      - 5.1.1.1. Tetracaine ophthalmic solution may be repeated once.
    - 5.1.2. If patient is in custody of law enforcement officers, request authorization to treat from the law enforcement officer in charge of patient.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 6.2. Remove contact lenses, if possible.

History: 07-2012; 07-2009; 02-2008.

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## Section 200.19: Overdose/Poisoning

1. History
  - 1.1. Route, type, time, quantity of exposure
  - 1.2. Accidental, intentional
  - 1.3. Bystander action prior to arrival
  - 1.4. Emesis (induced, spontaneous)
  - 1.5. Any antidote given
  - 1.6. Depression or suicidal
  - 1.7. Previous overdoses/poisonings
  - 1.8. History of drug/alcohol abuse
2. Symptoms
  - 2.1. Mouth or throat pain
  - 2.2. Burns around the mouth
  - 2.3. Eye irritation/burning
  - 2.4. Dyspnea
  - 2.5. Sleepiness
  - 2.6. Nausea, vomiting
  - 2.7. Abdominal pain
  - 2.8. Diarrhea
  - 2.9. Headache
  - 2.10. Itching
  - 2.11. Chest pain
  - 2.12. Depression
3. Signs
  - 3.1. Cardiovascular: dysrhythmias
  - 3.2. Gastrointestinal: vomiting, abdominal tenderness
  - 3.3. HEENT: abnormal breath odor, increased salivation, eye redness, excessive tearing
  - 3.4. Neurological: decreased level of consciousness, coma, seizures
  - 3.5. Respiratory: abnormal breathing patterns, labored respirations, wheezing
  - 3.6. Skin: cyanosis, rash, diaphoresis
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Decontaminate the patient in the presence of poisoning, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.

- 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
- 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
- 5.5. Anticholinergic (Organophosphate), symptomatic
  - 5.5.1. **Atropine, 0.5-1 milligram**, bolus.
    - 5.5.1.1. Repeat **atropine, 0.5-1 milligram** intravenously, every five minutes so long as symptoms persist.
- 5.6. Antipsychotic/Acute Dystonic Reaction
  - 5.6.1. **Diphenhydramine (Benadryl), 50 milligrams** intravenously or intramuscularly.
    - 5.6.1.1. **Diphenhydramine (Benadryl), 25 milligrams**, may be repeated once in ten minutes if dystonic reaction persists.
- 5.7. Beta Blocker, symptomatic (chest pain, syncope or hypotension in the presence of bradycardia or heart block)
  - 5.7.1. **Atropine, 0.5-1 milligram**, intravenously.
  - 5.7.2. **Transcutaneous pacemaker**, if symptoms persist.
    - 5.7.2.1. **Lorazepam (Ativan), 2 milligrams** intravenously, may be considered for sedation.
      - 5.7.2.1.1. **Lorazepam (Ativan), 2 milligrams**, may be repeated once, if necessary.
    - 5.7.2.2. Pacing should be considered as first line therapy in the presence of overt hemodynamic instability.
- 5.8. Calcium Channel Blocker, symptomatic (chest pain, syncope or hypotension in the presence of bradycardia or heart block)
  - 5.8.1. **Atropine, 0.5-1 milligram** intravenously.
    - 5.8.1.1. Repeat **atropine, 0.5-1 milligram** intravenously, every three to five minutes if rhythm persists to a maximum of 3 milligrams.
  - 5.8.2. **Calcium chloride, 1 gram** intravenously, if symptoms persist.
    - 5.8.2.1. **Calcium chloride, 1 gram** intravenously, may be repeated if symptoms persist.
  - 5.8.3. **Transcutaneous pacemaker**.
    - 5.8.3.1. **Lorazepam (Ativan), 2 milligrams** intravenously, may be considered for sedation.
    - 5.8.3.2. Pacing should be considered as first line therapy in the presence of overt hemodynamic instability.
- 5.9. Cyanide poisoning (intended for patients in cardiopulmonary arrest secondary to toxic inhalation in structure fires)
  - 5.9.1. **Hydroxocobalamin (Cyanokit) infusion, 5 grams** over 15 minutes, if available.
  - 5.9.2. A single repeat dose may be administered with concurrence of the EDMCP.
- 5.10. Opiate, symptomatic
  - 5.10.1. **Naloxone (Narcan), 0.4 milligram** intravenously.
    - 5.10.1.1. Naloxone (Narcan), 0.4 milligram, may be repeated every three minutes to a maximum dose of 4 milligrams.
    - 5.10.1.2. Naloxone (Narcan), 2 milligrams, may be administered intramuscularly in the absence of venous access.
- 5.11. Sympathomimetic (Cocaine), symptomatic (hypertension, tachycardia, agitation)



- 5.11.1. **Lorazepam (Ativan), 2 milligrams** intravenously. May be repeated once, if necessary.
- 5.12. Tricyclic and Tetracyclic Antidepressant
  - 5.12.1. In the presence of wide complex (QRS >0.12 second), hypotension or any dysrhythmia:
    - 5.12.1.1. **Sodium bicarbonate, 1 milliequivalent per kilogram** intravenously.
  - 5.12.2. In the presence of torsades de pointes:
    - 5.12.2.1. **Magnesium sulfate, 2 grams** intravenously.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 6.2. The following list provides a sampling of the various medications field providers may encounter. It is not inclusive of all medications and is intended solely as a reference.
    - 6.2.1. Central nervous system agents
      - 6.2.1.1. Sedatives:
        - 6.2.1.1.1. Barbituates: Seconal, Nembutal, Tuinal
        - 6.2.1.1.2. Non-barbituates: Quaalude, Sopors, Dalmane, Chloral hydrate, Placidyl
      - 6.2.1.2. Analgesics:
        - 6.2.1.2.1. Opiates: Heroin, Morphine, Demerol, Codeine, Percodan, Paregoric, Methadone, Lortab
        - 6.2.1.2.2. Non-narcotics: Talwin, Darvon, Acetaminophen, Salicylates, Phenylbutazone, Phenacetin
        - 6.2.1.2.3. Tranquilizers: Valium, Librium, Meprobamate, Vistaril, Thorazine
      - 6.2.1.3. Alcohols:
        - 6.2.1.3.1. Ethanol, Methanol, Isopropyl alcohol
      - 6.2.1.4. Hallucinogenics:
        - 6.2.1.4.1. Marijuana, Lyseric acid diethylamide (LSD), Cocaine, STP, Hashish
      - 6.2.1.5. Amphetamines:
      - 6.2.1.6. Diet pills, Benzedrine, "Speed"
      - 6.2.1.7. Antidepressants:
        - 6.2.1.7.1. Amitriptyline (*Elavil*, *Endep*, *Etrafon*, *Vanatrip*, *Levate*), Clomipramine (*Anafranil*), Doxepin (*Sinequan*, *Zonalon*, *Triadapin*), Imipramine (*Tofranil*, *Impril*), Nortriptyline (*Aventyl*; *Pamelor*, *Norventyl*), Desipramine (*Norpramin*), Protriptyline (*Vivactil*), Trimipramine (*Surmontil*), (*Limbitrol*) Amitriptyline + chlordiazepoxide
        - 6.2.1.7.2. Maprotiline (*Ludiomil*), Amoxapine (*Asendin*), Bupropion (*Wellbutrin*), Trazodone (*Desyrel*, *Trazorel*)
        - 6.2.1.7.3. Citalopram (*Celexa*), Fluoxetine (*Prozac*), Fluvoxamine (*Luvox*), Paroxetine (*Paxil*), Sertraline (*Zoloft*)
        - 6.2.1.7.4. Prochlorperazine (*Compazine*), Promethazine (*Phenergan*), Thorazine, Prolixin, Haloperidol
    - 6.2.2. Cardiac medications

- 6.2.2.1. Digitalis, Quinidine
- 6.2.2.2. Beta Blockers: Propranolol (*Inderal*), Atenolol (*Tenormin*), Metoprolol (*Lopressor*), Nadolol (*Corgard*), Timolol (*Blocadren*), Labetolol (*Trandate*), Esmolol (*Brevibloc*), Acebatolol (*Sectral*)
- 6.2.2.3. Other medications combined with beta blockers: Corzide (Nadolol/bendroflumethlazide), Inderide (Propranolol/HCTZ), Inderide LA) Propranolol/HCTZ), Lopressor HCT (Metoprolol/HCTZ), Tenoretic (Atenolol/Chlorthalidone), Timolide (Timolol/HCTZ), Ziac (Bisoprolol/HCTZ)
- 6.2.2.4. Calcium channel blockers: Amlodipine (*Norvasc*), Felodipine (*Plendil*, *Renedil*), Isradipine (*DynaCirc*), Nicardipine (*Cardene*), Nifedipine (*Procardia*, *Adalat*), Verapamil (*Calan*), Diltiazem (*Cardizem*)
- 6.2.3. Hypoglycemic agents
  - 6.2.3.1. Orinase, Diabinese, Dymelor, Metformin, Glipizide, Glyburide, Amaryl, Avandia, Actos, Byetta
- 6.2.4. Anticoagulants
  - 6.2.4.1. Coumadin, Heparin
- 6.2.5. Antibiotics
  - 6.2.5.1. Amoxil, Ceclor, Cefobid, Cleocin, Erythromycin, Geocillin, Ultracef, Vibramycin, Duricef, Keflex, Penicillin, Tetracycline
- 6.2.6. Common poisons:
  - 6.2.6.1. Parathion, Arsenic, Lead, Strychnine, Hydrocarbons, Acids and Alkalis

History: 07-2012; 07-2009; 03-2008 (memorandum 700.01); 02-2008.

## Section 200.20: Pain Management

1. History
  - 1.1. Chest pain associated with myocardial ischemia
  - 1.2. Dyspnea associated with pulmonary edema
  - 1.3. Isolated musculoskeletal injury
  - 1.4. Burns, in the absence of cardiopulmonary compromise, including localized cold injuries
  - 1.5. Sickle Cell Anemia
2. Symptoms
  - 2.1. Pain
3. Signs
  - 3.1. Skin: pallor, diaphoresis
  - 3.2. Vitals: tachycardia, tachypnea
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%)
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
  - 5.5. **Morphine sulfate, 2 milligrams** intravenously, for pain associated with: isolated extremity injury; burns, excluding those with accompanying cardiopulmonary compromise; chest pain suspicious of myocardial ischemia; or Sickle Cell crisis.
    - 5.5.1. Morphine Sulfate may be repeated in 2 milligram increments every five minutes to a maximum dose of 10 milligrams.
  - 5.6. Following administration of an analgesic:
    - 5.6.1. Assess and record changes in discomfort.
    - 5.6.2. Assess and document ventilation and perfusion status.
    - 5.6.3. Assess and document oxygen saturation and end-tidal CO<sub>2</sub>, as appropriate.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 02-2008.

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## Section 200.21: Seizure

1. History
  - 1.1. Onset
  - 1.2. Duration
  - 1.3. Type (grand-mal, focal, petit mal)
  - 1.4. Recovery of consciousness
  - 1.5. Incontinence
  - 1.6. Medical illnesses (especially prior seizures, diabetes, CVA, fever)
  - 1.7. Drug or alcohol withdrawal
  - 1.8. Head trauma
  - 1.9. Pregnancy
2. Symptoms
  - 2.1. Aura (visual or auditory hallucinations)
  - 2.2. Metallic taste in mouth
3. Signs
  - 3.1. Cardiovascular: check for pulses post seizure, as seizure may be first indication of cardiac arrest or serious dysrhythmia
  - 3.2. Genitourinary: incontinence
  - 3.3. HEENT: head trauma, tongue biting/oral trauma
  - 3.4. Neurological: seizures, decreased level of consciousness (postictal), focal neurological signs
  - 3.5. Skin: cyanosis, pallor, clammy children - rash, hot
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
  - 5.5. If seizure activity is present:
    - 5.5.1. **Lorazepam (Ativan), 2 milligrams** intravenously or intraosseously.
      - 5.5.1.1. May repeat lorazepam (Ativan) once for a maximum of 4 milligrams.
      - 5.5.1.2. Consider intramuscular administration if intravenous and intraosseous access is not accessible.
6. EDMCP Contact and Special Considerations.
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 03-2008 (memorandum 700.01); 02-2008.

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## Section 200.22: Snake Bite

1. History
  - 1.1. Type of snake
  - 1.2. Time of bite
  - 1.3. Age and size of patient
  - 1.4. Location of injury
  - 1.5. Treatment provided prior to EMS arrival
  - 1.6. Medical illnesses
2. Symptoms
  - 2.1. Paresthesia
  - 2.2. Local pain
  - 2.3. Peculiar or metallic taste in mouth
  - 2.4. Chills
  - 2.5. Nausea, vomiting
  - 2.6. Headache
  - 2.7. Dysphagia
3. Signs
  - 3.1. Skin: bite wound location, configuration (1, 2, or 3 fang marks, entire jaw imprint, none), local edema, discoloration
  - 3.2. Vital Signs: hypotension, fever
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Irrigate wound with 0.9% sodium chloride.
  - 4.5. Apply dry, sterile dressing.
  - 4.6. Mark initial edematous area with pen and note time.
  - 4.7. Immobilize affected part and remove distal jewelry.
  - 4.8. Attempt to identify what caused bite and bring to emergency department, if this can be done safely.
  - 4.9. If constricting bands in place upon arrival, remove.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
    - 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
  - 5.5. See Allergic Reaction protocol if signs or symptoms of allergic reaction.
6. EDMCP Contact and Special Considerations

## *Prehospital Standing Orders and Treatment Protocols*

- 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.



## Section 200.23: Stroke

1. History
  - 1.1. Onset and duration
  - 1.2. Where found
  - 1.3. Sequence of deficits
  - 1.4. Head or neck trauma
  - 1.5. Seizures
  - 1.6. Medical illnesses (especially diabetes, cardiovascular disease)
2. Symptoms
  - 2.1. Headache
  - 2.2. Confusion
  - 2.3. Seizures
3. Signs
  - 3.1. Neurological: decreased level of consciousness, impaired movement and symmetry of face and extremities, tremors, sensation changes
  - 3.2. Skin: diaphoresis, pallor
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement.
  - 4.4. Maintain patient in semi-Fowler's position with head elevated approximately thirty degrees, in the absence of trauma.
  - 4.5. Assess patient using the *Florida Bureau of EMS Stroke Alert Checklist*.
    - 4.5.1. Refer to Stroke Transport Protocol.
    - 4.5.2. Attach copy of *Florida Bureau of EMS Stroke Alert Checklist* to the patient care report and provide a copy of the form to the receiving facility.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
  - 5.5. Blood glucose <50 milligrams per deciliter.
    - 5.5.1. **Dextrose (50%), 25 grams** intravenously or intraosseously.
      - 5.5.1.1. **Glucagon, 1 milligram**, intramuscularly, in the absence of vascular access.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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## Section 200.24: Syncope

1. History
  - 1.1. Onset (gradual or abrupt)
  - 1.2. Duration
  - 1.3. Position (sitting, standing, lying down)
  - 1.4. Seizure activity
  - 1.5. Trauma
  - 1.6. Pregnancy
  - 1.7. Precipitating factors
  - 1.8. Medical illnesses (previous syncope, cardiac, CVA)
2. Symptoms
  - 2.1. Palpitations
  - 2.2. Chest pain
  - 2.3. Abdominal pain
  - 2.4. Back pain
  - 2.5. Nausea, vomiting
  - 2.6. Hematemesis, melena
  - 2.7. Headache
  - 2.8. Vertigo
3. Signs
  - 3.1. Abdominal: tenderness, possible pulsatile mass
  - 3.2. Cardiovascular: dysrhythmias
  - 3.3. HEENT: evidence of head trauma
  - 3.4. Neurological: decreased level of consciousness, coma
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Place patient in trendelenburg position in the presence of shock.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
    - 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

## Section 200.25: Trauma

1. History
  - 1.1. Mechanism of injury (blunt or penetrating)
  - 1.2. Blunt trauma: amount and direction of force
  - 1.3. Penetrating trauma: weapon, size of object, bullet caliber, trajectory of bullet
  - 1.4. Motor vehicle accident: condition of vehicle, dashboard, and steering wheel, speed of impact, seat belt use, patient trajectory
  - 1.5. Description of scene
  - 1.6. Treatment prior to arrival (patient movement)
  - 1.7. Time of injury
  - 1.8. Protective devices (helmet, air bag, restraint, etc.)
  - 1.9. Alterations in mentation (duration and progression)
  - 1.10. Drug or alcohol use
2. Symptoms
  - 2.1. Respiratory distress
  - 2.2. Chest pain
  - 2.3. Neck pain
  - 2.4. Hemoptysis
  - 2.5. Nausea/Vomiting
  - 2.6. Headache
  - 2.7. Diplopia or blurred vision
  - 2.8. Paresthesia
  - 2.9. Paralysis
3. Signs
  - 3.1. Abdomen: pain, tenderness
  - 3.2. Cardiovascular: muffled heart sounds, distended neck veins, narrow pulse pressure
  - 3.3. HEENT: Battle's sign, raccoon eyes, blood or fluid drainage from nose or ears, symmetry and reactivity of pupils
  - 3.4. Musculoskeletal: evidence of fracture or dislocation, soft tissue injury, loss of function
  - 3.5. Neck: tenderness
  - 3.6. Neurological: alterations in mentation, restlessness, seizure, coma
  - 3.7. Respiratory: apnea, abnormal chest wall movements (paradoxical, retractions), abnormal breath sounds, tracheal shift, subcutaneous emphysema
  - 3.8. Skin: cyanosis, pallor, mottling, entrance and exit wounds, cool, clammy, subcutaneous emphysema, "sucking" chest wound, soft tissue injury
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Appropriately immobilize spine.
  - 4.4. Immobilize all foreign objects in position found.
  - 4.5. Obtain and record blood glucose measurement, if appropriate.
  - 4.6. Refer to *Trauma Transport Protocol*.
  - 4.7. Abdominal Trauma
    - 4.7.1. Cover eviscerations with dressing moistened with sterile 0.9% sodium chloride.

- 4.8. Burns (chemical)
  - 4.8.1. Decontaminate
  - 4.8.2. Apply dry sterile dressings.
- 4.9. Burns (thermal)
  - 4.9.1. Apply dry sterile dressings.
- 4.10. Extremity Trauma (suspected fracture/dislocation)
  - 4.10.1. Suspected fracture or dislocation:
    - 4.10.1.1. Neurovascular function intact distal to injury:
      - 4.10.1.1.1. Immobilize.
    - 4.10.1.2. Neurovascular function compromised distal to injury:
      - 4.10.1.2.1. Attempt to return extremity to its anatomical position.
      - 4.10.1.2.2. Immobilize.
  - 4.10.2. Amputation:
    - 4.10.2.1. Incomplete:
      - 4.10.2.1.1. Immobilize in correct anatomical position.
    - 4.10.2.2. Complete:
      - 4.10.2.2.1. Irrigate amputated part with 0.9% sodium chloride and wrap in saline moistened sterile dressing.
      - 4.10.2.2.2. Wrap in plastic and keep cool during transport.
- 4.11. Head Trauma
  - 4.11.1. Elevate head of backboard thirty degrees in the absence of hypotension.
  - 4.11.2. Appropriate ventilation rates:
    - 4.11.2.1. Eucapneic (normal): twelve (12) breaths per minute.
    - 4.11.2.2. Hyperventilation: twenty (20) breaths per minute.
  - 4.11.3. Hyperventilate if herniation suspected:
    - 4.11.3.1. Asymmetrical pupils;
    - 4.11.3.2. Abrupt deterioration in mentation;
    - 4.11.3.3. Decorticate or decerebrate posturing; or
    - 4.11.3.4. Cushing's Triad (hypertension, bradycardia or hypoventilation).
- 4.12. Thoracic Trauma
  - 4.12.1. Open chest wound
    - 4.12.1.1. Apply occlusive dressing.
      - 4.12.1.1.1. Temporarily remove in the presence of deteriorating pulmonary status.
  - 4.12.2. Flail segment
    - 4.12.2.1. Attempt to stabilize with bulky dressing
    - 4.12.2.2. Assist ventilation with bag-mask ventilation.
- 5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Needle decompression for patient with tension pneumothorax as needed.
  - 5.3. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.3.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.4. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.5. Establish vascular access, if appropriate. Consider need for second vascular access point.
    - 5.5.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
  - 5.6. Burns (chemical)

- 5.6.1. Decontaminate
  - 5.6.2. Apply dry sterile dressings.
  - 5.6.3. Consider pain management, as appropriate.
- 5.7. Burns (thermal)
  - 5.7.1. Volume resuscitation in accordance with the *Parkland Burn Formula*.
  - 5.7.2. Consider pain management, as appropriate.
- 5.8. Extremity Trauma
  - 5.8.1. Consider pain management, as appropriate.
- 5.9. Head Trauma
  - 5.9.1. Target end-tidal carbon dioxide levels should be maintained between 30-35 mmHg in the intubated patient.
- 5.10. Thoracic Trauma
  - 5.10.1. Flail segment
    - 5.10.1.1. Attempt intubation.
  - 5.10.2. Tension pneumothorax
    - 5.10.2.1. Perform needle decompression
- 6. EDMCP Contact and Special Considerations
  - 6.1. In the presence of crush injury or suspected compartment syndrome:
    - 6.1.1. With the concurrence of the EDMCP, instill 50 milliequivalents of sodium bicarbonate into 1,000 milliliters of 0.9% sodium chloride and infuse at 150 milliliters per hour.
    - 6.1.2. Treatment outlined for *crush injury* and *compartment syndrome* are intended for patients who are entrapped for prolonged periods (i.e., building collapse, etc.) and not for isolated instances. For these unique circumstances, contact the EDMCP early in the extrication process and be prepared to administer sodium bicarbonate infusion prior to removal.
  - 6.2. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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## Section 200.26: Vaginal Hemorrhage

1. History
  - 1.1. Onset
  - 1.2. Duration
  - 1.3. Amount (number of pads or tampons, clots and tissue fragments)
  - 1.4. Menstrual history
  - 1.5. Contraception
  - 1.6. Gravida, Para, Abortion (GPA)
  - 1.7. Pregnant (due date)
  - 1.8. Postpartum (time and place of delivery)
  - 1.9. Medical illnesses (bleeding disorders, etc.)
2. Symptoms
  - 2.1. Abdominal pain, cramping
  - 2.2. Weakness
  - 2.3. Passage of clots, tissue fragments (bring to ED)
  - 2.4. Nausea, vomiting
  - 2.5. Thirst
  - 2.6. Dizziness
3. Signs
  - 3.1. Abdominal: tenderness, distension, guarding, rebound
  - 3.2. Neurological: decreased level of consciousness
  - 3.3. Skin: cool, clammy, diaphoresis, pallor
  - 3.4. Vital Signs: orthostasis, tachycardia, hypotension
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Apply pad to vaginal opening.
  - 4.5. Refer to *Obstetrical Transport Protocol*, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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## Section 300.00: Pediatric Protocols

This section contains standing orders for pediatric patients. Every attempt was made to maintain consistency in dosing by referring to the Broselow™ Pediatric Emergency Care tape. However, some medications authorized under Volusia County Prehospital Standing Orders and Treatment Protocols are not present on the resuscitation tape. Others' are present, but dosing is solely intended for resuscitation of patients in cardiopulmonary arrest. Below is a cross reference of the specific standing orders within this manual that do not refer to the Broselow™ Pediatric Emergency Care tape.

Based upon the strong utilization of this reference, agencies are required to maintain the most up-to-date version of the Broselow™ Pediatric Emergency Care tape on all advanced life support units.

Section	Medications
Section 300.01: Allergic Reactions	Albuterol (Proventil) Diphenhydramine (Benadryl) Epinephrine, 1:1,000 Methylprednisolone (Solu-Medrol)
Section 300.02: Altered Mental Status	Dextrose, 10%
Section 300.03: Cardiac Dysrhythmias	Lorazepam (Ativan)
Section 300.04: Cardiopulmonary Arrest	Dopamine (Intropin)
Section 300.05: Dyspnea	Albuterol (Proventil) Epinephrine, 1:1,000 Magnesium sulfate Methylprednisolone (Solu-Medrol)
Section 300.06: Nausea	Ondansetron (Zofran)
Section 300.09: Overdose/Poisoning	Atropine Diphenhydramine (Benadryl)
Section 300.10: Pain Management	Morphine sulfate



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## Section 300.01: Allergic Reactions

1. History
  - 1.1. Exposure, ingestion or contact (stings, drugs, foods, etc.)
  - 1.2. Prior allergic history
  - 1.3. Current medications
2. Symptoms
  - 2.1. Itching
  - 2.2. Rash
  - 2.3. Swelling
  - 2.4. Respiratory distress<sup>i</sup>
  - 2.5. Abdominal pain
  - 2.6. Nausea, vomiting
  - 2.7. Syncope
  - 2.8. Weakness
  - 2.9. Anxiety
  - 2.10. Choking sensation<sup>ii</sup>
  - 2.11. Cough
3. Signs
  - 3.1. HEENT: tongue or upper airway (uvula) edema
  - 3.2. Respiratory: wheezing, stridor<sup>iii</sup>, hoarseness, cough, upper airway noise
  - 3.3. Skin: rash, redness, urticaria (hives), generalized or local edema
  - 3.4. Vital signs: hypotension<sup>iv</sup>
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. In the presence of a moderate allergic reaction or severe systemic reaction:
    - 4.3.1. Epi-Pen Jr, 0.15 milligram, in patients between fifteen (15) and thirty (30) kilograms.
  - 4.4. Obtain and record blood glucose measurement, if appropriate.
  - 4.5. Nothing by mouth
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs or hypoperfusion are evident, bolus with 0.9% sodium chloride in accordance with Broselow™ Pediatric Emergency Care tape. Repeat as necessary to a maximum amount of sixty milliliters per kilogram.
  - 5.5. Mild Reaction (itching, urticaria)
    - 5.5.1. **Diphenhydramine (Benadryl) 1 milligram per kilogram<sup>v</sup>** (maximum 50 milligrams)
      - 5.5.1.1. May be administered intramuscularly if no venous access available.
  - 5.6. Moderate Reaction (dyspnea, wheezing, chest tightness)

- 5.6.1. **Epinephrine (1:1,000) 0.01 milligram per kilogram<sup>vi</sup>** subcutaneously. Maximum individual dose not to exceed 0.3 milligram.
- 5.6.2. **Albuterol (Proventil) 2.5 milligrams<sup>vii</sup>** via updraft treatment.
  - 5.6.2.1. Albuterol (Proventil) may be repeated to a total of three (3) treatments.
- 5.6.3. **Diphenhydramine (Benadryl) 1 milligram per kilogram<sup>viii</sup>** intravenously (maximum 50 milligrams)
  - 5.6.3.1. May be administered intramuscularly if no venous access available.
- 5.6.4. **Methylprednisolone (Solu-Medrol) 2 milligrams per kilogram<sup>ix</sup>** intravenously. Maximum dose 125 milligrams.
- 5.7. Severe systemic reaction (hypotension, stridor, severe respiratory distress)
  - 5.7.1. **Epinephrine (1:10,000) 0.01 milligram per kilogram<sup>x</sup>** intravenously. Maximum individual dose not to exceed 0.1 milligram.
    - 5.7.1.1. Epinephrine may be repeated every two to three minutes if condition persists or worsens.
  - 5.7.2. **Albuterol (Proventil) 2.5 milligrams<sup>xi</sup>** via updraft treatment.
    - 5.7.2.1. Albuterol (Proventil) may be repeated to a total of three (3) treatments.
  - 5.7.3. **Diphenhydramine (Benadryl) 1 milligram per kilogram<sup>xii</sup>** intravenously (maximum 50 milligrams)
    - 5.7.3.1. May be administered intramuscularly if no venous access available.
  - 5.7.4. **Methylprednisolone (Solu-Medrol) 2 milligrams per kilogram<sup>xiii</sup>**, intravenously. Maximum dose 125 milligrams.
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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<sup>i</sup> Denotes moderate to severe allergic reaction.

<sup>ii</sup> Denotes moderate to severe allergic reaction.

<sup>iii</sup> Denotes moderate to severe allergic reaction.

<sup>iv</sup> Denotes moderate to severe allergic reaction.

<sup>v</sup> Diphenhydramine dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.

<sup>vi</sup> Epinephrine dosing is protocol specific as dosing on the Broselow™ Pediatric Emergency Care tape is cardiopulmonary arrest specific.

<sup>vii</sup> Albuterol dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.

<sup>viii</sup> Diphenhydramine dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.

<sup>ix</sup> Methylprednisolone dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.

<sup>x</sup> Epinephrine dosing is protocol specific as dosing on the Broselow™ Pediatric Emergency Care tape is cardiopulmonary arrest specific.

<sup>xi</sup> Albuterol dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.

<sup>xii</sup> Diphenhydramine dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.

<sup>xiii</sup> Methylprednisolone dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.



## Section 300.02: Altered Mental Status

1. History
  - 1.1. Onset (acute vs. gradual)
  - 1.2. Duration
  - 1.3. History of trauma
  - 1.4. Description of scene (pills found, notes, syringes, etc.)
  - 1.5. Unusual odor in residence or at scene
  - 1.6. Recent emotional trauma or crisis (including suicidal or homicidal ideation)
  - 1.7. Drug or alcohol ingestion
  - 1.8. Toxic exposure
  - 1.9. Exertion or heat exposure
  - 1.10. Psychiatric disorders
  - 1.11. Medical illnesses (diabetes, seizures, etc.)
  - 1.12. Head trauma
  - 1.13. Drug overdose
  - 1.14. Seizures
  - 1.15. CVA
  - 1.16. Diabetes
  - 1.17. Other metabolic disorders, such as kidney or liver failure
  - 1.18. Sepsis
  - 1.19. Psychiatric illness
2. Symptoms
  - 2.1. Abrupt or bizarre behavior changes
3. Signs
  - 3.1. HEENT: breath odor (alcohol, ketones), pupil size and reactivity
  - 3.2. Neck: suspect c-spine injury in the presence of head trauma; nuchal rigidity (stiff neck)
  - 3.3. Neurological: decreased level of consciousness, abnormal pupil size, abnormal pupil symmetry and reactivity, seizures, focal deficits, hallucinations
  - 3.4. Other: evidence of trauma, medical alert tag
  - 3.5. Respiratory: abnormal breathing patterns
  - 3.6. Skin: needle tracks, cyanosis, diaphoresis
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement.
  - 4.4. Nothing by mouth, unless patient is a known diabetic and is able to self-administer Glucose paste, orange or apple juice
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs or hypoperfusion are evident, bolus with 0.9% sodium chloride in accordance with Broselow™ Pediatric Emergency Care tape.

- Repeat as necessary to a maximum amount of sixty milliliters per kilogram.
- 5.5. Blood glucose <60 milligrams per deciliter:
    - 5.5.1. Age one month to eleven years: **dextrose (25%) in accordance with Broselow™ Pediatric Emergency Care tape** intravenously. Maximum individual dose 25 grams.
    - 5.5.2. Neonate: **dextrose (10%), 0.5 gram (5 milliliters) per kilogram<sup>i</sup>** intravenously. Maximum individual dose 25 grams.
    - 5.5.3. **Glucagon, in accordance with Broselow™ Pediatric Emergency Care tape** in the absence of vascular access. Maximum individual dose 1 milligram.
  - 5.6. Options for preparing diluted dextrose solutions:
    - 5.6.1. Dextrose (25%)
      - 5.6.1.1. Instill 25 grams (50 milliliters) of dextrose (50%) in to a fifty milliliter bag of 0.9% sodium chloride. Yield: 100 milliliters of Dextrose (25%) in 0.9% sodium chloride.
      - 5.6.1.2. Draw up desired volume to be administered.
    - 5.6.2. Dextrose (10%)
      - 5.6.2.1. Instill 6.25 grams (12.5 milliliters) of dextrose (50%) in to a fifty milliliter bag of 0.9% sodium chloride. Yield: 62.5 milliliters of Dextrose (10%) in 0.9% sodium chloride.
      - 5.6.2.2. Draw up desired volume to be administered.
  - 6. EDMCP Contact and Special Considerations
    - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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<sup>i</sup> Dextrose dosing on the Broselow™ Pediatric Emergency Care tape is based upon a 25% solution. Neonates require a 10% solution and dosing is protocol specific.

### Section 300.03: Cardiac Dysrhythmia

1. History
  - 1.1. Onset (acute, gradual)
  - 1.2. Duration
  - 1.3. Precipitating events
  - 1.4. Medical illnesses (especially cardiac and respiratory disease)
2. Symptoms
  - 2.1. Chest pain/discomfort
  - 2.2. Dyspnea
  - 2.3. Nausea
3. Signs
  - 3.1. Cardiovascular: dysrhythmias
  - 3.2. Extremity: peripheral edema
  - 3.3. Neck: flat or distend neck veins.
  - 3.4. Neurological: decreased level of consciousness.
  - 3.5. Respiratory: rales, rhonchi, respiratory distress
  - 3.6. Skin: cool, diaphoretic, pallor, cyanosis.
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Initiate chest compressions in infants and children eight years of age or younger if heart rate less than sixty per minute (60 BPM) or poor systemic perfusion.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Establish vascular access, if appropriate.
    - 5.3.1. If clinical signs or hypoperfusion are evident, bolus with 0.9% sodium chloride in accordance with Broselow™ Pediatric Emergency Care tape. Repeat as necessary to a maximum amount of sixty milliliters per kilogram.
  - 5.4. Bradycardias
    - 5.4.1. Hemodynamically stable
      - 5.4.1.1. Strongly consider and aggressively treat for:
        - 5.4.1.1.1. Hypoxia
        - 5.4.1.1.2. Hypothermia
        - 5.4.1.1.3. Hypovolemia
        - 5.4.1.1.4. Traumatic brain injury
    - 5.4.2. Hemodynamically unstable
      - 5.4.2.1. Strongly consider and aggressively treat for:
        - 5.4.2.1.1. Hypoxia
        - 5.4.2.1.2. Hypothermia
        - 5.4.2.1.3. Hypovolemia
        - 5.4.2.1.4. Traumatic brain injury
      - 5.4.2.2. **Epinephrine (1:10,000), in accordance with Broselow™ Pediatric Emergency Care tape** intravenously.

- 5.4.2.2.1. Repeat **epinephrine (1:10,000)**, in accordance with **Broselow™ Pediatric Emergency Care tape** intravenously every three to five minutes if symptoms persist or there is no improvement.
    - 5.4.2.3. **Atropine, in accordance with Broselow™ Pediatric Emergency Care tape** intravenously.
    - 5.4.2.4. **Transcutaneous pacemaker.**
      - 5.4.2.4.1. **Lorazepam (Ativan), 0.05 milligram per kilogram<sup>i</sup>** intravenously, may be considered for sedation. Maximum dose of two milligrams. May be repeated once, if necessary.
      - 5.4.2.4.2. Pacing should be considered as first line therapy in the presence of heart block or heart transplant.
    - 5.4.2.5. **Dopamine infusion, in accordance with Broselow™ Pediatric Emergency Care tape.** Titrate to effect.
  - 5.5. Tachycardias with a narrow complex
    - 5.5.1. Hemodynamically stable
      - 5.5.1.1. Attempt to elicit vagal response.
    - 5.5.2. Hemodynamically unstable
      - 5.5.2.1. Narrow complex tachycardia
        - 5.5.2.1.1. **Adenosine (Adenocard), in accordance with Broselow™ Pediatric Emergency Care tape.**
        - 5.5.2.1.2. If initial dose fails to control rate, **adenosine (Adenocard), in accordance with Broselow™ Pediatric Emergency Care tape.**
      - 5.5.2.2. **Synchronized cardioversion**
        - 5.5.2.2.1. **Lorazepam (Ativan), 0.05 milligram per kilogram<sup>ii</sup>**, may be considered for sedation. Maximum dose of two milligrams. May be repeated once, if necessary.
        - 5.5.2.2.2. **Cardiovert in accordance with Broselow™ Pediatric Emergency Care tape.**
        - 5.5.2.2.3. Double initial energy setting for all subsequent cardioversion efforts.
  - 5.6. Tachycardias with a wide complex (0.09 second [90 milliseconds], or greater)
    - 5.6.1. Hemodynamically stable
      - 5.6.1.1. **Lidocaine, in accordance with Broselow™ Pediatric Emergency Care tape.**
      - 5.6.1.2. If torsades de pointes suspected, **magnesium sulfate, in accordance with Broselow™ Pediatric Emergency Care tape**, delivered over thirty seconds.
    - 5.6.2. Hemodynamically unstable
      - 5.6.2.1. **Synchronized cardioversion**
        - 5.6.2.1.1. **Lorazepam (Ativan), 0.05 milligrams per kilogram<sup>iii</sup>**, may be considered for sedation. May be repeated once, if necessary.
        - 5.6.2.1.2. **Cardiovert, in accordance with Broselow™ Pediatric Emergency Care tape.**
        - 5.6.2.1.3. Double the initial energy setting for all subsequent cardioversion efforts.
- 6. EDMCP Contact and Special Considerations

6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 10-2011 (memorandum 700.09); 07-2009; 03-2008 (memorandum 700.01); 02-2008.

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<sup>i</sup> Lorazepam dosing on the Broselow™ Pediatric Emergency Care tape is intended to treat seizures. Dosing for sedation during transcutaneous pacing and cardioversion is protocol specific.

<sup>ii</sup> Lorazepam dosing on the Broselow™ Pediatric Emergency Care tape is intended to treat seizures. Dosing for sedation during transcutaneous pacing and cardioversion is protocol specific.

<sup>iii</sup> Lorazepam dosing on the Broselow™ Pediatric Emergency Care tape is intended to treat seizures. Dosing for sedation during transcutaneous pacing and cardioversion is protocol specific.

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## Section 300.04: Cardiopulmonary Arrest

1. History
  - 1.1. Onset (acute, gradual)
  - 1.2. Duration
  - 1.3. Precipitating events
  - 1.4. Medical illnesses (especially cardiac and respiratory disease)
2. Symptoms
  - 2.1. None
3. Signs
  - 3.1. Respiratory: absent
  - 3.2. Vital Signs: absent
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. Provide positive pressure ventilation with supplemental oxygen.
  - 4.3. Begin cardiopulmonary resuscitation.
    - 4.3.1. Mechanical CPR devices are an acceptable alternative to manual compressions, if not contraindicated.
    - 4.3.2. Interruption of chest compressions should be limited to the performance of therapies that require doing so.
  - 4.4. Apply automatic external defibrillator and defibrillate if indicated.
  - 4.5. Obtain and record blood glucose measurement, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip.
  - 5.3. Establish vascular access, as appropriate.
  - 5.4. Asystole
    - 5.4.1. Confirm asystole in two leads.
    - 5.4.2. **Epinephrine (1:10,000), in accordance with Broselow™ Pediatric Emergency Care tape.**
      - 5.4.2.1. Repeat **epinephrine (1:10,000), in accordance with Broselow™ Pediatric Emergency Care tape**, every three to five minutes so long as rhythm persists.
    - 5.4.3. Consider:
      - 5.4.3.1. **Transcutaneous pacemaker**, in the presence of post heart transplant.
  - 5.5. Pulseless Electrical Activity
    - 5.5.1. **Epinephrine (1:10,000), in accordance with Broselow™ Pediatric Emergency Care tape.**
      - 5.5.1.1. Repeat **epinephrine (1:10,000), in accordance with Broselow™ Pediatric Emergency Care tape**, every three to five minutes so long as rhythm persists.
    - 5.5.2. Consider underlying etiology:
      - 5.5.2.1. Cardiogenic shock or pericardial tamponade.
        - 5.5.2.1.1. Establish second vascular access site and provide volume resuscitation in 500 milliliter increments.
        - 5.5.2.1.2. Consider **dopamine infusion, 5-20 micrograms per kilogram per minute<sup>i</sup>**.
      - 5.5.2.2. Tension pneumothorax
        - 5.5.2.2.1. Perform needle thoracostomy.

- 5.5.2.3. Hypovolemia
  - 5.5.2.3.1. Provide adequate volume resuscitation.
- 5.5.2.4. Hypoxemia
  - 5.5.2.4.1. Ensure adequate ventilation and oxygenation.
- 5.6. Ventricular Fibrillation
  - 5.6.1. **Defibrillate.**
    - 5.6.1.1. Deliver initial, single **defibrillation, in accordance with Broselow™ Pediatric Emergency Care tape.**
    - 5.6.1.2. Double initial energy setting for all subsequent electrical therapy.
    - 5.6.1.3. A pharmaceutical intervention should be delivered between defibrillations.
  - 5.6.2. **Epinephrine (1:10,000), in accordance with Broselow™ Pediatric Emergency Care tape.**
    - 5.6.2.1. Repeat **epinephrine (1:10,000), in accordance with Broselow™ Pediatric Emergency Care tape**, every three to five minutes if rhythm persists.
  - 5.6.3. Antidysrhythmic
    - 5.6.3.1. **Amiodarone (Cordarone), in accordance with Broselow™ Pediatric Emergency Care tape.**
    - 5.6.3.2. **Lidocaine, in accordance with Broselow™ Pediatric Emergency Care tape.**
      - 5.6.3.2.1. Repeat **lidocaine, in accordance with Broselow™ Pediatric Emergency Care tape**, every eight to ten minutes if rhythm persists to a maximum of three milligrams per kilogram.
      - 5.6.3.2.2. If dysrhythmia resolves, **in accordance with Broselow™ Pediatric Emergency Care tape**, titrating to effect.
  - 5.6.4. In the presence of recurrent or refractory ventricular fibrillation or *torsades des pointes*:
    - 5.6.4.1. **Magnesium sulfate, in accordance with Broselow™ Pediatric Emergency Care tape.** Consider early if *torsades des pointes* is identified.
- 5.7. Ventricular Tachycardia without Pulses
  - 5.7.1. Refer to *Ventricular Fibrillation* protocol.
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 06-2010 (memorandum 700.04); 07-2009; 02-2008.

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<sup>1</sup> Dopamine dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.



## Section 300.05: Dyspnea

1. History
  - 1.1. Onset (acute or gradual)
  - 1.2. Duration
  - 1.3. Exacerbating or alleviating factors
  - 1.4. Oral exposure/foreign bodies (toys, drugs, alcohol, food, chemicals, etc.)
  - 1.5. Trauma
  - 1.6. Environmental exposure
  - 1.7. Smoking
  - 1.8. Medical illnesses (asthma, diabetes, congenital heart disease)
  - 1.9. Home oxygen
  - 1.10. Drug or alcohol use
2. Symptoms
  - 2.1. Chest pain (location, quality, position)
  - 2.2. Dyspnea
  - 2.3. Cough
  - 2.4. Sputum production or change
  - 2.5. Paresthesia in hands or mouth
  - 2.6. Fever
3. Signs
  - 3.1. Cardiovascular: neck vein distention, dysrhythmias
  - 3.2. HEENT: upper airway, facial edema, drooling, nasal flaring
  - 3.3. Neurological: decreased level of consciousness, restlessness, slurred speech
  - 3.4. Respiratory: stridor, rales, rhonchi, wheezing, decreased breath sounds, crepitus, subcutaneous emphysema, accessory muscle usage
  - 3.5. Skin: cyanosis, peripheral edema, hives, evidence of neck or chest trauma
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. If Acute Bronchospasm/Asthma:
    - 4.4.1. Assist with self-administration with bronchodilators.
  - 4.5. If Foreign Body Airway Obstruction (FBAO):
    - 4.5.1. Partial obstruction:
      - 4.5.1.1. Do nothing to further agitate the patient.
    - 4.5.2. Complete obstruction:
      - 4.5.2.1. Age less than one year: alternate five back blows and five chest thrusts.
      - 4.5.2.2. Age one year or greater: provide abdominal thrusts
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.

- 5.4.1. If clinical signs or hypoperfusion are evident, bolus with 0.9% sodium chloride in accordance with Broselow™ Pediatric Emergency Care tape. Repeat as necessary to a maximum amount of sixty milliliters per kilogram.
- 5.5. If Acute Bronchospasm/Asthma:
  - 5.5.1. **Albuterol (Proventil), 2.5 milligrams<sup>i</sup>.**
    - 5.5.1.1. Albuterol (Proventil) may be repeated to a total of three (3) treatments.
  - 5.5.2. **Methylprednisolone (Solu-Medrol), 2 milligrams per kilogram<sup>ii</sup>.** Maximum dose 125 milligrams.
  - 5.5.3. In severe or refractory cases: **epinephrine (1:1,000) 0.01 milligram per kilogram<sup>iii</sup>** to a maximum of 0.3 milligram, subcutaneously.
  - 5.5.4. In the presence of a deteriorating or non-responding asthmatic, **magnesium sulfate, 50 milligrams per kilogram<sup>iv</sup>** (to a maximum of 2 grams) in 50 milliliters of 0.9% sodium chloride, infused over twenty to thirty minutes.
- 5.6. If Foreign Body Airway Obstruction (FBAO):
  - 5.6.1. Partial obstruction:
    - 5.6.1.1. Monitor. Intervene only if obstruction deteriorates.
  - 5.6.2. Complete obstruction:
    - 5.6.2.1. Attempt direct visualization and remove visible obstruction(s) with Magill forceps.
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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<sup>i</sup> Albuterol dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.

<sup>ii</sup> Methylprednisolone dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.

<sup>iii</sup> Epinephrine dosing is protocol specific as dosing on the Broselow™ Pediatric Emergency Care tape is cardiopulmonary arrest specific.

<sup>iv</sup> Magnesium sulfate dosing is protocol specific as dosing on the Broselow™ Pediatric Emergency Care tape is cardiopulmonary arrest specific.

## Section 300.06: Nausea

1. History
  - 1.1. Isolated nausea
  - 1.2. Nausea following the administration of prehospital medications.
2. Symptoms
  - 2.1. Nausea
3. Signs
  - 3.1. Gastrointestinal: vomiting
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
      - 5.2.1.1. Acquire right precordial leads in the presence of inferior wall injury.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs of hypoperfusion are evident, administer 250-500 milliliter fluid boluses of 0.9% sodium chloride. Repeat as necessary until signs resolve or two liters of crystalloid solution have been infused
      - 5.4.1.1. Make reasonable efforts to warm 0.9% sodium chloride before administration.
    - 5.4.2. If hypoperfusion does not respond to volume resuscitation, initiate **dopamine infusion, 5-20 micrograms per kilogram per minute** and titrate to effect.
  - 5.5. In patients less than forty kilograms, administer **ondansetron (Zofran), 0.1 milligram per kilogram<sup>1</sup> (maximum dosage of 4 milligrams)** intravenously over two to five minutes or intramuscularly if intravenous access cannot be obtained.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012 (new).

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<sup>i</sup> Ondansetron dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.

## Section 300.07: Near-Drowning (Submersion)

1. History
  - 1.1. Length of submersion
  - 1.2. Fresh or salt water
  - 1.3. Warm or cold water
  - 1.4. Water depth
  - 1.5. Water contamination
  - 1.6. Trauma (diving accident, scuba diving, child abuse)
2. Symptoms
  - 2.1. Cough
  - 2.2. Dyspnea
  - 2.3. Pleuritic chest pain
  - 2.4. Vomiting
3. Signs
  - 3.1. Cardiovascular: dysrhythmias
  - 3.2. HEENT: head or neck trauma
  - 3.3. Neurological: seizures, decreased level of consciousness
  - 3.4. Respiratory: rales, rhonchi, wheezing, frothy sputum, respiratory distress, airway obstruction
  - 3.5. Skin: cyanosis, pallor, cold
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Maintain body temperature.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs or hypoperfusion are evident, bolus with 0.9% sodium chloride in accordance with Broselow™ Pediatric Emergency Care tape. Repeat as necessary to a maximum amount of sixty milliliters per kilogram.
  - 5.5. If Evidence of Acute Pulmonary Edema:
    - 5.5.1. **Furosemide (Lasix), in accordance with Broselow™ Pediatric Emergency Care tape**, in the absence of hypotension.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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## Section 300.08: Newborn Care and Resuscitation

1. History
  - 1.1. Premature delivery
  - 1.2. Meconium staining
  - 1.3. Drug and/or alcohol use by mother
2. Symptoms
  - 2.1. None
3. Signs
  - 3.1. Cardiovascular: bradycardia
  - 3.2. Respiratory: insufficient ventilatory effort
  - 3.3. Skin: cyanosis, pallor
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Normal delivery
    - 4.4.1. Suction mouth, then nose, following delivery of head.
    - 4.4.2. Manipulate nuchal cord to facilitate delivery.
    - 4.4.3. Allow for natural delivery of newborn taking care to protect from expulsive delivery.
    - 4.4.4. Clamp cord at least eight inches from newborn's umbilicus with two clamps no less than two inches apart. Cut cord between clamps and assess for and manage any residual hemorrhage.
    - 4.4.5. Dry, maintain body temperature and stimulate.
  - 4.5. Breech delivery
    - 4.5.1. If newborn's head does not deliver within three minutes, insert two fingers in to the vagina, palm facing the newborn's face. Form a "v-shape" to allow for an air space for the newborn. Suction may be applied as necessary.
    - 4.5.2. Transport immediately.
  - 4.6. In the presence of bradycardia:
    - 4.6.1. If heart rate remains between 60 and 100 beats per minute following a minute of drying, warming, stimulation and oxygenation; begin CPR.
    - 4.6.2. If heart rate is less than 60 beats per minute at any time; begin cardiopulmonary resuscitation.
  - 4.7. In the presence of meconium staining:
    - 4.7.1. Aspirate meconium from oral and nasal cavities with bulb syringe or meconium aspirator.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs or hypoperfusion are evident, bolus with 0.9% sodium chloride in accordance with Broselow™ Pediatric Emergency Care tape.

Repeat as necessary to a maximum amount of sixty milliliters per kilogram.

5.5. In the presence of bradycardia:

5.5.1. If heart rate does not respond to drying, warming, stimulation, oxygenation or cardiopulmonary resuscitation:

5.5.1.1. **Epinephrine (1:1,000), in accordance with Broselow™ Pediatric Emergency Care tape.** May repeat at three to five minute intervals in the presence of bradycardia.

5.5.1.2. If opiate involvement is suspected:

5.5.1.2.1. **Naloxone (Narcan), in accordance with Broselow™ Pediatric Emergency Care tape.** May repeat once.

5.6. In the presence of meconium staining:

5.6.1. Intubate the trachea using a meconium aspirator and aspirate particulate matter. Repeat, rinsing between tracheal placements, until clear.

6. EDMCP Contact and Special Considerations

6.1. Dextrose administration in neonates shall be a ten percent (10%) concentration. Refer to Altered Mental Status section.

6.2. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 02-2008.



## Section 300.09: Overdose/Poisoning

1. History
  - 1.1. Route, type, time, quantity of exposure
  - 1.2. Accidental, intentional
  - 1.3. Bystander action prior to arrival
  - 1.4. Emesis (induced, spontaneous)
  - 1.5. Any antidote given
  - 1.6. Depression or suicidal
  - 1.7. Previous overdoses/poisonings
  - 1.8. History of drug/alcohol abuse
2. Symptoms
  - 2.1. Mouth or throat pain
  - 2.2. Burns around the mouth
  - 2.3. Eye irritation/burning
  - 2.4. Dyspnea
  - 2.5. Sleepiness
  - 2.6. Nausea, vomiting
  - 2.7. Abdominal pain
  - 2.8. Diarrhea
  - 2.9. Headache
  - 2.10. Itching
  - 2.11. Chest pain
  - 2.12. Depression
3. Signs
  - 3.1. Cardiovascular: dysrhythmias
  - 3.2. Gastrointestinal: vomiting, abdominal tenderness
  - 3.3. HEENT: abnormal breath odor, increased salivation, eye redness, excessive tearing
  - 3.4. Neurological: decreased level of consciousness, coma, seizures
  - 3.5. Respiratory: abnormal breathing patterns, labored respirations, wheezing
  - 3.6. Skin: cyanosis, rash, diaphoresis
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
  - 4.4. Decontaminate the patient in the presence of poisoning, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs or hypoperfusion are evident, bolus with 0.9% sodium chloride in accordance with Broselow™ Pediatric Emergency Care tape. Repeat as necessary to a maximum amount of sixty milliliters per kilogram.

- 5.5. Anticholinergic (Organophosphate), symptomatic
  - 5.5.1. **Atropine, 0.05 milligram per kilogram<sup>i</sup>.**
    - 5.5.1.1. Repeat **atropine, 0.05 milligram per kilogram**, every two to five minutes so long as symptoms persist.
- 5.6. Antipsychotic/Acute Dystonic Reaction
  - 5.6.1. **Diphenhydramine (Benadryl), 1 milligram per kilogram<sup>ii</sup>** (maximum 50 milligrams).
- 5.7. Calcium Channel Blocker, symptomatic (chest pain, syncope or hypotension in the presence of bradycardia or heart block)
  - 5.7.1. **Atropine, in accordance with Broselow™ Pediatric Emergency Care tape.**
  - 5.7.2. **Calcium chloride, in accordance with Broselow™ Pediatric Emergency Care tape.**
- 5.8. Opiate, symptomatic
  - 5.8.1. **Naloxone (Narcan) in accordance with Broselow™ Pediatric Emergency Care tape.**
- 5.9. Tricyclic and Tetracyclic Antidepressant
  - 5.9.1. In the presence of wide complex (QRS >0.12 second), hypotension or any dysrhythmia:
    - 5.9.1.1. **Sodium bicarbonate, in accordance with Broselow™ Pediatric Emergency Care tape.**
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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<sup>i</sup> Atropine dosing is protocol specific as dosing on the Broselow™ Pediatric Emergency Care tape is cardiopulmonary arrest specific.

<sup>ii</sup> Diphenhydramine dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.

## Section 300.10: Pain Management

1. History
  - 1.1. Chest pain associated with myocardial ischemia
  - 1.2. Isolated musculoskeletal injury secondary
  - 1.3. Burns, in the absence of cardiopulmonary compromise, including localized cold injuries
  - 1.4. Sickle Cell Anemia
2. Symptoms
  - 2.1. Pain
3. Signs
  - 3.1. Skin: pallor, diaphoresis
  - 3.2. Vitals: tachycardia, tachypnea
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%)
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs or hypoperfusion are evident, bolus with 0.9% sodium chloride in accordance with Broselow™ Pediatric Emergency Care tape. Repeat as necessary to a maximum amount of sixty milliliters per kilogram.
  - 5.5. **Morphine sulfate, 0.1 milligram per kilogram<sup>i</sup>** (maximum individual dose 2 milligrams). May repeat morphine dosing once for pain associated with:
    - 5.5.1. Isolated extremity injury;
    - 5.5.2. Burns, excluding those with accompanying cardiopulmonary compromise;
    - 5.5.3. Chest pain suspicious of myocardial ischemia; or
    - 5.5.4. Sickle Cell crisis.
  - 5.6. Following administration of an analgesic:
    - 5.6.1. Assess and record changes in discomfort.
    - 5.6.2. Assess and document ventilation and perfusion status.
    - 5.6.3. Assess and document oxygen saturation and end-tidal CO<sub>2</sub>, if available by nasal cannula.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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<sup>i</sup> Morphine dosing is protocol specific as it is not listed on the Broselow™ Pediatric Emergency Care tape.

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## Section 300.11: Seizure

1. History
  - 1.1. Onset
  - 1.2. Duration
  - 1.3. Type (grand-mal, focal, petit mal)
  - 1.4. Recovery of consciousness
  - 1.5. Incontinence
  - 1.6. Medical illnesses (especially prior seizures, diabetes, CVA, fever)
  - 1.7. Drug or alcohol withdrawal
  - 1.8. Head trauma
  - 1.9. Pregnancy
2. Symptoms
  - 2.1. Aura (visual or auditory hallucinations)
  - 2.2. Metallic taste in mouth
3. Signs
  - 3.1. Cardiovascular: check for pulses post seizure, as seizure may be first indication of cardiac arrest or serious dysrhythmia
  - 3.2. Genitourinary: incontinence
  - 3.3. HEENT: head trauma, tongue biting/oral trauma
  - 3.4. Neurological: seizures, decreased level of consciousness (postictal), focal neurologic signs
  - 3.5. Skin: cyanosis, pallor, clammy children - rash, hot
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Obtain and record blood glucose measurement, if appropriate.
5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.2.1. Acquire and evaluate 12 lead ECG, if appropriate.
  - 5.3. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
  - 5.4. Establish vascular access, if appropriate.
    - 5.4.1. If clinical signs or hypoperfusion are evident, bolus with 0.9% sodium chloride in accordance with Broselow™ Pediatric Emergency Care tape. Repeat as necessary to a maximum amount of sixty milliliters per kilogram.
  - 5.5. If seizure activity is present:
    - 5.5.1. **Lorazepam (Ativan), in accordance with Broselow™ Pediatric Emergency Care tape.**
    - 5.5.2. May repeat above dose once.
6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 03-2008 (memorandum 700.01); 02-2008.

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## Section 300.12: Trauma

1. History
  - 1.1. Mechanism of injury (blunt or penetrating)
  - 1.2. Blunt trauma: amount and direction of force
  - 1.3. Penetrating trauma: weapon, size of object, bullet caliber, trajectory of bullet
  - 1.4. Motor vehicle accident: condition of vehicle, dashboard, and steering wheel, speed of impact, seat belt use, patient trajectory
  - 1.5. Description of scene
  - 1.6. Treatment prior to arrival (patient movement)
  - 1.7. Time of injury
  - 1.8. Protective devices (helmet, air bag, restraint, etc.)
  - 1.9. Alterations in mentation (duration and progression)
  - 1.10. Drug or alcohol use
2. Symptoms
  - 2.1. Respiratory distress
  - 2.2. Chest pain
  - 2.3. Neck pain
  - 2.4. Hemoptysis
  - 2.5. Nausea/Vomiting
  - 2.6. Headache
  - 2.7. Diplopia or blurred vision
  - 2.8. Paresthesia
  - 2.9. Paralysis
3. Signs
  - 3.1. Abdomen: painful, tender, distended
  - 3.2. Cardiovascular: muffled heart sounds, distended neck veins, narrow pulse pressure
  - 3.3. HEENT: Battle's sign, raccoon eyes, blood or fluid drainage from nose or ears, symmetry and reactivity of pupils
  - 3.4. Musculoskeletal: evidence of fracture or dislocation, soft tissue injury, loss of function
  - 3.5. Neck: tenderness
  - 3.6. Neurological: alterations in mentation, restlessness, seizure, coma
  - 3.7. Respiratory: apnea, abnormal chest wall movements (paradoxical, retractions), abnormal breath sounds, tracheal shift, subcutaneous emphysema
  - 3.8. Skin: cyanosis, pallor, mottling, entrance and exit wounds, cool, clammy, subcutaneous emphysema, "sucking" chest wound, soft tissue injury
4. Basic Life Support
  - 4.1. Perform appropriate assessment and interventions, including cervical spine immobilization, if appropriate.
  - 4.2. If the patient's oxyhemoglobin saturation is less than ninety-four percent (<94%), administer supplemental oxygen to achieve saturation of ninety-four percent, or greater (≥94%).
  - 4.3. Appropriately immobilize spine.
  - 4.4. Immobilize all foreign objects in position found.
  - 4.5. Obtain and record blood glucose measurement, if appropriate.
  - 4.6. Refer to *Trauma Transport Protocol*.
  - 4.7. Abdominal Trauma
    - 4.7.1. Cover eviscerations with dressing moistened with sterile 0.9% sodium chloride.

- 4.8. Burns (chemical)
  - 4.8.1. Decontaminate
  - 4.8.2. Apply dry sterile dressings.
  - 4.8.3. Consider pain management, as appropriate.
- 4.9. Burns (thermal)
  - 4.9.1. Apply dry sterile dressings.
- 4.10. Extremity Trauma (suspected fracture/dislocation)
  - 4.10.1. Suspected fracture or dislocation:
    - 4.10.1.1. Neurovascular function intact distal to injury:
      - 4.10.1.1.1. Immobilize.
    - 4.10.1.2. Neurovascular function compromised distal to injury:
      - 4.10.1.2.1. Attempt to return extremity to its anatomical position.
      - 4.10.1.2.2. Immobilize.
  - 4.10.2. Amputation:
    - 4.10.2.1. Incomplete:
      - 4.10.2.1.1. Immobilize in correct anatomical position.
    - 4.10.2.2. Complete:
      - 4.10.2.2.1. Irrigate amputated part with 0.9% sodium chloride and wrap in saline moistened sterile dressing.
      - 4.10.2.2.2. Wrap in plastic and keep cool during transport.
- 4.11. Head Trauma
  - 4.11.1. Elevate head of backboard thirty degrees in the absence of hypotension.
  - 4.11.2. Appropriate ventilation rates:
    - 4.11.2.1. Child (age one year to eight years):
      - 4.11.2.1.1. Eucapneic (normal): twenty (20) breaths per minute.
      - 4.11.2.1.2. Hyperventilation: thirty (30) breaths per minute.
    - 4.11.2.2. Infant (age birth to one year):
      - 4.11.2.2.1. Eucapneic (normal): thirty (30) breaths per minute.
      - 4.11.2.2.2. Hyperventilation: thirty-five (35) breaths per minute.
  - 4.11.3. Hyperventilate if herniation suspected:
    - 4.11.3.1. Asymmetrical pupils;
    - 4.11.3.2. Abrupt deterioration in mentation;
    - 4.11.3.3. Decorticate or decerebrate posturing; or
    - 4.11.3.4. Cushing's Triad (hypertension, bradycardia or hypoventilation).
- 4.12. Thoracic Trauma
  - 4.12.1. Open chest wound
    - 4.12.1.1. Apply occlusive dressing.
      - 4.12.1.1.1. Temporarily remove in the presence of deteriorating ventilatory status.
  - 4.12.2. Flail segment
    - 4.12.2.1. Attempt to stabilize with bulky dressing
    - 4.12.2.2. Assist ventilation with bag-mask ventilation.
- 5. Advanced Life Support
  - 5.1. Advanced airway/ventilatory management, if appropriate.
  - 5.2. Needle decompression for patient with tension pneumothorax as needed.
  - 5.3. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
    - 5.3.1. Acquire and evaluate 12 lead ECG, if appropriate.



- 5.4. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
- 5.5. Establish vascular access, if appropriate.
  - 5.5.1. If clinical signs or hypoperfusion are evident, bolus with 0.9% sodium chloride in accordance with Broselow™ Pediatric Emergency Care tape. Repeat as necessary to a maximum amount of sixty milliliters per kilogram.
- 5.6. Burns (chemical)
  - 5.6.1. Decontaminate
  - 5.6.2. Apply dry sterile dressings
  - 5.6.3. Consider pain management, as appropriate.
- 5.7. Burns (thermal)
  - 5.7.1. Volume resuscitation in accordance with the *Parkland Burn Formula*:
  - 5.7.2. Consider pain management, as appropriate.
- 5.8. Extremity Trauma
  - 5.8.1. Consider pain management, as appropriate.
- 5.9. Head Trauma
  - 5.9.1. Target end-tidal carbon dioxide levels should be maintained between 30-35 mmHg in the intubated patient.
- 5.10. Thoracic Trauma
  - 5.10.1. Flail segment
    - 5.10.1.1. Attempt intubation.
  - 5.10.2. Tension pneumothorax
    - 5.10.2.1. Perform needle decompression.
- 6. EDMCP Contact and Special Considerations
  - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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**Section 400.00: Procedural Protocols**

This section is designed to give the provider an overview of the procedures authorized under Volusia County Prehospital Standing Orders and Treatment Protocols. Providers are encouraged to reference prehospital texts or seek additional clarification if further clarification is necessary or questions arise.

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**Section 400.01: Automatic External Defibrillator (AED)**

1. Skill level
  - 1.1. Basic life support (BLS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Pulselessness
  - 3.2. Apnea
4. Contraindications
  - 4.1. Patients who are breathing
  - 4.2. Patients with a pulse
  - 4.3. Patients that are conscious
5. Complications/Precautions
  - 5.1. None.
6. Procedure
  - 6.1. Begin cardiopulmonary resuscitation.
  - 6.2. Turn AED on and ensure device is working properly through self-test and warnings.
  - 6.3. Apply pads.
  - 6.4. Allow device to analyze rhythm and follow instructions.
7. Equipment
  - 7.1. AED
  - 7.2. Defibrillation pads, adult
  - 7.3. Defibrillation pads, pediatric
8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 8.2. Pediatric pads are recommended for patients weighing less than thirty-two kilograms; however, if no pediatric pads are available, adult pads are a suitable substitute.

History: 02-2008.

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**Section 400.02: Blood Glucose Monitoring**

1. Skill level
  - 1.1. Basic life support (BLS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Altered mental status
  - 3.2. Diabetic
  - 3.3. Seizure
  - 3.4. Syncope
4. Contraindications
  - 4.1. None
5. Complications/Precautions
  - 5.1. Infection
  - 5.2. Erroneous measurements
6. Procedure
  - 6.1. Ensure all equipment is assembled, readily available and operational.
  - 6.2. Choose location to acquire sample and cleanse skin with alcohol prep pad.
  - 6.3. Using a lancet, pierce the skin and capture the sample using the collection tube,
7. Equipment
  - 7.1. Blood glucose meter
  - 7.2. Test strips for collecting sample
  - 7.3. Lancets
8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 02-2008 (new).

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**Section 400.03: Continuous Positive Airway Pressure (CPAP)**

9. Skill level
  - 9.1. Advanced life support (ALS)
10. Physician authorization required prior to performing skill
  - 10.1. No
11. Indications
  - 11.1. Pulmonary edema secondary to congestive heart failure
  - 11.2. Pulmonary edema secondary to submersion/near-drowning that does not respond to one hundred percent supplemental oxygen
12. Contraindications
  - 12.1. Ineffective ventilatory effort
  - 12.2. Depressed level of consciousness
  - 12.3. Inability to maintain airway
  - 12.4. Hypotension
  - 12.5. Vomiting
  - 12.6. Gastric distension
13. Complications/Precautions
  - 13.1. Hypotension
14. Procedure
  - 14.1. Ensure all equipment is assembled, readily available and operational.
  - 14.2. Allow patient to assume position of comfort.
  - 14.3. Begin flow by turning to the 'on' position.
  - 14.4. Ensure that the flow adjustment valve is on the open position.
  - 14.5. Ensure that the concentration adjustment valve is in the closed position allowing for 0.28 FiO<sub>2</sub>.
  - 14.6. Apply mask to patient's face.
  - 14.7. Observe for improvement of symptoms.
    - 14.7.1. The oxygen flow valve may be opened in one half turn increments to allow for a greater fraction of inspired oxygen (FiO<sub>2</sub>).
15. Equipment
  - 15.1. CPAP generator
  - 15.2. Disposable, low pressure circuit
  - 15.3. Disposable mask with harness
  - 15.4. Disposable pressure valve, 7.5 cm H<sub>2</sub>O
  - 15.5. Oxygen source
16. EDMCP Contact and Special Considerations
  - 16.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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## Section 400.04: Cricothyrotomy

1. Skill level
  - 1.1. Advanced life support (ALS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Inability of the patient to sufficiently maintain adequate ventilation and oxygenation, and;
  - 3.2. Inability of the provider to sufficiently maintain adequate ventilation and oxygenation by way of bag-mask ventilation; and
  - 3.3. Inability of the provider to intubate.
4. Contraindications
  - 4.1. Patients who are able to adequately ventilate and oxygenate spontaneously
  - 4.2. Patients who are able to be adequately ventilated and oxygenated by a field provider
5. Complications/Precautions
  - 5.1. Improper placement
  - 5.2. Excessive hemorrhage
6. Procedure
  - 6.1. Quick Fix Cricothyrotomy Kit: indicated for patients eight years of age or greater
    - 6.1.1. Ensure all equipment is assembled, readily available and operational.
    - 6.1.2. Identify appropriate landmarks.
    - 6.1.3. Prepare area with alcohol or povidone-iodine (Betadine).
    - 6.1.4. Hold the skin taut over the thyroid cartilage.
    - 6.1.5. Make a one half inch vertical incision through the skin over the cricoid membrane to expose the trachea.
    - 6.1.6. Push the blade of the scalpel through membrane and make a small horizontal incision.
    - 6.1.7. Use forceps to open membrane.
    - 6.1.8. Insert the tube into trachea past cuffed end.
    - 6.1.9. Inflate cuff with air.
    - 6.1.10. Ventilate and assess placement.
    - 6.1.11. Secure tube.
  - 6.2. Needle: indicated for patients under eight years of age
    - 6.2.1. Ensure all equipment is assembled, readily available and operational.
    - 6.2.2. Identify appropriate landmarks.
    - 6.2.3. Prepare area with alcohol or povidone-iodine (Betadine).
    - 6.2.4. Puncture cricothyroid membrane at a 45 degree angle caudally while aspirating to identify the lumen of the trachea.
    - 6.2.5. Advance the catheter into the trachea and withdraw the needle.
    - 6.2.6. While holding the catheter in place, attach the standard connection from the 3.5 millimeter endotracheal tube.
    - 6.2.7. Ventilate with a bag-valve device and confirm placement.
7. Equipment
  - 7.1. Quick Fix Cricothyrotomy Kit
    - 7.1.1. Commercially available kit allowing the introduction of an airway through the cricothyroid membrane.
    - 7.1.2. Bag-Mask ventilation device capable of delivering supplemental oxygen.
    - 7.1.3. Oxygen source.
  - 7.2. Needle

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- 7.2.1. 14 gauge by two inch over the needle catheter.
- 7.2.2. Ten milliliter syringe.
- 7.2.3. Alcohol or povidone-iodine (Betadine) preps.
- 7.2.4. Tape, for securing catheter.
- 7.2.5. Standard 15 millimeter/22 millimeter adapter from a 3.5 millimeter endotracheal tube.
- 7.2.6. Bag-Mask ventilation device capable of delivering supplemental oxygen.
- 7.2.7. Oxygen source.
- 8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2014; 07-2012; 02-2008.

## Section 400.05: Defibrillation (manual) and Synchronized Cardioversion

1. Skill level
  - 1.1. Advanced life support (ALS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Ventricular fibrillation and pulseless ventricular tachycardia (defibrillation)
  - 3.2. Tachydysrhythmias (synchronized cardioversion)
4. Contraindications
  - 4.1. None in the presence of a rhythm requiring electrical therapy.
5. Complications/Precautions
  - 5.1. Deterioration of dysrhythmia (synchronized cardioversion)
6. Procedure
  - 6.1. Defibrillation (manual defibrillator)
    - 6.1.1. Ensure all equipment is assembled, readily available and operational.
    - 6.1.2. Confirm rhythm is ventricular fibrillation or pulseless ventricular tachycardia.
    - 6.1.3. Prep skin for application of pads.
    - 6.1.4. Apply pads in the sternum/apex configuration. Alternatively, the anterior/posterior configuration is acceptable or paddles may be utilized.
    - 6.1.5. Select appropriate energy level to deliver and charge defibrillator.
    - 6.1.6. Ensure that no one is in contact with the patient.
    - 6.1.7. Deliver energy, reevaluate patient's rhythm and deliver appropriate subsequent therapy in accordance with current resuscitative guidelines.
  - 6.2. Synchronized cardioversion
    - 6.2.1. Ensure all equipment is assembled, readily available and operational.
    - 6.2.2. Prep skin for application of pads.
    - 6.2.3. Apply pads in the sternum/apex configuration. Alternatively, the anterior/posterior configuration is acceptable or paddles may be utilized.
    - 6.2.4. Engage the synchronization feature on the defibrillator.
    - 6.2.5. Select appropriate energy level to deliver and charge defibrillator.
    - 6.2.6. Ensure that no one is in contact with the patient.
    - 6.2.7. Deliver energy and reevaluate patient's rhythm.
    - 6.2.8. If subsequent synchronized cardioversion is indicated, reengage the synchronization feature on the defibrillator each time before delivering a shock, if necessary.
7. Equipment
  - 7.1. Monitor/Defibrillator
  - 7.2. Defibrillation/Cardioversion pads, adult
  - 7.3. Defibrillation/Cardioversion pads, pediatric
8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

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## Section 400.06: Dual Lumen Airway

1. Skill level
  - 1.1. Basic life support (BLS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Apnea
  - 3.2. Pulseless
  - 3.3. Unconscious
  - 3.4. Need for prolonged positive pressure ventilation.
4. Contraindications
  - 4.1. Persons under five feet in height.
  - 4.2. Conscious or semi-conscious persons.
  - 4.3. Intact gag reflex.
  - 4.4. Presence of esophageal disease.
  - 4.5. Caustic ingestion.
  - 4.6. Underlying problem that could result in an edematous airway.
5. Complications/Precautions
  - 5.1. Maxillofacial injuries.
6. Procedure
  - 6.1. Ensure all equipment is assembled, readily available and operational.
  - 6.2. Place patient supine with head and neck in neutral position.
  - 6.3. Manually immobilize cervical spine if trauma suspected.
  - 6.4. Grasp lower jaw between thumb and index finger and displace anteriorly.
  - 6.5. Advance dual lumen airway into pharynx along the midline. If resistance is met, redirect tube.
  - 6.6. Advance tube until incisors are between lines on the proximal end of the tube.
  - 6.7. Inflate proximal cuff with one hundred milliliters of air.
  - 6.8. Inflate distal cuff with fifteen milliliters of air.
  - 6.9. Attach positive pressure ventilation device to "Tube 1" and deliver ventilation while auscultating over the patient's epigastrium.
    - 6.9.1. If tube is placed in the esophagus:
      - 6.9.1.1. Epigastric sounds will be absent.
      - 6.9.1.2. Auscultate lung sounds bilaterally to ensure adequate ventilation.
    - 6.9.2. If tube is placed in the trachea:
      - 6.9.2.1. Epigastric sounds will be present.
      - 6.9.2.2. Reattach positive pressure ventilation device to "Tube 2" and deliver ventilation while auscultating over the patient's epigastrium. If epigastric sounds are present, remove immediately and ventilate using a bag-mask device.
        - 6.9.2.2.1. If epigastric sounds are absent, auscultate lung sounds bilaterally to ensure adequate ventilation.
  - 6.10. Continue ventilation through appropriate tube while:
    - 6.10.1. Frequently monitoring chest rise and lung sounds to ensure airway adjunct integrity.
    - 6.10.2. Continuous end-tidal carbon dioxide monitoring is required in all instances of dual lumen airway placement.
      - 6.10.2.1. If the patient is under the care of a basic life support provider, continuous use of a colorimetric device is required.

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6.10.2.2. If the patient is under the care of an advanced life support provider, continuous use of waveform capnography is required.

- 7. Equipment
  - 7.1. Dual lumen airway kit.
  - 7.2. Device for providing positive pressure ventilation.
  - 7.3. Suction
  - 7.4. Oxygen source
- 8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.



## Section 400.07: Electrocardiogram, 12 Lead

1. Skill level
  - 1.1. Advanced life support (ALS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Signs or symptoms even remotely indicative of an acute coronary syndrome.
4. Contraindications
  - 4.1. None
5. Complications/Precautions
  - 5.1. None
6. Procedure
  - 6.1. Prepare skin.
  - 6.2. Place limb leads.
    - 6.2.1. Placement on the limb or on the trunk adjacent to the limb is acceptable.
  - 6.3. Place precordial leads.
    - 6.3.1. V<sub>1</sub>: Fourth intercostal space, immediately right of the sternum.
    - 6.3.2. V<sub>2</sub>: Fourth intercostal space, immediately left of the sternum.
    - 6.3.3. V<sub>3</sub>: Fifth intercostal space, midway between V<sub>2</sub> and V<sub>4</sub>.
    - 6.3.4. V<sub>4</sub>: Fifth intercostal space, on the midclavicular line.
    - 6.3.5. V<sub>5</sub>: Lateral to V<sub>4</sub>, on the anterior axillary line.
    - 6.3.6. V<sub>6</sub>: Lateral to V<sub>5</sub>, on the mid-axillary line.
  - 6.4. Have patient remain still.
  - 6.5. Acquire 12 lead ECG.
  - 6.6. Rule out ST changes in the presence of the following mimics:
    - 6.6.1. Left ventricular hypertrophy
    - 6.6.2. Paced rhythm
  - 6.7. If ST elevation is present in the inferior leads (II, III and aVF), reposition V<sub>4</sub> to the right chest wall (V<sub>4</sub>R) and reacquire to assess for right ventricular involvement.
  - 6.8. Declare "STEMI Alert" if the following is noted:
    - 6.8.1. ST elevation of at least one millimeter in at least two anatomically contiguous limb leads or two millimeters in at least two anatomically contiguous precordial leads, or
    - 6.8.2. Signs and symptoms of myocardial ischemia in the presence of left bundle branch block (LBB).
  - 6.9. The requirement to transmit ECG's is addressed under transport protocols.
  - 6.10. Patients with presentation suspicious of myocardial ischemia and in the absence of clinically relevant ST changes will be declared a "cardiac alert" and transported to the nearest emergency department.
7. Equipment
  - 7.1. Cardiac monitor.
  - 7.2. Electrodes
  - 7.3. Razor and other materials to adequately prepare the skin.
  - 7.4. Transmission capability (optional).
8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 8.2. Absence of ST changes on the 12 lead is not conclusive for the absence of ischemia or injury.

- 8.3. ST changes may only be interpreted with a diagnostic 12 lead ECG. Do not rely on what may appear to be ST changes during non-diagnostic rhythm monitoring.

History: 07-2014; 07-2012; 07-2009; 02-2008.

## Section 400.08: EMT Assistance with Medication Delivery

1. Skill level
  - 1.1. Basic life support (BLS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Bronchodilator
    - 3.1.1. Patients experiencing signs or symptoms of respiratory distress associated with bronchoconstriction and having previously been prescribed a bronchodilator.
  - 3.2. Nitroglycerin
    - 3.2.1. Patients experiencing chest pain, having been previously prescribed nitroglycerin.
4. Contraindications
  - 4.1. Bronchodilator
    - 4.1.1. None
  - 4.2. Nitroglycerin
    - 4.2.1. Systolic blood pressure less than ninety mmHg.
    - 4.2.2. Heart rate less than fifty (50).
    - 4.2.3. The chest pain is atypical when compared to pain the patient normally associates with angina.
    - 4.2.4. Patient has taken an agent used in the treatment of erectile dysfunction:
      - 4.2.4.1. Sildenafil citrate (Viagra), tadalafil (Cialis), or vardenafil (Levitra) within twenty-four hours.
5. Complications/Precautions
  - 5.1. Bronchodilator
    - 5.1.1. Tachydysrhythmias
  - 5.2. Nitroglycerin
    - 5.2.1. Hypotension
6. Procedure
  - 6.1. Assistance with a patient's metered-dose inhaler (bronchodilator)
    - 6.1.1. Verify that the medication is prescribed for the individual.
    - 6.1.2. Shake inhaler vigorously for ten to fifteen seconds.
    - 6.1.3. Have patient hold the inhaler in their mouth and activate while inhaling.
    - 6.1.4. Instruct patient to hold their breath for as long as possible to allow medication to permeate air passages.
    - 6.1.5. Repeat once, as necessary (bronchodilator)
  - 6.2. Assistance with a patient's nebulizer
    - 6.2.1. Verify that the medication is prescribed for the individual.
    - 6.2.2. Add medication to the disposable nebulizer reservoir.
    - 6.2.3. Turn on nebulizer to begin aerosolization.
    - 6.2.4. Instruct patient to inhale as deeply as possible to allow medication to permeate air passages.
    - 6.2.5. Repeat once, as necessary.
  - 6.3. Nitroglycerin
    - 6.3.1. Verify medication belongs to the patient.
    - 6.3.2. Ask patient to lift tongue.
    - 6.3.3. Administer tablet or spray in the sublingual space and allow dissolve/be absorbed.
    - 6.3.4. Reassess patient.

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- 6.3.5. Repeat every five minutes in the presence of symptoms.
- 7. Equipment
  - 7.1. Bronchodilator
    - 7.1.1. Supplied by patient.
  - 7.2. Nitroglycerin
    - 7.2.1. Supplied by patient.
- 8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

## Section 400.09: EMT Intravenous Access Program

1. Skill level
  - 1.1. Basic life support (BLS).
2. Physician authorization required prior to performing skill
  - 2.1. No.
3. Indications
  - 3.1. Determined need for vascular access for delivery of, or potential delivery of, volume resuscitation or medications.
4. Contraindications
  - 4.1. Presence of an arterio-venous shunt in the extremity.
5. Complications/Precautions
  - 5.1. Infection
  - 5.2. Infiltration
  - 5.3. Catheter shear
6. Procedure
  - 6.1. Identify need for venous access and determine appropriate site to include:
  - 6.2. Peripheral venous access
  - 6.3. Ensure all equipment is assembled, readily available and operational.
  - 6.4. Impede venous return, if appropriate and necessary.
  - 6.5. Prepare site with alcohol or povidone-iodine (Betadine).
  - 6.6. Perform venipuncture:
  - 6.7. Peripheral and external jugular venous access:
    - 6.7.1. Insert an appropriate-sized, over-the-needle catheter at suitable angle to penetrate vein.
    - 6.7.2. Once blood presents in flash chamber, slightly advance needle along axis of vein.
    - 6.7.3. Advance catheter off of needle and into vein.
    - 6.7.4. Withdraw needle and dispose of appropriately.
    - 6.7.5. Collect specimen for blood glucose testing, if appropriate.
    - 6.7.6. Attach maintenance device to hub of catheter.
      - 6.7.6.1. Saline lock:
        - 6.7.6.1.1. Flush with three milliliters of 0.9% sodium chloride while observing for infiltration.
      - 6.7.6.2. Intravenous tubing:
        - 6.7.6.2.1. Infuse at rapid rate while observing for infiltration.
        - 6.7.6.2.2. If determined to be patent, reduce infusion rate to ten milliliters per hour.
    - 6.7.7. Secure catheter and maintenance device.
7. Equipment
  - 7.1. Over-the-needle intravenous catheter.
  - 7.2. Alcohol or povidone-iodine (Betadine) preps.
  - 7.3. Tourniquet
  - 7.4. Tape or other means of securing catheter at venipuncture site.
  - 7.5. Means of maintaining catheter integrity:
    - 7.5.1. 0.9% sodium chloride and infusion set (macro or micro drip); or
    - 7.5.2. Saline lock and 0.9% sodium chloride flush
  - 7.6. Blood glucose meter, if appropriate
8. EDMCP Contact and Special Considerations
  - 8.1. Agencies opting to participate in this level of care are required to provide training to participating EMT's commensurate with the current United States Department

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of Transportation Emergency Medical Technician-Basic curriculum. Training shall include didactic and clinical instruction, including a demonstration of skills' proficiency by the participant.

- 8.2. Agencies wishing to participate in the EMT-IV program shall provide written notification to the medical director's office. Such notification shall include evidence of satisfactory training for each participant.
- 8.3. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012 (new).

## Section 400.10: Endotracheal Intubation

1. Skill level
  - 1.1. Advanced life support (ALS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Inability of the patient to sufficiently maintain adequate ventilation and oxygenation, **and**;
  - 3.2. Inability of the provider to sufficiently maintain adequate ventilation and oxygenation by way of bag-mask ventilation.
4. Contraindications
  - 4.1. Patients who are able to adequately ventilate and oxygenate spontaneously
  - 4.2. Patients who are able to be adequately ventilated and oxygenated by a field provider
5. Complications/Precautions
  - 5.1. Misplaced or dislodged airway.
  - 5.2. Hypoxemia, secondary to prolonged airway management attempts.
  - 5.3. Unrecognized esophageal placement leading to hypoxemia
6. Procedure
  - 6.1. Orotracheal intubation
    - 6.1.1. Ensure all equipment is assembled, readily available and operational. Further ensure that the patient is being adequately oxygenated prior to performing the procedure.
    - 6.1.2. If trauma suspected, maintain cervical spine integrity throughout procedure.
    - 6.1.3. Chemically induce sedated state, if necessary.
    - 6.1.4. Advance the blade into the right side of the patient's mouth, sweeping the tongue laterally while identifying landmarks.
      - 6.1.4.1. Remove foreign bodies that may cause an obstruction.
      - 6.1.4.2. If landmarks are not readily identified in a timely fashion, cease attempt and ventilate patient to ensure adequate ventilation/oxygenation.
    - 6.1.5. Gently advance the distal tip of the endotracheal tube between the vocal cords and in to the trachea.
    - 6.1.6. While firmly grasping the tube, remove the blade.
    - 6.1.7. Inflate cuff, if appropriate, to sufficiently isolate the airway.
    - 6.1.8. Attach bag-valve device and confirm placement.
    - 6.1.9. Continue ventilation:
      - 6.1.9.1. Frequently monitor chest rise and lung sounds to ensure airway adjunct integrity.
      - 6.1.9.2. Continuous end-tidal carbon dioxide monitoring (waveform capnography) is required in all instances of dual lumen airway placement.
7. Equipment
  - 7.1. Orotracheal intubation
    - 7.1.1. Endotracheal tube
    - 7.1.2. Stylet
    - 7.1.3. Laryngoscope handle
    - 7.1.4. Laryngoscope blades, assorted styles and sizes.
    - 7.1.5. Ten milliliter syringe

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- 7.1.6. Tape of device for securing tube
- 7.1.7. End-tidal carbon dioxide monitoring device
- 7.1.8. Suction
- 7.1.9. Bag-Mask ventilation device capable of delivering supplemental oxygen
- 7.1.10. Oxygen source
- 8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.



## Section 400.11: Epi-Pen Administration

1. Skill level
  - 1.1. Basic life support (BLS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Patients experiencing signs or symptoms of a severe anaphylactic reaction, including generalized urticaria, respiratory distress, or shock.
4. Contraindications
  - 4.1. None in the presence of true anaphylaxis.
5. Complications/Precautions
  - 5.1. Use with caution in patients with cardiovascular disease.
6. Procedure
  - 6.1. Determine proper dose. If utilizing a patient's auto-injector, verify that is was prescribed for them.
    - 6.1.1. Weight greater than thirty (30) kilograms, use adult dosage (0.3 milligram)
    - 6.1.2. Weight between fifteen (15) and thirty (30) kilograms, use pediatric dosage (0.15 milligram)
  - 6.2. Prepare site with alcohol or povidone-iodine (Betadine).
  - 6.3. Remove cap from the auto-injector.
  - 6.4. Place the tip of the auto-injector on the lateral aspect of the thigh midway between the knee and waist.
  - 6.5. Press auto-injector firmly against skin until it activates and hold in place for five to ten seconds; allowing the entire dose of medication to be delivered.
  - 6.6. Remove and properly discard.
7. Equipment
  - 7.1. Epinephrine auto-injector
    - 7.1.1. Epinephrine auto-injector, adult (0.3 milligram)
    - 7.1.2. Epinephrine auto-injector, pediatric (0.15 milligram)
8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 8.2. Auto-injectors are a part of the inventory on a basic life support unit. Alternatively, providers are authorized to utilize the patient's prescribed auto-injector.

History: 07-2012; 07-2009; 02-2008.

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## Section 400.12: Evidentiary Blood Draw

1. Skill level
  - 1.1. Advanced life support (ALS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Upon request of a law enforcement officer who has probable cause to believe an operator of a motor vehicle is under the influence of alcohol, chemical substances or controlled substances, providing:
    - 3.1.1. The operator caused serious bodily injury to another involved party; or
    - 3.1.2. The operator caused death to another involved party.
4. Contraindications
  - 4.1. Inadequate restraint of the patient that may result in injury to the patient during collection.
  - 4.2. Presence of an arterio-venous shunt in the extremity.
5. Complications/Precautions
  - 5.1. Infection
6. Complications/Precautions
  - 6.1. Similar to venous cannulation.
7. Procedure
  - 7.1. Assess the ability to safely draw a blood specimen from the individual.
    - 7.1.1. Statute allows for the law enforcement officer to use reasonable force to facilitate collection of the sample.
    - 7.1.2. The paramedic will convey any concerns over the ability to safely obtain a blood sample to the law enforcement officer.
  - 7.2. Ensure all equipment is assembled, readily available and operational.
    - 7.2.1. The law enforcement officer should be present and observe the entire procedure.
  - 7.3. Impede venous return, if appropriate and necessary.
  - 7.4. Prepare site with povidone-iodine (Betadine).
  - 7.5. Perform venipuncture:
    - 7.5.1. Insert the needle provided in the collection kit at suitable angle to penetrate vein.
    - 7.5.2. Insert blood tube in to collection port, piercing rubber stopper with needle.
    - 7.5.3. Allow blood tube to completely fill.
    - 7.5.4. Remove blood tube.
    - 7.5.5. Collect second blood tube in similar fashion.
  - 7.6. Withdraw needle and dispose of appropriately.
  - 7.7. Invert the blood tubes no less than five times to ensure adequate mixing of the sample with the anticoagulant agent. Do not shake.
  - 7.8. Appropriately dress venipuncture site.
  - 7.9. Record all appropriate information required by the blood alcohol sample collection kit.
8. Equipment
  - 8.1. Blood alcohol sample collection kit provided by a law enforcement officer
9. EDMCP Contact and Special Considerations
  - 9.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 9.2. Only two of the blood collection tube in the blood alcohol sample collection kit should be utilized. The third tube is not to be utilized.

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History: 07-2012; 02-2008.

## Section 400.13: Gastric Intubation

1. Skill level
  - 1.1. Advanced life support (ALS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Decompression of a distended stomach during positive pressure ventilation.
4. Contraindications
  - 4.1. Maxillofacial injury
  - 4.2. Head injury
5. Complications/Precautions
  - 5.1. Misplacement of tube
  - 5.2. Soft tissue disruption on insertion
  - 5.3. Inadvertent passage through fracture site
6. Procedure
  - 6.1. Ensure all equipment is assembled, readily available and operational.
  - 6.2. Determine appropriate size of tube.
  - 6.3. Determine amount of tube to be inserted:
    - 6.3.1. Orogastric insertion:
      - 6.3.1.1. Measure from the distal tip of tube: xiphoid process, to the ear and back to the corner of the patient's mouth.
    - 6.3.2. Nasogastric insertion:
      - 6.3.2.1. Measure from the distal tip of tube: xiphoid process, to the ear and back to the corner of the patient's nare.
  - 6.4. Placement:
    - 6.4.1. Liberally lubricate tube.
    - 6.4.2. Orogastric insertion:
      - 6.4.2.1. Advance tube through mouth and in to pharynx.
      - 6.4.2.2. If patient is awake, instruct them to swallow.
      - 6.4.2.3. Gently advance tube until previously identified stopping point is met.
    - 6.4.3. Nasogastric insertion:
      - 6.4.3.1. Advance tube through nare along the floor of the nasal cavity.
      - 6.4.3.2. If patient is awake, instruct them to swallow.
      - 6.4.3.3. Gently advance tube until previously identified stopping point is met.
  - 6.5. Confirmation
    - 6.5.1. Instill air into the tube while auscultating over the epigastrium.
      - 6.5.1.1. If air is heard entering the stomach, secure tube in place.
      - 6.5.1.2. If no air is heard entering the stomach, remove tube and reattempt.
7. Equipment
  - 7.1. Gastric tubes (assorted sizes)
  - 7.2. Water soluble lubricant
  - 7.3. Suction
  - 7.4. Sixty milliliter syringe (catheter tip)
  - 7.5. Tape for securing tube.
8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 02-2008.

## Section 400.14: Immunization Administration (Community Health)

1. Skill level
  - 1.1. Advanced life support (ALS)
  - 1.2. Personnel authorized to operate under this protocol include:
    - 1.2.1. Florida-certified paramedics that are credentialed to work under the auspices of the Volusia County EMS Medical Director; and
    - 1.2.2. Florida-certified paramedics not presently credentialed, but working under the direct supervision of a credentialed paramedic; and
    - 1.2.3. Paramedic students attending the paramedic program at Daytona State College, working under the direct supervision of a credentialed paramedic preceptor and on a college sanctioned clinical, may administer immunizations only to persons sixteen (16) years of age, or older.
  - 1.3. Purpose
    - 1.3.1. Provide a method of conveyance for the EMS Medical Director to meet obligations under Chapter 401.272, Florida Statute and Chapter 64J-1.004, Florida Administrative Code.
    - 1.3.2. Provide a uniform and practical methodology for prehospital emergency medical services personnel to deliver influenza and/or pneumococcal vaccine(s) under the venue of community health in the non-emergent setting in cooperation with the Volusia County Health Department.
2. Physician authorization required prior to performing skill
  - 2.1. Agencies desiring to provide influenza and/or pneumococcal immunizations must make an annual notification to the Medical Director of their intent to provide such a program.
3. Indications
  - 3.1. In accordance with guidelines established by the Volusia County Health Department, to include recommendation from the Centers for Disease Control and Prevention (CDC) and the manufacturer. Immunizations must be provided in accordance with manufacturer recommendations on the package insert unless contrary to Centers for Disease Control and Prevention recommendations or as otherwise specified.
4. Contraindications
  - 4.1. In accordance with guidelines established by the Volusia County Health Department, to include recommendations from the Centers for Disease Control and Prevention and the manufacturer.
5. Complications/Precautions
  - 5.1. In accordance with guidelines established by the Volusia County Health Department, to include recommendations from the Centers for Disease Control and Prevention and the manufacturer.
6. Procedure
  - 6.1. Pre-immunization
    - 6.1.1. Record all pertinent demographic information on appropriate forms.
    - 6.1.2. Complete pre-immunization screening and document the absence of all valid contraindications for the desired vaccination.
    - 6.1.3. Assess for previous vaccine reactions and other allergies.
    - 6.1.4. Assess for all other contraindications identified by the vaccine manufacturer.
    - 6.1.5. Provide patient, parent or legal guardian with CDC Vaccine Information Sheet and obtain consent.
  - 6.2. Immunization

- 6.2.1. Ensure that demographic and prescreening information is correct and complete on all forms.
- 6.2.2. Practice all appropriate measures to prevent exposure to bloodborne pathogens to any persons.
- 6.2.3. Each immunization should be delivered by separate injection.
- 6.2.4. Identify appropriate injection site:
  - 6.2.4.1. Deltoid (preferred site).
  - 6.2.4.2. Anteriolateral aspect of upper thigh.
- 6.2.5. Dosage.
  - 6.2.5.1. Influenza: in accordance with manufacturer recommendations.
  - 6.2.5.2. Pneumococcal: in accordance with manufacturer recommendations.
- 6.3. Post Immunization
  - 6.3.1. Properly dispose of contaminated sharps.
  - 6.3.2. Apply gentle massaging pressure to the immunization site following withdrawal of the needle.
  - 6.3.3. Document the following.
    - 6.3.3.1. Time vaccine was administered.
    - 6.3.3.2. Administration site.
    - 6.3.3.3. Vaccine and lot number.
    - 6.3.3.4. Name of paramedic administering immunization.
  - 6.3.4. Advise parent or legal guardian of the need to return for follow up vaccination, if appropriate.
  - 6.3.5. Communicate with the patient, parent or legal guardian that they should seek immediate medical assistance in the event of an unusual reaction.
- 6.4. Post Immunization Complication
  - 6.4.1. Vaccine Adverse Event Reporting System (VAERS) must be utilized.
    - 6.4.1.1. The National Childhood Vaccine Injury Act of 1986 requires reporting of clinically significant adverse events.
  - 6.4.2. Reportable events
    - 6.4.2.1. Any adverse event following the administration of a vaccine, even if it is uncertain that the vaccine caused the event.
    - 6.4.2.2. Any event listed by the manufacturer as a contraindication to subsequent doses of the vaccine.
    - 6.4.2.3. Any event listed in the Reportable Events Table published at <http://vaers.hhs.gov/pubs.htm>.
  - 6.4.3. Reporting process
    - 6.4.3.1. All instances involving adverse events following immunization must be immediately reported to the EMS Medical Director verbally. A written summary of the event, accompanied by all other pertinent patient care reporting, must follow within seventy-two (72) hours.
    - 6.4.3.2. Reporting may be accomplished via:
      - 6.4.3.2.1. Download the form from <http://vaers.hhs.gov>. Print and complete the form prior to sending by way of facsimile or mail to the location noted on the form. Maintain a copy of the form on file with the agency archives.
      - 6.4.3.2.2. Through secure, web-based application located at: <https://secure.vaers.org/VaersDataEntryintro.htm>.
- 7. Equipment



- 7.1. Handwashing facilities:
  - 7.1.1. Running water and soap (preferred), or
  - 7.1.2. Waterless hand sanitizing solution.
- 7.2. Vaccine
  - 7.2.1. Single-dose vials or prefilled syringes are preferred.
  - 7.2.2. Multi-dose vials may be utilized with the following caveats:
    - 7.2.2.1. Date and initial vial when originally opened.
    - 7.2.2.2. Swab rubber seal prior to each withdrawal of vaccine.
    - 7.2.2.3. Promptly return unused portion to refrigerated storage.
    - 7.2.2.4. Discard unused portion:
      - 7.2.2.4.1. After thirty (30) days.
      - 7.2.2.4.2. If there is any visible particulate matter or discoloration.
      - 7.2.2.4.3. If not maintained in accordance with the manufacturers recommended refrigerated storage parameters.
      - 7.2.2.4.4. If there is any doubt as to the integrity of the vaccine.
- 7.3. Alcohol prep pads
- 7.4. Syringes, if necessary.
- 7.5. Band-Aids
- 7.6. Gauze pads
- 7.7. Gloves
- 7.8. Biohazardous waste containers (sharps)
- 7.9. Refrigerated storage
- 7.10. Appropriate resuscitative equipment, to include
  - 1.2.9. A means of providing positive pressure ventilation with supplemental oxygen.
  - 1.2.10. Assortment of appropriate basic and advanced airway adjuncts.
  - 1.2.11. Sufficient equipment for gaining vascular access.
  - 1.2.12. All medications and fluids required under current prehospital standing orders and treatment protocols for the treatment of allergic reactions and cardiopulmonary arrest.
  - 7.10.1. Cardiac monitor/defibrillator
- 8. Medical Director Requirements
  - 8.1. Each department intending to participate in an immunization program must provide each participant involved in administering immunizations Medical Director-approved training prior to the beginning of the annual program.
- 9. EDMCP Contact and Special Considerations
  - 9.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 09-2008 (memorandum 700.03); 02-2008.

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**Section 400.15: Immunization Administration (EMS Staff at Risk of Exposure)**

1. Skill level
  - 1.1. Advanced life support (ALS)
  - 1.2. Personnel authorized to operate under this protocol include:
    - 1.2.1. Florida-certified paramedics that are credentialed to work under the auspices of the Volusia County EMS Medical Director; and
    - 1.2.2. Florida-certified paramedics not presently credentialed, but working under the direct supervision of a credentialed paramedic.
2. Physician authorization required prior to performing skill
  - 2.1. Agencies desiring to provide hepatitis A, B and/or tetanus/diphtheria/pertussis vaccinations must make notification to the Medical Director of their intent to provide such a program.
3. Indications
  - 3.1. Immunizations must be provided in accordance with manufacturer recommendations on the package insert unless contrary to Centers for Disease Control and Prevention recommendations or as otherwise specified.
4. Contraindications
  - 4.1. Immunizations must be provided in accordance with manufacturer recommendations on the package insert unless otherwise specified.
5. Complications/Precautions
  - 5.1. Immunizations must be provided in accordance with manufacturer recommendations on the package insert unless otherwise specified.
6. Procedure
  - 6.1. Pre-immunization
    - 6.1.1. Record all pertinent demographic information on appropriate forms.
    - 6.1.2. Complete pre-immunization screening and document the absence of all valid contraindications for the desired vaccination.
    - 6.1.3. Assess for previous vaccine reactions and other allergies.
    - 6.1.4. Assess for all other contraindications identified by the vaccine manufacturer.
    - 6.1.5. Provide employee with vaccine information and obtain consent.
  - 6.2. Immunization
    - 6.2.1. Ensure that demographic and prescreening information is correct and complete on all forms.
    - 6.2.2. Practice all appropriate measures to prevent exposure to bloodborne pathogens to any persons.
    - 6.2.3. Each immunization should be delivered by separate injection.
    - 6.2.4. Identify appropriate injection site:
      - 6.2.4.1. Deltoid (preferred site).
      - 6.2.4.2. Anteriolateral aspect of upper thigh.
    - 6.2.5. Dosage.
      - 6.2.5.1. Hepatitis A vaccine: in accordance with manufacturer recommendations.
      - 6.2.5.2. Hepatitis B vaccine: in accordance with manufacturer recommendations.
      - 6.2.5.3. Tetanus/Diphtheria/Pertussis vaccine: in accordance with manufacturer recommendations.
  - 6.3. Post Immunization
    - 6.3.1. Properly dispose of contaminated sharps.

- 6.3.2. Apply gentle massaging pressure to the immunization site following withdrawal of the needle.
  - 6.3.3. Document the following.
    - 6.3.3.1. Time vaccine was administered.
    - 6.3.3.2. Administration site.
    - 6.3.3.3. Vaccine and lot number.
    - 6.3.3.4. Name of paramedic administering immunization.
  - 6.3.4. Communicate with the employee that they should seek immediate medical assistance in the event of an unusual reaction.
- 7. Equipment
  - 7.1. Handwashing facilities:
    - 7.1.1. Running water and soap (preferred), or
    - 7.1.2. Waterless hand sanitizing solution.
  - 7.2. Vaccine
    - 7.2.1. Single-dose vials or prefilled syringes are preferred.
    - 7.2.2. Multi-dose vials may be utilized with the following caveats:
      - 7.2.2.1. Date and initial vial when originally opened.
      - 7.2.2.2. Swab rubber seal prior to each withdrawal of vaccine.
      - 7.2.2.3. Promptly return unused portion to refrigerated storage.
      - 7.2.2.4. Discard unused portion:
        - 7.2.2.4.1. After thirty (30) days.
        - 7.2.2.4.2. If there is any visible particulate matter or discoloration.
        - 7.2.2.4.3. If not maintained in accordance with the manufacturers recommended refrigerated storage parameters.
        - 7.2.2.4.4. If there is any doubt as to the integrity of the vaccine.
  - 7.3. Alcohol prep pads
  - 7.4. Syringes, if necessary.
  - 7.5. Band-Aids
  - 7.6. Gauze pads
  - 7.7. Gloves
  - 7.8. Biohazardous waste containers (sharps)
  - 7.9. Refrigerated storage
- 8. EDMCP Contact and Special Considerations
  - 8.1. Immunizations administered under this protocol should be provided only to employees at risk of exposure during the performance of their job duties.
  - 8.2. Immunization included under Immunization Administration (Community Health) may also be provided to employees.
  - 8.3. In all instances in which vaccines are being administered, appropriate resuscitative equipment must be on site and readily accessible. Resuscitative equipment includes, but is not limited to:
    - 1.2.13. A means of providing positive pressure ventilation with supplemental oxygen.
    - 1.2.14. Assortment of appropriate basic and advanced airway adjuncts.
    - 1.2.15. Sufficient equipment for gaining vascular access.
    - 1.2.16. All medications and fluids required under current prehospital standing orders and treatment protocols for the treatment of allergic reactions and cardiopulmonary arrest.
  - 8.3.1. Cardiac monitor/defibrillator

- 8.4. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009 (new).

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## Section 400.16: Intraosseous Access

1. Skill level
  - 1.1. Advanced life support (ALS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Intraosseous placement is indicated only when:
    - 3.1.1. Two attempts at conventional vascular access have failed, and;
    - 3.1.2. There is an imminent and clinical relevant need for access in order to deliver volume resuscitation or medication.
  - 3.2. Intraosseous placement is reserved for the following patients:
    - 3.2.1. Cardiopulmonary arrest;
    - 3.2.2. Hypoglycemic coma;
    - 3.2.3. Intractable seizure; or
    - 3.2.4. Trauma with overt signs and symptoms of shock, regardless of consciousness.
  - 3.3. For consideration of intraosseous placement in other patients, contact the EDMCP.
4. Contraindications
  - 4.1. Vascular access has been established.
  - 4.2. Placement in a fractured bone.
  - 4.3. Placement distal to a fractured bone.
  - 4.4. Placement in a burned, infected or otherwise unsuitable area.
  - 4.5. Difficulty in finding landmarks.
5. Complications/Precautions
  - 5.1. Extravasation of fluid from an improperly placed needle.
  - 5.2. Fat embolism
  - 5.3. Osteomyelitis
  - 5.4. Take care to avoid the epiphyseal plate.
6. Procedure
  - 6.1. Ensure all equipment is assembled, readily available and operational.
  - 6.2. Identify landmarks.
    - 6.2.1. In adult patients, both left and right tibia sites shall be attempted before attempting access in the humerus:
      - 6.2.1.1. Approximately one centimeter medial to the tibial tuberosity (anteriomedial surface of the tibia).
      - 6.2.1.2. Approximately one centimeter proximal to the surgical neck of the humerus.
    - 6.2.2. Pediatric:
      - 6.2.2.1. If the tibial tuberosity is not present: approximately two finger widths below the patella and then medial on to the anteriomedial surface of the tibia.
      - 6.2.2.2. If the tibial tuberosity is present: one finger width below the tibial tuberosity and then medial on to the anteriomedial surface of the tibia.
  - 6.3. Prepare site with alcohol or povidone-iodine (Betadine).
  - 6.4. Select proper needle size and attach to driver.
    - 6.4.1. Adult:
      - 6.4.1.1. Forty kilograms, or greater, 25 millimeter, 15 gauge needle for placement in the tibia.

- 6.4.1.2. Forty kilograms, or greater, 45 millimeter, 15 gauge needle for placement in the humerus.
  - 6.4.2. Pediatric: three through thirty-nine kilograms, 15 millimeter, 15 gauge needle for placement in the tibia.
  - 6.5. Stabilize the extremity and position the driver and needle at the insertion site. Make certain that the needle is perpendicular to the skin.
  - 6.6. Drive the needle through the skin noting if the proximal depth mark (five millimeter indicator) is still visible when resistance is felt.
    - 6.6.1. If the proximal depth mark is not visible when the needle contacts the bone, abandon the procedure and attempt with a larger needle.
  - 6.7. Penetrate the bone cortex by applying firm and steady pressure to the driver.
  - 6.8. Release the driver trigger and hand pressure when resistance suddenly diminishes.
  - 6.9. Remove the driver from the needle.
  - 6.10. Remove the stylet from the intraosseous device.
  - 6.11. Attach primed extension set of 0.9% sodium chloride to the intraosseous device.
    - 6.11.1. If the patient is conscious:
      - 6.11.1.1. Adult: administer Lidocaine (2%), 20 milligrams.
      - 6.11.1.2. Pediatric: administer Lidocaine (2%), 0.5 milligrams per kilogram to a maximum of 20 milligrams. If reliable weight can't be determined from patient, parent or guardian, base dosage on Broselow™ Pediatric Emergency Care tape.
    - 6.11.2. Infuse ten milliliters of 0.9% sodium chloride to check for extravasation.
      - 6.11.2.1. If evidence is present indicating an unsuccessful placement, place a saline lock on the hub of the needle and secure in place with a bulky dressing.
  - 6.12. Secure in place, apply patient identification device and frequently observe the site for extravasation.
  - 6.13. Removal
    - 6.13.1. If removal is necessary in the prehospital environment, gently apply traction while rotating the device clockwise.
    - 6.13.2. Do not tip or bend the needle in any direction.
    - 6.13.3. Dress the insertion site with non-sulfa containing antibiotic ointment and a band-aid.
- 7. Equipment
  - 7.1. EZ-IO Intraosseous driver device.
  - 7.2. EZ-IO needles
    - 7.2.1. 45 millimeter, 15 gauge needle
    - 7.2.2. 25 millimeter, 15 gauge needle
    - 7.2.3. 15 millimeter, 15 gauge needle. As an alternative to the 15 millimeter needle, agencies can opt to carry the 15 gauge Jamshidi® needle for intraosseous placement in pediatric patients.
  - 7.3. Means of maintaining intraosseous integrity:
    - 7.3.1. 0.9% sodium chloride
    - 7.3.2. Saline lock
    - 7.3.3. Three way stopcock
  - 7.4. Pressure infuser
- 8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 8.2. The preferred sequence of initiating vascular access shall be:



- 8.2.1. Intravenous access,
- 8.2.2. Intraosseous access in the tibia,
- 8.2.3. Intraosseous access in the humerus.

History: 07-2012; 01-2011 (memorandum 700.07); 07-2009; 02-2008.

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## Section 400.17: Medication Administration

1. Skill level
  - 1.1. Dependent upon circumstances
2. Physician authorization required prior to performing skill
  - 2.1. Yes, unless written as a standing order.
3. Indications
  - 3.1. Need to deliver medication by way of:
    - 3.1.1. Aerosolized
    - 3.1.2. Intramuscularly
    - 3.1.3. Intraosseously
    - 3.1.4. Intravenously
    - 3.1.5. Orally
    - 3.1.6. Rectally
    - 3.1.7. Subcutaneously
    - 3.1.8. Sublingually
4. Contraindications
  - 4.1. See specific medication
5. Complications/Precautions
6. Procedure
  - 6.1. Ensure that the proper medication and dose are being delivered to the proper patient.
  - 6.2. Ensure that the patient is not allergic to the medication, the medication is not expired and the medication is not contaminated with particulate matter or discolored.
  - 6.3. Ensure that the medication is not contraindicated or being administered in any manner that may cause harm to the patient.
  - 6.4. If the medication requires reconstitution, ensure that all particulate matter is dissolved.
  - 6.5. Routes:
    - 6.5.1. Aerosolized
      - 6.5.1.1. Place desired dose into nebulizer reservoir.
      - 6.5.1.2. Using oxygen or compressed air, flow no less than eight liters of gas per minute to achieve atomization of the liquid.
      - 6.5.1.3. Instruct patient to inhale deeply to allow medication to achieve the desired effect.
      - 6.5.1.4. Monitor for complications.
    - 6.5.2. Intramuscularly
      - 6.5.2.1. Draw up desired dose of medication ensuring that no air is present in the barrel.
      - 6.5.2.2. Identify injection site.
        - 6.5.2.2.1. Upper arm (Deltoid)
        - 6.5.2.2.2. Buttocks (Dorsogluteal)
        - 6.5.2.2.3. Thigh (Vastus Lateralis)
      - 6.5.2.3. Aseptically prep the site.
      - 6.5.2.4. Firmly grasp the tissue between your thumb and forefinger.
      - 6.5.2.5. Insert the needle at a ninety degree angle and release the skin. Ensure that the needle remains perpendicular to the skin surface.
      - 6.5.2.6. Aspirate slightly for a free return of blood.

- 6.5.2.6.1. If a bloody return is present in the barrel, withdraw the needle and identify an alternative site.
    - 6.5.2.7. Inject the medication in to the patient and withdraw the needle.
  - 6.5.3. Intraosseously or Intravenously
    - 6.5.3.1. Draw up desired dose of medication ensuring that no air is present in the barrel.
    - 6.5.3.2. Aseptically prep the injection port on the maintenance line.
    - 6.5.3.3. Attach syringe to medication port.
    - 6.5.3.4. Occlude tubing proximal to the medication port.
    - 6.5.3.5. Administer medication and deliver an adequate fluid bolus to ensure delivery to the patient.
  - 6.5.4. Orally
    - 6.5.4.1. Prepare proper dose for patient.
    - 6.5.4.2. Instruct patient as to the proper means of administering the drug (i.e., chewed and swallowed, etc.).
    - 6.5.4.3. Administer medication
  - 6.5.5. Subcutaneously
    - 6.5.5.1. Draw up desired dose of medication ensuring that no air is present in the barrel.
    - 6.5.5.2. Identify injection site.
      - 6.5.5.2.1. Upper arm
      - 6.5.5.2.2. Thigh
      - 6.5.5.2.3. Abdomen
    - 6.5.5.3. Aseptically prep the site.
    - 6.5.5.4. Grasp the tissue between your thumb and forefinger.
    - 6.5.5.5. Insert the needle at a forty-five degree angle and aspirate slightly for a free return of blood.
      - 6.5.5.5.1. If a bloody return is present in the barrel, withdraw the needle and identify an alternative site.
    - 6.5.5.6. Inject the medication in to the patient and withdraw the needle.
  - 6.5.6. Sublingually
    - 6.5.6.1. Identify the proper dose of the medication.
    - 6.5.6.2. Instruct patient as to the proper means of administering the drug (i.e., allow to dissolve, etc.).
    - 6.5.6.3. Place medication under patient's tongue.
- 7. Equipment
    - 7.1. Syringe (size dependent)
    - 7.2. Needle (size dependent)
  - 8. EDMCP Contact and Special Considerations
    - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 02-2008.

## **Section 400.18: Nebulization of Bronchodilators**

1. Skill level
  - 1.1. Advanced life support (ALS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Signs or symptoms of respiratory distress associated with bronchoconstriction.
4. Contraindications
  - 4.1. None
5. Complications/Precautions
  - 5.1. Use with caution in patients with cardiovascular disease.
6. Procedure
  - 6.1. Ensure all equipment is assembled, readily available and operational.
  - 6.2. Add medication to the disposable nebulizer reservoir.
  - 6.3. Aerosolize medication with oxygen or ambient air source by flowing no less than eight liters per minute on the flowmeter.
  - 6.4. Instruct patient to inhale as deeply as possible to allow medication to permeate air passages.
  - 6.5. Repeat as necessary.
7. Equipment
  - 7.1. Nebulizer or oxygen source capable of delivering eight liters per minute.
  - 7.2. Disposable nebulizer circuit.
8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 02-2008.

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## Section 400.19: Needle Thoracostomy

1. Skill level
  - 1.1. Advanced life support (ALS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Relief of tension pneumothorax.
4. Contraindications
  - 4.1. None in the presence of tension pneumothorax.
5. Complications/Precautions
  - 5.1. Disruption of the neurovascular bundle under the rib.
  - 5.2. Creation of pneumothorax.
6. Procedure
  - 6.1. Ensure all equipment is assembled, readily available and operational.
  - 6.2. Identify landmarks, in order of preference.
    - 6.2.1. Second intercostals space (above third rib) on the midclavicular line.
    - 6.2.2. Fourth intercostals space (above the fifth rib) on the midaxillary line.
  - 6.3. Prepare site with alcohol or povidone-iodine (Betadine).
  - 6.4. Insert the over-the-needle catheter (with syringe attached) in to the chest wall above the top of the rib while continually aspirating.
  - 6.5. Advance catheter off of needle and in to the pleural space.
  - 6.6. Withdraw needle and dispose of appropriately.
  - 6.7. Monitor patient for improvement.
    - 6.7.1. If, following improvement, the patient deteriorates, repeat the procedure.
7. Equipment
  - 7.1. 14 gauge by two inch over the needle catheter.
  - 7.2. Ten milliliter syringe.
  - 7.3. Tape for securing catheter to chest wall.
8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 02-2008.

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## **Section 400.20: Patient Restraint**

1. Skill level
  - 1.1. Basic life support (BLS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Combative patients who pose a potential threat to themselves or to healthcare providers.
4. Contraindications
  - 4.1. None, if indicated for patient or crew safety.
5. Complications/Precautions
  - 5.1. Positional asphyxia
  - 5.2. Excited delirium
  - 5.3. Death
6. Procedure
  - 6.1. Ensure a sufficient number of personnel are available to safely restrain the patient.
  - 6.2. Restrain patient is a supine or lateral recumbent position. Under no circumstances shall a patient be restrained in a prone position or “hog-tied”.
    - 6.2.1. No fewer than five persons should be utilized to restrain a patient.
    - 6.2.2. The patient’s four extremities and waist must be restrained.
  - 6.3. An oxygen mask or other appropriate barrier device may be utilized if the patient is spitting.
7. Equipment
  - 7.1. Soft restraints.
8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 8.2. Extraordinary effort should be made to avoid placing pressure on the patient’s thorax or neck.
  - 8.3. Capnography and pulse oximetry must be used whenever available to measure the patient’s ventilation and oxygenation status.
  - 8.4. If the patient breaks free from restraint, EMS personnel should refrain from attempting to subdue the patient. Contact law enforcement.

History: 07-2012; 07-2009; 02-2008.

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## **Section 400.21: Taser Removal**

1. Skill level
  - 1.1. Basic life support (BLS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Combative patients who pose a potential threat to themselves or to healthcare providers.
4. Contraindications
  - 4.1. Tasers lodged in any portion of the body above the clavicles.
5. Complications/Precautions
6. Procedure
  - 6.1. Apply gentle and in line traction to the probe in order to remove.
  - 6.2. If resistance is felt, stabilize in place and transport.
7. Equipment
  - 7.1. None.
8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.
  - 8.2. Taser deployment by law enforcement is frequently associated with combative or violent patients. EMS personnel must ensure that there is no underlying medical problem. Patients with an altered mental state, exhibiting highly erratic behavior or breathing patterns, or with suspected substance abuse should be transported to an appropriate receiving facility.

History: 07-2012; 07-2009; 02-2008.

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## Section 400.22: Total Spine Immobilization

1. Skill level
  - 1.1. Basic life support (BLS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Any suspicion of trauma that compromises spine integrity including, but not limited to:
    - 3.1.1. Neck or back pain following a traumatic event;
    - 3.1.2. Alteration in mentation following a traumatic event;
    - 3.1.3. Suspicious mechanism of injury, even in the absence of neck or back pain;
    - 3.1.4. Unclear circumstances surrounding a submersion event (i.e., near-drowning).
4. Contraindications
  - 4.1. None
5. Complications/Precautions
  - 5.1. Care should be taken to effectively pad voids in all patients to ensure immobility and elimination of pressure points.
6. Procedure
  - 6.1. Manually immobilize the cervical spine.
  - 6.2. Assess neurovascular integrity, including purposeful movement, at each extremity.
  - 6.3. Place properly fitted collar on the patient.
  - 6.4. Appropriately move patient to long spine board by way of:
    - 6.4.1. Log rolling patient on to backboard;
    - 6.4.2. Standing take down; or
    - 6.4.3. Seated spinal immobilization device.
  - 6.5. Secure torso.
    - 6.5.1. Place strap diagonally across torso securing it to the board above a shoulder and adjacent to the opposite hip. Place second strap as mirror image.
    - 6.5.2. Place third strap across waist securing it to the board.
    - 6.5.3. Place fourth strap across knees, securing to board
  - 6.6. Pad voids between patient and backboard.
  - 6.7. Secure cervical spine stabilization device on either side of patient's head to the backboard with adhesive tape.
  - 6.8. Assess neurovascular integrity, including purposeful movement, at each extremity.
7. Equipment
  - 7.1. Backboard (long).
  - 7.2. Four straps for securing torso.
  - 7.3. Cervical collar, rigid.
  - 7.4. Stabilization device to prevent lateral head movement while on the backboard.
  - 7.5. Adhesive tape.
  - 7.6. Backboard (short), alternatively, a Kendrick Extrication Device (KED) may be utilized.
  - 7.7. Sufficient padding for pediatric immobilization. Alternatively, a commercially available pediatric immobilizer may be utilized.
8. EDMCP Contact and Special Considerations

## *Prehospital Standing Orders and Treatment Protocols*

- 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 02-2008.

**Section 400.23: Traction Splint**

1. Skill level
  - 1.1. Basic life support (BLS)
2. Physician authorization required prior to performing skill
  - 2.1. No
3. Indications
  - 3.1. Closed, mid-shaft femur fracture
4. Contraindications
  - 4.1. Injury to joint proximal or distal to femur.
  - 4.2. Open femur fracture.
5. Complications/Precautions
  - 5.1. Failure
6. Procedure
  - 6.1. Maintain axial traction on the affected extremity.
  - 6.2. Ready and assemble all equipment.
  - 6.3. Appropriately place and secure the traction splint and ankle harness.
  - 6.4. Apply traction.
7. Equipment
  - 7.1. Traction splint.
8. EDMCP Contact and Special Considerations
  - 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2014 (new).





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**Section 400.24: Transcutaneous Pacing**

9. Skill level
  - 9.1. Advanced life support (ALS)
10. Physician authorization required prior to performing skill
  - 10.1. No
11. Indications
  - 11.1. Symptomatic bradycardias, including heart blocks, which do not respond to pharmaceutical intervention.
  - 11.2. Overt bradycardias, including heart blocks, which require immediate and aggressive therapy.
  - 11.3. Asystole
12. Contraindications
  - 12.1. None in the presence of hypoperfusion secondary to bradycardia.
13. Complications/Precautions
  - 13.1. Failure to gain electrical capture.
  - 13.2. Discomfort in the awake patient.
14. Procedure
  - 14.1. Ensure all equipment is assembled, readily available and operational.
  - 14.2. Place pads on patient in either the sternum/apex or anterior/posterior configuration.
  - 14.3. Connect pacemaker.
  - 14.4. Set rate for 70-80 per minute.
  - 14.5. Incrementally increase current until electrical capture is observed.
  - 14.6. Ensure that mechanical capture is obtained.
  - 14.7. Consider sedation if patient is intolerant of pacing stimulus.
15. Equipment
  - 15.1. Transcutaneous pacemaker.
  - 15.2. Pacing pads.
  - 15.3. Sedative (optional).
16. EDMCP Contact and Special Considerations
  - 16.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 02-2008.

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## Section 400.24: Venous Cannulation

1. Skill level
  - 1.1. Advanced life support (ALS) with exception noted below.
2. Physician authorization required prior to performing skill
  - 2.1. No.
3. Indications
  - 3.1. Determined need for vascular access for delivery of, or potential delivery of, volume resuscitation or medications.
4. Contraindications
  - 4.1. Presence of an arterio-venous shunt in the extremity.
5. Complications/Precautions
  - 5.1. Infection
  - 5.2. Infiltration
  - 5.3. Catheter shear
6. Procedure
  - 6.1. Identify need for venous access and determine appropriate site to include:
    - 6.1.1. Peripheral venous access
    - 6.1.2. External jugular vein
  - 6.2. Ensure all equipment is assembled, readily available and operational.
  - 6.3. Impede venous return, if appropriate and necessary.
  - 6.4. Prepare site with alcohol or povidone-iodine (Betadine).
  - 6.5. Perform venipuncture:
    - 6.5.1. Peripheral and external jugular venous access:
      - 6.5.1.1. Insert an appropriate-sized, over-the-needle catheter at suitable angle to penetrate vein.
      - 6.5.1.2. Once blood presents in flash chamber, slightly advance needle along axis of vein.
      - 6.5.1.3. Advance catheter off of needle and into vein.
      - 6.5.1.4. Withdraw needle and dispose of appropriately.
  - 6.6. Collect specimen for blood glucose testing, if appropriate.
  - 6.7. Attach maintenance device to hub of catheter.
    - 6.7.1. Saline lock:
      - 6.7.1.1. Flush with three milliliters of 0.9% sodium chloride while observing for infiltration.
    - 6.7.2. Intravenous tubing:
      - 6.7.2.1. Infuse at rapid rate while observing for infiltration.
      - 6.7.2.2. If determined to be patent, reduce infusion rate to ten milliliters per hour.
  - 6.8. Secure catheter and maintenance device.
7. Equipment
  - 7.1. Over-the-needle intravenous catheter.
  - 7.2. Alcohol or povidone-iodine (Betadine) preps.
  - 7.3. Tourniquet
  - 7.4. Tape or other means of securing catheter at venipuncture site.
  - 7.5. Means of maintaining catheter integrity:
    - 7.5.1. 0.9% sodium chloride and infusion set (macro or micro drip); or
    - 7.5.2. Saline lock and 0.9% sodium chloride flush
  - 7.6. Blood glucose meter, if appropriate.
8. EDMCP Contact and Special Considerations

## *Prehospital Standing Orders and Treatment Protocols*

- 8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 07-2012; 07-2009; 02-2008.

## Section 500.00: Medication Resume

The following pharmaceuticals are authorized to be administered under the parameters set forth in the Volusia County EMS System Protocols:

- Adenosine (Adenocard)
- Albuterol sulfate solution, 0.083% (Proventil)
- Amiodarone (Cordarone)
- Antibiotic ointment (non-sulfa)
- Aspirin (chewable)<sup>i</sup>
- Atropine sulfate
- Calcium chloride
- Dextrose, 50%
- Diltiazem hydrochloride (Cardizem)
- Diphenhydramine hydrochloride (Benadryl)
- Dopamine hydrochloride (Intropin)
- Epinephrine, 1:1,000
- Epinephrine, 1:10,000
- EpiPen<sup>ii</sup>
- EpiPen Jr<sup>iii</sup>
- Etomidate (Amidate)<sup>iv</sup>
- Furosemide (Lasix)
- Glucagon
- Glucose paste<sup>v</sup>
- Hydroxocobalamin (Cyanokit)<sup>vi</sup>
- Lidocaine hydrochloride, 2%
- Lidocaine hydrochloride, 20%
- Lorazepam (Ativan)<sup>vii</sup>
- Magnesium sulfate, 50%
- Methylprednisone sodium succinate (Solu-Medrol)
- Morphine sulfate<sup>viii</sup>
- Naloxone (Narcan)
- Nitroglycerin
- Ondansetron (Zofran)
- Sodium bicarbonate, 8.4%
- Succinylcholine (Anectine)<sup>ix</sup>
- Tetracaine (Pontocaine)<sup>x</sup>

The information on the following pages was gathered from manufacturer recommendations. It is intended only as a summary reference. Refer to individual package insert for more comprehensive and additional information.

For specific dosing under these standing orders, see individual pages within this manual.

History: 07-2012; 07-2009; 02-2008.

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<sup>i</sup> Required on basic life support response units.

<sup>ii</sup> Required on basic life support response units.

- iii Required on basic life support response units.
- iv Must be maintained as a controlled substance.
- v Required on basic life support response units.
- vi Advanced life support providers have the option of carrying hydroxocobalamin (Cyanokit).
- vii Must be maintained as a controlled substance.
- viii Must be maintained as a controlled substance.
- ix Only agencies and personnel within those agencies with written authorization from the EMS Medical Director are authorized to carry and utilize Succinylcholine (Anectine).
- x Advanced life support providers have the option of carrying tetracaine (Pontocaine).



**Section 500.01: Adenosine (Adenocard)**

1. Classification
  - 1.1. Antidysrhythmic
2. Indications
  - 2.1. Converting paroxysmal supraventricular tachycardia to sinus rhythm, including those rhythms associated with Wolff-Parkinson-White Syndrome.
3. Precautions
  - 3.1. Adenosine should be used cautiously in patients taking digoxin or concomitant use of digoxin and verapamil as it may rarely be associated with ventricular fibrillation.
4. Contraindications
  - 4.1. Second- and third-degree atrioventricular block.
  - 4.2. Sinus node disease, including sick sinus syndrome or symptomatic bradycardias.
  - 4.3. Known hypersensitivity to Adenosine or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: dysrhythmias at time of conversion, facial flushing, headache, diaphoresis, palpitations, chest pain and hypotension.
  - 5.2. Central Nervous System: lightheadedness, vertigo, upper extremity paresthesia, numbness, apprehension, blurred vision, burning sensation, heaviness in arms and neck and back pain.
  - 5.3. Gastrointestinal: nausea, metallic taste, tightness in throat, pressure in groin.
  - 5.4. Respiratory: dyspnea, chest pressure, hyperventilation and head pressure.
6. Route of administration
  - 6.1. Intravenous bolus (rapid) only.
    - 6.1.1. Due to Adenosine's half life, it should be administered through a proximal port on the infusion set and through a proximal and peripheral intravenous site. A twenty milliliter 0.9% sodium chloride flush should follow administration to facilitate delivery of the medication in to central circulation.
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Cardiac Dysrhythmia
    - 7.1.2. Pediatric:
      - 7.1.2.1. Cardiac Dysrhythmia

History: 02-2008.

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**Section 500.02: Albuterol Sulfate Solution, 0.083% (Proventil)**

1. Classification
  - 1.1. Bronchodilator
2. Indications
  - 2.1. Treatment of bronchospasm in patients with reversible obstructive airway disease and acute attacks of bronchospasm.
3. Precautions
  - 3.1. Albuterol should be used with caution in patients with cardiovascular disorders.
  - 3.2. If paradoxical bronchospasm occurs during delivery of this medication, discontinue treatments immediately.
  - 3.3. Albuterol should be administered extremely cautiously to patients being treated with monoamine oxidase inhibitors or tricyclic antidepressants as this may potentiate the cardiovascular effects
  - 3.4. Beta-receptor blocking agents and albuterol inhibit the effect of each other.
4. Contraindications
  - 4.1. Known hypersensitivity to Albuterol or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: tachycardia, hypertension.
  - 5.2. Central nervous system: tremors, vertigo, nervousness, headache.
  - 5.3. Gastrointestinal: nausea.
  - 5.4. Respiratory: bronchospasm, cough.
6. Route of administration
  - 6.1. Inhaled updraft treatment following nebulization.
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Allergic Reactions
      - 7.1.1.2. Dyspnea
    - 7.1.2. Pediatric:
      - 7.1.2.1. Allergic Reactions
      - 7.1.2.2. Dyspnea

History: 02-2008.

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### Section 500.03: Amiodarone (Cordarone)

1. Classification
  - 1.1. Antidysrhythmic
2. Indications
  - 2.1. Treatment of ventricular fibrillation.
  - 2.2. Treatment of ventricular tachycardia.
3. Precautions
  - 3.1. Hypotension.
  - 3.2. Bradycardia and atrio-ventricular block
  - 3.3. Proarrhythmia (primarily, *torsades de pointes*).
  - 3.4. Electrolyte disturbance
4. Contraindications
  - 4.1. Known hypersensitivity to amiodarone or any of its components.
  - 4.2. Cardiogenic shock
  - 4.3. Marked sinus bradycardia.
  - 4.4. Second-or third-degree atrio-ventricular (AV) block.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: hypotension, dysrhythmia.
6. Route of administration
  - 6.1. Intravenous.
7. Notes
  - 7.1. Amiodarone (Cordarone) is incompatible with sodium bicarbonate, therefore amiodarone infusions shall be delivered through a dedicated intravenous line. Bolus therapy shall be followed by a twenty milliliter bolus.
  - 7.2. Hypotension secondary to amiodarone infusion shall be treated with incremental reduction in the amiodarone infusion.
  - 7.3. This pharmaceutical is found in the following standing orders within this document.
    - 7.3.1. Adult:
      - 7.3.1.1. Cardiac dysrhythmias
      - 7.3.1.2. Cardiopulmonary arrest

History: 07-2012 (new).

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**Section 500.04: Antibiotic Ointment (non-sulfa)**

1. Classification
  - 1.1. Antibiotic (topical)
2. Indications
  - 2.1. Topical application to reduce likelihood of infection following removal of intraosseous needle.
3. Precautions
  - 3.1. Avoid contact with eyes.
4. Contraindications
  - 4.1. Known hypersensitivity to the product or any of its components.
  - 4.2. Do not apply to non-intact skin (excluding isolated intraosseous entry point).
  - 4.3. Do not use on patients under two years of age.
5. Adverse reactions/Side effects
  - 5.1. Mild to moderate allergic reaction.
6. Route of administration
  - 6.1. Topical
7. Notes
  - 7.1. Antibiotic ointment selected must not contain sulfa.
  - 7.2. This pharmaceutical is found in the following standing orders within this document.
    - 7.2.1. Procedural:
      - 7.2.1.1. Intraosseous access

History: 07-2012; 07-2009 (new).

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**Section 500.05: Aspirin (chewable)**

1. Classification
  - 1.1. Non-steroidal anti-inflammatory drug (NSAID)
2. Indications
  - 2.1. Suspected myocardial ischemia.
3. Precautions
  - 3.1. None
4. Contraindications
  - 4.1. Aspirin or aspirin product within the past twelve hours.
  - 4.2. Known hypersensitivity to aspirin, any of its components or aspirin products.
5. Adverse reactions/Side effects
  - 5.1. Gastrointestinal: nausea
6. Route of administration
  - 6.1. Chewed and swallowed.
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Chest Pain

History: 07-2012; 07-2009; 02-2008.

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**Section 500.06: Atropine Sulfate**

1. Classification
  - 1.1. Anticholinergic
2. Indications
  - 2.1. Symptomatic bradycardias.
  - 2.2. Anticholinesterase poisoning from organophosphorous pesticides.
3. Precautions
  - 3.1. Use with caution in all patients age forty, or greater.
4. Contraindications
  - 4.1. Glaucoma
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: Tachycardia
  - 5.2. Central nervous system: blurred vision, photophobia:
  - 5.3. ENT: dryness of oral mucosa
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Cardiac Dysrhythmias
      - 7.1.1.2. Overdose/Poisoning
    - 7.1.2. Pediatric:
      - 7.1.2.1. Cardiac Dysrhythmias
      - 7.1.2.2. Overdose/Poisoning

History: 07-2012; 07-2009; 02-2008.

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## Section 500.07: Calcium Chloride

1. Classification
  - 1.1. Electrolyte
2. Indications
  - 2.1. Suspicion of hyperkalemia in cardiopulmonary arrest.
  - 2.2. Calcium channel blocker overdose.
3. Precautions
  - 3.1. Use with caution in patients taking digitalis.
  - 3.2. Injections should be administered slowly to prevent concentrated calcium levels from reaching the heart because of the danger of acutely reduced cardiac output.
4. Contraindications
  - 4.1. Digitalis toxicity
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: peripheral vasodilation
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
7. Notes
  - 7.1. Calcium Chloride should be administered slowly through a large vein.
  - 7.2. This pharmaceutical is found in the following standing orders within this document.
    - 7.2.1. Adult:
      - 7.2.1.1. Cardiopulmonary arrest
      - 7.2.1.2. Overdose/Poisoning
    - 7.2.2. Pediatric:
      - 7.2.2.1. Overdose/Poisoning

History: 07-2014; 07-2012; 07-2009; 02-2008.

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**Section 500.08: Dextrose, 50%**

1. Classification
  - 1.1. Hypoglycemic agent
2. Indications
  - 2.1. Used for the treatment of hypoglycemia associated with insulin shock.
3. Precautions
  - 3.1. Care should be taken to ensure the vascular access device is well within the lumen of the vein and that extravasation does not occur.
  - 3.2. Patient receiving Dextrose should receive additional carbohydrates if they decline transport.
4. Contraindications
  - 4.1. Suspicion of intracerebral or intraspinal hemorrhage.
  - 4.2. In the presence of delirium tremens and dehydration.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: creation of thrombus, phlebitis, hyperglycemia
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
7. Notes
  - 7.1. Due to the hypertonic nature of the solution, the medication must be administered slowly through a patent access point using a small-bore needle.
  - 7.2. This pharmaceutical is found in the following standing orders within this document.
    - 7.2.1. Adult:
      - 7.2.1.1. Altered Mental Status
      - 7.2.1.2. Cardiopulmonary Arrest
    - 7.2.2. Pediatric:
      - 7.2.2.1. Altered Mental Status
      - 7.2.2.2. Cardiopulmonary Arrest

History: 07-2012; 07-2009; 02-2008.

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**Section 500.09: Diltiazem (Cardizem)**

1. Classification
  - 1.1. Calcium channel blocker
2. Indications
  - 2.1. Conversion of paroxysmal supraventricular tachycardia (PSVT).
  - 2.2. Rate control in the presence of atrial flutter and atrial fibrillation.
3. Precautions
  - 3.1. May produce heart block if given in the presence of a sinus rhythm.
  - 3.2. Use cautiously in the presence of congestive heart failure or myocardial infarction
4. Contraindications
  - 4.1. Second- and third-degree atrioventricular block.
  - 4.2. Sinus node disease, including sick sinus syndrome or symptomatic bradycardias.
  - 4.3. Known hypersensitivity to diltiazem or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: bradycardia, hypotension
  - 5.2. Gastrointestinal: nausea
  - 5.3. Other: vertigo, lightheadedness, headache
6. Route of administration
  - 6.1. Intravenously
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Cardiac Dysrhythmia

History: 07-2012; 07-2009; 02-2008.

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## Section 500.10: Diphenhydramine (Benadryl)

1. Classification
  - 1.1. Antihistaminic
2. Indications
  - 2.1. For allergic reactions following the management of severe symptomology.
3. Precautions
  - 3.1. Use caution when administering diphenhydramine to patients with narrow-angle glaucoma.
  - 3.2. Tissue necrosis may accompany intramuscular injection.
  - 3.3. Over medicating pediatric patients may result in hallucinations, convulsions or death.
  - 3.4. Diphenhydramine is more likely to potentiate vertigo, drowsiness and hypotension in the elderly.
  - 3.5. Use cautiously in patients with bronchial asthma and cardiovascular disease.
4. Contraindications
  - 4.1. Diphenhydramine should not be used in neonates, premature infants and nursing mothers.
  - 4.2. Known hypersensitivity to diphenhydramine or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: hypotension, headache, palpitations, bradycardia and extrasystoles.
  - 5.2. Central nervous system: sedation, vertigo, fatigue, confusion, excitation, euphoria and tinnitus.
  - 5.3. Gastrointestinal: epigastric distress, nausea and vomiting.
  - 5.4. General: urticaria, anaphylactic shock, photosensitivity, diaphoresis and drying of the oral mucosa.
  - 5.5. Genitourinary: Frequent urination and difficult urination.
  - 5.6. Respiratory: thickening of bronchial secretions, tightness of chest or throat and wheezing.
6. Route of administration
  - 6.1. Intravenous
  - 6.2. Intramuscular, only as last resort in the absence of intravenous access.
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Allergic Reaction
      - 7.1.1.2. Overdose/Poisoning
    - 7.1.2. Pediatric:
      - 7.1.2.1. Allergic Reaction
      - 7.1.2.2. Overdose/Poisoning

History: 07-2014; 07-2012; 07-2009; 02-2008.

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## Section 500.11: Dopamine Hydrochloride (Intropin)

1. Classification
  - 1.1. Sympathomimetic
2. Indications
  - 2.1. States of hypoperfusion not attributed to hypovolemia (i.e., cardiogenic shock).
3. Precautions
  - 3.1. Cardiovascular disease
  - 3.2. Use caution when administering dopamine to patients receiving, or who have received, monoamine oxidase (MAO) inhibitor therapy.
4. Contraindications
  - 4.1. Hypovolemic shock
  - 4.2. Uncorrected tachydysrhythmias
  - 4.3. Known hypersensitivity to Dopamine or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: hypertension, dysrhythmias, palpitations
6. Route of administration
  - 6.1. Intravenous infusion.
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Allergic Reactions
      - 7.1.1.2. Altered Mental Status
      - 7.1.1.3. Behavioral Emergencies
      - 7.1.1.4. Carbon Monoxide Exposure and Toxic Inhalations
      - 7.1.1.5. Cardiac Dysrhythmias
      - 7.1.1.6. Chest Pain
      - 7.1.1.7. Decompression Sickness/Dysbarism
      - 7.1.1.8. Dyspnea
      - 7.1.1.9. Hypothermia
      - 7.1.1.10. Near-drowning (Submersion)
      - 7.1.1.11. Overdose/Poisoning
      - 7.1.1.12. Snake Bites
      - 7.1.1.13. Syncope
    - 7.1.2. Pediatric
      - 7.1.2.1. Cardiopulmonary Arrest

History: 07-2012; 07-2009; 02-2008.

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**Section 500.12: Epinephrine, 1:1,000**

1. Classification
  - 1.1. Sympathomimetic
2. Indications
  - 2.1. Cardiopulmonary resuscitation.
  - 2.2. Bradycardia
  - 2.3. Moderate to severe allergic reaction, including anaphylaxis.
3. Precautions
  - 3.1. Administer epinephrine cautiously to elderly patients, patients with cardiovascular disease, hypertension, diabetes and gravid patients.
4. Contraindications
  - 4.1. None, in the presence of cardiopulmonary arrest.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: hypertension, tachycardia, dysrhythmia, palpitations.
  - 5.2. Central nervous system: anxiety, headache, cerebral hemorrhage may occur with overdosage.
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
  - 6.3. Subcutaneously (anaphylaxis only)
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Allergic Reaction
    - 7.1.2. Pediatric:
      - 7.1.2.1. Allergic Reaction
      - 7.1.2.2. Newborn Resuscitation

History: 07-2014; 07-2012; 07-2009; 02-2008.

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**Section 500.13: Epinephrine, 1:10,000**

1. Classification
  - 1.1. Sympathomimetic
2. Indications
  - 2.1. Cardiopulmonary resuscitation.
  - 2.2. Bradycardia
  - 2.3. Moderate to severe allergic reaction, including anaphylaxis.
3. Precautions
  - 3.1. Administer epinephrine cautiously to elderly patients, patients with cardiovascular disease, hypertension, diabetes and gravid patients.
4. Contraindications
  - 4.1. None, in the presence of cardiopulmonary arrest.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: hypertension, tachycardia, dysrhythmia, palpitations.
  - 5.2. Central nervous system: anxiety, headache, cerebral hemorrhage may occur with overdosage.
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.2.1.1. Allergic Reaction
      - 7.2.1.2. Cardiac Dysrhythmia
      - 7.2.1.3. Cardiopulmonary Arrest
    - 7.1.2. Pediatric:
      - 7.2.1.4. Allergic Reaction
      - 7.2.1.5. Cardiac Dysrhythmia
      - 7.2.1.6. Cardiopulmonary Arrest
      - 7.1.2.1. Newborn Resuscitation

History: 07-2012; 07-2009; 02-2008.

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## **Section 500.14: EpiPen and EpiPen Jr Auto-Injector**

1. Classification
  - 1.1. Sympathomimetic
2. Indications
  - 2.1. Moderate to severe allergic reaction, including anaphylaxis.
3. Precautions
  - 3.1. Administer Epinephrine cautiously to elderly patients, patients with cardiovascular disease, hypertension, diabetes and gravid patients.
4. Contraindications
  - 4.1. None, in the presence of anaphylaxis.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: hypertension, tachycardia, dysrhythmia, palpitations.
  - 5.1. Central nervous system: anxiety, headache, cerebral hemorrhage may occur with overdosage.
6. Route of administration
  - 6.1. Subcutaneously
7. Notes
  - 7.1. This synopsis is generic for the EpiPen (>30 kilograms) and EpiPen Jr. (15-30 kilograms) Auto-Injectors
  - 7.2. This pharmaceutical is found in the following standing orders within this document.
    - 7.2.1. Adult:
      - 7.3.1.1. Allergic Reaction
    - 7.2.2. Pediatric:
      - 7.3.1.2. Allergic Reaction

History: 07-2012; 07-2009 (new).

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**Section 500.15: Etomidate (Amidate)**

1. Classification
  - 1.1. Sedative/Hypnotic
2. Indications
  - 2.1. When sedation is required to facilitate intubation.
3. Precautions
  - 3.1. Etomidate may induce cardiac depression in elderly patients.
4. Contraindications
  - 4.1. Known hypersensitivity to etomidate or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: hypertension, hypotension, tachycardia, bradycardia, dysrhythmias
  - 5.2. Other: transient venous pain on administration, transient skeletal muscle movement.
  - 5.3. Respiratory: Hypoventilation, short periods of apnea.
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
7. Notes
  - 7.1. This drug must be stored, handled and disposed as a controlled substance.
  - 7.2. This pharmaceutical is found in the following standing orders within this document.
    - 7.2.1. Adult:
      - 7.2.1.1. Airway Management

History: 07-2012; 07-2009; 02-2008.

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**Section 500.16: Furosemide (Lasix)**

1. Classification
  - 1.1. Diuretic
2. Indications
  - 2.1. Pulmonary edema associated with congestive heart failure.
3. Precautions
  - 3.1. Excessive diuresis may cause dehydration and electrolyte imbalances, which may lead to dysrhythmias.
4. Contraindications
  - 4.1. Patients with anuria.
  - 4.2. Known hypersensitivity to furosemide or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: Hypotension
  - 5.2. Central nervous system: vertigo, headache, blurred vision, paresthesia
  - 5.3. Gastrointestinal: nausea, vomiting
6. Route of administration
  - 6.1. Intravenously
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Dyspnea
      - 7.1.1.2. Near-drowning (Submersion)
    - 7.1.2. Pediatric:
      - 7.1.2.1. Near-drowning (Submersion)

History: 07-2012; 07-2009; 02-2008.

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## **Section 500.17: Glucagon**

1. Classification
  - 1.1. Antihypoglycemic
2. Indications
  - 2.1. For the treatment of hypoglycemia in the absence of vascular access.
3. Precautions
  - 3.1. Improvement from a hypoglycemic state may be delayed due to the slow absorption associated with the intramuscular route.
  - 3.2. Patient receiving glucagon should receive additional carbohydrates if they decline transport.
4. Contraindications
  - 4.1. Patients with pheochromocytoma
  - 4.2. Known hypersensitivity to glucagon or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Gastrointestinal: nausea
6. Route of administration
  - 6.1. Intramuscular
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Altered Mental Status
    - 7.1.2. Pediatric:
      - 7.1.2.1. Altered Mental Status

History: 07-2012; 07-2009; 02-2008.

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## **Section 500.18: Glucose Paste**

1. Classification
  - 1.1. Antihypoglycemic
2. Indications
  - 2.1. Known or suspected hypoglycemia
3. Precautions
  - 3.1. Oral glucose agents place the patient at risk of aspiration if they are unable to maintain a patent airway independently.
4. Contraindications
  - 4.1. In patients unable to self-maintain a patent airway.
5. Adverse reactions/Side effects
  - 5.1. Endocrine: hyperglycemia
6. Route of administration
  - 6.1. Oral
7. Notes
  - 7.1. Glucose paste is not a required item on advanced life support units.
  - 7.2. This pharmaceutical is found in the following standing orders within this document.
    - 7.2.1. Adult:
      - 7.2.1.1. Altered Mental Status
    - 7.2.2. Pediatric:
      - 7.2.2.1. Altered Mental Status

History: 07-2012; 07-2009; 02-2008.

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**Section 500.19: Hydroxocobalamin (Cyanokit)**

1. Classification
  - 1.1. Cyanide antidote
2. Indications
  - 2.1. Cardiopulmonary arrest secondary to removal from structure fire.
3. Precautions
  - 3.1. Administration of hydroxocobalamin infusion must be accomplished through separate intravenous access.
4. Contraindications
  - 4.1. None
5. Adverse reactions/Side effects
  - 5.1. Hypertension
  - 5.2. Erythema
  - 5.3. Chromaturia
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
7. Notes
  - 7.1. Due to incompatibility with various resuscitation medications, administration of hydroxocobalamin infusion shall be performed through a dedicated intravenous line.
  - 7.2. This pharmaceutical is found in the following standing orders within this document.
    - 7.2.1. Adult:
      - 7.2.1.1. Overdose/Poisoning

History: 07-2012 (new).

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**Section 500.20: Lidocaine, 2%**

8. Classification
  - 8.1. Antidysrhythmic
9. Indications
  - 9.1. Ventricular irritability, including: premature ventricular complexes, wide-complex tachycardia, ventricular tachycardia and ventricular fibrillation.
  - 9.2. As an agent for premedicating candidates for elective intubation with suspected cerebral insult.
  - 9.3. As a local analgesic prior to fluid administration through an intraosseous line.
10. Precautions
  - 10.1. High serum levels of lidocaine can be toxic resulting in decreased mentation, seizures and coma.
11. Contraindications
  - 11.1. Presence of bradydysrhythmias or heart block.
  - 11.2. Known hypersensitivity to lidocaine or any of its components.
12. Adverse reactions/Side effects
  - 12.1. Cardiovascular: bradycardia, hypotension, cardiovascular collapse
  - 12.2. Central nervous system: lightheadedness, apprehension, decrease in mentation, confusion, vomiting, unconsciousness
13. Route of administration
  - 13.1. Intravenously
  - 13.2. Intraosseously
14. Notes
  - 14.1. This pharmaceutical is found in the following standing orders within this document.
    - 14.1.1. Adult:
      - 14.1.1.1. Airway Management
      - 14.1.1.2. Cardiac Dysrhythmias
      - 14.1.1.3. Cardiopulmonary Arrest
    - 14.1.2. Pediatric:
      - 14.1.2.1. Cardiac Dysrhythmias
      - 14.1.2.2. Cardiopulmonary Arrest
    - 14.1.3. Procedural
      - 14.1.3.1. Intraosseous Placement

History: 07-2012; 07-2009; 02-2008.

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**Section 500.21: Lidocaine, 20%**

1. Classification
  - 1.1. Antidysrhythmic
2. Indications
  - 2.1. Used for maintaining therapeutic levels of Lidocaine following resolution of dysrhythmias with bolus therapy.
3. Precautions
  - 3.1. High serum levels of Lidocaine can be toxic resulting in decreased mentation, seizures and coma.
4. Contraindications
  - 4.1. Presence of bradydysrhythmias or heart block.
  - 4.2. Known hypersensitivity to lidocaine or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: bradycardia, hypotension, cardiovascular collapse
  - 5.2. Central nervous system: lightheadedness, apprehension, decrease in mentation, confusion, vomiting, unconsciousness
6. Route of administration
  - 6.1. Intravenous infusion
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Cardiac Dysrhythmias
    - 7.1.2. Pediatric:
      - 7.1.2.1. Cardiac Dysrhythmias

History: 07-2012; 07-2009; 02-2008.

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## Section 500.22: Lorazepam (Ativan)

1. Classification
  - 1.1. Anticonvulsant/Sedative
2. Indications
  - 2.1. Sedation for:
    - 2.1.1. Chemical restraint
    - 2.1.2. Synchronized cardioversion
    - 2.1.3. Transcutaneous pacing.
  - 2.2. Seizures.
3. Precautions
  - 3.1. Elderly patients are more susceptible to the sedative effects of lorazepam and their ventilatory effort must be carefully observed.
4. Contraindications
  - 4.1. Known hypersensitivity to lorazepam or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Central nervous system: decrease in mentation
  - 5.2. Respiratory: respiratory depression
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
  - 6.3. Intramuscularly
7. Notes
  - 7.1. If being administered through the intravenous or intraosseous route, lorazepam must be diluted with an equal volume of 0.9% sodium chloride.
  - 7.2. This drug must be stored, handled and disposed as a controlled substance.
  - 7.3. Lorazepam stored without refrigeration on EMS units for more than ninety (90) days must be replaced and appropriately discarded.
  - 7.4. This pharmaceutical is found in the following standing orders within this document.
    - 7.4.1. Adult:
      - 7.4.1.1. Airway management
      - 7.4.1.2. Behavioral Emergencies
      - 7.4.1.3. Cardiac Dysrhythmias
      - 7.4.1.4. Pregnancy-induced Hypertension
      - 7.4.1.5. Seizures
    - 7.4.2. Pediatric:
      - 7.4.2.1. Cardiac Dysrhythmias
      - 7.4.2.2. Seizures

History: 07-2012; 11-2011 (memorandum 700.10); 06-2010 (memorandum 700.02); 07-2009; 03-2008 (memorandum 700.01); 02-2008.

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**Section 500.23: Magnesium Sulfate, 50%**

1. Classification
  - 1.1. Electrolyte
2. Indications
  - 2.1. Non-responding or deteriorating asthmatics.
  - 2.2. Preeclampsia/Eclampsia.
  - 2.3. Refractory or recurrent ventricular fibrillation or torsades de pointes.
3. Precautions
  - 3.1. Magnesium therapy should be cautiously considered in the presence of renal insufficiency.
4. Contraindications
  - 4.1. Heart block
  - 4.2. Known hypersensitivity to magnesium or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: cardiovascular collapse or depression
  - 5.2. Central nervous system: Altered mental status
  - 5.3. Respiratory: respiratory depression
6. Route of administration
  - 6.1. Intravenous
  - 6.2. Intravenous infusion
  - 6.3. Intraosseously
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Cardiopulmonary Arrest
      - 7.1.1.2. Dyspnea
      - 7.1.1.3. Pregnancy-induced Hypertension
    - 7.1.2. Pediatric:
      - 7.1.2.1. Cardiopulmonary Arrest
      - 7.1.2.2. Dyspnea

History: 07-2012; 07-2009; 02-2008.

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**Section 500.24: Methylprednisolone Sodium Succinate (Solu-Medrol)**

1. Classification
  - 1.1. Corticosteroid
2. Indications
  - 2.1. Acute bronchospasm
  - 2.2. Allergic states
3. Precautions
  - 3.1. None
4. Contraindications
  - 4.1. Premature infants
  - 4.2. Known hypersensitivity to methylprednisolone or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: hypertension, sodium retention, potassium loss
  - 5.2. Neurological: vertigo, headache
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Allergic Reaction
      - 7.1.1.2. Dyspnea
    - 7.1.2. Pediatric:
      - 7.1.2.1. Allergic Reaction
      - 7.1.2.2. Dyspnea

History: 07-2012; 07-2009; 02-2008.

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## **Section 500.25: Morphine Sulfate**

1. Classification
  - 1.1. Analgesic
2. Indications
  - 2.1. Management of pain associated with:
    - 2.1.1. Burns
    - 2.1.2. Ischemic chest pain
    - 2.1.3. Pulmonary edema
    - 2.1.4. Sickle Cell crisis
3. Precautions
  - 3.1. In the presence of right ventricular infarction, morphine sulfate may result in a precipitous drop in systolic pressure as a result of reduced preload.
4. Contraindications
  - 4.1. Systolic blood pressure less than 90 mmHg.
  - 4.2. Known hypersensitivity to morphine or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Central nervous system: decrease in mentation
  - 5.2. Respiratory: respiratory depression
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
7. Notes
  - 7.1. This drug must be stored, handled and disposed as a controlled substance.
  - 7.2. This pharmaceutical is found in the following standing orders within this document.
    - 7.2.1. Adult:
      - 7.2.1.1. Chest Pain
      - 7.2.1.2. Dyspnea
      - 7.2.1.3. Pain Management
    - 7.2.2. Pediatric:
      - 7.2.2.1. Pain Management

History: 07-2014; 07-2012; 07-2009; 02-2008.

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**Section 500.26: Naloxone (Narcan)**

1. Classification
  - 1.1. Narcotic/opiate antagonist
2. Indications
  - 2.1. Known or suspected narcotic/opiate overdose.
3. Precautions
  - 3.1. Too rapid of an administration or complete opiate reversal may cause withdrawal-like effects.
4. Contraindications
  - 4.1. Presence of traumatic brain injury.
  - 4.2. Known hypersensitivity to naloxone or any of its components.
5. Adverse reactions/Side effects
  - 5.1. None
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
7. Notes
  - 7.1. Naloxone should be administered gradually to improve cardiopulmonary status and not based upon level of consciousness.
  - 7.2. This pharmaceutical is found in the following standing orders within this document.
    - 7.2.1. Adult:
      - 7.2.1.1. Overdose/Poisoning
    - 7.2.2. Pediatric:
      - 7.2.2.1. Overdose/Poisoning

History: 07-2012; 07-2009; 02-2008.

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## **Section 500.27: Nitroglycerin**

1. Classification
  - 1.1. Vasodilator
2. Indications
  - 2.1. Signs or symptoms associated with myocardial ischemia.
  - 2.2. Signs or symptoms associated with pulmonary edema.
3. Precautions
  - 3.1. Nitroglycerin may precipitate severe hypotension in the presence of agents used to treat erectile dysfunction.
  - 3.2. In the presence of right ventricular infarction, Nitroglycerin may result in a precipitous drop in systolic pressure as a result of reduced preload.
4. Contraindications
  - 4.1. Systolic blood pressure less than 90 mmHg.
  - 4.2. In patients who have taken sildenafil citrate (Viagra), tadalafil (Cialis), or vardenafil (Levitra) within twenty-four hours.
  - 4.3. Known hypersensitivity to nitroglycerin or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: hypotension
  - 5.2. Central nervous system: syncope
  - 5.3. Other: headache
6. Route of administration
  - 6.1. Sublingual
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Chest Pain
      - 7.1.1.2. Dyspnea

History: 07-2012; 07-2009; 02-2008.

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**Section 500.28: Ondansetron (Zofran)**

1. Classification
  - 1.1. Antiemetic
2. Indications
  - 2.1. Nausea
3. Precautions
  - 3.1.
4. Contraindications
  - 4.1. Known hypersensitivity to ondansetron or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Gastrointestinal: diarrhea
  - 5.2. Other: headache
6. Route of administration
  - 6.1. Intravenous
  - 6.2. Intramuscular
7. Notes
  - 7.1. This pharmaceutical is found in the following standing orders within this document.
    - 7.1.1. Adult:
      - 7.1.1.1. Nausea
    - 7.1.2. Pediatric
      - 7.1.2.1. Nausea

History: 07-2012 (new).

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**Section 500.29: Sodium Bicarbonate, 8.4%**

1. Classification
  - 1.1. Alkalotic
2. Indications
  - 2.1. Metabolic acidosis.
3. Precautions
  - 3.1. Overly aggressive therapy with sodium bicarbonate may result in metabolic alkalosis.
  - 3.2. Great care should be exercised when administering sodium bicarbonate to patients with congestive heart failure or renal insufficiency due to the likelihood of sodium retention.
  - 3.3. In patients under two years of age, sodium bicarbonate should be diluted with 0.9% sodium chloride on a one-to-one basis to yield a 4.2% solution
4. Contraindications
  - 4.1. Hypochloremic states associated with excessive vomiting or from continuous gastrointestinal aspiration.
  - 4.2. Known hypersensitivity to sodium bicarbonate or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: metabolic alkalosis will occur with over aggressive administration of sodium bicarbonate.
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
7. Notes
  - 7.1. Due to the pH of the solution, the medication must be administered slowly through a patent access point using a small-bore needle.
  - 7.2. This pharmaceutical is found in the following standing orders within this document.
    - 7.2.1. Adult:
      - 7.2.1.1. Cardiopulmonary Arrest
      - 7.2.1.2. Overdose/Poisoning
      - 7.2.1.3. Trauma
    - 7.2.2. Pediatric:
      - 7.2.2.1. Cardiopulmonary Arrest
      - 7.2.2.2. Overdose/Poisoning

History: 07-2012; 07-2009; 02-2008.

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**Section 500.30: Succinylcholine Succinate (Anectine)**

1. Classification
  - 1.1. Ultra-short acting, depolarizing, neuromuscular blocker
2. Indications
  - 2.1. To facilitate tracheal intubation.
3. Precautions
  - 3.1. Fasciculations
  - 3.2. Increased intragastric pressure, which may result in regurgitation.
4. Contraindications
  - 4.1. Personal or familial history of malignant hyperthermia.
  - 4.2. Skeletal muscle myopathies.
  - 4.3. Hyperkalemic states.
  - 4.4. Post-burn or-crush injuries.
  - 4.5. Known hypersensitivity to succinylcholine or any of its components.
5. Adverse reactions/Side effects
  - 5.1. Cardiovascular: dysrhythmia
  - 5.2. Central nervous system: hyperthermia, masseter spasm
  - 5.3. Neurological: paralysis
6. Route of administration
  - 6.1. Intravenously
  - 6.2. Intraosseously
7. Notes
  - 7.1. Only prehospital agencies and personnel with written authorization may carry and utilize succinylcholine.
  - 7.2. Great care should be taken to ensure adequate sedation has been delivered prior to inducing paralysis.
  - 7.3. This pharmaceutical is found in the following standing orders within this document.
    - 7.3.1. Adult:
      - 7.3.1.1. Airway Management

History: 07-2012; 07-2009; 02-2008.

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**Section 500.31: Tetracaine (Pontocaine)**

1. Classification
  - 1.1. Ophthalmic analgesic
2. Indications
  - 2.1. Treatment for exposure to oleum capsicum, “tear gas” or other like chemical irritant.
3. Precautions
  - 3.1. Ophthalmic analgesia in the presence of foreign bodies adjacent to the globe can result in further injury without associated symptoms. Therefore, don’t allow the patient to rub their eyes.
4. Contraindications
  - 4.1. Known hypersensitivity to tetracaine or any of its components.
5. Adverse reactions/Side effects
  - 5.1. HEENT: eye itching, watery eyes
6. Route of administration
  - 6.1. Topical
7. Notes
  - 7.1. Tetracaine is not a required medication under Volusia County Prehospital Standing Orders and Treatment Protocols.
  - 7.2. This pharmaceutical is found in the following standing orders within this document.
    - 7.2.1. Adult:
      - 7.2.1.1. Ophthalmic Emergencies

History: 07-2012; 07-2009; 02-2008.

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**Section 600.00: Reference**

This section of the document is provided solely as reference for field providers.

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**Section 600.01: STEMI Alert Checklist**

Section 1: CALL DATA					
INCIDENT NUMBER	DATE	DISPATCHED	ON SCENE	TRANSPORT	ED ARRIVAL

Section 2: PATIENT DATA			
PATIENT LAST NAME	PATIENT FIRST NAME	AGE	SEX <input type="checkbox"/> FEMALE <input type="checkbox"/> MALE
PATIENT'S PRIMARY PHYSICIAN		PATIENT'S CARDIOLOGIST	

Section 3: STEMI ALERT CRITERIA			
QRS in lead V <sub>1</sub> greater than 0.12 second (120 milliseconds)?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<u>AND</u>			
Any signs or symptoms of ischemic myocardial event?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<u>OR</u>			
Clinically significant ST elevation?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<u>AND</u>			
ST elevation present in at least two anatomically contiguous leads?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<u>AND</u>			
Paced rhythms, left ventricular hypertrophy and inflammation mimics ruled out?	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
Declare <b>STEMI ALERT</b> and transport to STEMI Center.			

Section 4: PROVIDER DATA			
DESTINATION	UNIT IDENTIFIER	PARAMEDIC NAME	PATIENT CARE TURNED OVER TO
<b>LEAVE COPY OF 12 LEAD AT EMERGENCY DEPARTMENT</b>			

History: 02-2008.

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**Section 600.02: Glasgow Coma Scale**

<b>ADULT/PEDIATRIC</b>	
<b>Eyes</b>	
Spontaneous	4
To verbal command	3
To pain	2
None	1
<b>Verbal</b>	
Oriented and converses	5
Confused/Disoriented and converses	4
Inappropriate words	3
Incomprehensible sounds	2
None	1
<b>Motor</b>	
Obeys verbal commands	6
Localizes to pain	5
Withdraws to pain	4
Flexion (decorticate)	3
Extension (decerebrate)	2
None	1

<b>INFANT</b>	
<b>Eyes</b>	
Spontaneous	4
To verbal command	3
To pain	2
None	1
<b>Verbal</b>	
Infant coos or babbles (normal activity)	5
Infant is irritable or continually cries	4
Infant cries to pain	3
Infant moans to pain	2
None	1
<b>Motor</b>	
Infant moves spontaneously or purposefully	6
Infant withdraws from touch	5
Infant withdraws from pain	4
Abnormal flexion to pain (decorticate)	3
Abnormal extension to pain (decerebrate)	2
None	1

History: 02-2008.

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### Section 600.03: Medication - Dopamine Infusion

Mix 800 milligrams of Dopamine in to 500 milliliters 0.9% sodium chloride. Yield: 1,600 micrograms per milliliter.

Dopamine (Intropin) Infusion											
Infusion rates based upon: 1,600 microgram per milliliter concentration and 60 drop per milliliter infusion set.											
Micrograms per kilogram per minute											
Pounds	Kilograms	5	6	8	10	12	14	15	16	18	20
80	36	7	8	11	14	16	19	20	22	25	27
100	46	9	10	14	17	20	24	26	27	31	34
120	55	10	12	16	20	25	29	31	33	37	41
140	64	12	14	19	24	29	33	36	38	43	48
160	73	14	16	22	27	33	38	41	44	49	55
180	82	15	18	25	31	37	43	46	49	55	61
200	91	17	20	27	34	41	48	51	55	61	68
220	100	19	23	30	38	45	53	56	60	68	75
240	109	20	25	33	41	49	57	61	65	74	82
260	118	22	27	35	44	53	62	66	71	80	89
280	127	24	29	38	48	57	67	72	76	86	95
300	136	26	31	41	51	61	72	77	82	92	102
320	146	27	33	44	55	65	76	82	87	98	109
340	155	29	35	46	58	70	81	87	93	104	116
360	164	31	37	49	61	74	86	92	98	110	123

Drops per minute

History: 02-2008.

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# **Section 600.04: Medication - Epinephrine Infusion**

Mix one milligram of Epinephrine, 1:1,000 in to 50 milliliters 0.9% sodium chloride. Yield: 20 micrograms per milliliter.

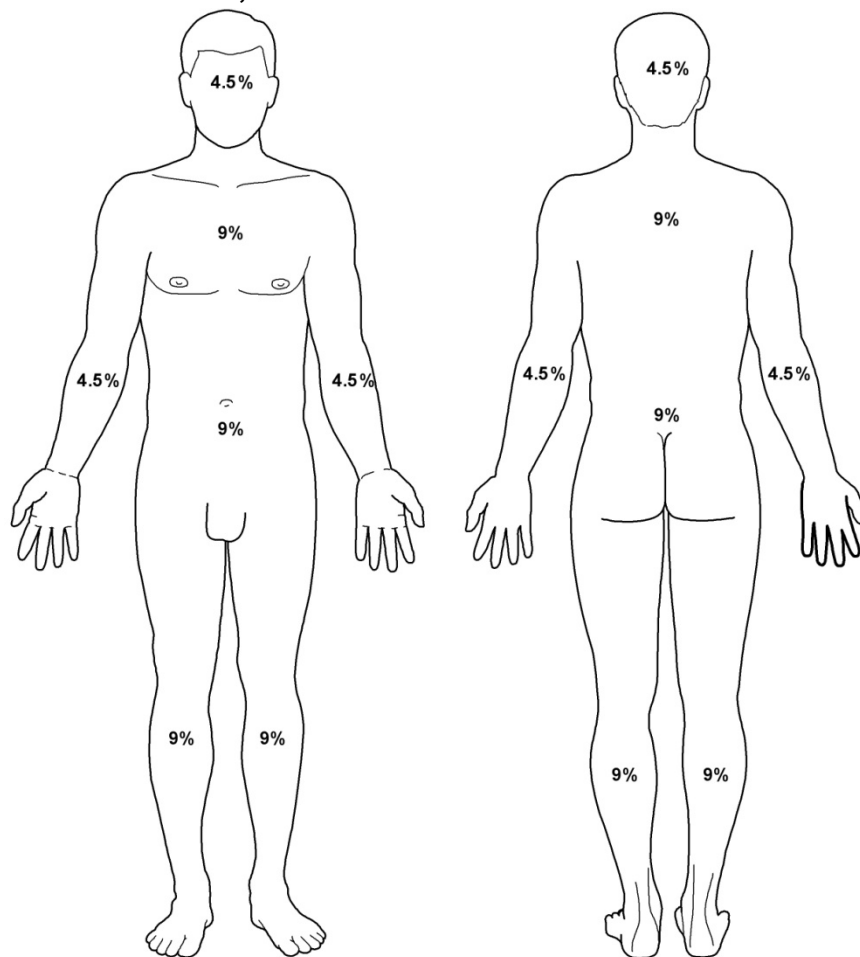
Epinephrine Infusion								
Infusion rates based upon: 20 micrograms per milliliter concentration and 60 drop per milliliter infusion set.								
Micrograms per minute								
2	3	4	5	6	7	8	9	10
6	9	12	15	18	21	24	27	30
Drops per minute.								

History: 02-2008.

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## Section 600.05: Rule of Nine's, Adult and Parkland Burn Formula



### Calculating Volume Resuscitation using the Parkland Burn Formula

Calculate the volume to be infused for the first twenty-four hours:

CALCULATING VOLUME TO BE INFUSED OVER THE FIRST TWENTY-FOUR HOURS					
4 milliliters	x	Percentage of body surface area (BSA) affected by second and third degree burns	x	Body weight in kilograms	= Volume to be infused over 24 hours
<b>EXAMPLE</b>					
4	x	20%	x	70	= 5,600 milliliters

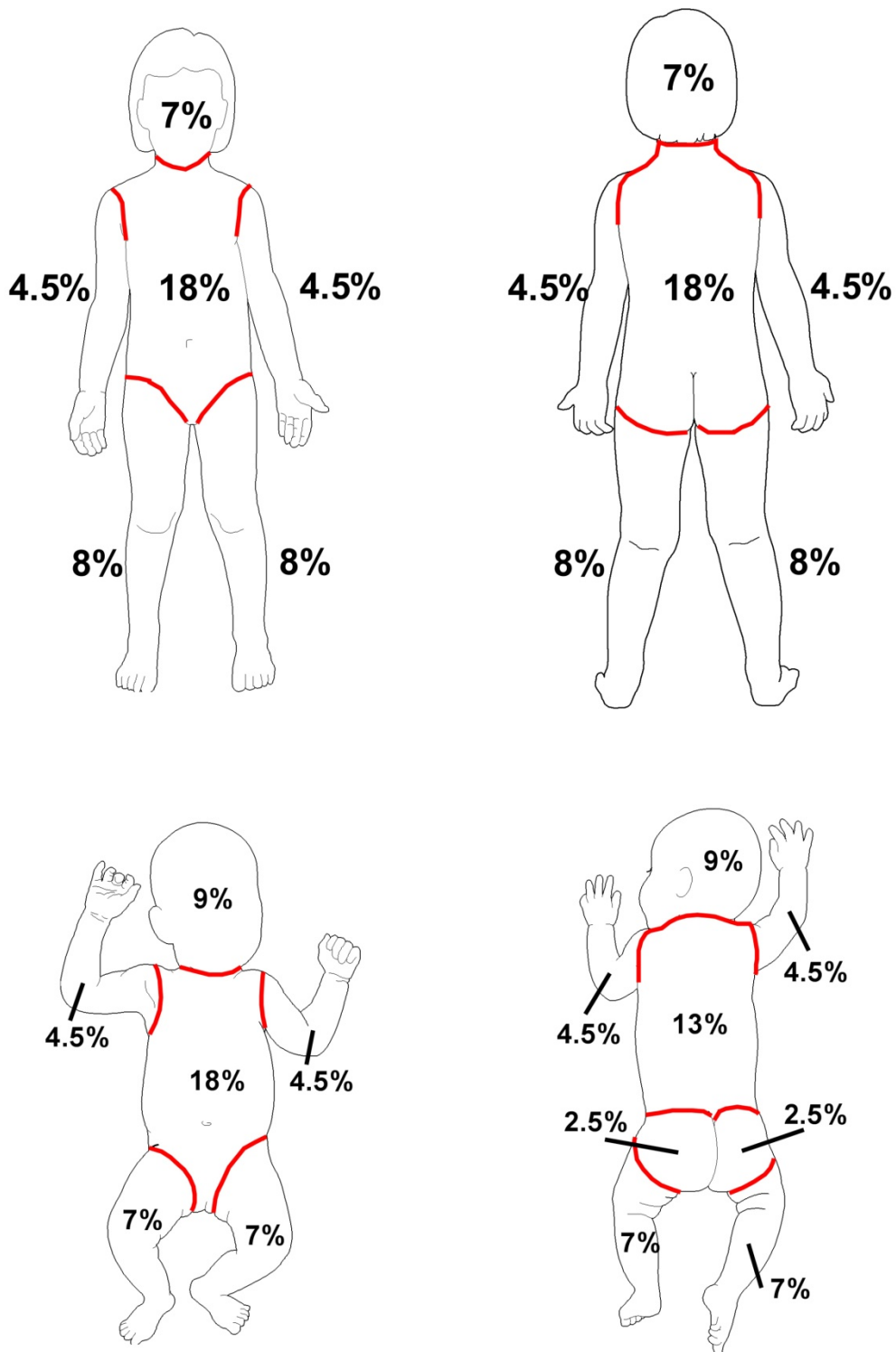
Half of this calculated volume is to be delivered over the first eight hours.

CALCULATING VOLUME TO BE INFUSED EVERY HOUR FOR THE FIRST EIGHT HOURS		
(Volume to be infused over 24 hours / 2) / 8	=	Volume to be Infused each hour for the first eight hours
<b>EXAMPLE</b>		
(5,600 / 2) / 8	=	350 milliliters per hour for first eight hours of care

History: 02-2008.

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**Section 600.06: Rule of Nine's, Child and Infant**



History: 02-2008.

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**Section 600.07: Stroke Alert Checklist****Section 1: CALL DATA**

INCIDENT NUMBER	DATE	DISPATCHED	ON SCENE	TRANSPORT	ED ARRIVAL
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**Section 2: PATIENT DATA**

PATIENT LAST NAME	PATIENT FIRST NAME	AGE	SEX <input type="checkbox"/> FEMALE <input type="checkbox"/> MALE
WITNESS NAME <input type="checkbox"/> Check if none		WITNESS TELEPHONE	

**Section 3: HISTORY**

LAST TIME PATIENT SEEN WITHOUT SIGNS OR SYMPTOMS	SEVERE HEADACHE <input type="checkbox"/> YES <input type="checkbox"/> NO	HEAD TRAUMA AT ONSET <input type="checkbox"/> YES <input type="checkbox"/> NO
--	---	--

**Section 4: EXAMINATION**

Is the patient's mental status altered from their usual baseline (AVPU)?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Does the patient have neck stiffness (can't touch his or her chin to chest)?	<input type="checkbox"/> YES <input type="checkbox"/> NO
<b>Prehospital Stroke Scale</b>	<b>✓ if abnormal</b>
<b>SPEECH:</b> Have the patient repeat "You can't teach an old dog new tricks".	
<b>FACIAL DROOP:</b> Have the patient smile or grin.	
<b>ARM DRIFT:</b> Have the patient extend both arms simultaneously in front of them with his or her eyes closed.	

**Section 5: STROKE ALERT CRITERIA**

Time of onset less than five hours?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Any abnormal finding consistent with stroke on examination?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Deficit not likely due to head trauma?	<input type="checkbox"/> YES <input type="checkbox"/> NO
Blood glucose greater than 50 milligrams per deciliter? _____ mg/dl	<input type="checkbox"/> YES <input type="checkbox"/> NO
Declare <b>STROKE ALERT</b> and transport to Stroke Center.	

**Section 6: PROVIDER DATA**

DESTINATION	UNIT IDENTIFIER	PARAMEDIC NAME	PATIENT CARE TURNED OVER TO
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History: 02-2008.

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**Section 600.08: Trauma Scorecard Methodology, Adult**

Component	Blue	Red
Airway	<ul style="list-style-type: none"> <li>Sustained respiratory rate <math>\geq 30</math></li> </ul>	<ul style="list-style-type: none"> <li>Airway assistance other than the delivery of supplemental oxygen</li> </ul>
Circulation	<ul style="list-style-type: none"> <li>Sustained heart rate <math>\geq 120</math></li> </ul>	<ul style="list-style-type: none"> <li>No radial pulse and a sustained heart rate <math>&gt; 120</math>, or</li> <li>Systolic blood pressure <math>&lt; 90</math> mmHg</li> </ul>
Best motor response (BMR)	<ul style="list-style-type: none"> <li>The patients BMR component of the Glasgow Coma Score is 5</li> </ul>	<ul style="list-style-type: none"> <li>The patients BMR component of the Glasgow Coma Score <math>&lt; 5</math>, or</li> <li>Presence of paralysis, or</li> <li>Suspicion of spinal cord injury, or</li> <li>Loss of sensation</li> </ul>
Cutaneous	Soft tissue injury from: <ul style="list-style-type: none"> <li>Major degloving injury, or</li> <li>Major flap avulsion greater than 5 inches, or</li> <li>Sustained a gunshot wound to an extremity</li> </ul>	<ul style="list-style-type: none"> <li>2<sup>nd</sup> or 3<sup>rd</sup> degree burns to <math>\geq 15\%</math> BSA, or</li> <li>Amputation proximal to wrist or ankle, or</li> <li>Penetrating injury to the head, neck or torso<sup>i</sup>.</li> </ul>
Long bone fracture	Signs or symptoms to indicate the presence of a single long bone fracture from either: <ul style="list-style-type: none"> <li>Motor vehicle collision, or</li> <li>Fall of 10 feet, or greater.</li> </ul>	<ul style="list-style-type: none"> <li>Signs or symptoms to indicate the presence of two or more long bone fracture sites<sup>ii</sup>.</li> </ul>
Age	<ul style="list-style-type: none"> <li>Patient <math>\geq 55</math> years in age</li> </ul>	
Mechanism of injury	<ul style="list-style-type: none"> <li>Patient ejected from a motor vehicle<sup>iii</sup>, or</li> <li>Steering wheel deformity as a result of driver impact</li> </ul>	
Glasgow Coma Score		<ul style="list-style-type: none"> <li>Sustained GCS score <math>\leq 12</math><sup>iv</sup></li> </ul>
EMT or Paramedic judgment		<ul style="list-style-type: none"> <li>The EMT or Paramedic assessing the patient may declare them to be a trauma alert if, in his or her judgment, the patient's condition warrants.</li> </ul>

History: 02-2008.

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<sup>i</sup> Superficial wounds where the depth of the wound is easily determined are excluded.

<sup>ii</sup> For purposes of trauma scorecard methodology, “fracture sites” are defined as 1) humerus, 2) radius and/or ulna, 3) femur and 4) tibia and/or fibula.

<sup>iii</sup> Ejection from the open bed of a pickup truck, and all-terrain vehicle or a motorcycle is excluded from this definition

<sup>iv</sup> Excluding patients whose usual Glasgow Coma Score is 12 or less based upon medical history and preexisting medical condition.



**Section 600.09: Trauma Scorecard Methodology, Pediatric**

Component	Blue	Red
Airway		<ul style="list-style-type: none"> <li>Airway assistance other than the delivery of supplemental oxygen</li> </ul>
Circulation	<ul style="list-style-type: none"> <li>Carotid or femoral pulses are palpable, but the radial or pedal pulses are not palpable, or</li> <li>Systolic blood pressure &lt;90 mmHg</li> </ul>	<ul style="list-style-type: none"> <li>Faint or non-palpable carotid or femoral pulse, or</li> <li>Systolic blood pressure &lt;50 mmHg</li> </ul>
Consciousness	<ul style="list-style-type: none"> <li>The patient exhibits symptoms of amnesia, or</li> <li>There is any loss of consciousness</li> </ul>	<ul style="list-style-type: none"> <li>The patients exhibits any altered mental status, or</li> <li>Presence of paralysis, or</li> <li>Suspicion of spinal cord injury, or</li> <li>Loss of sensation</li> </ul>
Cutaneous		<ul style="list-style-type: none"> <li>2<sup>nd</sup> or 3<sup>rd</sup> degree burns to ≥10% BSA, or</li> <li>Amputation proximal to wrist or ankle, or</li> <li>Penetrating injury to the head, neck or torso<sup>i</sup>, or</li> <li>Any major soft tissue disruption</li> </ul>
Long bone fracture	<ul style="list-style-type: none"> <li>Signs or symptoms to indicate the presence of a single closed long bone fracture<sup>ii</sup>.</li> </ul>	<ul style="list-style-type: none"> <li>Evidence of a single open long bone fracture site<sup>iii</sup>, or</li> <li>Evidence of multiple fracture sites<sup>2</sup> or dislocations</li> </ul>
Size	<ul style="list-style-type: none"> <li>Pediatric patients weighing &lt;11 kilograms (24 pounds), or</li> <li>The length of the body is equivalent to this length on the length/weight-based pediatric resuscitation tape</li> </ul>	
EMT or Paramedic judgment		<ul style="list-style-type: none"> <li>The EMT or Paramedic assessing the patient may declare them to be a trauma alert if, in his or her judgment, the patient's condition warrants.</li> </ul>

History: 02-2008.

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<sup>i</sup> Superficial wounds where the depth of the wound is easily determined are excluded.

<sup>ii</sup> For purposes of trauma scorecard methodology, “fracture sites” are defined as 1) humerus, 2) radius and/or ulna, 3) femur and 4) tibia and/or fibula.

<sup>iii</sup> For purposes of trauma scorecard methodology, “fracture sites” are defined as 1) humerus, 2) radius and/or ulna, 3) femur and 4) tibia and/or fibula.