Prehospital Standing Orders and Treatment Protocols

County of Volusia, Florida

Effective June 30, 2022

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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 emergency medical service (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.

Authorization

These protocols were developed under the authorization of the below-signed medical director in accordance with chapter 401, Florida Statute and chapters' 64J-1 and 64J-2, Florida Administrative Code. Changes to these protocols can be made only with the expressed written
lusia County EMS medical director.

Jessica B. Gershen, MD,
Volusia County EMS Medical Director

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Section 100.00: General protocols

This section contains general protocols that address instances in which field providers may 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 emergency department medical control physician (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. The goal of the EMS system is to provide optimal patient care on scene and if requested, or otherwise appropriate, transport to definitive care. Patient care may require transfer to other EMS providers to accomplish this mission.
    - 4.1. The EMT or paramedic first "on scene" will assume responsibility for patient care until such care is transferred to another provider.
    - 4.2. A prehospital provider certified at the basic life support level will transfer care to a provider certified at the advanced life support level.
    - 4.3. 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. As it pertains to municipal transport partners, transports shall occur consistent with agreements between the county and participating municipality.
        - 4.3.1. An advanced life support, non-transport provider is authorized to transition care to a basic life support transport unit if, in the opinion of the non-transport provider, the basic life support transport provider can safely and appropriately transport the patient. A comprehensive assessment is requisite in making the determination. If the assessment relies on any advanced life support level of care equipment (e.g., monitor), basic life support transport is inappropriate and may not be utilized.
    - 4.4. 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.
    - 4.5. Unless provided for elsewhere in this manual, care may not be transferred from a higher level care provider to a lower level care provider.

4.6. 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.

4.7. 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.

5. Proper body substance isolation must be utilized at all times.
6. For all calls, be prepared for immediate basic life support and advanced life support interventions upon initial patient contact and patient transfer, as appropriate.
7. 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.
8. 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.
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. Unless otherwise specified, patients should be continued on intravenous fluids, medications, and therapeutic devices initiated by referring agencies and institutions.
13. Orders communicated directly from the EDMCP to the paramedics caring for the patient may supersede established protocol.
14. 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.
15. Field personnel should not request orders for procedures or medications that are not indicated in this document.

History: 04-2021; 02-2019 (memorandum); 01-2018; 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 emergency department medical control physician (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: 01-2018; 02-2008.

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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 and determination of 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 situation involving the decision to initiate or terminate resuscitation:
    2.1. Initiation: begin resuscitative measures and contact the emergency department medical control physician (EDMCP). Provide the physician with a concise but comprehensive assessment of the situation, without compromise of patient care.
    2.2. Termination: contact the EDMCP. Provide the physician with a concise but comprehensive assessment of the situation.
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 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, if signed by the patient, or the patient's health care surrogate, or proxy or court appointed guardian or person acting pursuant to a durable power of attorney established pursuant to section 709.08, Florida Statutes. Pursuant to section 765.104, Florida Statutes, the revocation may be in writing, by physical destruction, by failure to present it, or by orally expressing a contrary intent. 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.

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 sustained asystole or pulseless electrical activity who has received care, including: endotracheal intubation or placement of a King LTS-D airway; cardiopulmonary resuscitation; ventilation with supplemental oxygen via positive pressure ventilation device (PPVD); and administration of two appropriate doses of epinephrine; exhibits no hypothermia; treatment for hypoglycemia, if indicated; and demonstrates 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: 04-2021; 01-2018; 07-2012; 02-2008.

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Section 100.05: 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 authorize 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 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. For example, 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 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 EMS medical director, or designee.

History: 04-2021; 07-2012 (reorganized, formerly emergency department diversion under 100.05).

Section 100.06: 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.
      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 a cognitive examination affording the provider the ability to better determine the patient's ability to refuse treatment and/or transport;
      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: 04-2021; 07-2012; 02-2008.

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Section 200.00: Transport protocols

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Section 200.01: Transport protocols, general

1. General considerations
   - 1.1. 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.
   - 1.2. If non-life threatening:
     - 1.2.1. Transport the patient to hospital of the patient's choice.
     - 1.2.2. 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).
     - 1.2.3. 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.
   - 1.3. If life threatening:
     - 1.3.1. Transport the patient to the closest appropriate facility.
     - 1.3.2. If the closest appropriate facility conflicts with the choice of the patient or the party acting of behalf on 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.
     - 1.3.3. 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."
     - 1.3.4. 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.
   - 1.4. The transport 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. If any prehospital provider communicates a patient designation that dictates transport to a hospital outlined under specific transport protocols (i.e., STEMI,

stroke, trauma, etc.), the designation shall not be negated by another prehospital provider without the approval of the receiving emergency department physician or the EMS medical director.

1.7. Emergency interfacility transfer procedures
  1.7.1. Any Volusia County receiving emergency department may declare a "STEMI alert", "stroke alert", or "trauma alert" based upon either initial assessment or subsequent deterioration when the patient meets criteria.
  1.7.2. 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 "STEMI alert", "stroke alert", or "trauma alert" to the communications center staff.
  1.7.3. The responsible transporting agency will assign such transfers an "emergency" status.
  1.7.4. 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.

1.8. Volusia County Receiving Facilities:
  1.8.1. Central Florida Regional Hospital: 1401 West Seminole Boulevard, Sanford
  1.8.2. AdventHealth DeLand: 701 West Plymouth Avenue, DeLand
  1.8.3. AdventHealth Deltona ER: 3108 Howland Boulevard, Deltona
  1.8.4. AdventHealth Fish Memorial: 1055 Saxon Boulevard, Orange City
  1.8.5. AdventHealth Flagler: 60 Memorial Medical Parkway, Palm Coast
  1.8.6. AdventHealth Daytona Beach: 301 Memorial Medical Parkway, Daytona Beach
  1.8.7. AdventHealth New Smyrna Beach: 401 Palmetto Avenue, New Smyrna Beach
  1.8.8. Halifax Health Medical Center: 303 North Clyde Morris Boulevard, Daytona Beach
  1.8.9. Halifax Health Medical Center of Port Orange: 1041 Dunlawton Avenue, Port Orange
  1.8.10. Halifax Health UF Health Medical Center of Deltona: 3300 Halifax Crossing Boulevard, Deltona
  1.8.11. Parrish Medical Center: 951 North Washington Avenue, Titusville

History: 04-2021; 12-2019 (memorandum); 01-2019 (memorandum); 01-2018; 07-2012; (reorganized)

Section 200.02: 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. Communications with the emergency department :
     - 1.2.1. Transmit the 12 lead ECG to the receiving emergency department as soon as feasible;
     - 1.2.2. Communicate the applicable field interpretation to the emergency department:
       - 1.2.2.1. In the presence of ST elevation or left bundle branch block with signs and/or symptoms of myocardial ischemia:
         - 1.2.2.1.1. Verbalize that the patient is a "STEMI alert";
         - 1.2.2.1.2. Communicate the specific STEMI criteria;
         - 1.2.2.1.3. Treatment provided;
         - 1.2.2.1.4. Vital signs;
         - 1.2.2.1.5. 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
         - 1.2.2.1.6. Estimated time of arrival.
       - 1.2.2.2. If the subtlety of the changes prevents the field provider from determining the presence or absence of ST changes:
         - 1.2.2.2.1. Request the receiving physician review the 12 lead ECG;
         - 1.2.2.2.2. Treatment provided;
         - 1.2.2.2.3. Vital signs;
         - 1.2.2.2.4. 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
         - 1.2.2.2.5. Estimated time of arrival.
       - 1.2.2.3. In the absence of ST elevation or left bundle branch block with signs and/or symptoms of myocardial ischemia:
         - 1.2.2.3.1. Treatment provided;
         - 1.2.2.3.2. Vital signs;
         - 1.2.2.3.3. 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
         - 1.2.2.3.4. Estimated time of arrival.
   - 1.3. Appropriate transport destinations.

1.3.1. 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.

1.3.2. 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.

1.3.2.1. Central Florida Regional Hospital: 1401 West Seminole Boulevard, Sanford

1.3.2.2. AdventHealth DeLand: 701 West Plymouth Avenue, DeLand

1.3.2.3. AdventHealth Fish Memorial: 1055 Saxon Boulevard, Orange City

1.3.2.4. AdventHealth Daytona Beach: 301 Memorial Medical Parkway, Daytona Beach

1.3.2.5. AdventHealth New Smyrna Beach: 401 Palmetto Avenue, New Smyrna Beach

1.3.2.6. Halifax Health Medical Center: 303 North Clyde Morris Boulevard, Daytona Beach

1.3.3. Initial receiving emergency departments that are not designated as STEMI receiving centers.

1.3.3.1. AdventHealth Deltona ER: 3108 Howland Boulevard, Deltona

1.3.3.2. AdventHealth Flagler, 60 Memorial Medical Parkway, Palm Coast

1.3.3.3. Halifax Health Medical Center of Port Orange: 1041 Dunlawton Avenue, Port Orange

1.3.3.4. Halifax Health UF Health Medical Center of Deltona: 3300 Halifax Crossing Boulevard, Deltona

1.3.3.5. Parrish Medical Center, 951 North Washington Avenue, Titusville

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.

History: 04-2021; 12-2019 (memorandum); 10-2018 (memorandum); 01-2018; 07-2014; 07-2012 (reorganized, formerly 100.05)

Section 200.03: Transport protocols, Florida Mental Health Act (Baker Act)

1. Definitions
   - 1.1. Co-morbid condition means any obvious or suspected emergency medical condition regardless of whether the condition is directly or indirectly related to the underlying mental health condition. Such conditions include, but are not limited to: suspected or known overdose, injuries resulting from self-harm, altered mental status, and chest pain. The presence of relative past medical history without the manifestation of signs or symptoms does not support the determination of a co-morbid condition.
   - 1.2. Intellectual disability means significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior which manifests before the age of 18 and can reasonably be expected to continue indefinitely. For the purposes of this definition, the term:
     - 1.2.1. Adaptive behavior means the effectiveness or degree with which an individual meets the standards of personal independence and social responsibility expected of his or her age, cultural group, and community.
     - 1.2.2. Significantly subaverage general intellectual functioning means performance that is two or more standard deviations from the mean score on a standardized intelligence test specified in the rules of the agency.
   - 1.3. Involuntary examination means an examination performed under the applicable laws of the State of Florida to determine if an individual qualifies for involuntary inpatient treatment or involuntary outpatient treatment.
   - 1.4. Mental illness means an impairment of the mental or emotional processes that exercise conscious control of one's actions or of the ability to perceive or understand reality, which impairment substantially interferes with a person's ability to meet the ordinary demands of living, regardless of etiology. For the purposes of this section, the term does not include intellectual disability, intoxication, or conditions manifested only by antisocial behavior or substance abuse impairment.
2. Criteria for involuntary examination
   - 2.1. Involuntary examination requires that there is reason to believe the individual has a mental illness and because of the mental illness:
     - 2.1.1. The person has refused voluntary examination after conscientious explanation and disclosure of the purpose of the examination; or
     - 2.1.2. The person is unable to determine for himself or herself whether examination is necessary

       and

     - 2.1.3. Without care or treatment, the person is likely to suffer from neglect or refuse to care for himself or herself; such neglect or refusal poses a real and present threat of substantial harm to his or her well-being; and it is not apparent that such harm may be avoided through the help of willing family members or friends or the provision of other services; or

2.1.4. There is a substantial likelihood that without care or treatment the person will cause serious bodily harm to himself or herself or others in the near future, as evidenced by recent behavior.

3. Who may initiate
   3.1. Florida Statutes provides a mechanism for initiating involuntary examination for the following professions: a court through an ex parte order; a law enforcement officer; or a physician, clinical psychologist, psychiatric nurse, mental health counselor, marriage and family therapist, or clinical social worker.
4. Transport requirements
   4.1. Ambulance transport of persons subject to involuntary examination is appropriate in the following circumstances:
      4.1.1. There is an emergency medical condition requiring assessment and/or treatment (ambulance transport is required).
      4.1.2. Upon request from a law enforcement officer when such assistance is needed for the safety of the officer or the person in custody. Such instances may include, but are not limited to: the elderly, frail or otherwise infirmed persons, persons who may not be best suited for transport in a patrol car.
      4.1.3. Law enforcement shall be requested to attend during ambulance transport if the transporting crew is of the opinion that their safety is jeopardized.
5. Appropriate transport destinations.
   5.1. In the absence of an acute co-morbid condition or conditions, transport the patient to Halifax Health Medical Center, 301 North Clyde Morris Boulevard, Daytona Beach.
   5.2. If there is reasonable suspicion that an acute co-morbid condition or conditions exist, transport the patient to the closest emergency department.

History: 01-2018; 07-2014 (700.02)

Section 200.04: 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. AdventHealth DeLand: 701 West Plymouth Avenue, DeLand
        - 3.1.2. AdventHealth Daytona Beach: 301 Memorial Medical Parkway, Daytona Beach
        - 3.1.3. 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. AdventHealth Deltona ER: 3108 Howland Boulevard, Deltona
        - 3.2.2. AdventHealth Fish Memorial: 1055 Saxon Boulevard, Orange City
        - 3.2.3. AdventHealth Flagler, 60 Memorial Medical Parkway, Palm Coast
        - 3.2.4. AdventHealth New Smyrna Beach: 401 Palmetto Avenue, New Smyrna Beach
        - 3.2.5. Central Florida Regional Hospital: 1401 West Seminole Boulevard, Sanford
        - 3.2.6. Halifax Health Medical Center of Port Orange: 1041 Dunlawton Avenue, Port Orange
        - 3.2.7. Halifax Health UF Health Medical Center of Deltona: 3300 Halifax Crossing Boulevard, Deltona
        - 3.2.8. Parrish Medical Center, 951 North Washington Avenue, Titusville

History: 04-2021; 12-2019 (memorandum); 01-2019 (memorandum); 01-2018; 07-2012 (reorganized, formerly 100.05)

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Section 200.05: Transport protocols, stroke

1. All patients suspected of experiencing a transient ischemic attack or stroke will be assessed utilizing the matrices defined in this document.
2. Stroke center hierarchy.
    2.1. Primary stroke centers maintain the ability to image and treat stroke patients with the peripheral administration of tissue plasminogen activator (tPA).
    2.2. Comprehensive stroke centers have the added ability of endovascular treatment, including administration of tPA directly to the occlusion and clot retrieval (thrombectomy) in the event of a large vessel occlusion (LVO). Comprehensive stroke centers are de facto primary stroke centers.
3. Stroke assessment tools.
    3.1. The following stroke assessment tools are to be utilized:
        3.1.1. Cincinnati Prehospital Stroke Scale (CPSS) for the presumption of stroke.
        3.1.2. Cincinnati Stroke Triage Assessment Tool (C-STAT) for the presumption of LVO. C-STAT is synonymous with the Cincinnati Prehospital Stroke Severity Scale (CP-SSS). For clarity, this document will reference the C-STAT.
        3.1.3. Florida Stroke-Triage Assessment Tool[1] for presumption of hemorrhagic stroke.
    3.2. An assessment form amalgamating the above is provided in the appendix of this document.
4. Assessment matrices
    4.1. If, based upon patient presentation or other information gathered, stroke is suspected, providers shall assess the patient using the matrices, in sequence, below.
        4.1.1. Assessment matrix 1: Cincinnati Prehospital Stroke Scale.
            4.1.1.1. Components
                4.1.1.1.1. Facial droop
                4.1.1.1.2. Arm drift
                4.1.1.1.3. Speech abnormality
            4.1.1.2. If the CPSS is presumptive for stroke, continue with additional assessment matrices to determine the appropriate transport destination. Otherwise, follow appropriate protocols.
        4.1.2. Assessment matrix 2: Cincinnati Stroke Triage Assessment Tool (C-STAT)
            4.1.2.1. Components
                4.1.2.1.1. Conjugate gaze deviation. If patient meets criteria, add two (2) to C-STAT score.
                4.1.2.1.2. Incorrectly answers age or month and does not follow simple command. If patient meets criteria, add one (1) to C-STAT score.
                4.1.2.1.3. Arm (left, right, or both) fall within ten (10) seconds. If patient meets criteria, add one (1) to C-STAT score.

[1] Florida Department of Health, Bureau of Emergency Medical Oversight. (2019, October 24). Florida Emergency Medical Services Stroke-Triage Assessment Tool. Retrieved January 4, 2021, from http://www.floridahealth.gov/licensing-and-regulation/ems-system/_documents/florida-ems-stroke-alert.pdf

4.1.2.2. If the C-STAT score is presumptive for LVO (score is ≥2), continue with additional assessment matrices to determine the appropriate transport destination. Otherwise, follow appropriate protocols.

4.1.3. Assessment matrix 3: Hemorrhagic stroke assessment

4.1.3.1. Components

4.1.3.1.1. Sudden, worst-ever headache

4.1.3.1.2. Sudden and unexplained decrease in consciousness

4.1.3.1.3. Furthermore, consider hemorrhagic potential when:

4.1.3.1.3.1. Onset of symptoms occurred following physical exertion

4.1.3.1.3.2. Presence of nausea/vomiting

4.1.3.1.3.3. Nuchal rigidity

4.1.3.1.3.4. Significantly elevated blood pressure (systolic blood pressure ≥180 or diastolic blood pressure ≥120)

4.1.3.2. If the hemorrhagic assessment is presumptive for hemorrhage, continue with additional assessment matrices to determine the appropriate transport destination. Otherwise, follow appropriate protocols.

4.1.4. Assessment matrix 4: Exclusionary criteria

4.1.4.1. Components

4.1.4.1.1. Time of onset greater then twenty-four (>24) hours

4.1.4.1.2. Signs and symptoms are likely attributed to traumatic brain injury

4.1.4.1.3. Signs and symptoms are likely attributed to hypoglycemia

4.1.4.2. If the exclusionary assessment negates the cumulative stroke alert designation, follow appropriate protocols.

4.1.5. Transport destination determination

4.1.5.1. If the exclusionary criteria negates designation of stroke alert, transport to the nearest appropriate receiving facility.

4.1.5.2. Stroke alert, comprehensive: If the CPSS is presumptive for stroke <u>and</u> the C-STAT ≥2 and/or the hemorrhagic assessment is presumptive for large vessel occlusion or hemorrhage, respectively, designate the patient stroke alert, comprehensive and transport to the nearest comprehensive stroke center.

4.1.5.3. Stroke alert: primary: If the CPSS is presumptive for stroke <u>and</u> the C-STAT and/or the hemorrhagic assessment is <u>not</u> presumptive for large vessel occlusion or hemorrhage, respectively, designate the patient stroke alert, primary and transport to the nearest primary stroke center.

4.1.5.4. Patient weight, when necessary, shall be a factor in determining an appropriate transport destination.

5. Communications with the emergency department.

5.1. When declaring a stroke alert, primary or comprehensive the following must be included in the communication.
5.1.1. Providers must verbalize that the patient is a stroke alert, including the subclassification (primary or comprehensive).
5.1.2. A brief description of the clinical presentation.
5.1.3. Vital signs, to include pulse, respiratory rate, blood pressure, blood glucose level and itemized Glasgow Coma Score.
5.1.4. Estimated time of arrival.

6. Documentation for the emergency department.
6.1. Providers are expected to provide the stroke triage assessment tool, or substantially similar content, to the receiving emergency department at the time of patient turnover. It shall include at a minimum:
6.1.1. Patient name.
6.1.2. Patient date of birth or approximate age.
6.1.3. Name or names of persons familiar with patient or onset of signs and symptoms that may be beneficial in the event further information or clarification of information is needed by the receiving facility.
6.1.4. All telephone (e.g., home landline, work landline, cellular, etc.) contact information for the persons identified above.
6.1.5. A comprehensive list of all medications, including dosages and frequency for each medication.
6.1.6. A comprehensive medical history for the patient. History shall include: the last time the patient was seen at their normal neurologic baseline; if the signs and symptoms are associated with wake up stroke; and any indicators that the patient may be excluded from thrombolytic therapy as a result of previous cerebral hemorrhage, recent traumatic injury, and recent surgical procedure.

7. Appropriate transport destinations.
7.1. Comprehensive stroke receiving facilities (maximum weight capacity of computerized axial tomography (CT) scanner)
7.1.1. Halifax Health Medical Center: 303 North Clyde Morris Boulevard, Daytona Beach (650 pounds)
7.2. Primary stroke receiving facilities (maximum weight capacity of computerized axial tomography (CT) scanner)
7.2.1. Central Florida Regional Hospital: 1401 West Seminole Boulevard, Sanford (450 pounds)
7.2.2. AdventHealth DeLand: 701 West Plymouth Avenue, DeLand (500 pounds)
7.2.3. AdventHealth Fish Memorial: 1055 Saxon Boulevard, Orange City (450 pounds)
7.2.4. AdventHealth Flagler, 60 Memorial Medical Parkway, Palm Coast
7.2.5. AdventHealth Daytona Beach: 301 Memorial Medical Parkway, Daytona Beach (450 pounds)
7.2.6. AdventHealth New Smyrna Beach: 401 Palmetto Avenue, New Smyrna Beach (450 pounds)
7.2.7. Halifax Health Medical Center of Port Orange: 1041 Dunlawton Avenue, Port Orange

7.2.8. Parrish Medical Center, 951 North Washington Avenue, Titusville

7.3. 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.

7.3.1. AdventHealth Deltona ER: 3108 Howland Boulevard, Deltona

7.3.2. Halifax Health UF Health Medical Center of Deltona: 3300 Halifax Crossing Boulevard, Deltona

History: 04-2021; 12-2019 (memorandum); 01-2019 (memorandum); 01-2018; 07-2014; 05-2013 (memorandum); 07-2012 (reorganized, formerly 100.05)

Section 200.06: 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. Central Florida Regional Hospital: 1401 West Seminole Boulevard, Sanford
      4.1.2. AdventHealth DeLand: 701 West Plymouth Avenue, DeLand
      4.1.3. AdventHealth Fish Memorial: 1055 Saxon Boulevard, Orange City
      4.1.4. AdventHealth Daytona Beach: 301 Memorial Medical Parkway, Daytona Beach
      4.1.5. AdventHealth New Smyrna Beach: 401 Palmetto Avenue, New Smyrna 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. AdventHealth Deltona ER: 3108 Howland Boulevard, Deltona
      4.2.2. AdventHealth Flagler, 60 Memorial Medical Parkway, Palm Coast
      4.2.3. Halifax Health Medical Center of Port Orange: 1041 Dunlawton Avenue, Port Orange
      4.2.4. Halifax Health UF Health Medical Center of Deltona: 3300 Halifax Crossing Boulevard, Deltona
      4.2.5. Parrish Medical Center, 951 North Washington Avenue, Titusville

History: 04-2021; 12-2019 (memorandum); 01-2019 (memorandum); 01-2018; 07-2014; 02-2013 (corrected); 01-2013 (new).

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Section 200.07: 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, the communications center shall make every effort to gather the following information, at a minimum, and relay such information to responding agencies.
            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, the communications center will ensure timely dispatch of the most readily available and appropriately staffed and equipped emergency medical service vehicle(s). The communication center 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 to the communications center.
    1.2. Assessment of the trauma patient
        1.2.1. If any prehospital provider communicates a designation of trauma 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.
        1.2.2. Differentiating adult and pediatric patients.
            1.2.2.1. Adult patients will be those having the anatomical and physical characteristics of a person sixteen years of age, or older.
            1.2.2.2. Pediatric patients will be those having the anatomical and physical characteristics of a person fifteen years of age, or younger.
            1.2.2.3. 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 length-based measuring device, assess the patient utilizing the pediatric criteria.
        1.2.3. Adult trauma scorecard methodology.

1.2.3.1. 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.

1.2.3.1.1. The patient receives active airway assistance beyond the administration of oxygen.

1.2.3.1.2. The patient lacks a radial pulse and has a sustained heart rate greater than 120 beats per minute.

1.2.3.1.3. The patient's systolic blood pressure is less than 90 millimeters of mercury.

1.2.3.1.4. The patient's best motor response component of the Glasgow Coma Score is four or less.

1.2.3.1.5. The patient exhibits the presence of paralysis.

1.2.3.1.6. There is suspicion of spinal cord injury.

1.2.3.1.7. The patient sustains second or third degree burns to fifteen percent of the total body surface area, or greater.

1.2.3.1.8. The patient has an amputation proximal to the wrist or ankle.

1.2.3.1.9. The patient has a penetrating injury to the head, neck or torso when the wound is not readily identifiable as superficial.

1.2.3.1.10. 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.

1.2.3.1.11. The total sustained Glasgow Coma Score is twelve or less, unless the depressed Glasgow Coma Score can be attributed to a preexisting medical condition.

1.2.3.2. 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.

1.2.3.2.1. The patient exhibits a sustained respiratory rate of thirty, or greater.

1.2.3.2.2. The patient has a sustained heart rate of 120 beats per minute, or greater.

1.2.3.2.3. The patient's best motor response component of the Glasgow Coma Score is five.

1.2.3.2.4. Major degloving injury.

1.2.3.2.5. Major flap avulsion greater than five inches.

1.2.3.2.6. Gunshot wound to an extremity.

1.2.3.2.7. Long bone fracture resulting from a motor vehicle collision.

1.2.3.2.8. Long bone fracture resulting from a fall from an elevation of ten feet, or greater.

1.2.3.2.9. Patient is age fifty-five or greater.

1.2.3.2.10. Ejection from a motor vehicle; excluding motorcycles, all-terrain vehicles, open bed of a pick up truck, etc.

1.2.3.2.11. Steering wheel deformity as a result of impact by the driver.

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.

1.2.4. Pediatric trauma scorecard methodology.

1.2.4.1. 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.

1.2.4.1.1. Effort is required to maintain an open airway. Such effort may include continuous suctioning, jaw-thrust maneuver or basic or advanced airway management.

1.2.4.1.2. The patient exhibits an altered mental status that includes drowsiness, lethargy, inability to follow commands, or unresponsiveness.

1.2.4.1.3. The patient exhibits paralysis.

1.2.4.1.4. There is suspicion of spinal cord injury.

1.2.4.1.5. There is loss of sensation.

1.2.4.1.6. The patient has either faint or non-palpable femoral or carotid pulses.

1.2.4.1.7. The patient's systolic blood pressure less than 50 millimeters of mercury.

1.2.4.1.8. 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.

1.2.4.1.9. There are signs or symptoms of multiple long bone fractures (excluding isolated wrist and ankle fractures).

1.2.4.1.10. There are signs or symptoms of multiple dislocations (excluding isolated wrist and ankle dislocations).

1.2.4.1.11. Major degloving injury.

1.2.4.1.12. Major flap avulsion.

1.2.4.1.13. The patient sustains second or third degree burns to ten percent of the total body surface area, or greater.

1.2.4.1.14. The patient has an amputation at, or proximal to, the wrist or ankle.

1.2.4.1.15. The patient has a penetrating injury to the head, neck or torso when the wound is not readily identifiable as superficial.

1.2.4.2. 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.

1.2.4.2.1. The patient exhibits symptoms of amnesia.

1.2.4.2.2. There is loss of consciousness.

1.2.4.2.3. Carotid or femoral pulses are palpable, but the radial or pedal pulses are not palpable.

1.2.4.2.4. The patient's systolic blood pressure less than 90 millimeters of mercury.

1.2.4.2.5. Evidence of a single closed long bone fracture (excluding isolated wrist or ankle fractures).

1.2.4.2.6. Patient weighs eleven kilograms or less or the body length is equivalent to this weight on the Broselow™ Pediatric Emergency Care tape.

1.2.4.3. 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.

1.2.4.4. 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".

1.2.4.4.1. Electrocution injuries with evidence of an exit wound;

1.2.4.4.2. Falls of twenty feet or greater;

1.2.4.4.3. Lightning injuries;

1.2.4.4.4. Pedestrians struck by a motor vehicle and thrown greater than twenty feet; or

1.2.4.4.5. EMT or paramedic discretion.

1.3. Trauma Destination Requirements

1.3.1. Adult and pediatric patients meeting Florida trauma scorecard methodology shall be transported to the nearest trauma center, unless the distance is not relevant to the length of time for transport due to the use of an air ambulance, unless otherwise provided for in this section. The determination of the "nearest" trauma center shall be determined by the transporting paramedic. Factors effecting the decision may include, but are not limited to, distance, anticipated transport time, traffic patterns and density, and any other relevant factors.

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 emergency department medical control physician (EDMCP) at the local trauma center for consultation. Such discipline-specific care may include burn care, hyperbaric medicine, and comprehensive pediatric services. 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 emergency department.

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.

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 the communication center to relay information to the trauma center under unusual circumstances and if the two options above are not available.

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, oxyhemoglobin saturation 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 and the anticipated time-sensitive need for services, 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 in coordination with Air-1 in order to coordinate response, safe air operations on scene, 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. If the incident commander is not a paramedic, it is recommended that they consult with the lead transport paramedic on scene.

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. Appropriate transport destinations.

1.6.1. Trauma center

1.6.1.1. Central Florida Regional Hospital: 1401 West Seminole Boulevard, Sanford

1.6.1.2. Halifax Health Medical Center: 303 North Clyde Morris Boulevard, Daytona Beach

1.6.2. 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.

1.6.2.1. AdventHealth DeLand: 701 West Plymouth Avenue, DeLand

1.6.2.2. AdventHealth Deltona ER: 3108 Howland Boulevard, Deltona

1.6.2.3. AdventHealth Fish Memorial: 1055 Saxon Boulevard, Orange City

1.6.2.4. AdventHealth Flagler, 60 Memorial Medical Parkway, Palm Coast

1.6.2.5. AdventHealth Daytona Beach: 301 Memorial Medical Parkway, Daytona Beach

1.6.2.6. AdventHealth New Smyrna Beach: 401 Palmetto Avenue, New Smyrna Beach

1.6.2.7. Halifax Health Medical Center of Port Orange: 1041 Dunlawton Avenue, Port Orange

1.6.2.8. Halifax Health UF Health Medical Center of Deltona: 3300 Halifax Crossing Boulevard, Deltona

1.6.2.9. Parrish Medical Center, 951 North Washington Avenue, Titusville

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: 04-2021; 12-2019 (memorandum); 01-2019 (memorandum); 01-2018; 05-2015; 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.

Section 300.00: Provider protocols

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

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Section 300.01: 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.
6. Pursuant to 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, King LTS-D 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.
7. All community health programs (i.e., community paramedicine, mobile integrated health care, etc.) outside of conventional prehospital response and transport and interfacility

transport must have the written approval of the EMS medical director prior to implementation.

History: 04-2021; 01-2018; 07-2012; 02-2008.

Section 300.02: Reporting requirements to the EMS medical director

1. The 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 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 prehospital standing orders, including deviations from established transport protocols;
        - 2.1.2. Complications in patient care resulting from treatment rendered by field providers;
        - 2.1.3. Unauthorized possession, dispensing, utilization, or any irregularities of prescription fluids, medications, devices or controlled substances.
        - 2.1.4. Any and all matters involving known or suspected irregularities surrounding controlled substances;
        - 2.1.5. Any other unusual or atypical clinical events not specified above.
        - 2.1.6. 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 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 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 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 Director or 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. Review process:
3.2.1. 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.
3.2.2. 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.
3.2.3. The medical director reserves the right to seek input from other persons as necessary in order to gain a comprehensive understanding of the event.

3.3. Disposition
3.3.1. The disposition of all reviews is solely the decision of the medical director and may include recommendations or action up to, and including, revocation of a field provider's ability to function under the medical director's license.
3.3.2. The 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.
3.3.3. A representative from the agency employing the individual will be copied on correspondences.

3.4. Appeal
3.4.1. The field provider involved will have five business days to make a written request to the medical director if he or she feels the severity of the EMS medical director's decision is too severe.
3.4.2. The medical director will respond with a final position on the matter within five business days.

History: 01-2018; 07-2012; 07-2009; 02-2008.

Section 300.03: 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 and 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.

4.5. Paramedics authorized to utilize neuromuscular blockade (e.g., succinylcholine, vecuromium) will be required to successfully complete a two (2) hours, medical director-approved refresher course biennially.

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 300.04: Communications with medical control

1. Communications with medical control shall be made via a recorded radio communication on the 800 MHz system. Utilization of cellular telephones and other "off-line" communication is prohibited, barring extenuating circumstances. This is for the benefit of the patient, prehospital provider, and their respective agency.
2. Communications with medical control shall be comprehensive and brief.
3. Radio report format
    - 3.1. EMS unit identification;
    - 3.2. Patient age, sex and chief complaint;
    - 3.3. Brief history of the present illness or injury;
    - 3.4. Pertinent past medical history and pertinent medications
    - 3.5. Vital signs, to include: level of consciousness, pulse, respirations, blood pressure, oxygen saturation; and ECG rhythm, if appropriate;
    - 3.6. If pediatric patient, appropriate color from Broselow™ Pediatric Emergency Care tape;
    - 3.7. Care provided; and
    - 3.8. Request for orders, if necessary.
        - 3.8.1. All orders provided to field providers must be repeated to the EDMCP.

History: 01-2018 (reorganized); 07-2012; 02-2008.

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Section 400.00: Adult protocols

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

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Section 400.01: 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: 01-2018; 07-2012; 02-2008.

Section 400.02: Adrenal insufficiency

1. History
   - 1.1. Onset and duration
   - 1.2. Past medical history
   - 1.3. Recent illness or trauma
   - 1.4. Stress event (i.e., medical procedure, pregnancy, etc.)
   - 1.5. Corticosteroid treatment by others prior to EMS arrival
2. Symptoms
   - 2.1. Weakness
   - 2.2. Nausea
   - 2.3. Vomiting
   - 2.4. Sudden/Severe lower back, abdominal, or leg pain
   - 2.5. Dehydration
   - 2.6. Diarrhea
3. Signs
   - 3.1. Vital signs: outside of normal parameters
   - 3.2. Neurological: altered mental status
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 the EDMCP with the above assessment and inquire whether methylprednisolone (Solu-Medrol), 2 milligrams per kilogram of body weight to a maximum dose of 125 milligrams, is desired.

History: 01-2018; 11-3-2016 (700.12).

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Section 400.03: 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 (≥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. King LTS-D
       - 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. No more than two (2) attempts 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. No more than two (2) 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. King LTS-D

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 King LTS-D 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, 2%, 1.5 milligrams per kilogram intravenously or intraosseously, in the presence of cerebral insult.

5.6. Midazolam (Versed), 2-4 milligrams intravenously or intraosseously.

5.7. Etomidate (Amidate), 0.3 milligram per kilogram intravenously or intraosseously. Maximum dose is 20 milligrams. If necessary, etomidate (Amidate), 0.3 milligram per kilogram intravenously or intraosseously may be repeated once to a maximum of 40 milligrams.

5.7.1. After successful intubation and if circumstances dictate the need for additional sedation and the patient is hemodynamically stable:

5.7.1.1. Ketamine, 1 milligram per kilogram intravenously. Total dose is not to exceed 100 milligrams.

5.8. Prehospital personnel that have written approval from the EMS medical director may utilize:

5.8.1. Succinylcholine (Anectine), 1.5 milligrams per kilogram intravenously or intraosseously. Maximum dose is 200 milligrams.

5.8.2. If succinylcholine is contraindicated, vecuronium (Norcuron), 0.1 milligrams per kilogram intravenously or intraosseously. Maximum dose is 10 milligrams.

5.8.3. After successful intubation and if circumstances dictate the need for additional sedation and the patient is hemodynamically stable:

5.8.3.1. Midazolam, 0.01-0.05 milligram per kilogram per hour

5.8.4. If further sedation is necessary, fentanyl, 1 microgram per kilogram intravenously. Total dose is not to exceed 100 micrograms.

6. EDMCP contact and special considerations

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

History: 04-2021; 01-2018; 07-2012; 07-2009; 05-2008 (memorandum 700.02); 03-2008 (memorandum 700.01); 02-2008.

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Section 400.04: 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
   - 2.5. Abdominal pain
   - 2.6. Nausea, vomiting
   - 2.7. Syncope
   - 2.8. Weakness
   - 2.9. Anxiety
   - 2.10. Choking sensation
   - 2.11. Cough
3. Signs
   - 3.1. HEENT: tongue or upper airway (uvula) edema
   - 3.2. Respiratory: wheezing, stridor , hoarseness, cough, upper airway noise
   - 3.3. Skin: rash, redness, urticaria (hives), generalized or local edema
   - 3.4. Vital signs: 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. In the presence of a moderate allergic reaction or severe systemic reaction:
     - 4.4.1. Epi-Pen, 0.3 milligram intramuscularly, 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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:
5.4.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,
5.4.2.2. Norepinephrine infusion, 2-20 micrograms per minute. 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 intramuscularly.
5.6.2. Albuterol (Proventil) 2.5 milligrams nebulized. Ipratropium bromide (Atrovent), 0.5 milligram, may be added to the first albuterol nebulizer 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 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 intramuscularly.
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. Ipratropium bromide (Atrovent), 0.5 milligram, may be added to the first albuterol nebulizer treatment.
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: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

Section 400.05: 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.
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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:
5.4.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,
5.4.2.2. Norepinephrine infusion, 2-20 micrograms per minute. Titrate to effect.
5.5. Blood glucose <60 milligrams per deciliter.
5.5.1. Dextrose, 25 grams intravenously or intraosseously.
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: 04-2021; 01-2018; 07-2012; 02-2008.

Section 400.06: Behavioral

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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:
       - 5.4.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,
       - 5.4.2.2. Norepinephrine infusion, 2-20 micrograms per minute. Titrate to effect.
   - 5.5. In the presence of excited delirium (acutely agitate patient that is a danger to the provider, themselves, or others):
     - 5.5.1. Ketamine, 2 milligrams per kilogram, intramuscularly. A second dose of 2 milligrams per kilogram may be repeated if necessary to a maximum total dose of 500 milligrams.
     - 5.5.2. Administration of ketamine requires continuous assessment, including 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.
   - 6.3. All chemically sedated patients require ambulance transport to an emergency department.

History: 01-2021; 01-2018; 07-2012; 07-2009; 05-2008 (memorandum 700.01); 02-2008.

Section 400.07: 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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:

5.5.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,

5.5.2.2. Norepinephrine infusion, 2-20 micrograms per minute. Titrate to effect.

5.6. Cyanide poisoning (intended only for patients in cardiopulmonary arrest secondary to toxic inhalation in structure fires)

5.6.1. Hydroxocobalamin (Cyanokit) infusion, 5 grams over 15 minutes, if available.

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" SaO2 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: 04-2021; 01-2018; 07-2012; 02-2008.

Section 400.08: 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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:
       - 5.3.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,
       - 5.3.2.2. Norepinephrine infusion, 2-20 micrograms per minute. 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 (sinus bradycardia, junctional rhythms, and heart blocks):
5.5.1. Hemodynamically stable
5.5.1.1. Observe for deterioration.
5.5.2. Hemodynamically unstable
5.5.2.1. Atropine, 0.5-1 milligram. Repeat atropine, 0.5-1 milligram intravenously, bolus every three to five minutes if rhythm persists to a maximum of 3 milligrams.
5.5.2.2. Transcutaneous pacemaker.
5.5.2.2.1. Midazolam (Versed), 2 milligrams intravenously or intraosseously.
5.5.2.2.2. May repeat Midazolam (Versed) once for a maximum of 4 milligrams.
5.5.2.2.3. If unable to obtain vascular access, midazolam (Versed), 2 milligrams, intramuscularly.
5.5.2.3. Pacing should be considered as first line therapy in the presence of overt hemodynamic instability.
5.5.2.4. Epinephrine (1:1,000) infusion, 2-10 micrograms per minute. Titrate to effect.

5.6. Tachycardias with a narrow complex (atrial fibrillation, atrial flutter, and paroxysmal supraventricular tachycardia (PSVT)).
5.6.1. Hemodynamically stable (awake and oriented x 4; lack of chest pain, hypotension or other signs of shock). Observe for deterioration.
5.6.2. Atrial fibrillation or atrial flutter: hemodynamically unstable
5.6.2.1. Diltiazem (Cardizem), 20 milligrams intravenously.
5.6.2.2. Synchronized cardioversion
5.6.2.2.1. Midazolam (Versed), 2 milligrams intravenously or intraosseously.
5.6.2.2.1.1. May repeat Midazolam (Versed) once for a maximum of 4 milligrams.
5.6.2.2.1.2. If unable to obtain vascular access, midazolam (Versed), 2 milligrams, intramuscularly.
5.6.2.2.2. Cardiovert at manufacturer recommended joule setting for specific device.
5.6.2.2.3. If dysrhythmia unresolved, perform all subsequent cardioversions at manufacturer recommended joule setting for specific device.

5.6.3. Paroxysmal supraventricular tachycardia (PSVT) : hemodynamically unstable
5.6.3.1. Adenosine (Adenocard), 6 milligrams intravenously.
5.6.3.1.1. Adenosine (Adenocard), 12 milligrams intravenously, if initial dose fails to control rate.
5.6.3.2. Diltiazem (Cardizem), 20 milligrams intravenously.
5.6.3.3. Synchronized cardioversion
5.6.3.3.1. Midazolam (Versed), 2 milligrams intravenously or intraosseously.
5.6.3.3.1.1. May repeat Midazolam (Versed) once for a maximum of 4 milligrams.
5.6.3.3.1.2. If unable to obtain vascular access, midazolam (Versed), 2 milligrams, intramuscularly.
5.6.3.3.2. Cardiovert at manufacturer recommended joule setting for specific device.
5.6.3.3.3. 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. If dysrhythmia persists or reoccurs after ten minutes, 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. Midazolam (Versed), 2 milligrams intravenously or intraosseously.
5.7.3.1.1.1. May repeat Midazolam (Versed) once for a maximum of 4 milligrams.
5.7.3.1.1.2. If unable to obtain vascular access, midazolam (Versed), 2 milligrams, intramuscularly.
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: 04-2021; 01-2018; 07-2012; 07-2009; 03-2008 (memorandum 700.01); 02-2008.

Section 400.09: 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, 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. Naloxone (2 milligrams intravenously or intraosseously) may be repeated once.
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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:
5.5.2.1.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,
5.5.2.1.2.2. Norepinephrine infusion, 2-20 micrograms per minute. Titrate to effect.
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, 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. Naloxone (Narcan), 2 milligrams intravenously or intraosseously, may be repeated once.

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. If dysrhythmia persists or reoccurs after ten minutes, lidocaine, 1.5 milligrams per kilogram.

5.6.3.2.1. 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.

5.6.3.2.2. If dysrhythmia resolves, begin lidocaine infusion, 2-4 milligrams per minute, titrating to effect.

5.6.4. In the presence of recurrent or refractory ventricular fibrillation:

5.6.4.1. Dextrose, 25 grams intravenously or intraosseously if blood glucose is <60 milligrams per deciliter.

5.6.4.2. Magnesium sulfate, 2 grams intravenously or intraosseously. Consider early if torsades de pointes is identified.

5.6.4.3. Naloxone (Narcan), 2 milligrams intravenously or intraosseously. Naloxone (Narcan), 2 milligrams intravenously or intraosseously, may be repeated once.

5.6.4.4. Sodium bicarbonate, 1 milliequivalent per kilogram intravenously or intraosseously.

5.6.5. If suspicious of calcium channel blocker toxicity or hyperkalemia:

5.6.5.1. Calcium chloride (10%), 1 gram intravenously or intraosseously.

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: 04-2021; 01-2018; 07-2012; 10-2011 (memorandum 700.09); 06-2010 (memorandum 700.03); 07-2009; 02-2008.

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Section 400.10: Chest pain/Acute coronary syndrome

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), 324 milligrams, chewed and swallowed. If patient has taken a lesser dose of an aspirin product in the previous twelve hours, administer balance to achieve a total dose of 324 milligrams.
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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:

5.4.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,

5.4.2.2. Norepinephrine infusion, 2-20 micrograms per minute. 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. Analgesic

5.6.1. Morphine sulfate, 2 milligrams intravenously. Morphine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,

5.6.1.1. May be repeated every five minutes to a maximum of 10 milligrams.

5.6.2. Fentanyl citrate, 1 microgram per kilogram intravenously, intraosseously, or intramuscularly to a maximum single dose of 40 micrograms.

5.6.2.1. May be repeated every five minutes to a maximum of 200 micrograms.

6. EDMCP contact and special considerations.

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

History: 04-2021; 01-2018; 07-2012; 10-2011 (memorandum 700.09); 07-2009; 02-2008.

Section 400.11: 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. Maintain patient in a supine position.
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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:

5.4.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,

5.4.2.2. Norepinephrine infusion, 2-20 micrograms per minute. 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.

History: 04-2021; 01-2018; 07-2012; 02-2008.

Section 400.12: 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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:

5.4.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,

5.4.2.2. Norepinephrine infusion, 2-20 micrograms per minute. Titrate to effect.

5.5. If acute bronchospasm/asthma (excluding CHF and COPD)

5.5.1. Albuterol (Proventil), 2.5 milligrams, nebulized. Ipratropium bromide (Atrovent), 0.5 milligram, may be added to the first albuterol nebulizer treatment.

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, intramuscuarly.

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. Ipratropium bromide (Atrovent), 0.5 milligram, may be added to the first albuterol nebulizer treatment.

5.6.1.1. Albuterol (Proventil) may be repeated to a total of three (3) treatments.

5.6.2. Continuous positive airway pressure (CPAP).

5.6.2.1. Utilize 7.5 cm H2O valve.

5.6.2.2. Adjust oxygen flow as necessary; maintain saturation between of ninety-four percent, or greater (≥94%) in the adequately breathing patient.

5.6.3. Methylprednisolone (Solu-Medrol), 125 milligrams, intravenously.

5.7. If acute pulmonary edema

5.7.1. Nitroglycerin, 0.4 milligram, sublingually. Nitroglycerin may be repeated every three to five minutes as needed in the presence of chest pain. Alternatively, when utilizing CPAP, transdermal nitroglycerin paste may be applied.

5.7.1.1. Patients weighing less than seventy kilograms (<70 kgs), apply one-half (0.5) inch paste.

5.7.1.2. Patients weighing seventy kilograms, or greater (≥70 kgs), apply one (1) inch paste.

5.7.1.3. Nitroglycerin is contraindicated:

5.7.1.3.1. Systolic blood pressure is less than 90 mmHg;

5.7.1.3.2. Patient has taken an agent used in the treatment of erectile dysfunction:

5.7.1.3.2.1. Sildenafil citrate (Viagra), tadalafil (Cialis), or vardenafil (Levitra) within twenty-four hours.

5.7.1.3.3. 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 H2O 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.

6.1.1. Analgesic

6.1.1.1. Morphine sulfate, 2 milligrams intravenously. Morphine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,

6.1.1.1.1. May be repeated every five minutes to a maximum of 10 milligrams.

6.1.1.2. Fentanyl citrate, 1 microgram per kilogram intravenously, intraosseously, or intramuscularly to a maximum single dose of 40 micrograms.

6.1.1.2.1. May be repeated every five minutes to a maximum of 200 micrograms.

5.7.3. Albuterol (Proventil), 2.5 milligrams, nebulized. Ipratropium bromide (Atrovent), 0.5 milligram, may be added to the first albuterol nebulizer treatment.

5.7.3.1. 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: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 400.13: Hypertension

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: 01-2018; 07-2012; 02-2008.

Section 400.14: 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 degrees.
     - 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.
    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: 01-2018; 07-2012; 02-2008.

Section 400.15: 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.
   - 5.3. Acquire and evaluate 12 lead ECG, if appropriate.
   - 5.4. Acquire right precordial leads in the presence of inferior wall injury.
   - 5.5. Monitor and record end-tidal carbon dioxide utilizing waveform capnography, if available and appropriate.
   - 5.6. Establish vascular access, if appropriate.
     - 5.6.1. 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
     - 5.6.2. Make reasonable efforts to warm 0.9% sodium chloride before administration.
       - 5.6.2.1. Vasopressors. If hypoperfusion does not respond to volume resuscitation:

5.6.2.1.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,

5.6.2.1.2. Norepinephrine infusion, 2-20 micrograms per minute. Titrate to effect.

5.7. For pain associated with localized injury (frostbite):

5.7.1. Analgesic

5.7.1.1. Morphine sulfate, 2 milligrams intravenously. Morphine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,

5.7.1.1.1. May be repeated every five minutes to a maximum of 10 milligrams.

5.7.1.2. Fentanyl citrate, 1 microgram per kilogram intravenously, intraosseously, or intramuscularly to a maximum single dose of 40 micrograms.

5.7.1.2.1. May be repeated every five minutes to a maximum of 200 micrograms.

6. EDMCP contact and special considerations

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

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

Section 400.16: 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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:
       - 5.4.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,
       - 5.4.2.2. Norepinephrine infusion, 2-20 micrograms per minute. 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. Intravenous administration is preferred. Alternatively, ondansetron, 4 milligrams, orally dissolving tablet (ODT) may be given lingually.
6. EDMCP contact and special considerations
   - 6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 04-2021; 01-2018; 07-2012 (new).

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Section 400.17: Near-drowning

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 clinically indicated.
   - 4.5. Protect from heat loss
5. Advanced life support
   - 5.1. Advanced airway/ventilatory management, if appropriate.
   - 5.2. Continuous positive airway pressure (CPAP), in the presence of pulmonary edema.
     - 5.2.1. Utilize 7.5 cm H_2O valve.
     - 5.2.2. Adjust oxygen flow as necessary; maintain saturation between of ninety-four percent, or greater (≥94%) in the adequately breathing patient.
   - 5.3. Initiate cardiac monitoring. Evaluate and record ECG strip, if appropriate.
     - 5.3.1. Acquire and evaluate 12 lead ECG, if appropriate.
       - 5.3.1.1. Acquire right precordial leads in the presence of inferior wall injury.
   - 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 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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:

5.5.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,

5.5.2.2. Norepinephrine infusion, 2-20 micrograms per minute. 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: 04-2021; 05-2019 (memorandum); 01-2018; 07-2012; 02-2008.

Section 400.18: 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. Midazolam (Versed), 2 milligrams intravenously or intraosseously.
         - 5.5.1.1.1. May repeat midazolam (Versed) once for a maximum of 4 milligrams.
         - 5.5.1.1.2. If unable to obtain vascular access, midazolam (Versed), 2 milligrams, intramuscularly.
       - 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: 01-2018; 07-2012; 07-2009 (formerly Pregnancy-induced Hypertension); 03-2008 (memorandum 700.01); 02-2008.

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Section 400.19: Ophthalmic

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: 01-2018; 07-2012; 07-2009; 02-2008.

Section 400.20: 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. Naloxone (Narcan), 4 milligrams, intranasally, in the presence of hypoventilation secondary to suspected opiate overdose.
   - 4.5. 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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:

5.4.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,

5.4.2.2. Norepinephrine infusion, 2-20 micrograms per minute. Titrate to effect.

5.5. Anticholingeric (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. Midazolam (Versed), 2 milligrams intravenously or intraosseously.

5.7.2.1.1. May repeat midazolam (Versed) once for a maximum of 4 milligrams.

5.7.2.1.2. If unable to obtain vascular access, midazolam (Versed), 2 milligrams, intramuscularly.

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. Midazolam (Versed), 2 milligrams intravenously or intraosseously.

5.8.3.1.1. May repeat midazolam (Versed) once for a maximum of 4 milligrams.

5.8.3.1.2. If unable to obtain vascular access, midazolam (Versed), 2 milligrams, intramuscularly.

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.

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. The preferred route of administration for naloxone is intravenous followed by intraosseous. If the provider attempts and fails to establish access for both preferred routes, administer 2 milligrams intramuscularly.

5.10.1.3. Notwithstanding nasally administered naloxone by lay person or basic life support responders, intravenous naloxone shall be administered in the presence of continued respiratory depression.

5.10.1.4. If intravenous administration is available, intravenous administration shall be utilized in lieu of nasal administration.

5.11. Sympathomimetic (Cocaine), symptomatic (hypertension, tachycardia, agitation)

5.11.1. Midazolam (Versed), 2 milligrams intravenously or intraosseously.

5.11.1.1. May repeat Midazolam (Versed) once for a maximum of 4 milligrams.

5.11.1.2. If unable to obtain vascular access, midazolam (Versed), 2 milligrams, intramuscularly.

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. Marajuana, Lyseric acid diethylamide (LSD), Cocaine, STP, Hashish

6.2.1.5. Amphetamines:

6.2.1.6. Diet pills, Benzedrine, "Speed"

6.2.1.7. Antidepresants:

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), Fluoexitine (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), Metroprolol (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: 04-2021; 01-2018; 07-2012; 07-2009; 03-2008 (memorandum 700.01); 02-2008.

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Section 400.21: 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. For pain associated with: isolated minor extremity injury; minor burns; renal colic (kidney stones); or general musculoskeletal pain.
     - 5.5.1. Ketorolac (Toradol), 15-30 milligrams, intravenously, intraosseously, or intramuscularly.
   - 5.6. For more severe pain associated with: isolated extremity injury; burns, excluding those with accompanying cardiopulmonary compromise; chest pain suspicious of myocardial ischemia; or Sickle Cell crisis.
     - 5.6.1. Analgesic
       - 5.6.1.1. Morphine sulfate, 2 milligrams intravenously. Morphine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,
         - 5.6.1.1.1. May be repeated every five minutes to a maximum of 10 milligrams.

5.6.1.2. Fentanyl citrate, 1 microgram per kilogram intravenously, intraosseously, or intramuscularly to a maximum single dose of 40 micrograms.

5.6.1.2.1. May be repeated every five minutes to a maximum of 200 micrograms.

5.7. Following administration of an analgesic:

5.7.1. Assess and record changes in discomfort.

5.7.2. Assess and document ventilation and perfusion status.

5.7.3. Assess and document oxygen saturation and end-tidal carbon dioxide, 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: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

Section 400.22: 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. Midazolam (Versed), 2 milligrams intravenously or intraosseously.
       - 5.5.1.1. May repeat midazolam (Versed) once for a maximum of 4 milligrams.

5.5.1.2. If unable to obtain vascular access, midazolam (Versed), 2 milligrams, intramuscularly.

6. EDMCP contact and special considerations.
   6.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 01-2018; 07-2012; 07-2009; 03-2008 (memorandum 700.01); 02-2008.

Section 400.23: 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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:
5.4.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,
5.4.2.2. Norepinephrine infusion, 2-20 micrograms per minute. Titrate to effect.

5.5. See Allergic Reaction protocol if signs or symptoms of allergic reaction.

6. EDMCP contact and special considerations

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

History: 04-2021; 01-2018; 07-2012; 02-2008.

Section 400.24: 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 stroke transport protocol assessment matrix in this document.
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. Acquire the appropriate blood laboratory specimens for patients designated as meeting stroke alert criteria: light green/heparin (2); lavender/EDTA (1); and light blue/coagulation (1).
   - 5.6. Blood glucose <50 milligrams per deciliter.
     - 5.6.1. Dextrose, 25 grams 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: 04-2021; 01-2018; 07-2012; 02-2008.

Section 400.25: 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. Vasopressors. If hypoperfusion does not respond to volume resuscitation:
5.4.2.1. Dopamine, 5-20 micrograms per kilogram per minute. Titrate to effect. Dopamine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,
5.4.2.2. Norepinephrine infusion, 2-20 micrograms per minute. 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: 04-2021; 01-2018; 07-2012; 02-2008.

Section 400.26: Systemic inflammatory response syndrome

1. History
   - 1.1. Onset
   - 1.2. Duration
   - 1.3. Recent illness or trauma
2. Symptoms
   - 2.1. Chills
   - 2.2. Nausea, vomiting
3. Signs
   - 3.1. General: fluctuations in temperature, infection
   - 3.2. Cardiovascular: elevated heart rate
   - 3.3. Respiratory: Elevated 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. Suspect systemic inflammatory response syndrome:
     - 4.4.1. Patient age is eighteen years of age, or greater;
     - 4.4.2. Is non-gravid;
     - 4.4.3. There is suspected or documented infection present; and
     - 4.4.4. Has two, or more, of the following:
       - 4.4.4.1. Temperature greater than 38°C (100.4°F) or less than 36°C (96.8°F)
       - 4.4.4.2. Heart rate greater than 90 beats per minute, or
       - 4.4.4.3. Respiratory rate greater than 20 breaths per minute
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 systolic blood pressure is less than 90 mmHg or mean arterial pressure is less than 65 mmHg, 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. Prior to utilizing a vasopressor (norepinephrine), contact the emergency department physician at the receiving facility.
6. EDMCP contact and special considerations

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

History: 04-2021; 01-2018; 05-20-2015 (700.06).

Section 400.27: 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, if clinically indicated.
   - 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. Control hemorrhage.
      4.10.2.1.2. Immobilize in correct anatomical position.
    4.10.2.2. Complete:
      4.10.2.2.1. Control hemorrhage.
      4.10.2.2.2. Irrigate amputated part with 0.9% sodium chloride and wrap in saline moistened sterile dressing.
      4.10.2.2.3. 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
5.11. Severe hemorrhage
5.11.1. In patients greater than eighteen (>18) years of age with signs and symptoms of severe hemorrhage (internal or external) and systolic blood pressure less than ninety millimeters of mercury (<90 mmHg) and heart rate greater than one hundred twenty (>120) and evidence of peripheral vasoconstriction and time of injury less than three (<3) hours, tranexamic acid, 1 gram in 100 milliliters of 0.9 sodium chloride, infused over ten (10) minutes.

6. EDMCP contact and special considerations
6.1. In the presence of crush injury or suspected compartment syndrome:
6.1.1. 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.
6.2. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 04-2021; 05-2019 (memorandum); 01-2018; 07-2012; 02-2008.

Section 400.28: 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: 01-2018; 07-2012; 02-2008.

Section 500.00: 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.

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Section 500.01: Adrenal insufficiency

1. History
   - 1.1. Onset and duration
   - 1.2. Past medical history
   - 1.3. Recent illness or trauma
   - 1.4. Stress event (i.e., medical procedure, pregnancy, etc.)
   - 1.5. Corticosteroid treatment by others prior to EMS arrival
2. Symptoms
   - 2.1. Weakness
   - 2.2. Nausea
   - 2.3. Vomiting
   - 2.4. Sudden/Severe lower back, abdominal, or leg pain
   - 2.5. Dehydration
   - 2.6. Diarrhea
3. Signs
   - 3.1. Vital signs: outside of normal parameters
   - 3.2. Neurological: altered mental status
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 the EDMCP with the above assessment and inquire whether methylprednisolone (Solu-Medrol), 2 milligrams per kilogram of body weight to a maximum dose of 125 milligrams, is desired.

History: 01-2018; 11-3-2016 (700.12).

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Section 500.02: 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
   - 2.5. Abdominal pain
   - 2.6. Nausea, vomiting
   - 2.7. Syncope
   - 2.8. Weakness
   - 2.9. Anxiety
   - 2.10. Choking sensation
   - 2.11. Cough
3. Signs
   - 3.1. HEENT: tongue or upper airway (uvula) edema
   - 3.2. Respiratory: wheezing, stridor , hoarseness, cough, upper airway noise
   - 3.3. Skin: rash, redness, urticaria (hives), generalized or local edema
   - 3.4. Vital signs: 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. 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. Give 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, uticaria)

5.5.1. Diphenhydramine (Benadryl) 1 milligram per kilogram (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 intramuscularly. Maximum individual dose not to exceed 0.3 milligram.
5.6.2. Albuterol (Proventil) 2.5 milligrams nebulized. If signs or symptoms persist, albuterol may be repeated to a total of 7.5 milligrams.
5.6.2.1. If the patient is less than eight years of age, Ipratropium bromide (Atrovent), 0.25 milligram, may be added to the first albuterol nebulizer treatment.
5.6.2.2. If age eight, or greater, Ipratropium bromide (Atrovent), 0.5 milligram, may be added to the first albuterol nebulizer treatment.
5.6.3. Diphenhydramine (Benadryl) 1 milligram per kilogram 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 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 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 nebulized. If signs or symptoms persist, albuterol may be repeated to a total of 7.5 milligrams.
5.7.2.1. If the patient is less than eight years of age, Ipratropium bromide (Atrovent), 0.25 milligram, may be added to the first albuterol nebulizer treatment.
5.7.2.2. If age eight, or greater, Ipratropium bromide (Atrovent), 0.5 milligram, may be added to the first albuterol nebulizer treatment.
5.7.3. Diphenhydramine (Benadryl) 1 milligram per kilogram 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, 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: 04-2021; 07-2018 (memorandum); 01-2018; 07-2012; 02-2008.

Section 500.03: 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 in accordance with Broselow™ Pediatric Emergency Care tape intravenously. Maximum individual dose 25 grams.

5.5.2. Neonate: dextrose (10%), 0.5 gram per kilogram intravenously. Maximum individual dose 25 grams.

6. EDMCP contact and special considerations

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

History: 01-2018; 07-2012; 02-2008.

Section 500.04: 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. Midazolam (Versed), 0.1 milligram per kilogram of body weight, to a maximum of two milligrams, intravenously or intraosseously.
5.4.2.4.1.1. May repeat midazolam (Versed) once for a maximum of 4 milligrams.
5.4.2.4.1.2. If unable to obtain vascular access, midazolam (Versed), 0.1 milligram per kilogram, intramuscularly, to a maximum of two milligrams. May repeat 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. Norepinephrine infusion, 0.1 microgram per kilogram per minute. Titrate to effect every three (3) to five (5) minutes.

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. Midazolam (Versed), 0.05 milligram per kilogram of body weight, to a maximum of two milligrams, intravenously or intraosseously, may be considered for sedation.
5.5.2.2.1.1. May repeat midazolam (Versed) once for a maximum of 4 milligrams.
5.5.2.2.1.2. If unable to obtain vascular access, midazolam (Versed), 0.1 milligram per kilogram, to a maximum of two

milligrams. May repeat 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. Midazolam (Versed), 0.05 milligram per kilogram of body weight, to a maximum of two milligrams, intravenously or intraosseously.

5.6.2.1.1.1. May repeat midazolam (Versed) once for a maximum of 4 milligrams.

5.6.2.1.1.2. If unable to obtain vascular access, midazolam (Versed), 0.1 milligram per kilogram, intramuscularly, to a maximum of two milligrams. May repeat 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: 04-2021; 01-2018; 07-2012; 10-2011 (memorandum 700.09); 07-2009; 03-2008 (memorandum 700.01); 02-2008.

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Section 500.05: 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. Norepinephrine infusion, 0.1 microgram per kilogram per minute. Titrate to effect every three (3) to five (5) minutes.
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. If dysrhythmia persists or reoccurs after ten minutes, 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: 04-2021; 01-2018; 07-2012; 06-2010 (memorandum 700.04); 07-2009; 02-2008.

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Section 500.06: 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 bronchodialators.
   - 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 nebulized. If signs or symptoms persist, albuterol may be repeated to a total of 7.5 milligrams.
5.5.1.1. If the patient is less than eight years of age, Ipratropium bromide (Atrovent), 0.25 milligram, may be added to the first albuterol nebulizer treatment.
5.5.1.2. If age eight, or greater, Ipratropium bromide (Atrovent), 0.5 milligram, may be added to the first albuterol nebulizer treatment.
5.5.2. Methylprednisolone (Solu-Medrol), 2 milligrams per kilogram. Maximum dose 125 milligrams.
5.5.3. In severe or refractory cases: epinephrine (1:1,000) 0.01 milligram per kilogram to a maximum of 0.3 milligram, intramuscularly.
5.5.4. In the presence of a deteriorating or non-responding asthmatic, magnesium sulfate, 50 milligrams per kilogram (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:
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: 04-2021; 07-2018 (memorandum); 01-2018; 07-2012; 02-2008.

Section 500.07: 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. Norepinephrine infusion, 0.1 microgram per kilogram per minute. Titrate to effect every three (3) to five (5) minutes.
   - 5.5. In patients less than forty kilograms and six months of age, or older, administer ondansetron (Zofran), 0.1 milligram per kilogram (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: 04-2021; 01-2018; 07-2012 (new).

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Section 500.08: Near-drowning

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

History: 04-2021; 01-2018; 07-2012; 02-2008.

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Section 500.09: 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 newborns 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 newborns head does not deliver within three minutes, insert two fingers in to the vagina, palm facing the newborns 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: 01-2018; 07-2012; 07-2009; 02-2008.

Section 500.10: 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. Anticholingeric (Organophosphate), symptomatic
5.5.1. Atropine, 0.05 milligram per kilogram.
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 (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.
5.8.2. Notwithstanding nasally administered naloxone by lay person or basic life support responders, intravenous naloxone shall be administered in the presence of continued respiratory depression.
5.8.3. If intravenous administration is available, intravenous administration shall be utilized in lieu of nasal administration.
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: 01-2018; 07-2012; 02-2008.

Section 500.11: 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. Analgesic
     - 5.5.1. Morphine sulfate, in accordance with Broselow™ Pediatric Emergency Care tape, intravenously. Morphine shall be discontinued from prehospital inventory and standing orders effective October 1, 2021,
     - 5.5.2. Fentanyl citrate, in accordance with Broselow™ Pediatric Emergency Care tape a maximum single dose of 20 micrograms.
       - 5.5.2.1. May be repeated every five minutes to a maximum of 100 micrograms.
   - 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 carbon dioxide, 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: 04-2021; 01-2018; 07-2012; 02-2008.

Section 500.12: 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:
     - 6.1.1. Midazolam (Versed), 0.1 milligram per kilogram of body weight, to a maximum of two milligrams, intravenously or intraosseously.
       - 5.5.1.1. May repeat midazolam (Versed) once for a maximum of 4 milligrams.

5.5.1.2. If unable to obtain vascular access, midazolam (Versed), 0.1 milligram per kilogram, intramuscularly, to a maximum of two milligrams. May repeat once, if necessary.

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: 01-2018; 07-2012; 07-2009; 03-2008 (memorandum 700.01); 02-2008.

Section 500.13: 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, if clinically indicated.
   - 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: 04-2021; 01-2018; 07-2012; 02-2008.

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Section 600.00: 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 600.01: 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: 01-2018; 02-2008.

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Section 600.02: Blood glucose measurement

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: 01-2018; 02-2008 (new).

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Section 600.03: Continuous positive airway pressure (CPAP)

1. Skill level
   1.1. Advanced life support (ALS)
2. Physician authorization required prior to performing skill
   2.1. No
3. Indications
   3.1. Pulmonary edema secondary to congestive heart failure
   3.2. Pulmonary edema secondary to submersion/near-drowning that does not respond to one hundred percent supplemental oxygen
4. Contraindications
   4.1. Ineffective ventilatory effort
   4.2. Depressed level of consciousness
   4.3. Inability to maintain airway
   4.4. Hypotension
   4.5. Vomiting
   4.6. Gastric distension
5. Complications/Precautions
   5.1. Hypotension
6. Procedure
   6.1. Ensure all equipment is assembled, readily available and operational.
   6.2. Allow patient to assume position of comfort.
   6.3. Begin flow by turning to the 'on' position.
   6.4. Ensure that the flow adjustment valve is on the open position.
   6.5. Ensure that the concentration adjustment valve is in the closed position allowing for 0.28 FiO2.
   6.6. Apply mask to patient's face.
   6.7. Observe for improvement of symptoms.
      6.7.1. The oxygen flow valve may be opened in one half turn increments to allow for a greater fraction of inspired oxygen (FiO2).
7. Equipment
   7.1. CPAP generator
   7.2. Disposable, low pressure circuit
   7.3. Disposable mask with harness
   7.4. Disposable pressure valve, 7.5 cm H2O
   7.5. 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: 01-2018; 07-2012; 02-2008.

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Section 600.04: 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
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: 01-2018; 07-2014; 07-2012; 02-2008.

Section 600.05: 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: 01-2018; 07-2012; 02-2008.

Section 600.06: 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. V1: Fourth intercostal space, immediately right of the sternum.
      6.3.2. V2: Fourth intercostal space, immediately left of the sternum.
      6.3.3. V3: Fifth intercostal space, midway between V2 and V4.
      6.3.4. V4: Fifth intercostal space, on the midclavicular line.
      6.3.5. V5: Lateral to V4, on the anterior axillary line.
      6.3.6. V6: Lateral to V5, 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 V4 to the right chest wall (V4R) 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: 01-2018; 07-2014; 07-2012; 07-2009; 02-2008.

Section 600.07: 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.
- 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: 01-2018; 07-2012; 02-2008.

Section 600.08: EMT intravenous access

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 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: 01-2018; 07-2012 (new).

Section 600.09: 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 King LTS-D 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
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
7.1.11. Gum-elastic bougie

8. EDMCP contact and special considerations
   8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 04-2021; 01-2018; 07-2012; 02-2008.

Section 600.10: 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 uticaria, 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: 01-2018; 07-2012; 07-2009; 02-2008.

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Section 600.11: 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. Patients with signs or symptoms of cerebrovascular accident.
   3.2. 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:
      3.2.1. The operator caused serious bodily injury to another involved party; or
      3.2.2. 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. Cerebrovascular accident
      7.1.1. Ensure all equipment is assembled, readily available and operational.
      7.1.2. Prepare site with aseptic solution.
      7.1.3. Perform venous cannulation:
         7.1.3.1. Using appropriate collection system, acquire sample.
         7.1.3.2. Transfer blood sample to blood tube allowing tube to completely fill.
         7.1.3.3. Collect all appropriate samples (green [2]; lavender [1]; and light blue [1]).
      7.1.4. Invert the blood tubes no less than five times to ensure adequate mixing of the sample with the anticoagulant agent. Do not shake.
      7.1.5. Appropriately and legibly label all collected samples.
   7.2. Evidentiary
      7.2.1. Assess the ability to safely draw a blood specimen from the individual.
         7.2.1.1. Statute allows for the law enforcement officer to use reasonable force to facilitate collection of the sample.
         7.2.1.2. The paramedic will convey any concerns over the ability to safely obtain a blood sample to the law enforcement officer.
      7.2.2. Ensure all equipment is assembled, readily available and operational.
         7.2.2.1. The law enforcement officer should be present and observe the entire procedure.
      7.2.3. Impede venous return, if appropriate and necessary.
      7.2.4. Prepare site with povidone-iodine (Betadine).

7.2.5. Perform venipuncture:
7.2.5.1. Insert the needle provided in the collection kit at suitable angle to penetrate vein.
7.2.5.2. Insert blood tube in to collection port, piercing rubber stopper with needle.
7.2.5.3. Allow blood tube to completely fill.
7.2.5.4. Remove blood tube.
7.2.5.5. Collect second blood tube in similar fashion.
7.2.6. Withdraw needle and dispose of appropriately.
7.2.7. Invert the blood tubes no less than five times to ensure adequate mixing of the sample with the anticoagulant agent. Do not shake.
7.2.8. Appropriately dress venipuncture site.
7.2.9. 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.

History: 01-2018; 07-2012; 02-2008.

Section 600.12: 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: xiphiod 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: xiphiod 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 epigastrum.
            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: 01-2018; 07-2012; 02-2008.

Section 600.13: 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 pneumoccocal 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. Pneumoccocal: 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. V accine 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

7.10.1. A means of providing positive pressure ventilation with supplemental oxygen.

7.10.2. Assortment of appropriate basic and advanced airway adjuncts.

7.10.3. Sufficient equipment for gaining vascular access.

7.10.4. All medications and fluids required under current prehospital standing orders and treatment protocols for the treatment of allergic reactions and cardiopulmonary arrest.

7.10.5. 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.
   9.2. Ensure enrollment in all state-mandated programs (Florida SHOTS) to track immunizations.

History: 04-2021; 01-2018; 07-2012; 07-2009; 09-2008 (memorandum 700.03); 02-2008.

Section 600.14: 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:
  8.3.1. A means of providing positive pressure ventilation with supplemental oxygen.
  8.3.2. Assortment of appropriate basic and advanced airway adjuncts.
  8.3.3. Sufficient equipment for gaining vascular access.
  8.3.4. All medications and fluids required under current prehospital standing orders and treatment protocols for the treatment of allergic reactions and cardiopulmonary arrest.
  8.3.5. Cardiac monitor/defibrillator

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

8.5. Ensure enrollment in all state-mandated programs (Florida SHOTS) to track immunizations.

History: 04-2021; 01-2018; 07-2012; 07-2009 (new).

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Section 600.15: 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;
      3.2.4. Opiate overdose; or
      3.2.5. 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 epiphaseal plate.
6. Procedure
   6.1. Ensure all equipment is assembled, readily available and operational.
   6.2. Identify landmarks.
      6.2.1. Adult:
         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. May repeat once based upon patient discomfort to a maximum of 40 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: 04-2021; 01-2018; 07-2012; 01-2011 (memorandum 700.07); 07-2009; 02-2008.

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Section 600.16: King LTS-D 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. Conscious or semi-conscious persons.
   4.2. Intact gag reflex.
   4.3. Presence of esophageal disease.
   4.4. Caustic ingestion.
5. Complications/Precautions
   5.1. Maxilofacial injuries.
6. Procedure
   6.1. Ensure all equipment is assembled, readily available and operational.
   6.2. Determine appropriate size King LTS-D.
   6.3. Place patient supine with head and neck in neutral position.
   6.4. Manually immobilize cervical spine if trauma suspected.
   6.5. Grasp lower jaw between thumb and index finger and displace anteriorly.
   6.6. Insert airway in accordance with manufacturer recommendations.
7. Equipment
   7.1. King LTS-D in the following authorized sizes
      7.1.1. Size 3 (4 feet through 5 feet in height);
      7.1.2. Size 4 (5 feet through 6 feet in height); and
      7.1.3. Size 5 (6 feet and greater in height).
   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: 04-2021 (new).

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Section 600.17: 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
        3.1.9. Transdermally
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 desire 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.
6.5.7. Transdermal
6.5.7.1. Identify the proper dose of the medication.
6.5.7.2. Place desired dose of appropriate application device.
6.5.7.3. Affix to patient.

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: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 600.18: 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: 01-2018; 07-2012; 07-2009; 02-2008.

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Section 600.19: 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 intercostal space (above third rib) on the midclavicular line.
      6.2.2. Fourth intercostal space (above the fifth rib) on the mid-axillary 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: 01-2018; 07-2012; 07-2009; 02-2008.

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Section 600.20: 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: 01-2018; 07-2012; 07-2009; 02-2008.

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Section 600.21: 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. If the deployed taser has a removal device provided by the manufacturer, follow the manufacturer recommendation for probe removal.
   6.2. Apply gentle and in line traction to the probe in order to remove.
   6.3. If resistance if 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: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 600.22: Spinal motion restriction

1. Skill level
   1.1. Basic life support (BLS)
2. Physician authorization required prior to performing skill
   2.1. No
3. Indications[2]
   3.1. Acutely altered level of consciousness (e.g., GCS <15, evidence of intoxication)
   3.2. Midline neck or back pain and/or tenderness;
   3.3. Focal neurologic signs and/or symptoms (e.g., numbness or motor weakness);
   3.4. Anatomic deformity of the spine;
   3.5. Distracting circumstances or injury (e.g., long bone fracture, degloving, or crush injuries, large burns, emotional distress, communication barrier, etc.) or any similar injury that impairs the patient's ability to contribute to a reliable examination.
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.

[2] Fischer, MD, MS, P. E., Perina, MD, D. G., Delbridge, MD, MPH, T. R., Fallat, MD, M. E., Salomone, MD, J. P., Dodd, MS, MA, J., Bulger, MD, E. M., and Gestring, MD, M. L. (2018, August 9). Spinal Motion Restriction in the Trauma Patient – A Joint Position Statement. Retrieved May 16, 2019, from https://www.tandfonline.com/doi/full/10.1080/10903127.2018.1481476

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

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

History: 04-2021; 05-2019 (memorandum); 01-2018; 07-2012; 07-2009; 02-2008.

Section 600.23: 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: 01-2018; 07-2014 (new).

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Section 600.24: Transcutaneous pacing

1. Skill level
   1.1. Advanced life support (ALS)
2. Physician authorization required prior to performing skill
   2.1. No
3. Indications
   3.1. Symptomatic bradycardias, including heart blocks, which do not respond to pharmaceutical intervention.
   3.2. Overt bradycardias, including heart blocks, which require immediate and aggressive therapy.
   3.3. Asystole
4. Contraindications
   4.1. None in the presence of hypoperfusion secondary to bradycardia.
5. Complications/Precautions
   5.1. Failure to gain electrical capture.
   5.2. Discomfort in the awake patient.
6. Procedure
   6.1. Ensure all equipment is assembled, readily available and operational.
   6.2. Place pads on patient in either the sternum/apex or anterior/posterior configuration.
   6.3. Connect pacemaker.
   6.4. Set rate for 70-80 per minute.
   6.5. Incrementally increase current until electrical capture is observed.
   6.6. Ensure that mechanical capture is obtained.
   6.7. Consider sedation if patient is intolerant of pacing stimulus.
7. Equipment
   7.1. Transcutaneous pacemaker.
   7.2. Pacing pads.
   7.3. Sedative (optional).
8. EDMCP contact and special considerations
   8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 01-2018; 07-2012; 07-2009; 02-2008.

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Section 600.25: Venous cannulation

1. Skill level
   1.1. Advanced life support (ALS).
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
  8.1. Contact EDMCP for treatment other than standing orders, dispute resolution or other clarification, as necessary.

History: 01-2018; 07-2012; 07-2009; 02-2008.

Section 700.00: Medication resume

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

- Acetylsalicylic acid (aspirin), chewable
- Adenosine injection (Adenocard)
- Albuterol sulfate inhalation solution, 0.083% (Proventil)
- Amiodarone hydrochloride injection (Cordarone)
- Antibiotic ointment (non-sulfa)
- Atropine sulfate injection
- Calcium chloride injection
- Dextrose, 10%
- Diltiazem hydrochloride injection (Cardizem)
- Diphenhydramine hydrochloride injection (Benadryl)
- Epinephrine injection, 1:1,000
- Epinephrine injection, 1:10,000
- EpiPen and EpiPen Jr auto-injector
- Etomidate injection (Amidate)
- Fentanyl citrate injection
- Glucose paste
- Hydroxocobalamin injection (Cyanokit)
- Ipratropium bromide inhalation (Atrovent)
- Ketamine hydrochloride injection (Ketalar)
- Ketorolac tromethamine injection (Toradol)
- Lidocaine hydrochloride injection, 2%
- Lidocaine hydrochloride injection, 20%
- Magnesium sulfate injection, 50%
- Methylprednisolone sodium succinate inhalation (Solu-Medrol)
- Midazolam hydrochloride injection (Versed)
- Morphine sulfate injection
- Naloxone hydrochloride injection (Narcan)
- Naloxone hydrochloride nasal spray (Narcan)
- Nitroglycerin lingual spray or tablet
- Norepinephrine bitartrate injection (Levophed)
- Ondansetron hydrochloride (Zofran)
- Sodium bicarbonate injection
- Succinylcholine succinate injection (Anectine)
- Tetracaine ophthalmic solution (Pontocaine)
- Tranexamic acid injection (Cyklokapron)
- Vecuronium bromide injection (Norcuron)

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 standing orders.

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

Section 700.01: Acetylsalicylic acid (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. 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.

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.02: Adenosine injection (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.

History: 04-2021; 01-2018; 02-2008.

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Section 700.03: Albuterol sulfate inhalation 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.

History: 04-2021; 01-2018; 02-2008.

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Section 700.04: Amiodarone hydrochloride injection (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. Proarrythmia (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-venticular (AV) block.
5. Adverse reactions/Side effects
   5.1. Cardiovascular: hypotension, dysrythmia.
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.

History: 04-2021; 01-2018; 07-2012 (new).

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Section 700.05: 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.

History: 04-2021; 01-2018; 07-2012; 07-2009 (new).

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Section 700.06: Atropine sulfate injection

1. Classification
   1.1. Anticholinergic
2. Indications
   2.1. Symptomatic bradycardias.
   2.2. Anticholinesterase poisoning from organophosphate 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

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.07: Calcium chloride injection

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.

History: 04-2021; 01-2018; 07-2014; 07-2012; 07-2009; 02-2008.

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Section 700.08: Dextrose, 10%

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 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 some solutions, the medication must be administered slowly through a patent access point.

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.09: Diltiazem hydrochloride injection (Cardizem)

1. Classification
   1.1. Calcium channel blocker
2. Indications
   2.1. Rate control in the presence of atrial flutter and atrial fibrillation.
   2.2. Conversion of paroxysmal supraventricular tachycardia (PSVT).
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. Tachycardia associated with Wolfe Parkinson White (WPW) syndrome.
   4.4. 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

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.10: Diphenhydramine hydrochloride injection (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 of neonates, premature infants.
   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.

History: 04-2021; 01-2018; 07-2014; 07-2012; 07-2009; 02-2008.

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Section 700.11: Epinephrine injection, 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 over dosage.
6. Route of administration
   6.1. Intravenously
   6.2. Intraosseously
   6.3. Intramuscularly (anaphylaxis only)

History: 04-2021; 01-2018; 07-2014; 07-2012; 07-2009; 02-2008.

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Section 700.12: Epinephrine injection, 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 over dosage.
6. Route of administration
   6.1. Intravenously
   6.2. Intraosseously

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.13: 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
6. 7.3. Cardiovascular: hypertension, tachycardia, dysrhythmia, palpitations.
   6.1. Central nervous system: anxiety, headache, cerebral hemorrhage may occur with over dosage.
7. Route of administration
   7.1. Intramuscularly
8. Notes
   8.1. This synopsis is generic for the EpiPen (>30 kilograms) and EpiPen Jr. (15-30 kilograms) Auto-Injectors

History: 04-2021; 01-2018; 07-2012; 07-2009 (new).

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Section 700.14: Etomidate injection (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 of as a controlled substance.

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.15: Fentanyl citrate injection

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. Musculoskeletal injury
     - 2.1.5. 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. Head trauma.
   - 4.3. Acute alcohol intoxication.
   - 4.4. Depressed ventilatory function including, but not limited to, emphysema and acute asthma.
   - 4.5. 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. Intravenous
   - 6.2. Intraosseous
   - 6.3. Intramuscular
7. Notes
   - 7.1. This drug must be stored, handled and disposed of as a controlled substance.

History: 04-2021 (new).

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Section 700.16: 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.

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.17: Hydroxocobalamin injection (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 hydroxocobalmin 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. Hydroxocobalamin is not a required medication under Volusia County Prehospital Standing Orders and Treatment Protocols.

History: 04-2021; 01-2018; 07-2012 (new).

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Section 700.18: Ipratropium bromide inhalation (Atrovent)

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. Ipratropium bromide should be used with caution in patients with cardiovascular disorders.
   3.2. If paradoxical bronchospasm occurs during delivery of this medication, discontinue treatments immediately.
4. Contraindications
   4.1. Known hypersensitivity to ipratropium bromide or any of its components.
5. Adverse reactions/Side effects
   5.1. Respiratory: bronchitis, COPD exacerbation, and dyspnea
6. Route of administration
   6.1. Inhaled updraft treatment following nebulization.

History: 04-2021; 01-2018 (new).

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Section 700.19: Ketamine hydrochloride injection (Ketalar)

1. Classification
   1.1. Non-barbiturate anesthetic
2. Indications
   2.1. Excited delirium (acutely agitated patient that is a danger to the provider, themselves or others)
3. Precautions
   3.1. Careful monitoring for ventilatory and respiratory insufficiency following administration.
4. Contraindications
   4.1. Known hypersensitivity to ketamine or any of its components.
5. Adverse reactions/Side effects
   5.1. Hypertension or hypotension
   5.2. Tachycardias or bradycardias
6. Route of administration
   6.1. Intramuscular
7. Notes
   7.1. This drug must be stored, handled and disposed of as a controlled substance.
   7.2. Ketamine is to be used exclusively for excited delirium. It is not intended as an alternative agent for sedation under airway management.

History: 04-2021; 01-2018 (new).

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Section 700.20: Ketorolac tromethamine injection (Toradol)

1. Classification
   1.1.
2. Indications
   2.1. Pain management in isolated minor extremity injuries, burns, renal colic (kidney stones), general musculoskeletal pain.
3. Precautions
   3.1. None.
4. Contraindications
   4.1. NSAI/Ibuprofen use with 24 hours,
   4.2. TBI/CVA in last 24 hours,
   4.3. Active bleeding,
   4.4. Currently taking anticoagulants.
   4.5. Age less than sixteen years.
5. Adverse reactions/Side effects
   5.1. None.
6. Route of administration
   6.1. Intravenous
   6.2. Intraosseous
   6.3. Intramuscular

History: 04-2021 (new).

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Section 700.21: Lidocaine hydrochloride injection, 2%

1. Classification
   1.1. Antidysrhythmic
2. Indications
   2.1. Ventricular irritability, including: premature ventricular complexes, wide-complex tachycardia, ventricular tachycardia and ventricular fibrillation.
   2.2. As an agent for premedicating candidates for elective intubation with suspected cerebral insult.
   2.3. As a local analgesic prior to fluid administration through an intraosseous line.
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. Intravenously
   6.2. Intraosseously

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.22: Lidocaine hydrochloride injection, 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

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.23: Magnesium sulfate injection, 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

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.24: Methylprednisolone sodium succinate inhalation (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. Neonates, premature infants and nursing mothers of neonates and 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

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.25: Midazolam hydrochloride injection (Versed)

1. Classification
   1.1. Benzodiazepine, anticonvulsant/sedative
2. Indications
   2.1. Seizure
   2.2. Airway management
3. Precautions
   3.1. Careful monitoring for ventilator and respiratory insufficient following administration.
4. Contraindications
   4.1. Known hypersensitivity to midazolam or any of its components.
5. Adverse reactions/Side effects
   5.1. CNS: altered mental status
   5.2. Respiratory: respiratory depression
6. Route of administration
   6.1. Intravenous
   6.2. Intraosseous
   6.3. Intramuscular
7. Notes
   7.1. This drug must be stored, handled and disposed as a controlled substance.

History: 04-2021; 01-2018 (new).

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Section 700.26: Morphine sulfate injection

8. Classification
    8.1. Analgesic
9. Indications
    9.1. Management of pain associated with:
        9.1.1. Burns
        9.1.2. Ischemic chest pain
        9.1.3. Pulmonary edema
        9.1.4. Musculoskeletal injury
        9.1.5. Sickle Cell crisis
10. Precautions
    10.1. In the presence of right ventricular infarction, morphine sulfate may result in a precipitous drop in systolic pressure as a result of reduced preload.
11. Contraindications
    11.1. Systolic blood pressure less than 90 mmHg.
    11.2. Known hypersensitivity to morphine or any of its components.
12. Adverse reactions/Side effects
    12.1. Central nervous system: decrease in mentation
    12.2. Respiratory: respiratory depression
13. Route of administration
    13.1. Intravenously
    13.2. Intraosseously
14. Notes
    14.1. This drug must be stored, handled and disposed of as a controlled substance.

History: 04-2021; 01-2018; 07-2014; 07-2012; 07-2009; 02-2008.

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Section 700.27: Naloxone hydrochloride injection (Narcan)

1. Classification
   1.1. Narcotic/opiate antagonist
2. Indications
   2.1. Known or suspected 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 cerebral insult.
   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
   6.3. Intramuscularly
7. Notes
   7.1. Naloxone should be administered gradually to improve cardiopulmonary status and not based upon level of consciousness.

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.28: Naloxone hydrochloride nasal spray (Narcan)

1. Classification
   1.1. Narcotic/opiate antagonist
2. Indications
   2.1. Known or suspected 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 cerebral insult.
   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. Intranasal
7. Notes
   7.1. Naloxone should be administered gradually to improve cardiopulmonary status and not based upon level of consciousness.
   7.2. Naloxone nasal spray is reserved for BLS units, Beach Safety and law enforcement only.

History: 04-2021 (new).

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Section 700.29: Nitroglycerin lingual spray, tablet, or transdermal paste

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
   6.2. Transdermal

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.30: Norepinephrine bitartrate injection (Levophed)

1. Classification
   1.1. Vasopressor
2. Indications
   2.1. Hypotension secondary to cardiogenic, septic or neurogenic shock refractory to intravascular fluid boluses;
   2.2. Patients where fluid boluses is contraindicated (ie, pulmonary edema)
3. Precautions
   3.1. Infuse through a well-established and patent vascular access site. Monitor routinely.
4. Contraindications
   4.1. Hypovolemic shock;
   4.2. Mesenteric or peripheral vascular thrombosis
5. Adverse reactions/Side effects
   5.1.
6. Route of administration
   6.1. Intravenous
   6.2. Intraosseous

History: 04-2021 (new).

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Section 700.31: Ondansetron hydrochloride (Zofran)

1. Classification
   1.1. Antiemetic
2. Indications
   2.1. Nausea
3. Precautions
   3.1. Use in patients following abdominal surgery or in patients with chemotherapy-induced nausea and vomiting may mask a progressive ileus and/or gastric distention
4. Contraindications
   4.1. Known hypersensitivity to ondansetron or any of its components.
   4.2. Known history of QTC prolongation
   4.3. Patients taking medications that may cause QTC prolongation (i.e., chlorpromazine, haloperidol, droperidol, quetiapine, olanzapine, amisulpride, thioridazine, quinidine, procainamide, disopyramide, sotalol, amiodarone)
5. Adverse reactions/Side effects
   5.1. Gastrointestinal: diarrhea
   5.2. Other: headache
6. Route of administration
   6.1. Intravenous
   6.2. Intramuscular
   6.3. Sublingual

History: 04-2021; 01-2018; 07-2012 (new).

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Section 700.32: Sodium bicarbonate injection

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.

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.33: Succinylcholine succinate injection (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.

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.34: Tetracaine ophthalmic solution (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.

History: 04-2021; 01-2018; 07-2012; 07-2009; 02-2008.

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Section 700.35: Tranexamic acid injection (Cyklokapron)

1. Classification
   1.1. Antifibrinolytic
2. Indications
   2.1. Patients greater than 18 years of age;
   2.2. Signs and symptoms of severe hemorrhage (internal or external);
   2.3. Systolic blood pressure less than 90 mmHg;
   2.4. Heart rate greater than 120;
   2.5. Evidence of peripheral vasoconstriction; and
   2.6. Time of injury less than 3 hours (180 minutes)
3. Precautions
   3.1. None.
4. Contraindications
   4.1. Time of injury greater than 3 hours (180 minutes);
   4.2. Patients with contraindications to antifibrinolytic therapy agents.
5. Adverse reactions/Side effects
   5.1. None.
6. Route of administration
   6.1. Intravenous infusion
   6.2. Intraosseous infusion

History: 04-2021 (new).

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Section 700.36: Vecuronium bromide injection (Norcuron)

1. Classification
   1.1. Long acting non-depolarizing neuromuscular blocker
2. Indications
   2.1. To facilitate tracheal intubation
3. Precautions
   3.1. Additive/synergistic effects if administered with or following and opioid or sedative.
   3.2. Myasthenia gravis and other neuromuscular diseases increase sensitivity to the drug.
4. Contraindications
   4.1. Lack of ventilatory support.
   4.2. Known hypersensitivity to vecuronium or any of its components.
5. Adverse reactions/Side effects
   5.1. Respiratory insufficiency or apnea
   5.2. Itching
6. Route of administration
   6.1. Intravenous
   6.2. Intraosseous
7. Special considerations
   7.1. Only prehospital agencies and personnel with written authorization may carry and utilize vecuronium.
   7.2. Great care should be taken to ensure adequate sedation has been delivered prior to inducing paralysis.

History: 04-2021 (new).

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Section 800.00: Reserved

Section 900.00: Memorandum indicating change or clarification

Memorandums contained in this section are intended to alter or clarify current *Volusia County Prehospital Standing Orders and Treatment Protocols*. Each memorandum is appropriately titled and contains a brief description of the content of the change. Dissemination of this information to all appropriate personnel is the responsibility of each agency.

With the addition of these memorandums to the document, the medical director strongly encourages the agency to reference the specific memorandum on the affected pages in order to make providers aware of the change while perusing or otherwise referencing the manual.

The next revision of this document will contain these changes or clarifications in the body of the document, thereby eliminating pages in this section with every revision.

History: 2022-07-26 (900.16); 2022-07-26 (900.15); 2022-05-02 (900.14); 2022-05-02 (900.13); 2022-05-02 (900.12); 03-07-2022 (900.11); 03-07-2022 (900.10, rescinded 05-02-2022); 11-03-2021 (900.09, revised, rescinded 05-02-2022); 11-03-2021 (900.08); 11-03-2021 (900.07); 11-03-2021 (900.06, rescinded 05-02-2022); 11-03-2021 (900.05); 10-01-2021 (900.04); 08-16-2021 (900.03, rescinded 11-03-2021); 07-22-2021 (900.02); 05-10-2021 (900.01).

Section 900.01: Obstetrical transport protocol change

Description of modification/clarification: Realignment of transport protocol based upon changes in service at AdventHealth.

Distribution date: May 10, 2021 (reauthorized June 30, 2022)

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Jessica B. Gershen, MD

AdventHealth has announced the transition of obstetrical services from AdventHealth DeLand to AdventHealth Fish Memorial (Orange City). As a result, this addendum reclassifies AdventHealth DeLand as a non-obstetrical receiving facility and AdventHealth Fish Memorial as an obstetrical receiving facility effective at 8:00 a.m., Monday, May 24, 2021.

Section 900.02: Authorization of ambulance receiving facility

Description of modification/clarification: Realignment of transport protocol based upon changes in service at AdventHealth.

Distribution date: July 16, 2021 (updated July 22, 2021) (reauthorized June 30, 2022)

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Jessica B. Gershen, MD

The following facility is an authorized ambulance receiving facility effective Monday, July 19, 2021 at 7:00 a.m.

AdventHealth Port Orange ER
5811 South Williamson Boulevard
Port Orange, Florida 32128

The Port Orange facility is an appropriate receiving facility for all but specialty transports (e.g., obstetrical, STEMI, stroke, trauma, etc.) with a caveat: the facility is an appropriate alternative for persons with compromised and uncontrolled airway issues when it is closest.

Section 900.03: Release of first response agency

Description of modification/clarification: Introductory program involving the release of first response agencies under specific conditions.

Distribution date: August 16, 2021

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Peter C. Springer, MD, FACEP

This program is intended as an introductory program and authorizes only the agencies and personnel identified under separate written correspondence from the EMS medical director to operate under the auspices of this section.

Release of first response agency

Scope and purpose

The *Release of first response agency* is a pilot program intended exclusively for agencies with written authorization from the medical director to execute the appropriate refusal, return to service, and allow the low acuity patient to independently await the ambulance arrive for persons with no perceived or discernable emergency medical condition. The program is meant to improve efficiency within the emergency medical services system and gain resource capacity through the professional, responsible, and appropriate application of this program. Deviations from or usurpation of the intended spirit of the program may result in restrictions to the paramedic or emergency medical technicians ability to practice in Volusia County.

Persons that are eligible for inclusion under this program:

1. An adult or an emancipated minor;
2. Be alert and oriented;
3. Free from alcohol or drug intoxication[1];
4. Must be independently and effectively able to ambulate without reasonable risk of fall[2];
5. Be in no apparent distress;
6. Must have and maintain reliable access to access the 9-1-1 system until the ambulance arrives on scene;
7. Be in a safe environment[3]; and
8. Be amenable to the terms and conditions of this program.

Persons that are ineligible for inclusion under this program:

[1] For purposes of this section, "alcohol or drug intoxication" means any reasonable suspicion as determined on clinical assessment by the field provider or admission of consumption of alcohol or drugs by the patient.

[2] For purposes of this section, "independently and effectively able to ambulate without reasonable risk of fall" means persons able to move between two points in a timely manner without assistance, without undue burden, and without exacerbating any underlying medical condition.

[3] For purposes of this section, "safe environment" shall include a residence, hotel/motel room, or any domicile in which the persons resides or are welcome.

1. Hearing-impaired persons, sight-impaired persons, mentally-impaired persons, or others' with special needs;
2. Individuals with a definable unstable emergency medical condition;
3. Individuals with a perceived emergency medical condition;
4. Individuals with a preexisting medical condition which, in the judgment of the emergency medical technician or paramedic, would place them at increased risk by being left to independently await the ambulance arrival;
5. Individuals with vital signs outside of physiological norms; and
6. Individuals that have received any advanced life support assessment or treatment by the emergency medical provider

If an individual is eligible based upon the above criteria, the first response agency may seek consent from the patient and execute the appropriate release. Regardless of eligibility, no individual shall be directly denied or otherwise persuaded to decline allow this interruption in care.

First response prehospital provider (paramedic or emergency medical technician) responsibilities:

1. Afford the patient the ability to make an informed decision regarding their willingness to participate in the *Release of first response agency* program.
2. The responsible paramedic or emergency medical technician affording the option of exercising this program shall be clearly identified in the patient care report. If no designation is made, the report author will be presumed to be the individual responsible for the determination.
3. It is the expectation that a comprehensive history and physical examination occur prior to invoking this program. The assessment, and contemplation of any other mitigating factors in the provider's decision-making process, shall be comprehensively documented.
4. The provider shall record the following specific information in the patient care report: patient's legal name; patient's date of birth; patient's home address; patient's telephone number; the unique incident or case number assigned to the patient; and the name of the hospital emergency department at which the patient intends to be evaluated.
5. The patient care report shall be completed as soon as practical. Under no circumstances may the report be left incomplete prior to the provider ending their shift.
6. Communicate with the responding transport unit to determine their estimated time of arrival. If the arrival is imminent, invoking the use of *Release of first response agency* may not be appropriate. This program shall not be used as a mechanism to hastily disposition a patient.
7. Notify your supervisor of any irregularities encountered in the administration of this program.
8. Document an exclusive disposition description in the patient disposition section of the electronic patient care report that will allow identification of the incident.

First response agency responsibilities:

1. If irregularities are reported by field personnel, those concerns shall be conveyed to the medical director, or his or her designee, in writing no later than the close of business on the first business day following notification by the field provider. Irregularities of greater concern shall also require verbal communication as soon as possible.

2. Create a unique patient disposition description in the electronic patient care report and instruct all personnel in its use for this program. The description shall be uniform with all other participating agencies and agreeable with the Emergency Medical Administration division.
3. Review all instances in which this program is utilized for appropriateness and application of parameters established in this section.

Transport agency responsibilities

If the ambulance arrival is delayed more than thirty (30) minutes following the first response agency clearing the scene, telephone contact shall be made with the patient by a Volusia County Emergency Medical Services division system status controller, or his or her designee.

RESCINDED

Section 900.04: Unavailability of fentanyl/Authorization for morphine

Description of modification/clarification: In lieu of supply interruptions with fentanyl, this authorization allows resumption of morphine.

Distribution date: October 1, 2021 (reauthorized June 30, 2022)

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Jessica B. Gershen, MD

In the event providers are unable to obtain fentanyl, providers may return to inventorying and administering morphine sulfate as order below.

Adult

1. **Acute coronary syndrome:** morphine, two (2) milligrams intravenously every five (5) minutes to a maximum of ten (10) milligrams until symptoms are relieved and in the absence of contraindications.
2. **Pulmonary edema:** morphine, two (2) milligrams intravenously every five (5) minutes to a maximum of ten (10) milligrams until symptoms are relieved and in the absence of contraindications.
3. **Localized cold injury (frostbite):** morphine, two (2) milligrams intravenously every five (5) minutes to a maximum of ten (10) milligrams until symptoms are relieved and in the absence of contraindications.
4. **Isolated extremity injury; burs, excluding those with associated cardiovascular compromise; chest pain suspicious of myocardial ischemia; or Sickle Cell crisis:** morphine, two (2) milligrams intravenously every five (5) minutes to a maximum of ten (10) milligrams until symptoms are relieved and in the absence of contraindications.

Pediatric

1. **Isolated extremity injury; burns, excluding those with associated cardiovascular compromise; chest pain suspicious of myocardial ischemia; or Sickle Cell crisis:** morphine, 0.1 milligram per kilogram of body weight to a total single dose of 2 milligrams in the absence of contraindications. This dose may be repeated once for a total of two doses.

Section 900.05: Tactical emergency medical support

Description of modification/clarification: Authorization and guidance for use of Tactical Emergency Casualty Care (TECC) in support of law enforcement operations.

Distribution date: November 3, 2021 (reauthorized June 30, 2022)

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Jessica B. Gershen, MD

Predicated on your agency's adoption of a policy allowing participation in the tactical emergency medical services environment, this authorization outlines prehospital care activities.

The purpose of the tactical emergency medical support (TEMS) personnel is to provide immediate medical care to injured or ill officers and any civilians in austere environments. Personnel certified at the level of emergency medical technician-basic (EMT-B) or emergency medical technician-paramedic (EMT-P) are authorized to utilize the Tactical Emergency Casualty Care (TECC) guidelines (formerly called Law Enforcement Fire Response, or LEFR) published by the National Association of Emergency Medical Technicians (NAEMT) providing adherence to their base scope of training (e.g., EMT-B or EMT-P).

Authorization

1. This authorization extends to persons that have successful completed TEMS training, including any NAEMT recommended continuing education.
2. The authorization is limited to the above persons only when engaged in TEMS activity (live events, training, and other sanctioned events). All practices are to be compliant with the applicable federal, state, county, and local laws and regulations.
3. The TEMS medic will be responsible for the initial evaluation and field stabilization of injured law enforcement officers, civilians, or any person taken into custody until safe evacuation from the hot zone is completed and care transferred to another emergency medical service provider.

Section 900.06: Right size response program

Description of modification/clarification: Reinforcement of response configuration under existing emergency medical dispatch triage procedures.

Distribution date: November 3, 2021

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Peter C. Springer, MD, FACEP

Development of the right-size response (RSR) program was a collective effort of the fire chiefs' and county agencies with a goal of reducing resources assigned to low acuity, non-emergent medical incident types. The plan, implemented in 2018, utilized the emergency medical dispatch platform in the Volusia Sheriff's communications center to assign a single non-transport unit from the agency having jurisdiction with the intent of responding to, and assessing the need for ambulance transport, prior to the dispatch pf an ambulance.

This supplement to the Volusia County Prehospital Standing Orders and Treatment Protocols reinforces the need for all first response agencies to adhere to this emergency medical dispatch program component.

RESCINDED

Expectations

When the communications center assigns a first response agency as the sole responding unit to a low acuity, non-emergent medical incident, responding personnel shall make contact with the patient, provide a comprehensive assessment and determine if the patient desires transport. In these instances, providers shall delay requesting an ambulance to respond until the field provider arrives at the patient's side and determines the proper or desired disposition.

Transportation options

Ambulance. If ambulance transportation is necessary or desired, providers on scene shall make the request through the Volusia Sheriff's communications center. The request shall specify emergent (lights and siren) versus non-emergent (no lights and siren) response and the level of care required: basic life support or advanced life support. The communications center will assign the appropriate resource based upon this information.

First response agencies may utilize the scene release program and return to service. Use discretion in executing the scene release if the anticipated ambulance response time is brief.

Alternative transport. If the provider makes a reasonable and informed determination that medical care is not required during transport and the patient is amenable, convey a request for alternative transport 1 (AT1) to the communications center. If the asset is unavailable, the communications

~~center will dispatch the next most appropriate and available resource. A patient refusal is required under this option.~~

~~AT1 is a transportation service provided by the county in conjunction with the nurse triage program. The intent of the service is to transport persons without a medical condition that could reasonably require prehospital care during transit.~~

~~As always, a properly executed patient refusal and declination of transport remains an option.~~

RESCINDED

Section 900.07: Emergency medical care and transport of law enforcement canines

Description of modification/clarification: Legislative allowance for emergency medical services personnel to treat and transport law enforcement canines injured in the line of duty.

Distribution date: November 3, 2021 (reauthorized June 30, 2022)

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Jessica B. Gershen, MD

The State of Florida passed legislation[1] that authorizes persons licensed as an emergency medical technician-basic (EMT-B) or an emergency medical technician-paramedic (EMT-P) to provide emergency medical care to *law enforcement canines* injured in the line of duty. The law further permits licensed emergency medical service transport providers to transport law enforcement canines to a veterinary clinic or similar facility providing there is no individual requiring medical attention or transport at that time.

A law enforcement canine means *any canine that is owned, or the service of which is employed, by a state or local law enforcement agency, a correctional agency, a fire department, a special fire district, or the State Fire Marshal for the principal purpose of aiding in the detection of criminal activity, flammable materials, or missing persons; the enforcement of laws; the investigation of fires; or the apprehension of offenders*.

This protocol conveys the legislative authority to providers, but does not provide direction for care. Initial discussions with a veterinarian suggest many of the same procedures utilized in our current prehospital standing orders and treatment protocols could be adapted to use in animals. While those discussions continue, I will highlight that the law affords immunity from criminal or civil liability to EMT-B and EMT-P who act in good faith when providing emergency medical care.

Procedure

Every agency is strongly encouraged to develop procedures for managing such situations. While not an exhaustive list, considerations should include:

- Safety of emergency medical personnel during care and transport;
- Stipulations that the canine's handler or an experienced handler should accompany during transport;

[1] §401.254 Treatment of injured police canines. (1) As used in this section, the term "police canine" means any canine that is owned, or the service of which is employed, by a state or local law enforcement agency, a correctional agency, a fire department, a special fire district, or the State Fire Marshal for the principal purpose of aiding in the detection of criminal activity, flammable materials, or missing persons; the enforcement of laws; the investigation of fires; or the apprehension of offenders. (2) A licensee with a valid permit for the transport vehicle may transport a police canine injured in the line of duty to a veterinary clinic or similar facility if there is no individual requiring medical attention or transport at that time. (3) Notwithstanding s. 474.213, a paramedic or an emergency medical technician may provide emergency medical care to a police canine injured in the line of duty while at the scene of the emergency or while the police canine is being transported to a veterinary clinic or similar facility. A paramedic or an emergency medical technician who acts in good faith to provide emergency medical care to an injured police canine is immune from criminal or civil liability.

- Consideration for restraint (e.g., lead, muzzle, etc.).

Determination of the veterinary clinic shall be made by the handler or other law enforcement officer.

Section 900.08: Discontinuation of prehospital laboratory specimen collection

Description of modification/clarification: Elimination of the requirement to collect laboratory specimens on suspected stroke patients.

Distribution date: November 3, 2021 (reauthorized June 30, 2022)

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Jessica B. Gershen, MD

With the exception of lawfully requested specimen collection for determining blood alcohol level, this addendum prohibits the collection of laboratory specimens under *Volusia County Prehospital Standing Orders and Treatment Protocols*. Please remove all blood collection tubes from your apparatus.

Section 900.09: Release of first response agency (revised November 2021)

Description of modification/clarification: Revised program involving the release of first response agencies under specific conditions.

Distribution date: November 3, 2021

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Peter C. Springer, MD, FACEP

Section 900.09 rescinds section 900.03 (August 16, 2021). The entirety of change to this section reflects in a single footnote. The previous footnote defines alcohol or drug intoxication as "*any reasonable suspicion as determined on clinical assessment by the field provider or admission of consumption of alcohol or drugs by the patient*." The revised definition defines alcohol or drug intoxication as "*any reasonable suspicion as determined on clinical assessment by the field provider*."

This program is intended as an introductory program and authorizes only the agencies and personnel identified under separate written correspondence from the EMS medical director to operate under the auspices of this section.

RESCINDED

Release of first response agency

Scope and purpose

The *Release of first response agency* is a pilot program intended exclusively for agencies with written authorization from the medical director to execute the appropriate refusal, return to service, and allow the low acuity patient to independently await the ambulance arrive for persons with no perceived or discernable emergency medical condition. The program is meant to improve efficiency within the emergency medical services system and gain resource capacity through the professional, responsible, and appropriate application of this program. Deviations from or usurpation of the intended spirit of the program may result in restrictions to the paramedic or emergency medical technicians ability to practice in Volusia County.

Persons that are eligible for inclusion under this program:

1. An adult or an emancipated minor;
2. Be alert and oriented;
3. Free from alcohol or drug intoxication[1];
4. Must be independently and effectively able to ambulate without reasonable risk of fall[2];
5. Be in no apparent distress;

[1] For purposes of this section, "alcohol or drug intoxication" means any reasonable suspicion as determined on clinical assessment by the field provider.

[2] For purposes of this section, "independently and effectively able to ambulate without reasonable risk of fall" means persons able to move between two points in a timely manner without assistance, without undue burden, and without exacerbating any underlying medical condition.

6. Must have and maintain reliable access to access the 9-1-1 system until the ambulance arrives on scene;
7. Be in a safe environment[3]; and
8. Be amenable to the terms and conditions of this program.

Persons that are ineligible for inclusion under this program:

1. Hearing-impaired persons, sight-impaired persons, mentally-impaired persons, or others' with special needs;
2. Individuals with a definable unstable emergency medical condition;
3. Individuals with a perceived emergency medical condition;
4. Individuals with a preexisting medical condition which, in the judgment of the emergency medical technician or paramedic, would place them at increased risk by being left to independently await the ambulance arrival;
5. Individuals with vital signs outside of physiological norms; and
6. Individuals that have received any advanced life support assessment or treatment by the emergency medical provider

If an individual is eligible based upon the above criteria, the first response agency may seek consent from the patient and execute the appropriate release. Regardless of eligibility, no individual shall be directly denied or otherwise persuaded to decline allow this interruption in care.

First response prehospital provider (paramedic or emergency medical technician) responsibilities:

1. Afford the patient the ability to make an informed decision regarding their willingness to participate in the *Release of first response agency* program.
2. The responsible paramedic or emergency medical technician affording the option of exercising this program shall be clearly identified in the patient care report. If no designation is made, the report author will be presumed to be the individual responsible for the determination.
3. It is the expectation that a comprehensive history and physical examination occur prior to invoking this program. The assessment, and contemplation of any other mitigating factors in the provider's decision-making process, shall be comprehensively documented.
4. The provider shall record the following specific information in the patient care report: patient's legal name; patient's date of birth; patient's home address; patient's telephone number; the unique incident or case number assigned to the patient; and the name of the hospital emergency department at which the patient intends to be evaluated.
5. The patient care report shall be completed as soon as practical. Under no circumstances may the report be left incomplete prior to the provider ending their shift.
6. Communicate with the responding transport unit to determine their estimated time of arrival. If the arrival is imminent, invoking the use of *Release of first response agency* may not be appropriate. This program shall not be used as a mechanism to hastily disposition a patient.

[3] For purposes of this section, "safe environment" shall include a residence, hotel/motel room, or any domicile in which the persons resides or are welcome.

7. Notify your supervisor of any irregularities encountered in the administration of this program.
8. Document an exclusive disposition description in the patient disposition section of the electronic patient care report that will allow identification of the incident.

First response agency responsibilities:

1. If irregularities are reported by field personnel, those concerns shall be conveyed to the medical director, or his or her designee, in writing no later than the close of business on the first business day following notification by the field provider. Irregularities of greater concern shall also require verbal communication as soon as possible.
2. Create a unique patient disposition description in the electronic patient care report and instruct all personnel in its use for this program. The description shall be uniform with all other participating agencies and agreeable with the Emergency Medical Administration division.
3. Review all instances in which this program is utilized for appropriateness and application of parameters established in this section.

Transport agency responsibilities

If the ambulance arrival is delayed more than thirty (30) minutes following the first response agency clearing the scene, telephone contact shall be made with the patient by a Volusia County Emergency Medical Services division system status controller or his or her designee.

RESCINDED

Section 900.10: Basic life support transport evaluation

Description of modification/clarification: Implementation of a review process is necessary to track and review instances in which a fire department based paramedic attends to a patient receiving transport in a basic life support ambulance.

Distribution date: March 7, 2022

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Peter C. Springer, MD, FACEP

This section establishes a requirement for the submission of patient care reports, including all attachments, by non-transport providers in every instance in which the fire department-based paramedic determines there is a need to accompany a patient during transport in a basic life support ambulance. Submission of the report is required within forty-eight (48) hours from time of dispatch.

The intention of this reporting requirement is to better assess the impact of basic life support ambulances in the system and address concerns raised by those within the system.

Due to the presence of protected health information, please submit reports via secure upload to the following URL: https://vcservices.vcgov.org/secureupload/d/ema. An auto-generated email will be returned to the email provided indicating the status of the up load.

RESCINDED

Section 900.11: Hospital name change

Description of modification/clarification: Rebranding of HCA Central Florida Regional Hospital.

Distribution date: March 7, 2022 (reauthorized June 30, 2022)

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Jessica B. Gershen, MD

HCA Central Florida Regional Hospital, 1401 West Seminole Boulevard, Sanford, Florida has rebranded their facility name to HCA Florida Lake Monroe Hospital. All services provided by the facility remain intact. This addendum serves only as notice of the name change and clarification that all references to Central Florida Regional Hospital within this document now apply to HCA Florida Lake Monroe Hospital.

Section 900.12: Right-size-response (RSR) program

Description of modification/clarification: Clarification regarding the right-size-response program.

Distribution date: May 2, 2022 (reauthorized June 30, 2022)

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Jessica B. Gershen, MD

Section 900.12 rescinds section 900.06.

The intent of the *right-size-response* (RSR) program was to reduce the number of unnecessary two-tiered responses to non-emergency medical incidents. Under the program, the majority of prehospital medical responses prioritized as non-emergency are assigned to the closest jurisdictional non-transport asset.

Expectations

When the communications center assigns a first response agency as the sole responding unit to a low acuity, non-emergent medical incident, responding personnel shall make contact with the patient, provide a comprehensive assessment and determine if the patient desires transport. In these instances, providers shall delay requesting an ambulance to respond until the field provider arrives at the patient's side and determines the proper or desired disposition. If the patient requests ambulance transport, convey the type of ambulance – basic life support (BLS) or advanced life support (ALS) – to the communications center.

First response agencies may utilize the *scene release for low acuity patients* and return to service. Use discretion in executing the scene release if the anticipated ambulance response time is brief.

As always, a properly executed patient refusal and declination of transport remains an option.

Conversely, non-emergency medical requests at health care facilities (e.g., nursing homes, assisted living facilities, physician offices, etc.) may produce an ambulance-only response. Based upon the specific request from the facility and information received during the call taking process, assignment of the most appropriate transport asset – BLS or ALS – will occur.

The subset of non-emergency incidents isolated to falls currently receives a conventional two-tiered response.

Section 900.13: Scene release for low acuity patients (formerly *Release of first response agency*)

Description of modification/clarification: Clarification regarding scene release for low acuity patients.

Distribution date: May 2, 2022 (reauthorized June 30, 2022)

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Jessica B. Gershen, MD

Section 900.13 rescinds section 900.09.

Scope and purpose

The *scene release for low acuity patients* is a program intended to allow non-transport providers to return to service following proper execution of this section and allow the low acuity patient to await the ambulance arrival in the absence of a discernable emergency medical condition. The program intends to improve efficiency within the emergency medical services system and gain resource capacity through the professional, responsible, and appropriate application of this program.

Persons that are eligible for inclusion under this program:

1. An adult, an emancipated minor, or a minor accompanied by a parent or legal guardian;
2. Be alert and oriented;
3. Free from alcohol or drug intoxication[1];
4. Must be independently and effectively able to ambulate without reasonable risk of fall[2];
5. Be in no apparent distress;
6. Must have and maintain reliable access to access the 9-1-1 system until the ambulance arrives on scene;
7. Be in an environment in which the person feels safe; and
8. Be amenable to the terms and conditions of this program.

Persons that are ineligible for inclusion under this program:

1. Mentally-impaired persons or others' with special needs;
2. Individuals with a definable unstable emergency medical condition;

[1] For purposes of this section, "alcohol or drug intoxication" means any reasonable suspicion as determined on clinical assessment by the field provider.

[2] For purposes of this section, "independently and effectively able to ambulate without reasonable risk of fall" means persons able to move between two points in a timely manner without assistance, without undue burden, and without exacerbating any underlying medical condition.

3. Individuals with a preexisting medical condition which, in the judgment of the emergency medical technician or paramedic, would place them at increased risk by being left to independently await the ambulance arrival;
4. Individuals with vital signs outside of physiological norms; and
5. Individuals that have received any advanced life support medication and/or require ongoing advanced life support treatment by an emergency medical care provider.

If an individual is eligible based upon the above criteria, the first response agency may seek consent from the patient and execute the appropriate release. Regardless of eligibility, no individual shall be directly denied or otherwise persuaded to decline allow this interruption in care.

First response prehospital provider (paramedic or emergency medical technician) responsibilities:

1. Afford the patient the ability to make an informed decision regarding their willingness to participate in the *Release of first response agency program*.
2. The responsible paramedic or emergency medical technician affording the option of exercising this program shall be clearly identified in the patient care report. If no designation is made, the report author will be presumed to be the individual responsible for the determination.
3. It is the expectation that a complaint specific history and physical examination occur prior to invoking this program. The assessment, and contemplation of any other mitigating factors in the provider's decision-making process, shall be appropriately documented.
4. Communicate with the responding transport unit to determine their estimated time of arrival. If the arrival is imminent, invoking the use of *Release of first response agency* may not be appropriate. This program shall not be used as a mechanism to hastily disposition a patient.
5. Notify your supervisor of any irregularities encountered in the administration of this program.
6. Document an exclusive disposition description in the patient disposition section of the electronic patient care report that will allow identification of the incident.

First response agency responsibilities:

1. If irregularities are reported by field personnel, those concerns shall be conveyed to the medical director, or his or her designee, in writing no later than the close of business on the first business day following notification by the field provider. Irregularities of greater concern shall also require verbal communication as soon as possible.
2. Create a unique patient disposition description in the electronic patient care report and instruct all personnel in its use for this program. The description shall be uniform with all other participating agencies and agreeable with the Emergency Medical Administration division.
3. Review all instances in which this program is utilized for appropriateness and application of parameters established in this section.

Transport agency responsibilities

If delayed ambulance arrival is anticipated to be more than thirty (30) minutes following the first response agency clearing the scene, telephone contact shall be made with the patient by a Volusia County Emergency Medical Services division system status controller, or his or her designee.

Section 900.14: Basic life support transport units

Description of modification/clarification: Clarification regarding basic life support transport units.

Distribution date: May 2, 2022 (reauthorized June 30, 2022)

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Jessica B. Gershen, MD

Section 900.14 rescinds section 900.10.

Resource assignment

The intent is to send an advanced life support (ALS) transport unit to every incident with a reasonable likelihood of requiring ALS services. Despite best efforts, the blending of resources is inevitable. Below are more definitive directions for given circumstances.

Unavailability of ALS transport resources. On occasion, system demand may result in the assignment of a basic life support (BLS) transport unit to a higher acuity incident. These extraordinary circumstances will receive a timely review and corrective action contemplated providing stakeholders adhere to reporting guidelines.

Unavailability of BLS transport resources. Availability of BLS transport assets may be limited by resource availability or geography. If a basic life support unit is unavailable, assignment of an ALS asset will occur. The Emergency Medical Services division system status controller retains the flexibility to send a more distant BLS unit providing it does not create a scene delay of more than fifteen (15) minutes.

Transition of care between ALS non-transport and BLS transport

Pursuant to section 64J-1.003(5), Florida Administrative Code, an emergency medical technician-basic may attend patients during transport on an ALS ambulance. Local interpretation affords the determination by the medical director to allow ALS non-transport providers may turn over care to a BLS transport unit following assessment and care providing:

1. The non-transport paramedic provides an initial assessment of the patient and determines that the patient's condition does not warrant ALS level of care and that the patient's condition is not reasonably likely to deteriorate during transport and require ALS care. A matrix providing guidance for determining appropriateness of continued BLS care is included in table 900.14.-1 at the end of this section. This matrix provides guidance and relies on the acumen of the paramedic to adjust for individual circumstances.

Accompaniment by fire-based paramedic during transport with a BLS unit

Should a call where the fire-based paramedic and BLS transport unit are both on-scene develop into a "time life critical" incident, the BLS transport unit will transport to the appropriate facility utilizing fire-based paramedic services. For the purposes of this section, "time life critical" incidents includes cardiopulmonary arrest, active labor or imminent childbirth, drowning, electrocution, STEMI alert, stroke alert, trauma alert, or if the fire medic determines that based upon their assessment there is an imminent threat to the patient's life. It shall be the responsibility of the fire-based paramedic to bring all reasonably anticipated ALS equipment during transport. This section acknowledges the difference between non-transport and transport equipment inventories. It further recognizes that all equipment and medications on the non-transport minimum equipment list meet or exceed the state minimum requirements and any non-inventoried items are local preference. BLS transport assets will not maintain ALS equipment or supplies.

If the fire-based paramedic encounters a subsequent off-load delay at the receiving emergency department, the system status controller shall be notified and make all reasonable efforts to relieve the paramedic by communicating with the emergency department charge nurse, consolidating patients with other units on off-load delay at the same emergency department, or sending a resource to the emergency department.

Refusal of a non-transport paramedic to accompany during transport with a basic life support unit

This document recognizes that an emergency medical technician-basic confronted with a patient that, in their opinion, requires ALS level of service may occur. In such instances, the EMT-basic should state their concern to a non-transport paramedic on scene. If the fire-based paramedic declines to upgrade the level of care, the EMT-basic shall not delay transport, but both providers will confer with the emergency department medical control physician.

Both the BLS transport personnel and fire-based paramedic shall document the circumstances and forward to Emergency Medical Administration using the secure URL: https://vcservices.vcgov.org/secureupload/d/ema.

Monitoring efficacy BLS transport and necessity for a non-transport paramedic to attend during transport

This section establishes reporting requirements for fire-based non-transport personnel and BLS transport personnel.

Fire-based personnel shall submit the complete patient care reports, including all attachments, by non-transport providers in every instance in which the fire-based paramedic determines there is a need to accompany a patient during transport in a BLS ambulance. Submission of the report is required within ninety-six (96) hours from time of dispatch. Due to the presence of protected health information, fire personnel shall submit reports via secure upload to the following URL: https://vcservices.vcgov.org/secureupload/d/ema.

Crews on BLS transport units must indicate the presence of a fire-based health care provider on their patient care report under the (name of ZOLL field). Inclusion of the accompaniment of a rider in the narrative is insufficient.

The intention of this reporting requirement is to better assess the impact of BLS ambulances in the system and address concerns raised by stakeholders within the system.

Table 900.14.-1: Volusia County basic life support differentiation matrix pursuant to section 64J-1.003(5), Florida Administrative Code

	Basic life support	Advanced life support
Airway and breathing	• Respiratory complaint associated with hyperventilation syndrome • Oxyhemoglobin saturation greater than ninety-two percent (>92%) on room air or home oxygen	• Difficulty breathing, abnormal breathing, assisted ventilations, or advanced airway in place • Respiratory rate less than twelve (<12) or greater than thirty (>30) • Oxyhemoglobin saturation less than, or equal to, ninety-two percent (≤92%) on room air or home oxygen
Circulation	• Heart rate greater than fifty (>50) or less than one hundred twenty (<120) that is asymptomatic	• Heart rate less than fifty (<50) or greater than one hundred twenty (>120) • Cardiopulmonary arrest/respiratory arrest (current or status post)
Mental status	• Altered mental status not associated with acute changes (e.g. dementia, etc.) • Suicide attempt involving medications without symptoms associated with altered level of consciousness or abnormal vital signs, at the discretion of the paramedic • Cooperative psychiatric patients	• Acute altered mental status (current or status post) • Combative patient requiring chemical restraint • Seizure regardless of history • Any symptomatic overdose involving medication • Signs or symptoms of transient ischemic attack or stroke
Medical complaint	• Mild allergic reaction with no systemic response • Isolated extremity injury with intact circulation • Atraumatic abdominal pain with normal vital signs • Obstetrical/Gynecological complaints without vital sign changes as above; no indication of labor	• Allergic reaction with widespread or systemic symptoms; or the use of an Epi-Pen prior to arrival • Thoracic or chest pain with potential to be cardiac related • Abdominal pain with abnormal vital signs • Any patient who is hemodynamically unstable • Active labor, or greater than twenty (>20) weeks gestation with an obstetrical complaint • Any medication has been administered
Vital signs	• Altered blood glucose level but can respond and follow simple commands • Altered temperature without associated vital signs or complaint related to temperature / sepsis	• Complaints or symptoms associated with blood glucose level less than sixty milligrams per deciliter (<60 mg/dL) or greater than three hundred 300 milligrams per deciliter (>300 mg/dL) • Complaints or symptoms associated with hyperthermia or hypothermia, including suspected sepsis

Section 900.15: Dextrose shortage and alternatives

Description of modification/clarification: Addressing the ongoing supply disruptions involving various dextrose solutions.

Distribution date: July 26, 2022

Expiration date: Upon release of next comprehensive protocol revision or upon availability of customary dextrose solutions

Approved by: Jessica B. Gershen, MD

Options below do not alleviate agencies from the responsibility of exhausting all appropriately licensed vendors for *customary dextrose solutions*. For purposes of this section, *customary dextrose solutions* means dextrose, fifty percent (50%); dextrose, twenty-five percent (25%); and dextrose, ten percent (10%).

Having considered the potential for ongoing supply disruptions involving customary dextrose solutions, the following treatment regimens are offered for patients with a blood glucose level of less than sixty milligrams per deciliter (<60 mg/dL).

1. If the patient, regardless of weight, is conscious and able to self-administer oral glucose, administer **insta-glucose, 15 grams orally**. If blood glucose does not improve to sixty milligrams per deciliter, or higher (≥60 mg/dL), administer a second dose of insta-glucose, 15 grams, orally. This option should be pursued even with the availability of customary dextrose solutions considering foreseeable supply shortages. If the patient is not a suitable candidate for oral glucose and customary dextrose solutions are available, administer dextrose in accordance with *prehospital standing orders and treatment protocols*.
2. Agencies may acquire dextrose, 5% solutions (500 milliliter bag) when customary dextrose solutions are unavailable. If it is necessary to treat hypoglycemia with dextrose, 5%:
    a. Patient weight fifty kilograms, or greater (≥50 kilograms), **administer 12.5 grams (250 milliliters) dextrose, 5%**. Reassess the blood glucose level. If it is above sixty milligrams per deciliter (>60 mg/dL), cease further treatment. If the blood glucose level remains below sixty milligrams per deciliter (<60 mg/dL), reassess lung sounds and patient's tolerance for further volume loading. If appropriate, **administer 12.5 grams (250 milliliters) dextrose, 5%** (balance of 500 milliliter bag).
    b. Patient weight less than fifty kilograms (<50 kilograms), **administer 0.25 grams per kilogram of dextrose, 5% to a maximum dose is 12.5 grams**. Reassess the blood glucose level. If it is above sixty milligrams per deciliter (>60 mg/dL), cease further treatment. If the blood glucose level remains below sixty milligrams per deciliter (<60 mg/dL), reassess lung sounds and patient's tolerance for further volume loading. If appropriate, **administer 0.25 grams per kilogram of dextrose, 5% to a maximum dose is 12.5 grams**.

3. Agencies may also acquire glucagon injection when customary dextrose solutions are unavailable. If it is necessary to treat hypoglycemia with glucagon:
   a. Patient weight twenty kilograms, or greater (≥20 kilograms), administer glucagon, 1 milligram intramuscularly.[1]
   b. Patient weight less than twenty kilograms (<20 kilograms), administer glucagon, 0.5 milligram intramuscularly.[2]

   Once patient awakens, allow the patient to self-administer oral glucose.

[1] United States Department of Health and Human Services, Food and Drug Administration. (2003). *Information for the physician glucagon for injection*. Retrieved from https://www.accessdata.fda.gov/drugsatfda_docs/label/2004/20928slr010_glucagon_lbl.pdf
[2] United States Department of Health and Human Services, Food and Drug Administration. (2003). *Information for the physician glucagon for injection*. Retrieved from https://www.accessdata.fda.gov/drugsatfda_docs/label/2004/20928slr010_glucagon_lbl.pdf

Section 900.16: Monkeypox guidance

Description of modification/clarification: Informational only pertaining to emerging cases of monkeypox.

Distribution date: July 26, 2022

Expiration date: Upon release of next comprehensive protocol revision

Approved by: Jessica B. Gershen, MD

Monkeypox bullets for EMS

Identify –

- Monkeypox is a viral illness that is not normally found in the United States, making it extremely unlikely that emergency medical services (EMS) professionals will encounter a person infected with it during routine operations.
- The signs and symptoms of illness include flu-like symptoms (fever, headache, muscle aches) and swollen lymph nodes. Soon after the onset of viral symptoms, the patient will develop a vesicular/pustular rash the starts on the face and covers the whole body.
- The person must have traveled to a country that has monkeypox illness (e.g., Nigeria, Democratic Republic of Congo) and/or otherwise had close contact with a person sick with monkeypox in the last 5-21 days.

Isolate –

- Transmission of the virus is by way of exposure of mucous membranes (eyes, nose, mouth) or non-intact skin by direct contact with infectious bodily fluids, and/or exposure to respiratory secretions. It is most likely spread by large respiratory droplets (which can be projected (e.g., 6 feet). To guard against the theoretical possibility of airborne transmission, strict adherence with standard + contact + airborne precautions is recommended for EMS personnel. This includes a NIOSH-approved, fit-tested N-95 particulate mask, gown, gloves, and eye protection with face shield or goggles.
- Apply a surgical mask to the patient if tolerated
  Implement a hierarchy of controls (e.g., separate the driver compartment from the patient compartment, turn the exhaust fan on high in the patient compartment [if so equipped], use personal protective equipment (PPE) checklists for donning and doffing (ideally with a trained observer), clean and disinfect all surfaces of the ambulance and equipment with an EPA-registered hospital grade disinfectant. Medical waste is category A and requires special management. Monitor personnel for signs and symptoms of illness for 21 days after transport if the patient is confirmed to have monkeypox.

Inform –

- Inform other responding personnel if a risk of monkeypox is suspected and prevent unprotected exposure to the patient
- Inform supervisory personnel – some communities may have dedicated transport teams and designated facilities for transport and management of patients with special pathogens
- Inform the receiving facility as soon as possible, that you suspect a patient may be infected with monkeypox, so that space is made available to properly isolate the patient on arrival and that healthcare personnel are in appropriate PPE
- Inform the local and state public health authorities

Additional information

Clinical Recognition (updated June 24, 2022)[1]

You can recognize potential monkeypox infection based on the similarity of its clinical course to that of ordinary discrete smallpox.

After infection, there is an incubation period of roughly 1-2 weeks. The development of initial symptoms (e.g., fever, malaise, headache, weakness, etc.) marks the beginning of the prodromal period.

A feature that distinguishes infection with monkeypox from that of smallpox is the development of swollen lymph nodes (lymphadenopathy). Swelling of the lymph nodes may be generalized (involving many different locations on the body) or localized to several areas (e.g., neck and armpit).

Shortly after the prodrome, a rash appears. Lesions typically begin to develop simultaneously and evolve together on any given part of the body. The evolution of lesions progresses through four stages—macular, papular, vesicular, to pustular—before scabbing over and resolving.

The illness typically lasts 2-4 weeks. The severity of illness can depend upon the initial health of the individual, the route of exposure, and the strain of the infecting virus (West African vs. Central African virus genetic groups, or clades). West African monkeypox is associated with milder disease, fewer deaths, and limited human-to-human transmission. Human infections with the Central African monkeypox virus clade are typically more severe compared to those with the West African virus clade and have a higher mortality. Person-to-person spread is well-documented for Central African monkeypox virus.

Key Characteristics for Identifying Monkeypox

- Lesions are well circumscribed, deep seated, and often develop umbilication (resembles a dot on the top of the lesion)

[1] United States Department of Health and Human Services, Centers for Disease Control and Prevention. (2022). *Monkeypox, clinical recognition*

- Lesions are relatively the same size and same stage of development on a single site of the body (ex: pustules on face or vesicles on legs)
- Fever before rash
- Lymphadenopathy common
- Disseminated rash is centrifugal (more lesions on extremities, face)
- Lesions on palms, soles
- Lesions are often described as painful until the healing phase when they become itchy (crusts)

Monkeypox Disease

Incubation period

Infection with monkeypox virus begins with an incubation period. A person is not contagious during this period.

- Incubation period is roughly 1-2 weeks.
- A person does not have symptoms and may feel fine.

Prodrome

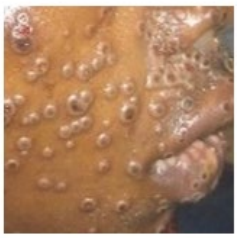
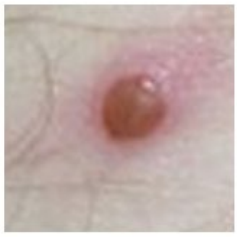
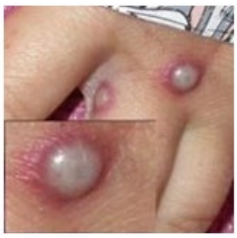
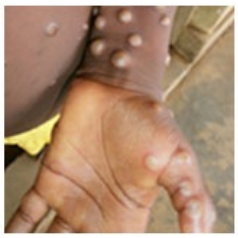
Persons with monkeypox will develop an early set of symptoms (prodrome). A person may sometimes be contagious during this period.

- The first symptoms include fever, malaise, headache, sometimes sore throat and cough, and lymphadenopathy (swollen lymph nodes).
- Lymphadenopathy is a distinguishing feature of monkeypox from smallpox.
- This typically occurs with fever onset, 1–2 days before rash onset, or rarely with rash onset.
- Lymph nodes may swell in the neck (submandibular & cervical), armpits (axillary), or groin (inguinal) and occur on both sides of the body or just one.

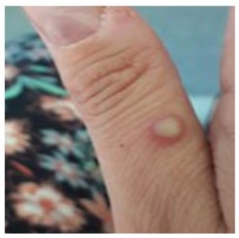
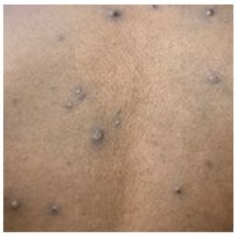
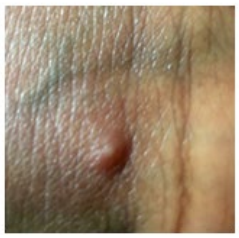
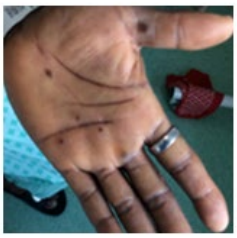
Rash

Following the prodrome, lesions will develop in the mouth and on the body. Lesions progress through several stages before falling off. A person is contagious from the onset of the enanthem through the scab stage.

Key Characteristics of Monkeypox Rash

More Monkeypox Rash Photos
Photo Credit: NHS England High Consequence Infectious Diseases Network

Enanthem Through the Scab Stage

Stage	Stage Duration	Characteristics
Enanthem		• The first lesions to develop are on the tongue and in the mouth.
Macules	1−2 days	• Following the enanthem, a macular rash appears on the skin, starting on the face and spreading to the arms and legs and then to the hands and feet, including the palms and soles. • The rash typically spreads to all parts of the body within 24 hours becoming most concentrated on the face, arms, and legs (centrifugal distribution).
Papules	1−2 days	• By the third day of rash, lesions have progressed from macular (flat) to papular (raised).
Vesicles	1−2 days	• By the fourth to fifth day, lesions have become vesicular (raised and filled with clear fluid).
Pustules	5−7 days	• By the sixth to seventh day, lesions have become pustular (filled with opaque fluid) – sharply raised, usually round, and firm to the touch (deep seated). • Lesions will develop a depression in the center (umbilication). • The pustules will remain for approximately 5 to 7 days before beginning to crust.
Scabs	7−14 days	• By the end of the second week, pustules have crusted and scabbed over. • Scabs will remain for about a week before beginning to fall off.

Rash resolved

Pitted scars and/or areas of lighter or darker skin may remain after scabs have fallen off. Once all scabs have fallen off a person is no longer contagious.