MEDICAL DIRECTION SERVICE AGREEMENT

October 1, 2022

PINELLAS COUNTY
EMERGENCY MEDICAL SERVICES AUTHORITY
12490 Ulmerton Road
Largo, FL 33774-2700

AGREEMENT made this 8th day of September 2022, between **Prehospital Medicine Consultants, LLC**, a Florida Corporation ("Contractor"), and the **PINELLAS COUNTY EMERGENCY MEDICAL SERVICES AUTHORITY**, a special taxing district established by Chapter 80-585, Laws of Florida, as amended ("Authority").

R E C I T A L S

1. On March 15, 2022, the Authority released a Request for Proposal No. 22-0252-P-JJ for the provision of Medical Direction Services ("RFP").

2. On March 28, 2022, the Authority selected the Contractor as the number one ranked proposer and authorized negotiations with Contractor.

3. Pursuant to the RFP, Contractor and Authority now desire to enter into this Medical Direction Service Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants of each other contained in this Agreement and other good and valuable consideration, receipt of which is hereby acknowledged, the parties agree as follows:

ARTICLE I
THE AGREEMENT

SECTION 101. PURPOSE

The purpose of this Agreement is to define the obligations and responsibilities of the Contractor and Authority (collective "Parties") hereto with respect to the provision of Medical Direction Services in Pinellas County.

SECTION 102. COOPERATION

The Parties shall cooperate and use all reasonable efforts, pursuant to the terms of this Agreement, to facilitate the terms of this Agreement. Accordingly, the Parties further agree in good faith to mutually undertake resolution of disputes, if any, in an equitable and timely manner so as to limit the need for costly, time-consuming, adversarial proceedings to resolve such disputes.

SECTION 103. CONTRACT DOCUMENTS

The following Appendices are attached to and made part of this Agreement:

Appendix A. First Responders in Pinellas County
Appendix B. Insurance Requirements
Appendix C. Certificate of Insurance
Appendix D. Business Associate Agreement
Appendix E. Human Services Work Plan
Appendix F. EMS Medical Director Offices
Appendix G. Medical Operations Manual

This Agreement, together with the foregoing Appendices, constitutes the entire Medical Direction Service Agreement between the Parties with respect to the provision of Medical Direction services, shall supersede any prior agreement, contract, or memorandum of understanding between the Parties regarding such services and the Parties agree that the terms and conditions of this Agreement, including the Appendices, shall govern exclusively the obligations of the Parties. In the event of, and/or to the extent there exists a conflict among this Agreement and the above listed Appendices, this Agreement shall govern.

ARTICLE II
DEFINITIONS

SECTION 201. WORDS AND TERMS

Unless the context otherwise requires, capitalized terms used herein shall have the following meanings ascribed to them:

"Advanced Life Support" or **"ALS"** means treatment of life-threatening and non-life-threatening trauma and medical conditions through the use of techniques such as endotracheal intubation, the administration of drugs or intravenous fluids, cardiac monitoring, and cardiac defibrillation by a qualified person, pursuant to rules of the Department.

"Advanced Practice Paramedic" or "APP" means a certified paramedic who, through additional training and demonstration of expertise, is authorized by the EMS Medical Director to perform specific diagnostic and/or therapeutic modalities beyond the usual scope of practice of a certified Paramedic. The APP's expanded scope of practice applies only during the operation of, and in support of, the specific special operations team to which they are trained and certified as defined in the EMS Rules and Regulations.

"Ambulance Contractor" means the entity contracted by the Authority to provide Ambulance Services and Mental Health Interfacility Transport Services.

"Ambulance Services" means the emergency, non-emergency, inter-facility, critical care, and other Specialized Rescue and other specialized transport services offered by the Authority through its Ambulance Contractor.

"Ambulance" means any vehicle permitted by the Department, approved by the Executive Director, and operated by the Ambulance Contractor, which is equipped to provide Advanced Life Support services or Basic Life Support services, and used for the transportation of Patients.

“Associate Medical Director” means physician who is (1) duly licensed osteopathic or medical doctor in the State of Florida, (2) meets the requirements of the Department, (3) is board certified in emergency medicine, and (4) has a valid employment agreement with the Contractor to serve as an assistance to the Medical Director.

"Authority" means the Pinellas County Emergency Medical Services Authority, a special taxing district established by Chapter 80-585, Laws of Florida, as amended.

"Basic Life Support" or **"BLS"** means treatment of life-threatening and non-life-threatening trauma and medical conditions by a qualified person through the use of techniques described in the Emergency Medical Technician Basic Training Course Curriculum of the United States Department of Transportation.

"Caller" means a person accessing the EMS system by telephone.

"Certificate of Public Convenience and Necessity" or “COPCN” means that certificate issued by the Board of County Commissioners pursuant to Chapter 401.25(2)(d), Florida Statutes or the Authority through Chapter 54 of the Pinellas County Code.

"County" means Pinellas County, Florida, a political subdivision of the State of Florida.

"County-Certified" or **"County Certification"** means authorized to work in the EMS System in accordance with requirements established by the Medical Control Board and the Medical Director and approved by the Authority.

"Department" means the State of Florida Department of Health, Bureau of Emergency Medical Services.

"Disaster" means an occurrence of a severity and magnitude that normally results in death, injuries, and/or property damage, and which cannot be managed through routine procedures and resources of the EMS system.

"Emergency Medical Technician" or **"EMT"** means any person who is trained in Basic Life Support, who is County-Certified, and who is certified by the Department to perform such services in emergency and non-emergency situations.

"EMS" means Emergency Medical Services.

"EMS Advisory Council" means the Pinellas County Emergency Medical Services Advisory Council.

"EMS Confidential Information" means EMS System information deemed confidential and/or exempt from §119.07, Florida Statutes, and Section 24(a), Article 1 of the Florida Constitution, HIPAA, HITECH, or other applicable law, including, but not limited to, Protected Health Information (PHI), trade secrets, data processing software obtained by the EMS System under a licensing agreement and EMS System-produced data processing software and security systems, and any other information designated in writing by the Executive Director as EMS Confidential Information.

"EMS Emergency" means any occurrence or threat thereof, in the County or any municipality therein, or in any surrounding County or Counties, which may result in unexpected increased demand for EMS services and is designated as such by the Executive Director.

"EMS Fellow" means a graduate of an Accreditation Council for Graduate Medical Education (ACGME) approved residency training program in emergency medicine, who is enrolled in an approved post-graduate program of study in the sub-specialty of Emergency Medical Services.

"EMS Ordinance" means Chapter 54, Article III, of the Pinellas County Code.

"EMS Personnel" means the County-Certified Physicians, Paramedics, Registered Nurses, EMTs, and Wheelchair Transport drivers employed by ALS and BLS First Responders, the Ambulance Contractor, the Authority, or the Contractor.

"EMS System" means the network of organizations and individuals established to provide emergency medical services to citizens of the County and includes: all ALS and Critical Care Ambulance Services, all ALS and BLS First Responder Services, Regional 9-1-1 and EMS Communications Center operations, Medical Direction Services, citizen CPR training and public education.

“EMS Training” means the then current Continuing Medical Education (CME) program for the continuing and remedial education and training of all EMS Personnel and the EMS Academy program for initial training, testing and certification of EMS Personnel.

"Executive Director" means the Authority’s Director of the EMS System or his/her designee.

"First Responder Services" means the rapid response of EMS Personnel to medical and traumatic emergencies to provide patient assessment and ALS or BLS patient care, as necessary, at the scene of an emergency including Specialized Rescue services.

"First Responders" means any municipalities, fire districts, entities, as listed in **Appendix A**, or any future entities under contract with the Authority and located within Pinellas County that possess (1) a valid Certificate of Public Convenience and Necessity, and (2) a valid agreement with the Authority to provide ALS or BLS First Responder Services.

"Fiscal Year" means the period commencing October 1 in any given year and ending September 30 of the following year.

"Medical Communications Officer" means the specially trained Paramedic or EMT employed by the Ambulance Contractor to relay information to hospitals and monitor the status of hospital resources and EMS System resources in accordance with the Medical Operations Manual.

"Medical Control Board" means the board appointed by the Authority, pursuant to the EMS Ordinance, and having the duties and responsibilities set forth in the EMS Ordinance and any rules and regulations adopted pursuant thereto.

"Medical Control Physician" means the specially trained and County-Certified physician authorized to provide Online Medical Control. Medical Control Physicians must be licensed to practice in the State of Florida and board certified and active in a broad-based clinical medical specialty with demonstrated experience in emergency medicine or other related specialty.

"Medical Direction" or **"Medical Direction Services"** means the (1) clinical oversight and leadership, protocol and policy review (offline medical control), (2) the provision of Online Medical Control services, (3) review and approval of medical supply and equipment standards, (4) review and approval of the certification and re-certification of EMS Personnel, (5) Review and approval of all CME training materials and curriculum, and (6) field observation of EMS Personnel rendering patient care as required by Section 408.

"Medical Director" means the physician who is (1) duly licensed osteopathic or medical doctor in the State of Florida, (2) meets the requirements of the Department, (3) is board certified in emergency medicine, (4) meets the requirements of the EMS Ordinance and has a valid employment agreement with the Contractor, to serve as the clinical leader of the EMS System. The Medical Director must also meet the approval of the Medical Control Board and be appointed by Authority. The Medical Director may use the title “Chief Medical Officer – Pinellas County EMS”.

"Medical Operations Manual" means the then current clinical, operational, and administrative procedures, protocols and guidelines, a copy of which is attached hereto as **Appendix G**, prepared for the EMS System and approved by the Medical Control Board, as the same may be amended from time to time.

"Mental Health Interfacility Transport Services" means the interfacility transportation of mental health clients, in accordance with Chapter 394, Florida Statutes, and any successor statute.

"Online Medical Control" means the clinical management, direct orders and supervision provided by the Medical Director or a Medical Control Physician via radio, telephone or scene response to EMS Personnel rendering ALS and BLS patient care and treatment at the scene of an emergency and prior to or during emergency, non-emergency or specialized transport.

"Paramedic" means a person who is County-Certified and certified by the Department to perform Basic and Advanced Life Support procedure, pursuant to the provisions of state statute and regulations.

"Party" or **"Parties"** means either the Authority or Contractor, or both, as the context of the usage of such term may require.

"Patient" means an individual who is ill, sick, injured, wounded, or otherwise incapacitated, and is in need of, or is at risk of needing, medical attention or care on scene and/or during transport to or from a health care facility.

"Performance Requirements" means the requirements of this Agreement intended to ensure; (1) clinical and operational performance is consistent with approved medical standards and protocols; (2) Contractor is unrelenting in its effort to detect and correct performance deficiencies; and (3) Contractor assists the Authority in upgrading the performance and reliability of the EMS System; (4) Contractor meets all the requirements of providing Medical Direction Services; (5) Contractor meets all of the requirements of providing a Medical Director.

"Priority Dispatch Protocols" means the interrogation protocols and pre-arrival instructions, as set forth in the "Advanced Medical Priority Dispatch System" (AMPDS) guidelines developed by the National Academy of Emergency Medical Dispatch, or any successor method approved through processes adopted by the Board of County Commissioners.

"Protocols" means protocols, procedures and standards to be followed by all EMS personnel including, but not limited to, clinical treatment protocols; standing orders; multiple casualty incident and disaster protocols; transport protocols including hospital destination, hospital bypass and first responder transports; trauma transport protocols and use of helicopter ambulances; protocols for the transfer of patient care and professional interaction between EMS personnel; on-scene medical authority; standard for allowed clinical procedures; policies and protocols to govern Specialized Rescue teams and situations; standards for emergency (9-1-1) and non-emergency EMS call-taking, call processing and radio and data communications including, but not limited to, priority dispatch and pre-arrival instruction protocols; standards for patient care reporting and record keeping; standards for Baker Act transport services and wheelchair/stretcher van services.

"Quality Assurance Review" means an audit, inquiry or review, by the Medical Director, into procedures and practices of EMS Personnel, First Responders, or the Ambulance Contractor on an individual EMS incident or overall EMS System performance or compliance.

"Registered Nurse" means a person who is County-Certified and licensed to practice professional nursing pursuant to the provisions of Chapter 464, Florida Statutes and any successor statute.

"Rules and Regulations" means the rules and regulations adopted by the Authority, as may be amended from time to time.

"Specialized Rescue" means the hazardous materials response team(s), tactical (SWAT) EMS teams, water rescue teams and technical rescue teams provided by the Ambulance Contractor or First Responders to mitigate emergency situations and affect the rescue of Patients.

"State" means the State of Florida.

"State of Emergency" means a Disaster, which has been declared by proclamation of the State, County, or a municipality in the County.

"Wheelchair/Stretcher Van Transport" means the services, vehicles and personnel regulated by the Authority for the transport of wheelchair bound clients within the County.

SECTION 202. TERMS GENERALLY

Whenever the context may require, any pronoun shall include corresponding masculine, feminine, and neuter forms. The words "include," "includes" and "including" shall be deemed to be followed by the phrase "without limitation," except as the context may otherwise require. The words "agree," "agreement," "approval" and "consent" shall be deemed to be followed by the phrase "which shall not be unreasonably withheld or unduly delayed," except as the context may otherwise require. The words "approved," "designate," or similar words shall be deemed to be preceded by the word "reasonably," except as the context may otherwise require.

ARTICLE III
REPRESENTATIONS

SECTION 301. REPRESENTATIONS OF CONTRACTOR

Contractor represents and warrants to the Authority that each of the following statements are presently true and correct:

(a) Existing Contractor has been organized and validly exists, under the laws of the State of Florida, and has been qualified to conduct business in the State of Florida, as having all requisite power and authority in Florida to carry on its business as now conducted, to own or hold or otherwise its properties, and to enter into and perform its obligations under this Agreement and under each instrument described herein to which it is or will be a party.

(b) Due Authorization. This Agreement has been duly authorized by all necessary actions on the part of, and has been duly executed and delivered by, Contractor, and neither the execution and delivery thereof, nor compliance with the terms and provisions thereof or hereof at the time such action is required (i) requires the approval and consent of any other party, except such as have been duly obtained, certified copies thereof having been delivered to the Authority; (ii) contravenes any existing law, judgment, governmental rule, regulation, or order applicable to or binding on Contractor; or (iii) the corporate charter or bylaws of Contractor or any other agreement or instrument in existence on the date of this Agreement to which Contractor is a party.

(c) Enforceability. This Agreement constitutes a legal, valid, and binding obligation of Contractor enforceable against Contractor in accordance with the terms thereof, except as such enforceability may be limited by applicable bankruptcy, insolvency, or similar laws, from time to time in effect, which affect creditors' rights generally and subject to usual equitable principles in the event that equitable remedies are involved.

(d) No Litigation. There are no pending, or to the knowledge of Contractor, threatened actions or proceedings before any court or administrative agency to which Contractor is a party, questioning the validity of this Agreement of any document or action contemplated hereunder, or which are likely, in any case or in the aggregate, to materially adversely affect the consummation of the transactions contemplated hereunder.

(e) Financial Capability. Contractor is fully capable, financially, and otherwise, to perform its obligations hereunder.

(f) Requirements of Applicable Law. Contractor is aware of, acknowledges its ongoing duty to comply with, and represents that it is fully prepared to comply with, any applicable federal, state and local laws, regulations and requirements, including but not limited to the Health Insurance Portability and Accountability Act of 1996, Pub. Law 104-191(August 21, 1996), as amended, and regulations promulgated thereunder ("HIPAA"), the Health Information Technology for Economic and Clinical Health Act - Division A, Title XIII, and Division B, Title IV, of the American Recovery and Reinvestment Act of 2009 ("ARRA"), Pub. Law 111-5, 123 Stat. 115 (Feb. 17, 2009), and regulations promulgated thereunder ("HITECH"), the Medicare and Medicaid Patient Protection Act of 1987, as amended, 42 U.S.C. §1320a-7b and regulations promulgated thereunder (the "Anti-kickback Statute"), and 42 U.S.C. §1395nn and regulations promulgated thereunder (the "Stark Act").

ARTICLE IV
DUTIES AND RESPONSIBILITIES OF CONTRACTOR

SECTION 401. MEDICAL DIRECTOR

(a) Obligation to provide a Medical Director. Contractor shall continuously provide a physician to provide clinical leadership to the EMS System and serve as its sole Medical Director.

Contractor shall ensure that its agreement with the physician to fulfill the position of Medical Director fully discloses the requirements of this agreement and requires that if the Medical Director intends to voluntarily resign the position, he/she shall continue to serve as the Medical Director until such time as the Authority approves a replacement physician.

(b) Requirements of the Medical Director. Medical Director shall:

- Be duly licensed to practice as a medical or osteopathic doctor in the State of Florida;
- Is board certified by the American Board of Emergency Medicine (ABEM), the American Osteopathic Board of Emergency Medicine (AOBEM) Shall be active in a broad-based clinical medical specialty with demonstrated experience in pre-hospital care and hold an Advanced Cardiac Life Support (ACLS) certificate or equivalent.
- Meet the requirements of the Department under applicable Florida Statutes and Administrative Code;
- Meet the requirements of the EMS Ordinance;
- Have a valid employment agreement with the Contractor or one of its professional contractual affiliates, and submit a copy of such to the Authority, and
- Be recommended by the Medical Control Board and appointed by the Authority.

(c) Activities of the Medical Director. Medical Director shall:

- Assume direct responsibility for the clinical activities performed by all EMS Personnel performing within the EMS System;
- Discharge all duties identified in Florida Statutes, Florida Administrative Code, the EMS Ordinance, the Rules and Regulations and the Medical Operations Manual;
- Be a participant in a statewide physician group involved in pre-hospital care, and
- Be an active member of a national professional organization that promotes the clinical practice of EMS.

SECTION 401.1. ASSOCIATE MEDICAL DIRECTORS

(a) Obligation to provide An Associate Medical Directors. Contractor shall provide a physician(s) on a full or part-time basis totaling 1.5 full-time equivalents. Such time shall predominately be in the office or in the field.

(b) Requirements of the Associate Medical Director. Associate Medical Director shall:

- Be duly licensed to practice as a medical or osteopathic doctor in the State of Florida;
- Is board certified by the American Board of Emergency Medicine (ABEM), the American Osteopathic Board of Emergency Medicine (AOBEM) Shall be active in a broad-based clinical medical specialty with demonstrated experience in pre-hospital care and hold an Advanced Cardiac Life Support (ACLS) certificate or equivalent.
- Meet the requirements of the Department under applicable Florida Statutes and Administrative Code;
- Have a valid employment agreement with the Contractor, or one of its professional contractual affiliates, and submit a copy of such to the Authority.

(c) Activities of the Associate Medical Director. Associate Medical Director shall:

- Assist the Medical Director with duties in Section 401 and any subsequent Sections; and
- Exercise the authority, duties, and responsibilities of the Medical Director when the Medical Director is absent.

SECTION 401.2. DUTIES OF MEDICAL DIRECTOR OR ASSOCIATE MEDICAL DIRECTOR

The following duties may be performed by either the Medical Director or an Associate Medical Director:

- Medical Director or Associate Medical Director shall actively and regularly conduct and participate in the following:
  - quality assurance data review and analysis
  - quality improvement committees and projects
  - publishing in industry journals
  - prospective and retrospective clinical and operational research studies
  - medical case reviews
  - physician led training for EMS Academy
  - physician led training for online Continuing Medical Education
  - physician led capstone testing of all new Paramedics
  - drafting and reviewing EMS Academy and CME curriculum
  - livestream briefings, discussions, and question/answer sessions
  - training and protocol review for Advanced Practice Paramedics
  - medical oversight of Ambulance and Regional 911 emergency medical dispatchers and Protocols
  - participation in provider wellness and mental health first aid initiatives and the wellness and fitness leadership committee.

SECTION 402. MEDICAL OPERATIONS MANUAL

Comprehensive Review. Authority's staff shall conduct an on-going and comprehensive review of all Protocols, rules, regulations, and standards as may be necessary to ensure reliable service delivery in the EMS System and appropriate patient care. These are collectively contained within the Medical Operations Manual. Authority's staff will research and draft all protocols, processes, and procedures.
Authority's staff and the Medical Director shall consider the results of Quality Assurance Reviews, review of medical literature, and input from the Medical Control Board and interested physicians, the EMS Advisory Council, First Responders, Ambulance Contractor, EMS Personnel, and the Authority in drafting and reviewing proposed protocols.

The Medical Director shall monitor the number of on-line medical consultations within the EMS system and seek to maintain at an acceptable level though the use of revised protocols as necessary.

SECTION 403. ONLINE MEDICAL CONTROL

Contractor shall provide a primary Online Medical Control Physician on a continual basis that is available by telephone, access via radio to the Pinellas County Intergovernmental Public Safety Radio System and the Authority's electrocardiograph telemedicine system (i.e. Philips Corsium or successor system)

Online Medical Control shall be made available 24 hours per day to provide clinical guidance, patient care and treatment orders, medication orders for all First Responders and the Ambulance Contractor on all pre-hospital and interfacility activities of the EMS System including, but not limited to, Specialized Rescue services, critical care transport, and mental health interfacility transports. Online Medical Control shall be capable of viewing telemedicine data in real time during consults.

All Online Medical Control staff members shall be County-Certified Medical Control Physicians in accordance with the Rules and Regulations and receive specialized training in the provision of Online Medical Control. All Online Medical Control staff shall satisfactorily complete a minimum of 10 hours per year of continuing medical education. Five (5) of the continuing education hours must be related to pre-hospital care.

Online Medical Control staff members shall fully comply with all laws, standards, rules, and regulations established by the State, the County, and the Medical Control Board, including the protocols established in the Medical Operations Manual, and shall assist the Medical Director in monitoring, regulating, and the oversight of the EMS System.

SECTION 404. CONTINUING MEDICAL EDUCATION

Contractor shall be responsible for ensuring the quality of the EMS Training, both CME and EMS Academy training, provided to the EMS system by:

- Reviewing and approving all curriculum and courses for the CME training program prior to EMS Personnel being trained;

- Actively participating in the CME steering committee;

- Make staff available to serve as subject matter experts or curriculum consultants to the core and remedial CME programs;

- Advise the Authority's Executive Director or the Medical Control Board anytime the Contractor believes the quality of the CME program is failing to ensure high quality patient care is provided by EMS Personnel;

- Medical Director shall monitor and audit at least one (1) class of every CME course.

SECTION 405. MEDICAL EQUIPMENT AND SUPPLIES

Authority’s staff shall conduct an on-going and comprehensive review of all EMS medical equipment, medications and medical supplies as may be necessary to ensure reliable service delivery in the EMS System and excellence in patient care.

Authority’s staff shall prepare clinical justification for medical equipment, pharmaceuticals, and medical supplies. Staff shall ensure implementation instructions are distributed to the Ambulance Contractor and First Responders prior to training or implementation, and training through the CME program has been completed, if necessary, prior to implementation of new equipment, pharmaceuticals, or medical supplies.

Medical Director shall review and approve all changes to medical equipment, pharmaceuticals and medical supplies and seek approval of the Medical Control Board for items that institute new treatment modalities.

Authority’s staff and the Medical Director shall take into consideration the results of Quality Assurance Reviews, review of medical literature, and input from the Medical Control Board, interested physicians, the EMS Advisory Council, First Responders, Ambulance Contractor, EMS Personnel, and the Authority.

SECTION 406. QUALITY ASSURANCE AND IMPROVEMENT

The Medical Director is expected to have a high level of involvement in the areas of Quality Assurance and continuous improvement of clinical processes and service delivery. It is contemplated that over the life of this agreement the methods which are used by the Authority in implementing these activities will change and evolve based upon the needs of the system as determined by the Authority through its Rules and Regulations or through changes to state law. At present it is contemplated that the Medical Director will be involved and support these processes as follows:

(a) Complaint Analysis and Performance Monitoring – Authority's staff shall establish procedures for routine auditing and monitoring of EMS System performance and adherence to Protocols on individual EMS incidents and overall EMS System compliance. Medical Director or designees may, at any time and without limitation, conduct performance monitoring and complaint analysis to ensure that EMS Personnel, First Responders and the Ambulance Contractor comply with the Protocols and Rules and Regulations of the Medical Control Board and the Authority. Contractor will support the informal analysis of complaints arising from patients or interested parties in assuring that protocols were followed and appropriate services were rendered and making recommendations regarding resolution of any issues not requiring any formal action regarding a Quality Assurance Review or Professional Standards Investigation. Alternatively, as a result of the informal analysis of complaints a referral may be made for a Quality Assurance Review or for action regarding Professional Standards.

(b) Quality Assurance Review – Medical Direction Services will support the Authority in their discharge of the process contained in F.S. 401.425 through their Emergency Medical Services Review Committee in assisting in the analysis of issues before the committee and appropriate resolution of any issues arising out of the review process. The Emergency Medical Review Committee may require remedial training of EMS Personnel. Such remedial training may be conducted by the Medical Director, the CME Contractor, First Responder agencies or the Ambulance Contractor at the Medical Director's discretion.

(c) Professional Standards – Medical Director shall take actions necessary, in accordance with Section 410, to ensure that EMS Personnel conduct themselves professionally, have appropriate clinical assessment and treatment skills, appropriate clinical and operational decision-making skills, and adhere to Protocols and, Rules and Regulations. The Medical Director will be the final decision-making authority for issues regarding certification to practice as part of the Pinellas County EMS system subject to the professional standards process in the Rules and Regulations.

The Medical Director and staff will comply with the time requirements of either state law or the Rules and Regulations of the Authority, which apply to the incidents being evaluated under this section and which are in force at the time of the investigation.

Section 407. CERTIFICATION OF EMS PERSONNEL

(a) Certification Process. Authority's staff shall validate that all EMS Personnel meet the initial requirements and continuously comply with the established standards to attain and maintain County certification required to be classified as County-Certified. Medical Director shall review and approve new certifications of EMS Personnel. Medical Director shall issue, renew, suspend and revoke the County-Certification of EMS Personnel following the Rules and Regulations and due process requirements.

(b) Due process. Authority's staff shall provide for all procedures for the suspension, revocation, refusal to renew, or refusal to initially issue a personnel certificate or vehicle permit. The due process standards shall be subject to approval of the County Attorney and may not be adopted until the Medical Control Board and the Authority have given such approval. Medical Director shall comply with the due process requirements when suspending, revoking or refusing to issue County Certification for EMS Personnel.

SECTION 408. FIELD ACTIVITY AND SYSTEM MONITORING

Medical Director or designee shall substantially perform and document in its monthly summary report to the Authority evidence of the following required activities:

- Direct field observation of EMS Personnel performing patient care at a minimum of five (5) EMS incidents per month;

- Visit and interact with EMS Personnel, hospital emergency department staff, and other public safety personnel on a regular basis. Contractor shall document at least three (3) visits to a First Responder, Ambulance Contractor station, or a hospital emergency room each month, and

- The Medical Director shall ride along and observe field activity as a crewmember on an Ambulance or First Responder unit for a minimum of ten (10) hours per year.

- Direct observation of Ambulance and Regional 9-1-1 emergency medical dispatchers on a regular basis.

Such field responses, visits and ride-alongs shall be distributed equally among each of the First Responder agencies, the Ambulance Contractor, and the hospitals on an annual basis.

SECTION 409. INTEGRATED DATA SYSTEM

(a) Integrated Data System. Medical Director shall assist the Authority in improving the clinical user requirements for the Authority's existing medical record-keeping system. The Parties understand that the database of the Authority's automated medical record-keeping system shall be fully comprehensive, including complete and integrated information on all system activities. Contractor shall, without additional compensation:

- Require all Contractor personnel to comply with all record-keeping and data entry requirements of the EMS System, to document online medical control consults, as approved and periodically revised by the Authority;

- Comply with coding and data format conventions as specified by the Authority.

(b) Ownership of Data and Records. Contractor agrees that all data, whether written or an electronic file, relating to the Authority's Patients, operations and EMS System including, but not limited to, dispatch records, patient care reports, research and quality assurance databases, hospital status and capability, personnel certification, and continuing education rosters are all the property of the Authority.

(c) EMS Confidential Information. Contractor shall not disclose to any third-party EMS Confidential Information that Contractor, through its personnel, has access to or has received from the Authority pursuant to its performance of services pursuant to the Agreement, unless approved in writing by the Executive Director. All such EMS Confidential Information will be held in trust and confidence from the date of disclosure by the Authority, and discussions involving such EMS Confidential Information shall be limited to Contractor's personnel except as is necessary to complete the requirements of this Agreement.

SECTION 410. PERSONNEL

The Parties understand that the EMS System requires professional and courteous conduct at all times from Contractor's personnel.

Contractor is responsible for ensuring, through in-service and new employee orientation, that its personnel possess a thorough understanding of the structure, finance, and operation of the EMS System and its underlying structure and philosophy.

Contractor shall utilize management practices, which ensure that Online Medical Control personnel working extended shifts, part-time jobs, voluntary overtime, or mandatory overtime have not been on-duty to an extent, which might impair clinical judgment or job performance.

After prior written notice and a meeting between the Parties to discuss alternatives or remedial plans (meeting shall be within ten (10) calendar days of the notice), the Authority may demand the removal of any person employed by Contractor who chronically misconducts himself or is chronically incompetent or negligent in the due and proper performance of his duties, and Contractor shall not reassign such persons for production of services under this Agreement without the prior written consent of the Authority. Provided, however, that the Authority shall not be arbitrary or capricious in exercising its rights under this provision.

SECTION 411. NOTIFICATIONS

Contractor shall make reasonable efforts to notify the Executive Director or their designee, via telephone, electronic medium or verbally, upon occurrence, of the following:

- Significant complaints, unusual occurrences, or investigations;
- Instances when an acting Medical Director is providing coverage;
- Changes in Medical Control Physician staff;

SECTION 412. COORDINATION AND APPROVAL

Medical Director shall notify the Executive Director or their designee, in writing, thirty (30) days prior to implementing changes in protocols or equipment standards, except emergency actions deemed necessary to ensure public health, safety and welfare.

Medical Director shall request the approval of the Medical Control Board before adopting changes to any protocol, equipment standards or Rules and Regulations developed by the Medical Director prior to implementation except emergency actions deemed necessary to ensure public health, safety and welfare.

SECTION 413. CONSTITUENT AND QUALITY ASSURANCE MEETINGS

Medical Director or his/her designee shall regularly attend the monthly or periodic meetings of the EMS Advisory Council, Medical Control Board, Pinellas County Fire Chief's Association, the EMS Leadership Group and Ambulance Services Quality Committee, to keep EMS System constituents and stakeholders informed of the Contractor's activities and to provide an opportunity for feedback regarding clinical policies in the EMS System.

Contractor shall conduct a meeting with the Executive Director to discuss the clinical status of the EMS System and discuss Quality Assurance Reviews on a quarterly basis.

Contractor shall conduct a meeting with the Ambulance Contractor and all Fire Responders to discuss the clinical status of the EMS System and discuss Quality Assurance Reviews. This shall be done no less frequently than quarterly.

SECTION 414. DISASTER ASSISTANCE AND PLANNING

Immediately upon notification by the Authority of a Disaster, State of Emergency or EMS Emergency, Contractor shall commit all resources as are necessary and appropriate, given the nature of the disaster, and shall assist in accordance with plans and protocols applicable in the locality where the State of Emergency or EMS Emergency has occurred.

Contractor will actively cooperate in planning, updating, and following the Pinellas County Comprehensive Emergency Management Plan, including, but not limited to, participation in disaster drill critiques and providing a representative to the meetings of the Disaster Advisory Council, and for emergency management drills and activation of Emergency Operations Center at Contractor's sole expense.

SECTION 415. ETHICS AND COMPLIANCE

Contractor shall at all times conduct its business and perform its responsibilities under this Agreement in accordance with ethical business practices. Contractor, its agents, employees, and Medical Director shall provide services hereunder in compliance with all applicable federal, state, and local laws, ordinances, Rules and Regulations.

Contractor further agrees to follow and comply with all Medicare, Medicaid, and other applicable regulations regarding the determination of medical necessity. Contractor shall assist the Authority, First Responders and Ambulance Contractor on an as needed basis to maintain any ambulance billing compliance programs implemented by the Authority.

Contractor shall comply with the provision of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Business Associate Agreement attached as **Appendix D** hereto.

Contractor shall assist the Authority, First Responders, and the Ambulance Contractor in attaining and continually complying with accreditation requirements related to Medical Direction Services that affect the various service accreditations sought by the Authority, First Responders or the Ambulance Contractor. Such service accreditations shall include, but not be limited to, the Commission for the Accreditation of Ambulance Services (CAAS), the National Academy of Emergency Dispatch Accredited Center of Excellence (ACE), the Commission on Accreditation of Medical Transport Systems (CAMTS), and the Commission on Fire Accreditation International (CFAI).

SECTION 416. OUTSIDE WORK

The Medical Director shall seek the approval of the Authority's Executive Director for any outside part-time or per diem work to be performed by Medical Director. Such requests will not be denied unless there is a conflict of interest with the EMS System or duties required under this agreement would be compromised or diminished by the outside work. Authority acknowledges and approves Medical Director's current outside work as specified in Schedule 416.

SECTION 417. EMS SYSTEM WEB SITE

Contractor shall establish and maintain an active and up to date website that provides the following at a minimum:

- searchable access by Paramedics and EMTs of all current Protocols and medical control directives, to include comprehensive hyperlinks to be a usable reference during Patient care.
- such website shall allow direct posting by EMS Authority personnel of EMS System related documents (i.e. regulations, contracts, meeting agenda and minutes, training materials, etc.)

ARTICLE V
DUTIES AND RESPONSIBILITIES OF AUTHORITY

SECTION 501. COMMUNICATIONS INFRASTRUCTURE

Except as otherwise provided herein, the Authority shall furnish, own and maintain, at no cost to Contractor, the EMS System's entire communications infrastructure and shall make available for the use of the Contractor the following: portable radios for up to twelve (12) personnel; pagers for up to twelve (12) personnel; unified communication platform between smartphones; the 800MHz radio network (Motorola WAVE PTX or successor system) and smartphones with unlimited talk/text/data for up to twelve (12) personnel; tablet computers with wireless data for up to twelve (12) personnel; and laptops with docking stations and dual screens for up to four (4) personnel" of any other communication devices that may be utilized by Authority currently or in the future; maintenance of such equipment throughout the life of this Agreement, except for losses and repairs due to loss, theft, abuse, or neglect. The Authority shall replace portable radios according to its normal replacement schedule.

SECTION 502. CENTRAL FACILITIES AND EQUIPMENT

The Authority shall provide, at no cost, an office to be used by the Medical Director to perform the duties required in this Agreement. The Authority reserves the right to provide office space in an alternative location at its sole discretion. Contractor shall pay monthly for any personal telephone charges. Additional office space may be provided upon request, if approved by the Executive Director.

The Authority shall allow existing County emergency vehicles to be used by the EMS Medical Director, Associate Medical Director, or EMS Fellow in the performance of field observation and system monitoring duties as required in Section 408 of this Agreement and to respond to EMS Incidents, Mass Gatherings, or large-scale Mass Casualty Incidents. Such vehicle shall not be permanently assigned.

ARTICLE VI
INSURANCE AND INDEMNIFICATION

SECTION 601. MINIMUM INSURANCE REQUIREMENTS

Contractor shall maintain all insurance requirements in accordance with **Appendix B**.

ARTICLE VII
COMPENSATION AND OTHER FINANCIAL PROVISIONS

SECTION 701. COMPENSATION

Authority shall pay Contractor the annual amount of $1,508,871.00 for the first year of the Agreement.

The annual payment shall be made in twelve (12) equal installments. Each installment shall be made within forty-five (45) days after receipt and acceptance by the Authority of an invoice for services rendered during the preceding calendar month in accordance with the Local Government Prompt Payment Act, §218.70 et. seq., Florida Statutes. Each invoice shall include an activity report in a form agreed upon by the Parties that summarizes the Contractor's efforts and accomplishments during the preceding month.

SECTION 702. AUTOMATIC ANNUAL RATE ADJUSTMENT

Beginning on October 1, 2023, and annually thereafter, Contractor's compensation for all services and deductions shall follow the below table:

Fiscal Year	Annual Compensation
FY23-24	$1,508,871.00
FY24-25	$1,537,085.00
FY25-26	$1,566,263.00
FY26-27	$1,596,459.00
FY27-28	$1,627,732.00

SECTION 703. AUDITS AND INSPECTIONS

Contractor shall make available to the Authority for its examination its records with respect to all matters covered by this Agreement. Authority may audit, examine, copy, and make excerpts or transcripts from such records, and may make audits of all contracts, invoices, materials, payrolls, inventory records, personnel records, daily logs, conditions of employment, and other data related to all matters covered by this Agreement.

Contractor shall retain all records pertaining to this Agreement for a period of at least three (3) years after final payment is made or longer if required under the retention requirements for public records in Florida.

SECTION 704. REIMBURSEMENT FOR QUALITY ASSURANCE SERVICES

(a) EMS Related. The Authority may utilize Contractor's staff for quality assurance and improvement projects, data analysis and performance monitoring on a regular or episodic basis at its discretion. Authority shall reimburse the Contractor for the actual cost of salary and benefits up to $100.00 per hour for quality assurance analyst hours that are actually performed and preapproved in writing. Contractor shall submit invoices to Authority within twenty (20) days following the last day of each month. Contractor shall be reimbursed monthly in arrears. For each year during the term of this Agreement, the total Medical Direction Service compensation amounts shall be established through the Authority's budget process, but in no event, shall the cumulative compensation to the Contractor for all payments under this provision for any Fiscal Year exceed the amount budgeted by the Authority. The reimbursement amount shall not exceed $50,000.00 in any fiscal year.

(b) Human Services Related. The Authority may utilize Contractor's staff to assist Pinellas County Human Services various activities related to programs, grants, or initiatives to combat opioid addiction. Such activities may include, but not be limited to, outreach, education, quality assurance and improvement projects, data analysis, and performance monitoring on a regular or episodic basis at its discretion. Contractor shall ensure that such activities are non-duplicative and do not conflict with EMS Medical Direction Services responsibilities. Authority shall reimburse the Contractor, through funding from County Human Services derived from various programs and grants, for the actual cost of salary and benefits, up to $200.00 per hour for physicians and $100.00 per hour for non-physicians, for hours worked and preapproved in writing. Contractor shall submit invoices to Authority within twenty (20) days following the last day of each month. Contractor shall be reimbursed monthly in arrears up to the amount budgeted by Human Services.

SECTION 705. REIMBURSEMENT FOR DISASTER SERVICES

At the conclusion of Disaster assistance or EMS Emergency, Contractor shall determine its additional costs incurred and shall present such cost statement to the Authority for review, acceptance, and reimbursement.

The cost statement associated with rendering aid under Disaster or EMS Emergency conditions shall be based solely upon the additional costs incurred by Contractor for assistance that is specifically requested by the Executive Director and/or their designee and shall not include costs that would have been borne by Contractor to meet normal service requirements if the Disaster or EMS Emergency had not occurred. Contractor shall provide any backup material or documentation requested by the Authority.

SECTION 706. FISCAL NON-FUNDING

In the event sufficient budgeted funds are not available for a new fiscal period, the Authority shall notify Contractor of such occurrence and this Agreement shall terminate on the last day of current fiscal period without penalty or expense to the Authority.

ARTICLE VIII
TERM AND TERMINATION

SECTION 801. TERM

This Agreement shall be for five (5) years, commencing October 1, 2022, and ending on midnight September 30, 2027. There will be no extensions of this Agreement.

SECTION 802. TERMINATION

(a) Termination For Cause. This agreement may be terminated by the Authority for cause if at any time the Contractor fails to fulfill or abide by any of the terms or conditions of this agreement. "Cause" shall include, but not be limited to, the event that Contractor fails to provide a Medical Director meeting the requirements of Section 401 herein; Medical Director cease, for any reason, to be licensed to practice medicine in the State of Florida pursuant to the provisions of Chapter 458, Florida Statutes; and substantial breach of any covenant or warranty contained in this Agreement; provided, however, the Authority shall provide written notice of such breach and the Contractor shall have the opportunity to cure such breach within thirty (30) calendar days of receipt of such notice. Notwithstanding the preceding, if Contractor fails to provide Online Medical Control, the Authority shall provide written notice of such breach and the Contractor shall have the opportunity to cure such breach within one (1) calendar day of receipt of such notice.

This Agreement may be terminated by Contractor for cause if at any time the Authority fails to fulfill or abide by any of the terms or conditions of this Agreement. Authority shall have the opportunity to cure such breach within thirty (30) calendar days or receipt of such notice.

(b) Termination Without Cause. Except as provided in Section 801 herein, this agreement may be terminated at will at the option of the Authority or Contractor upon one hundred and twenty (120) days written notice at any time during the initial term or any renewal term. Contractor shall be entitled to all compensation earned through the date of termination.

ARTICLE IX
MISCELLANEOUS

SECTION 901. ASSIGNMENT

Contractor shall not assign any portion of the Agreement for services to be rendered without first obtaining written consent from the Authority. Any assignment made contrary to the provisions of this section shall be cause for termination of the Agreement and, at the option of the Authority, shall not convey any rights to the assignee. Any change in Contractor's ownership shall, for purposes of the Agreement, be considered a form of assignment. The Authority shall not unreasonably withhold its approval of requested change in ownership, so long as the transferee is of known financial and business integrity and the Authority has the opportunity to research the transferee's background. For clarity, this Section 901 shall not restrict or prohibit Contractor's use of its affiliated and contracted entities and health care providers that provide health care services (including for Medical Direction and Medical Control Physicians), provided however that, Contractor remains completely responsible for the successful and complete performance of the requirements of this Agreement.

SECTION 902. NON-DISCRIMINATION IN EMPLOYMENT

Contractor will not discriminate against any applicant for employment because of age, race, color, religion, sex or national origin. Contractor will take affirmative action to ensure that applicants are employed, and that during employment employees are treated equally without regard to age, race, color, religion, sex or national origin. Such action shall include, but not be limited to, recruiting and related advertising, layoff or termination, upgrading, demotion, transfer, rates of pay and compensation, and selection for training, including apprenticeship. Contractor will post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

Contractor shall make reasonable accommodations for employees with disabilities and comply with the federal requirements of the Americans with Disabilities Act (ADA).

SECTION 903. NOTICES

All notices, consents and agreements required or permitted by this Agreement shall be in writing, and, as applicable, shall be transmitted by registered or certified mail, return receipt requested, with notice deemed to be given upon receipt; postage prepaid, and shall be addressed as follows:

If to Authority:

Executive Director
Pinellas County EMS Authority
12490 Ulmerton Road, Suite 134
Largo, FL 33774-2700

If to Contractor:

Dr. Jameson
Prehospital Medicine Consultants LLC
50 8th Avenue Southwest #22
Largo, FL 33779

With Copy To:
Pinellas County Purchasing Department
Attn: Purchasing Director
400 S. Ft. Harrison, 6th Floor
Clearwater, FL 33756

SECTION 904. ENTIRE AND COMPLETE AGREEMENT

This Agreement, as amended, and all Appendices hereto, constitute the entire and complete agreement of the Parties with respect to the services to be provided hereunder. This Agreement, unless provided herein to the contrary, may be modified only by written agreement duly executed by the Parties with the same formality as this Agreement.

SECTION 905. OTHER DOCUMENTS

Each Party agrees to execute and deliver any instruments and to perform any acts that may be necessary or reasonably requested in order to give full effect to this Agreement.

SECTION 906. APPLICABLE LAW

The law of the State of Florida shall govern the validity, interpretation, construction and performance of this Agreement.

SECTION 907. WAIVER

Unless otherwise specifically provided by the terms of this Agreement, no delay or failure to exercise a right resulting from any breach of this Agreement shall impair such right or shall be construed to be a waiver thereof, but such may be exercised from time to time and as often as may be deemed expedient. Any waiver shall be in writing and signed by the Party granting such waiver. If any representation, warranty or covenant contained in this Agreement is breached by either Party and thereafter waived by the other Party, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other breach under this Agreement.

SECTION 908. SEVERABILITY

In the event that any provision of this Agreement shall, for any reason, be determined to be invalid, illegal, or unenforceable in any respect, the Parties hereto shall negotiate in good faith and agree to such amendments, modifications, or supplements of or to this Agreement or such other appropriate actions as shall, to the maximum extent practicable in light of such determination, implement and give effect to the intentions of the Parties as reflected herein, and the other provisions of this Agreement shall, as so amended, modified, supplemented, or otherwise affected by such action, remain in full force and effect.

SECTION 909. INDEPENDENT CONTRACTOR

Nothing in this Agreement shall be construed to create a relationship of employer and employee, or principal and agent, partnership, joint venture, or any other relationship other than that of independent parties contracting with each other solely for the purpose of carrying out the provisions of this Agreement.

SECTION 910. HEADINGS

Captions and headings in this Agreement are for ease of reference and do not constitute a part of this Agreement.

SECTION 911. DRAFTING

The Authority and Contractor negotiated this Agreement (including the Appendices annexed hereto) at arm's length. The Authority and Contractor jointly prepared this Agreement, and its provisions shall be construed on parity between all parties. As such, no rule of construction shall apply which construes the language of this Agreement more favorably for, or more strictly against, any Party by reason of the preparation of this Agreement.

[Signature Page to Follow]

IN WITNESS WHEREOF the parties hereto, by and through their undersigned authorized officers, have caused this Agreement to be executed on this 8th day of September, 2022.

ATTEST:

KEN BURKE, CLERK

by: _____
Deputy Clerk

PINELLAS COUNTY EMERGENCY MEDICAL SERVICES AUTHORITY

by: _____
Chairman

BOARD OF COUNTY COMMISSIONERS SEAL PINELLAS COUNTY, FLORIDA

APPROVED AS TO FORM
By: *Amanda S. Coffey*
Office of the County Attorney

Contractor: Prehospital Medicine Consultants LLC

by: Angus Jameson MD MPH

Title: Angus M. Jameson MD MPH, Manager PMC LLC

SCHEDULE 416
Approved current outside employment

State EMS Medical Director
Emergency Room services at Tampa General Hospital

Appendix A

FIRST RESPONDERS IN PINELLAS COUNTY

1) City of Clearwater including the Clearwater Fire District
2) City of Dunedin including the Dunedin Fire District
3) East Lake Fire and Rescue District
4) City of Gulfport
5) City of Largo including the Largo Fire District, Highpoint Fire District served by Largo, Town of Belleair, City of Belleair Bluffs, and Belleair Bluffs Fire District
6) Lealman Fire Rescue District including the Town of Kenneth City
7) City of Madeira Beach
8) City of Oldsmar
9) Pinellas Suncoast Fire and Rescue District
10) Palm Harbor Fire and Rescue District
11) City of Pinellas Park including the Pinellas Park Fire District
12) City of Safety Harbor including the Safety Harbor Fire District
13) City of Seminole including the Seminole Fire District
14) City of South Pasadena
15) City of St. Petersburg including the portion of the Highpoint Fire District served by St. Petersburg, and the Gandy Fire District
16) Tierra Verde Fire District (including Ft. Desoto)
17) City of St. Pete Beach
18) City of Tarpon Springs including the Tarpon Springs Fire District
19) City of Treasure Island
20) Pinellas County Airport Rescue Fire Fighters (ARFF)
21) Eckerd College Search and Rescue (EC-SAR)
22) Pinellas County EMS Authority – Pinellas County Sheriff Tactical EMS Team
23) Pinellas County Regional 911 Center Emergency Medical Dispatchers

Appendix B

INSURANCE REQUIREMENTS AND INDEMNIFICATION

MINIMUM INSURANCE REQUIREMENTS

Contractor shall pay for and maintain at least the following insurance coverage and limits. Said insurance shall be evidenced by delivery to the County of a certificate of insurance executed by the insurers listing coverage and limits, expiration dates and terms of policies and all endorsements whether or not required by the County, and listing all carriers issuing said policies; and, upon request, a certified copy of each policy, including all endorsements. The insurance requirements shall remain in effect throughout the term of this Agreement.

(a) Worker's Compensation Insurance with employer liability limits as required by law, as follows:

- Per Employee - $500,000.00
- Per Employee Disease - $500,000.00
- Policy Limit Disease - $500,000.00

(b) Comprehensive General Liability Insurance including, but not limited to, Independent Contractor, Contractual Liability Premises/Operations, Products/Completed Operations and Personal Injury covering the liability assumed under indemnification provisions of this Agreement, with limits of liability for personal injury and/or bodily injury, including death, as follows:

- General Aggregate - $2,000,000.00
- Products/Completed Operations Aggregate - $2,000,000.00
- Personal Injury and Advertising Injury - $1,000,000.00
- Combined Single Limit Per Occurrence - $1,000,000.00

(c) Professional Liability Insurance (Medical Malpractice) with at least the minimum limits as follows. If "claims made" coverage is provided "tail coverage" extending five (5) years beyond the termination of the contract shall be required. Proof of "tail coverage" must be submitted sixty (60) days prior to the termination of the contract, or immediately if contract termination is less than sixty (60) days. In lieu of "tail coverage", Contractor may submit annually to the Authority, for a five (5) year period, a current certificate of insurance providing "claims made" insurance with prior acts coverage in force with a retroactive date no later than commencement date of the initial contract. The limits are as follows:

- Each Occurrence or Claim - $2,000,000.00
- General Aggregate - $4,000,000.00

For acceptance of Professional Liability coverage included with another policy required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence or claim must be greater than or equal to the amount of Professional Liability and other coverage combined.

(d) Property Insurance. Contractor will be responsible for all damage to its own property, equipment and/or materials.

ADDITIONAL INSURANCE REQUIREMENTS

Each insurance policy shall include the following conditions by endorsement to the policy:

(a) Contractor shall provide notice forty-five (45) days prior to expiration, cancellation, non-renewal, or any material change in coverage or limits, a written notice thereof to the Authority. Contractor shall also notify the Authority within twenty-four (24) hours after receipt of any notices of expiration, cancellation, non-renewal, or material changes in coverage received by said Contractor from its insurer.

(b) Companies issuing the insurance policy, or policies, shall have no recourse against the Authority or County for payment of premiums or assessments for any deductibles, which are all at the sole responsibility and risk of Contractor.

(c) Pinellas County shall be endorsed to the required policy or policies as an additional insured, exclusive of professional liability insurance.

(d) The policy clause "Other Insurance" shall not apply to any insurance coverage currently held by County or to any such future coverage, or to County's Self-Insured Retention of whatever nature. Contractor's insurance shall be primary and non-contributory. Contractor hereby waives subrogation rights for loss or damage against the County.

INDEMNIFICATION

Contractor covenants and agrees that it will indemnify and hold harmless the Authority and the County and all of their officers and employees, from any claim, loss, damage, cost, charge or expense, including any claim or amounts recovered under the "Workers' Compensation Law" or of any other laws, by-laws, ordinance, order or decree brought or recovered against it by reason of any act, action, neglect or omission by Contractor, its agents, or employees, during the performance of the contract, whether direct or indirect, and whether to any person or property to which the County, the Authority, or said parties may be subject, except that neither Contractor nor any of its subcontractors, or assignees, will be liable under this section for damages arising out of injury or damage to persons or property directly caused or resulting from the sole negligence of the County, the Authority, or any of their officers, or employees.

PREHMED-03 JULIERAISS

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 7/25/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Julie Raiss
NFP Property & Casualty Services, Inc. 8777 North Gainey Center Drive Suit 260 Scottsdale, AZ 85258	PHONE (A/C, No, Ext): (928) 515-0123 FAX (A/C, No): (928) 775-3429 E-MAIL ADDRESS: julie.raiss@nfp.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Nautilus Insurance Company	17370
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

Prehospital Medicine Consultants LLC
50 8th Ave. SW, Unit 22
Largo, FL 33770

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$ 2,000,000
	CLAIMS-MADE X OCCUR	X		EMD2010649P1	10/1/2022	10/1/2023	DAMAGE TO RENTED PREMISES (Ea occurrence)	$
							MED EXP (Any one person)	$
							PERSONAL & ADV INJURY	$
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 4,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$
	OTHER:							$
	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$
	ANY AUTO						BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	HIRED AUTOS ONLY / NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$
	DED RETENTION $							$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						PER STATUTE OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	N / A					E.L. EACH ACCIDENT	$
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$
A	Professional Liab	X		EMD2010649P1	10/1/2022	10/1/2023	Each Claim	2,000,000
A	Professional Liab	X		EMD2010649P1	10/1/2022	10/1/2023	Aggregate	4,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

REF # 96-Z367804

PINELLAS COUNTY EMERGENCY MEDICAL SERVICES AUTHORITY IS NAMED AS ADDITIONAL INSURED PER ENDORSEMENT EMD 7000-0915-N.

CERTIFICATE HOLDER

Pinellas County
c/o Ebix RCS
151 N. Lyon Ave.
Hemet, CA 92543-8010

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Julie a Raiss

HIPAA BUSINESS ASSOCIATE AGREEMENT

This Agreement ("Agreement") is entered into by and between Prehospital Medicine Consultants, LLC, ("Business Associate") and Pinellas County and the Pinellas County Emergency Medical Services Authority, d/b/a SUNSTAR EMS ("Covered Entity").

RECITALS

WHEREAS, Business Associate performs functions, activities, or services for, or on behalf of Covered Entity, and Business Associate receives, has access to or creates Health Information in order to perform such functions, activities or services;

WHEREAS, Covered Entity is subject to the Administrative Simplification requirements of the Health Insurance Portability and Accountability Act of 1996, as amended, and regulations promulgated thereunder ("HIPAA"), including but not limited to, the Standards for Privacy of Individually Identifiable Health Information and the Security Standards for the Protection of Electronic Protected Health Information found at 45 Code of Federal Regulations Parts 160, 162 and 164;

WHEREAS, the Health Information Technology for Economic and Clinical Health Act ("HITECH"), part of the American Recovery and Reinvestment Act of 2009 ("ARRA"), amended provisions of HIPAA widening the scope of privacy and security protections available under HIPAA, increases the potential for legal liability and provides for more enforcement; and

WHEREAS, HIPAA requires Covered Entity to enter into a contract with Business Associate to provide for the protection of the privacy and security of Health Information, and HIPAA prohibits the disclosure to or use of Health Information by Business Associate if such a contract is not in place; and

WHEREAS, on March 26, 2013, the Department of Health and Human Services ("HHS") HIPAA Omnibus Final Rule became effective, modifying the requirements for Business Associates and Business Associates Agreements.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing which are hereby acknowledged and incorporated herein, and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the parties agree as follows:

ARTICLE I
DEFINITIONS

1.1 Catch-all definition: The following terms used in this Agreement shall have the same meaning as those terms in the HIPAA Rules: Breach, Data Aggregation, Designated Record Set, Disclosure, Health Care Operations, Individual, Minimum Necessary, Notice of Privacy Practices, Protected Health Information, Required By Law, Secretary, Security Incident, Subcontractor, Unsecured Protected Health Information, and Use.

1.2 "Business Associate" shall generally have the same meaning as the term "business associate" at 45 CFR 160.103, and in reference to the party to this agreement, shall mean Prehospital Medicine Consultants, LLC.

1.3 "Covered Entity" shall generally have the same meaning as the term "covered entity" at 45 CFR 160.103, and in reference to the party to this agreement, shall mean Pinellas County and the Pinellas County Emergency Medical Services Authority, d/b/a SUNSTAR EMS.

1.4 "HIPAA Rules" shall mean the Privacy, Security, Breach Notification, and Enforcement Rules at 45 CFR Part 160 and Part 164.

1.5 "Privacy Regulations" means the Standards for Privacy of Covered Individually Identifiable Health Information, 45 Code of Federal Regulations Parts 160 and 164, promulgated under HIPAA.

1.6 "Services" means the services provided by Business Associate pursuant to the Underlying Agreement(s), or if no such agreement(s) are in effect, the services Business Associate performs with respect to the Covered Entity.

1.7 "Underlying Agreement" means the Medical Direction Service Agreement executed by the Covered Entity and Business Associate.

ARTICLE II
OBLIGATIONS AND ACTIVITIES OF BUSINESS ASSOCIATE

2.1 Business Associate agrees to:

- 2.1.1 Not Use or Disclose Protected Health Information other than as permitted or required by the Agreement or as required by law;
- 2.1.2 Use appropriate safeguards, and comply with Subpart C of 45 CFR Part 164 with respect to electronic Protected Health Information, to prevent use or disclosure of Protected Health Information other than as provided for by the Agreement;
- 2.1.3 Report to Covered Entity any Use or Disclosure of Protected Health Information not provided for by the Agreement of which it becomes aware, including breaches of unsecured Protected Health Information as required at 45 CFR 164.410, and any security incident of which it becomes aware;
  - 2.1.3.1 The initial report shall be made by telephone call to the Covered Entity within forty-eight (48) hours from the time the Business Associate becomes aware of the non-permitted Use or Disclosure, followed by a written report to covered Entity no later than five (5) calendar days from the date the Business Associate becomes aware of the non-permitted Use or Disclosure; and
  - 2.1.3.2 Business Associate will handle breach notifications to individuals, the HHS Office for Civil Rights (OCR), and potentially the media, on behalf of the Covered Entity only when so directed by the Covered Entity or required by law.

2.1.4 In accordance with 45 CFR 164.502(e)(1)(ii) and 164.308(b)(2), if applicable, ensure that any subcontractors that create, receive, maintain, or transmit protected health information on behalf of the Business Associate agree to the same restrictions, conditions, and requirements that apply to the Business Associate with respect to such information;

2.1.5 Make available protected health information in a designated record set to the Covered Entity as necessary to satisfy Covered Entity's obligations under 45 CFR 164.524;

2.1.5.1 Requests received by the Business Associate directly from an individual seeking access to protected health information in a designated record set will be forwarded to the Covered Entity within two (2) business days to allow the Covered Entity to process the request.

2.1.6 Make any amendment(s) to protected health information in a designated record set as directed or agreed to by the covered entity pursuant to 45 CFR 164.526, or take other measures as necessary to satisfy covered entity's obligations under 45 CFR 164.526;

2.1.6.1 Requests for amendment that the Business Associate receives directly from the individual will be forwarded to the Covered Entity within two (2) business days to allow the Covered Entity to process the request.

2.1.6.2 Business Associate shall to incorporate any amendments to the information in the designated record set within two (2) business days.

2.1.7 Maintain and make available the information required to provide an accounting of disclosures to the Covered Entity within two (2) business days, as necessary to satisfy Covered Entity's obligations under 45 CFR 164.528 regardless of whether the business associate received the request for an accounting of disclosures directly from the individual, or the Covered Entity made the Business Associate aware of such a request received by the Covered Entity;

2.1.7.1 For each Disclosure that requires an accounting, Business Associate shall track the information required by the Privacy Regulations, and shall securely maintain the information for six (6) years from the date of the Disclosure.

2.1.8 To the extent the business associate is to carry out one or more of covered entity's obligation(s) under Subpart E of 45 CFR Part 164, comply with the requirements of Subpart E that apply to the covered entity in the performance of such obligation(s); and

2.1.9 Make its internal practices, books, and records available to the Secretary for purposes of determining compliance with the HIPAA Rules.

2.2 Initial Effective Date of Performance. The obligations created under this Agreement shall become effective immediately upon execution of this Agreement or the agreement to which it is appended.

2.3 Permitted Uses and Disclosures of Protected Health Information.

2.3 Business Associate may only:

2.3.1.1 Use and Disclose Protected Health Information as necessary to perform Services for, or on behalf of Covered Entity in accordance

with the Underlying Agreement. Services are defined as the clinical oversight of the Pinellas County EMS System;

2.3.1.2 Use Protected Health Information to create aggregated or de-identified information (in accordance with the requirements of the Privacy Regulations);

2.3.1.3 Use or Disclose Protected Health Information (including aggregated or de-identified information) as otherwise directed by Covered Entity consistent with covered entity's minimum necessary policies and procedures, provided that Covered Entity shall not request Business Associate to Use or Disclose Protected Health Information in a manner that would not be permissible if done by Covered Entity;

2.3.1.4 Use or Disclose Protected Health Information as required by law;

2.3.1.5 Business Associate shall not Use Health Information for any other purpose, except that if necessary, Business Associate may Use Health Information for the proper management and administration of Business Associate or to carry out its legal responsibilities; provided that any Use or Disclosure described herein will not violate the Privacy Regulations or Florida law if done by Covered Entity.

2.3.1.6 Except as otherwise limited in this Agreement, Business Associate may Disclose Health Information for the proper management and administration of the Business Associate, provided that with respect to any such Disclosure either (a) the Disclosure is required by law (within the meaning of the Privacy Regulations) or (b) the Disclosure would not otherwise violate Florida law and Business Associate obtains reasonable written assurances from the person to whom the information is to be Disclosed that such person will hold the information in confidence and will not Use or further Disclose such information except as required by law or for the purpose(s) for which it was Disclosed by Business Associate to such person, and that such person will notify Business Associate of any instances of which it is aware in which the confidentiality of the information has been breached.

2.4 Adequate Safeguards for Health Information. Business Associate warrants that it shall implement and maintain appropriate safeguards to prevent the Use or Disclosure of Health Information in any manner other than as permitted by this Agreement.

2.5 Mitigation. Business Associate agrees to mitigate, to the extent practicable, any harmful effect that is known to Business Associate of a Use or Disclosure of Health Information by Business Associate in violation of the requirements of this Agreement.

ARTICLE III
OBLIGATIONS OF COVERED ENTITY

3.1 Privacy Notice. Covered Entity shall notify Business Associate of any limitation(s) in Covered Entity's notice of privacy practices to the extent such limitation(s) may affect Business Associate's Use or Disclosure of Health Information.

ARTICLE IV
TERM AND TERMINATION

4.1 Term. Subject to the provisions of Sections 4.2 and 4.3, the term of this Agreement shall be the term of the Underlying Agreement(s).

4.2 Termination for Cause. Upon Covered Entity's knowledge of a material breach of this Agreement by the Business Associate, Covered Entity shall either:

a. notify Business Associate of the breach in writing, and provide an opportunity to cure the breach or end the violation within ten (10) business days of such notification; provided that if Business Associate fails to cure the breach or end the violation within such time period to the satisfaction of Covered Entity, Covered Entity shall have the right to immediately terminate this Agreement and the Underlying Agreement(s) upon written notice to Business Associate;

b. upon written notice to Business Associate, immediately terminate this Agreement and the Underlying Agreement(s) if Covered Entity determines that such breach cannot be cured; or

c. if Covered Entity determines that neither termination nor cure is feasible, the Covered Entity shall report the violation to the Secretary.

4.3 Termination for Breach of Section 5.2. Covered Entity may terminate the Underlying Agreement(s) and this Agreement upon thirty (30) days written notice in the event (a) Business Associate does not promptly enter into negotiations to amend this Agreement when requested by Covered Entity pursuant to Section 5.2 or (b) Business Associate does not enter into an amendment to this Agreement providing assurances regarding the safeguarding of Health Information that the Covered Entity, in its sole discretion, deems sufficient to satisfy the standards and requirements of HIPAA.

4.4 Disposition of Health Information Upon Termination or Expiration. Upon termination or expiration of this Agreement, Business Associate shall either return or destroy, in Covered Entity's sole discretion and in accordance with any instructions by Covered Entity, all Protected Health Information in the possession or control of Business Associate and its agents and subcontractors. In such event, Business Associate shall retain no copies of such Protected Health Information. However, if the Business Associate determines that neither return nor destruction of Protected Health Information is feasible, Business Associate shall notify Covered Entity of the conditions that make return or destruction infeasible, and may retain Protected Health Information provided that Business Associate (a) continues to comply with the provisions of this Agreement for as long as it retains Protected Health Information, and (b) further limits

Uses and Disclosures of Protected Health Information to those purposes that make the return or destruction of Protected Health Information infeasible.

4.5 Survival. The obligations of Business Associate under this Article IV shall survive the termination of this Agreement.

ARTICLE V
MISCELLANEOUS

5.1 Indemnification. Notwithstanding anything to the contrary in the Underlying Agreement(s), at Business Associate's expense, Business Associate agrees to indemnify, defend and hold harmless Covered Entity and Covered Entity's employees, directors, officers, subcontractors or agents (the "Indemnities") against all damages, losses, lost profits, fines, penalties, costs or expenses (including reasonable attorneys' fees) and all liability to third parties arising from any breach of this Agreement by Business Associate or its employees, directors, officers, subcontractors, agents or other members of Business Associate's workforce. Business Associate's obligation to indemnify the Indemnitees shall survive the expiration or termination of this Agreement for any reason.

5.2 Amendment to Comply with Law. The parties acknowledge that state and federal laws relating to electronic data security and privacy are rapidly evolving and that amendment of this Agreement may be required to provide for procedures to ensure compliance with such developments. The parties specifically agree to take such action as is necessary to implement the standards and requirements of HIPAA and other applicable laws relating to the security or confidentiality of Health Information. The parties understand and agree that Covered Entity must receive satisfactory written assurance from Business Associate that Business Associate will adequately safeguard all Health Information that it receives or creates on behalf of Covered Entity. Upon Covered Entity's request, Business Associate agrees to promptly enter into negotiations with Covered Entity, concerning the terms of any amendment to this Agreement embodying written assurances consistent with the standards and requirements of HIPAA or other applicable laws.

5.3 Relationship to Underlying Agreement(s) Provisions. In the event that a provision of this Agreement is contrary to a provision of an Underlying Agreement(s), the provision of this Agreement shall control. Otherwise, this Agreement shall be construed under, and in accordance with, the terms of such Underlying Agreement(s), and shall be considered an amendment of and supplement to such Underlying Agreement(s).

5.4 Modification of Agreement. No alteration, amendment, or modification of the terms of this Agreement shall be valid or effective unless in writing and signed by Business Associate and Covered Entity.

5.5 Non-Waiver. A failure of any party to enforce at any time any term, provision or condition of this Agreement, or to exercise any right or option herein, shall in no way operate as a waiver thereof, nor shall any single or partial exercise preclude any other right or option herein. In no way whatsoever shall a waiver of any term, provision or condition of this Agreement be

valid unless in writing, signed by the waiving party, and only to the extent set forth in such writing.

5.6 Agreement Drafted By All Parties. This Agreement is the result of arm's length negotiations between the parties and shall be construed to have been drafted by all parties such that any ambiguities in this Agreement shall not be construed against either party.

5.7 Severability. If any provision of this Agreement is found to be invalid or unenforceable by any court, such provision shall be ineffective only to the extent that it is in contravention of applicable laws without invalidating the remaining provisions hereof.

5.8 Section Headings. The section headings contained herein are for convenience in reference and are not intended to define or limit the scope of any provision of this Agreement.

5.9 No Third Party Beneficiaries. There are no third party beneficiaries to this Agreement.

5.10 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, and will become effective and binding upon the parties as of the effective date at such time as all the signatories hereto have signed a counterpart of this Agreement.

5.11 Notices. Any notices required or permitted to be given hereunder by either party to the other shall be given in writing: (1) by personal delivery; (2) by electronic facsimile with confirmation sent by United States first class registered or certified mail, postage prepaid, return receipt requested; (3) by bonded courier or by a nationally recognized overnight delivery service; or (4) by United States first class registered or certified mail, postage prepaid, return receipt requested, in each case, addressed to:

If to Business Associate:	Prehospital Medicine Consultants, LLC ATTN: Angus M. Jameson, MD 12490 Ulmerton Road, Ste. 105 Largo, FL 33774
If to Covered Entity:	Pinellas County EMSA c/o Pinellas County Public Safety Services Attn: HIPAA Compliance Officer 12490 Ulmerton Road Largo, FL 33774-2700

or to such other addresses as the parties may request in writing by notice given pursuant to this Section 5.12. Notices shall be deemed received on the earliest of personal delivery; upon delivery by electronic facsimile with confirmation from the transmitting machine that the transmission was completed; twenty-four (24) hours following deposit with a bonded courier or overnight delivery service; or seventy-two (72) hours following deposit in the U.S. Mail as required herein.

5.12 Applicable Law and Venue. This Agreement shall be governed by and construed in accordance with the internal laws of the State of Florida (without regard to principles of

conflicts of laws). The parties agree that all actions or proceedings arising in connection with this Agreement shall be tried and litigated exclusively in the state courts located in Pinellas County, Florida or federal court (if permitted by law and a party elects to file an action in federal court) in the Tampa Division of the Middle District of Florida. This choice of venue is intended by the parties to be mandatory and not permissive in nature, and to preclude the possibility of litigation between the parties with respect to, or arising out of, this Agreement in any jurisdiction other than that specified in this Section 5.12. Each party waives any right it may have to assert the doctrine of *forum non conveniens* or similar doctrine or to object to venue with respect to any proceeding brought in accordance with this Section 5.12.

5.13 Interpretation. Any ambiguity in this Agreement shall be resolved to permit Covered Entity to comply with the Privacy Regulations.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement effective as of the date stated above.

COVERED ENTITY

By: Charlie Justice

Print Name: Charlie Justice

Title: Chairman

Dated: 9/8/2022.

BUSINESS ASSOCIATE

By: Angus Jameson MD MPH

Print Name: Angus M. Jameson, MD

Title: EMS Medical Director

Dated: 7/20/22

ATTEST: KEN BURKE, CLERK

By:

BOARD OF COUNTY COMMISSIONERS SEAL PINELLAS COUNTY, FLORIDA

APPROVED AS TO FORM

By: *Amanda S. Coffey*

Office of the County Attorney

APPENDIX E

Human Services Work Plan

Project Name	Pinellas Matters/Bayfront ED Bridge Education Pilot
Project Number	5
Authorized Hours	270

Description of Activities to be Performed / Work Plan

1. Shadowing in Bayfront Emergency Room

Description

- Observation of the Emergency Department at Bayfront to evaluate the volume and type of patients seeking assistance for Opioid Use Disorder (OUD).
- Assess clinicians and staff in the following areas to identify opportunities for improvement and to help establish a stable MOUD system:
  - identification of patients that my benefit from MOUD
  - approaching patients identified as having OUD who are not seeking therapy but would potentially benefit from intervention, education, and therapy
  - medical evaluation and treatment of OUD
  - case management, social work, etc. in providing follow up after induction of therapy for OUD

2. Multi-Department meetings to secure buy-in

Description

- Hold interdepartmental meetings to educate team members on MOUD and address questions, concerns and comments.
- Educate departments on the technicalities of MOUD
- Address any concerns from medical team members and administration regarding MOUD

3. Development of Educational Materials

Description

- Development of educational materials for clinicians, social work, case management, and any other team members to improve care of patients with OUD
- Maintain current best practices for treatment of OUD
- Development of multi-modal educational materials as necessary to include (but not limited to) – flyers, FAQ sheets, lectures, presentations, informal questions, and answer sessions.
- Development of educational materials for patients deemed eligible for MOUD as well as those considering MOUD in the future
- Assist in research projects related to OUD for any interested persons

4. Multi-Department trainings on the dispensing and administration of MOUD

Description

- Hold meetings with invested departments to ensure safe and effective treatment of OUD.
- Education on safe prescribing practices as well as the legal aspects of MOUD
- Trainings to include administration, clinicians, nursing, social work, case management, other departments as necessary

5. Ongoing strategic support for Bayfront ER for duration of pilot

Description

- Ensure ongoing support to Bayfront during the pilot period and as necessary after to ensure safe, effective ongoing treatment for OUD.
- Assistance in implementing best practices as new evidence based best practices are developed.

Hours:

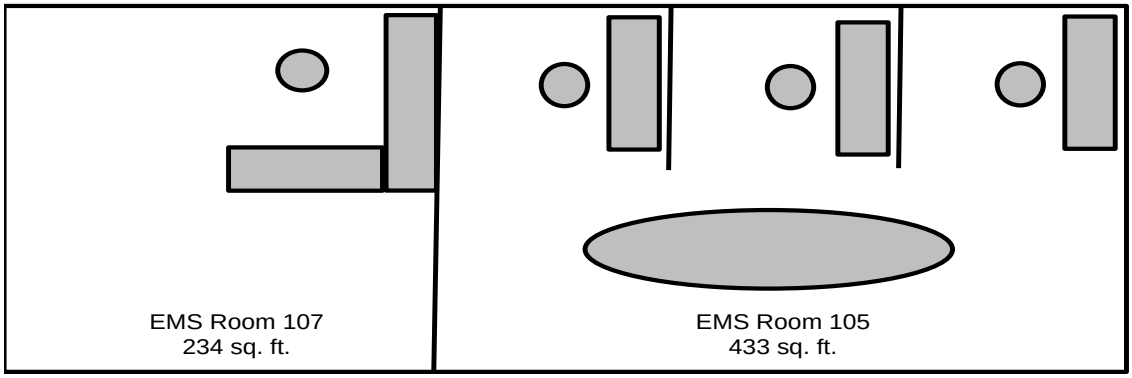
- Dr. Andrew Smith MD – 25 hours @ $200/hour per month
- Heather Henderson, MA, CAS – 65 hours @ $60/hour per month

Duration:

- This pilot program will run for 3 months during the first phase
- Reevaluate at the end of 3 months for effectiveness and further implementation
- Program may be extended by the Human Services Director for up to 12 months.
- Program may have revised goals, actions, assignments, and project hours if approved by the Human Services Director.

Appendix F

EMS Medical Director Offices



ACTIVE:15670174.3

Appendix G

MEDICAL OPERATIONS MANUAL

Four Hundred and twelve (412) page document follows

Pinellas County EMS & FIRE ADMINISTRATION

Medical Operations Manual

Volume 1
Effective - January 8, 2020

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

CLINICAL STANDARDS

CLINICAL STANDARDS

CS1 DEFINITION OF A PATIENT

Universal Definition of a Patient:

All persons who have themselves requested, or have had requested on their behalf, medical assistance from the Pinellas County EMS System shall be considered patients.

Additionally, a person with any of the following shall be considered a patient:

- a complaint suggestive of injury or illness
- has evidence of injury or illness
- has experienced a situation or event that may precipitate injury or illness

These criteria shall be applied in the broadest sense and where there is any question or doubt, the person is to be considered a patient.

Pediatric Specific Considerations:

- Selection of clinical treatment protocols:
  - A patient weighing less than 37 kg or able to be measured with the Handtevy Pediatric Length-Based Tape is to be considered pediatric for equipment sizing and medication dosing
  - While a reasonable estimate may be given by an age of 13 years or younger, clinicians must use judgement given that developmental age and weight are increasingly mismatched.

- Determination of general pediatric destination selection
  - A patient 18 years of age or younger will be considered pediatric

- Determination of specialty pediatric destination selection
  - Including Trauma Alert Criteria/Trauma Transport Protocols and Baker Act Receiving Facilities
  - A patient 16 years of age and younger will be considered pediatric.

Intentionally Left Blank

CS2 PATIENT BILL OF RIGHTS

Pinellas County EMS Patient's Bill of Rights and Responsibilities

NOTE: The following is adapted from the FL Patient's Bill of Rights and Responsibilities as codified in § 381.026, Fla. Stat. (2019). This reiteration of selected portions of the text is not meant to be exhaustive or exclusive, but rather to highlight and reinforce those components with specific applicability to the delivery of prehospital emergency care

Patient's Rights

- **A patient has the right to:**
  - Treatment for any emergency medical condition that will deteriorate from failure to provide such treatment
  - Be provided information concerning diagnosis, a planned course of treatment, alternatives, risks and prognosis by the health care provider
  - Refuse any treatment, except as otherwise provided by law
  - Be treated with courtesy and respect, with appreciation of his or her individual dignity and with protection of his or her need for privacy
  - Impartial access to medical treatment or accommodations, regardless of race, national origin, religion, handicap or source of payment
  - Know if medical treatment is for purposes of experimental research and to give his or her consent or refusal to participate in such experimental research

Patient's Responsibilities

- **A patient is responsible for:**
  - Providing to the healthcare provider, to the best of his or her knowledge, accurate and complete information about present complaints, past illnesses, hospitalizations, medications and other matters relating to his or her health
  - His or her actions if he or she refuses treatment or does not follow the health care provider's instructions

Intentionally Left Blank

CS3 PATIENT SAFETY

We have a duty to provide the safest care possible by:

- Responding to calls for assistance in a safe and timely manner
- Ensuring proficiency in the location of all medications and medical supplies on the current vehicle assigned and response bags/equipment
- Being mindful about what you've used from your equipment and restock. To this end, within your best capabilities, maintaining a constant state of readiness
- Providing expert, compassionate, and appropriate care as per all applicable Medical Control Directives, volumes of the current Medical Operations Manual (MOM) and OLMC direction
- Paying special attention to  in the MOM
- Maintaining current and progressive, professional knowledge
- Respecting a patient's autonomy, whenever possible
- Acknowledging, addressing and alleviating a patient's fear and concerns whenever possible

Do the right thing:

- Fulfill your duty to each patient
- Be an advocate for every patient – this means safely prioritizing their needs above your own
- Maintain a patient focused environment
- Utilize the principles of Crew Resource Management (CRM) – a lead Clinician has a responsibility to be receptive to input from supporting clinicians, likewise, supporting clinicians have a responsibility to effectively and appropriately voice their input
    - In the case of differences between system clinicians:
        - EMTs and Paramedics involved will focus on the provision of patient care and timely transport of the patient.
        - Patient safety concerns on scene shall be relayed to the lead EMT or Paramedic, who will retain full responsibility for decisions made.
        - The lead EMT or Paramedic is expected to heed patient safety concerns raised to ensure we "***do no harm***."
        - Discussion about the situation should occur after the call with the involvement of appropriate supervisor(s).
        - EMS Coordinators are expected to initiate a Quality Assurance Review of any clinical or significant concerns.
- Ultimately, there are many ways to get to the end goal of safe, appropriate and successful patient care in any particular situation. Differences in style should not derail overall progress, but safety concerns must be voiced and addressed immediately
- Know and use the "8 Rights to Patient Drug Administration":

o Right patient	o Right route
o Right medication	o Right documentation
o Right dose	o Right reason
o Right time	o Right response

- Perform Intervention and Medication Administration Cross-Check (I-MACC) prior to any procedure or administration of a medication (Ref. CT19)

- If you experience a medication or treatment error, immediately contact OLMC for assistance with further appropriate treatment. Communicate the error to your fellow EMS clinicians and the receiving facility to ensure the best ongoing care for your patient. Ensure the error is documented
- Keep your patient informed. They have the right to make a decision that you do not agree with and that might be clinically detrimental to them, only if they have been completely advised as to why their decision may be averse to their health, and have demonstrated decisional capacity

CS4 HOSPITAL DESTINATION POLICY

DEFINITIONS:

Patient Status Definitions:

RED: Critical or unstable; requiring immediate intervention to preserve life and/or limb or prevent serious disability, including but not limited to "*STEMI ALERT*", "*STROKE ALERT*", "*SEPSIS ALERT*" and "*TRAUMA ALERT*" patients

YELLOW: Serious; potential for loss of life and/or limb or risk of serious disability if care is not received in a timely manner

GREEN: Non-Urgent; requiring care in a reasonable amount of time, but will likely not suffer adverse effects from a limited delay in definitive care

BLACK: Obviously dead, triaged as an unsalvageable/expectant patient, or having traumatic injuries incompatible with life

Hospital Status Definitions:

Go to http://hs.sunstarems.com for real time hospital status and specialty capabilities

OPEN: Hospital is on normal operating condition with the availability of all usual specialty referral service capabilities.

HOSPITAL DIVERT: Hospital has requested the diversion of all incoming 9-1-1/EMS Ambulance transports. Hospital DIVERT status shall be for a minimum of one (1) hour

SPECIALTY DIVERT: Hospital is OPEN except for the inability to provide one or more of a facility's usual specialty referral service capabilities.

EMS BYPASS: EMS System, with the approval of the OLMC Physician, has initiated temporary closure of a Hospital to all 911/EMS Ambulance transports in accordance with the Patient Wait Time/Hospital Bed Delay Protocol

CLOSED: Hospital has an internal disaster or inability to provide care for any incoming 9-1-1 Ambulance transports.

SPECIALLTY REFERRAL SERVICES: Each hospital has provided in writing to Pinellas County EMS the availability of one or more of the following Specialty Referral Services:

- Percutaneous Coronary Intervention (PCI)
- Primary or Comprehensive Stroke Center
- Adult Psychiatric/Baker Act
- Pediatric (less than 15 years old) Psychiatric/Baker Act
- Pediatric/Neonatal
- Obstetrics
- Adult Trauma Center
- Pediatric Trauma Center
- Burn Center

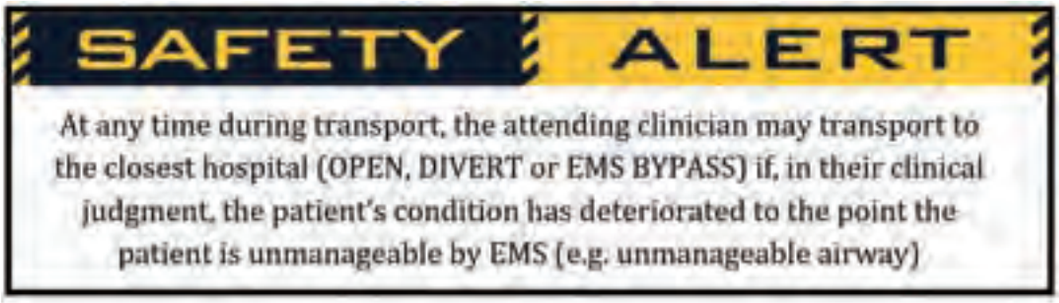
POLICIES

Hospital Destination Policy

The overarching principle of the Pinellas County EMS System Destination Policy is to get the "right patient to the right hospital and facilitate the best possible care and outcome"

- 9-1-1 patients will be transported to receiving hospitals using the following criteria in rank order:
  - All patients who accessed the Pinellas County EMS System by dialing 9-1-1, or who have an emergency medical condition, will be transported to a hospital or Freestanding Emergency Department
  - Category **RED** patients will be transported emergency (lights and sirens) to the closest appropriate and OPEN Hospital (e.g. hospital emergency room (ER) or hospital ER with a specialty referral service) for immediate stabilization. To ensure adequate resources at the patient's side, first responder paramedics will accompany category **RED** patients to the hospital, whenever practicable
  - Category **YELLOW** patients may be transported to an OPEN hospital (e.g. hospital ER or hospital ER with a specialty referral service) of their choice, if the estimated transport time is less than thirty (30) minutes, provided that hospital is an appropriate receiving facility for their condition
  - Category **GREEN** patients may be transported to an OPEN hospital (e.g. Hospital ER or hospital ER with a specialty referral service) of their choice if the estimated transport time is less than sixty (60) minutes, provided that hospital is an appropriate receiving facility for their condition
  - A patient requiring obstetric and/or neonatal services (e.g. labor & delivery, neonatal intensive care unit, etc.) must enter receiving facilities via the emergency department (ED) and be assessed by facility staff prior to proceeding to any specialty care unit within the facility. In cases where the specialty care unit is in a separate building, patients must still enter through the main ED (e.g. Bayfront ED for The Baby Place, Morton Plant ED for Maternity Center)

- Every effort should be made to honor our Veterans through facilitation of their transport to the U.S. Department of Veteran Affairs (VA) Hospital, provided their condition is stable, the VA hospital is OPEN, and the patient does not meet criteria for specialty referral services, that the VA hospital does not provide



- It is incumbent upon the attending clinician to explain why a particular hospital is most appropriate, however, patients have the right to refuse a recommended hospital, provided the patient has "decisional capacity" and is not a severity **RED** patient and a refusal is documented in accordance with Protocol CS12

Freestanding Emergency Department Policy:

Freestanding Emergency Departments (FEDs) provide all services of a standard hospital emergency department but, do not provide trauma or other specialty referral services. Typically, FEDs are affiliated with a hospital. It is important to note that patients who require admission after evaluation in a FED must be transported a second time by EMS. Therefore, while these facilities provide a valuable service in increasing the availability of emergency evaluation and care, we must be selective in which patients we transport to such facilities. We may also be called upon to educate our patients regarding the capabilities of these facilities.

Freestanding Emergency Department (FED) Transport Criteria

Severity **GREEN** patients may be transported to a FED except in any of the following conditions:

- A patient that requires a specialty referral service
- A patient who is pregnant greater than 20 weeks gestation
- A patient who requires physical or chemical restraints

Hospital Status Change Policy:

Each hospital shall ensure an up to date listing of Authorized Hospital Personnel allowed to change the hospital's status is provided to EMS. The listing shall include 24/7 contact information

The Authorized Hospital Representative will contact Sunstar Dispatch at 727-587-2102 (or via radio in the event of a telephone system failure) to change the status of the hospital

Sunstar Dispatch will update the Hospital Status log and website for all Hospital Status changes

Authorized Hospital Representatives are responsible for checking the EMS designated website to ensure the hospital's reported status is accurate and reporting when the hospital is OPEN or SPECIALITY DIVERT services become available

EMS Bypass (Patient Wait Time / Hospital Bed Delay Protocol) Policy:

To ensure patient wait time is minimized and a patient is transferred to hospital personnel in a timely manner, the Pinellas County EMS System established the Patient Wait Time / Hospital Bed Delay Protocol. This is necessary to ensure the highest quality care for our patients, as well as maintain the availability of ambulance resources to respond to the next patient

EMS BYPASS will be activated in the following manner:

0 Minutes	Arrival at Hospital
	Patient waiting greater than five (5) minutes without transfer of care, the attending clinician will notify Sunstar Dispatch.
	Patient waiting greater than fifteen (15) minutes without transfer of care, Sunstar Dispatch will contact the Hospital ER Charge Nurse.
	Patient waiting greater than twenty (20) minutes without transfer of care, the EMS System will place the hospital on EMS BYPASS until transfer of care has been accomplished, for all patients currently at that facility in the care of EMS clinicians. The OLMC Physician will approve the EMS BYPASS.
	Patient waiting greater than thirty (30) minutes without transfer of care, the EMS System will place the hospital on EMS BYPASS for a period of two (2) hours to allow the hospital to decompress its Emergency Department. The hospital may request EMS rescind the EMS BYPASS prior to the two hours, if the hospital indicates they can safely resume accepting patients. The OLMC Physician will take the request into consideration and may override the EMS BYPASS prior to two hours.

System Status Management Policy:

If multiple hospitals in a given geographic area in the County are on Hospital DIVERT, such that honoring requests for Hospital DIVERT would place undue strain on the EMS System, the requesting hospitals will be notified by Sunstar Dispatch. If no Hospital can return to OPEN status, patients will be distributed to all Hospitals as equitably as possible by the OLMC Physician. While System Status Management is in effect, Sunstar Communications staff will periodically poll hospitals for updated status (NEDOCS/CEDOCS scores preferred) to guide decision making.

CS5 TRANSPORT RESOURCE UTILIZATION

ALL patients in the Pinellas County EMS System shall be transported by a Sunstar Ambulance.

The following exceptions allow for the use of a local first responder transport capable unit or mutual aid ambulance in situations in which there is a delayed arrival of a Sunstar Ambulance:

- **SEVERITY "RED" PATIENT**
- **VOLATILE SCENE**
  - Situations in which remaining on the scene may endanger the EMS crew or the patient
- **REMOVAL FROM ENVIRONMENT**
  - Situations where severe weather is hindering patient care or removal from the environment is required to facilitate care or patient safety (e.g. pedestrian struck during a severe storm, heat stroke/exhaustion, lightning strike victim)
- **"CONDITION 5"**
  - Situations in which the 9-1-1 Regional Communications Center has changed the countywide operation status to "Condition 5" due to extreme call volume, severe weather or a mass casualty event
- **EMS EMERGENCY OR DECLARED DISASTER**

ALL other requests for the use of a local first responder transport capable unit:

- OLMC ***MUST*** be contacted prior to loading the patient on the first responder transport unit stretcher, except in rare and unusual circumstances. OLMC will advise if transport has been authorized and shall make the final decision regarding the transportation of all patients.

  NOTE: Transfer between First Responder and Sunstar Ambulance stretchers is authorized when patient care and safety are ***NOT*** compromised

Air Transport:

- The following exceptions allow for the use of Air Medical Transport (helicopter ambulance) resources for **SEVERITY "RED" PATIENTS:**
  - When *LOCAL CONDITIONS* (heavy traffic/gridlock, multi-victim/mass-casualty incidents, remote or barrier island) exist and in the judgement of the attending EMT, Paramedic or Incident Commander, would make transport by helicopter ambulance faster than transport by ground ambulance
  - When *SCENE CONDITIONS* (extended extrication, heavy machinery extrication, technical rescue, remote location) exist and in the judgement of the attending EMT, Paramedic or Incident Commander, would make transport by helicopter ambulance faster than transport by ground ambulance
  - When *PATIENT CONDITIONS* (requirement for burn center, re-implantation surgery or hyperbaric chamber) exist and in the judgement of the attending EMT, Paramedic or Incident Commander, would make transport by helicopter ambulance faster than transport by ground ambulance

NOTE: Any other use of air transport services requires prior OLMC authorization

Intentionally Left Blank

CS6 INTERFACILITY TRANSFER

Pre-Transport

1. Review patient information provided by the Sunstar Communications Center
2. Ensure ***minimum*** required equipment is taken to the bedside:
    - Sunstar only/ Immediate transfers – Full ALS gear
    - Unscheduled non-emergency – Full ALS/BLS Gear
    - Scheduled non-emergency – Airway bag
3. Care initiated by the sending facility may need to be continued during transport. Communications Center personnel and field clinicians shall refer to CT27 for authorized care by transport unit type:
    - Should the patient require care and/or equipment above and beyond the normal scope of practice and training of the responding EMS personnel, the transferring facility shall provide appropriate staff or consider other means of medical transport (e.g. BLS Ambulance, ALS Ambulance, Critical Care Paramedic, Critical Care Transport, Air Upgrade) (Ref. CT27)
    - The attending paramedic or EMT has the right to decline a transport if he/she is convinced patient care is outside their scope of practice and training or, alternatively, insist a hospital member accompany them on the transport
    - If additional staff accompanies the patient, it is the responsibility of the transferring physician to assure their qualifications
    - Specific written orders for treatments, including medications for ALS transfers and other orders should be obtained from the transferring physician prior to the initiation of the transport
    - Ordered medications not contained within the EMS system must be supplied by the transferring hospital
4. The following information should accompany the patient (but not delay the transfer in acute situations):
    - Copies of pertinent hospital records
    - Written orders during transport
    - Any other pertinent information including appropriate transfer documents

During Transport

1. Interventions performed enroute and who performed them will be documented in the patient care report
2. Paramedics and EMTs are authorized to act according to authorized clinical protocol within the standard of care delineated in the MOMs
3. EMTs and Paramedics are responsible for adhering to all administrative and clinical standard protocols
4. The concentration and administration rates of all medications being administered will be documented in the patient care report
5. If applicable, hospital supplied medications not used during transport must be turned over to staff at the receiving facility with signature confirming receipt
6. In the event a patient's condition changes or warrants intervention other than as authorized under standing orders or those provided in writing by the transferring Physician, consult with OLMC is required. OLMC may request higher level of transfer, different unit type, or provide further orders. EMTs who contact OMLC should clearly identify themselves as EMTs and state whether they are on an ALS or BLS transport unit at the beginning of the consult

7. If patient condition is rapidly deteriorating, the Sunstar Communications Center should be contacted to determine the closest facility available for diversion. OLMC should be contacted when the potential need for diversion has been determined.

CS7 PATIENT CARE REPORT & TRANSFER OF CARE

This protocol defines the requirements for completing the Pinellas County EMS Patient Care Report (electronic Patient Care Reporting System (ePCR) or paper forms) and the transfer of patient records and belongings between EMS clinicians and hospital personnel

Patient Care Report Completion:

- A Pinellas County Patient Care Report (PCR) must be completed in all the following instances:
  - A BLS, ALS or CCT unit responds to a request for emergency or non-emergency medical services
  - A Paramedic makes patient contact, assesses a patient, provides treatment and/or transport, obtains a refusal of evaluation from an individual or confirms the death of a patient
- The first County Certified EMT or Paramedic on the scene is responsible for starting and ensuring the completion of a PCR for each licensed EMS provider agency
- A provisionally certified paramedic completing a PCR must have the County Certified Paramedic Preceptor review and sign the PCR
- Each agency that arrives to assist in patient care shall complete a PCR documenting any assessment and/or interventions provided by personnel from their agency
- All pertinent fields in the ePCR or on the paper PCR shall be completed including all patient demographic information, assessments, treatments and interventions, and required signatures
- If patient placed on cardiac monitor during patient care (e.g. vitals, rhythm, SpO2, EtCO2, 12 Lead), all monitor data related to each specific patient must be uploaded to the respective ePCR
- If a BLS or ALS First Responder Unit is cancelled by a Unit from another agency a "cancelled enroute" PCR must be completed
- If a BLS or ALS First Responder Unit is cancelled by a Unit from the same agency, the Unit being cancelled is not required to complete a PCR
- An Ambulance Unit must complete a report unless they are canceled for a "closer unit" or a "higher priority call." If an Ambulance Unit is "cancelled on scene" by an ALS First Responder a PCR must be completed

Electronic and Paper Forms Completion:

- All ALS First Responder and Ambulance Units are required to complete an electronic ePCR
- In the rare circumstance that a PCR is not completed immediately after the transfer of care, a PCR must be completed and filed before the EMT or Paramedic ends their shift
- In the event of a computer failure, a paper PCR shall be completed and the tablet or web-based ePCR report shall be completed as soon as the ePCR system is available
- The paper PCR shall be retained to meet records retention requirements
- Level 2 Mass Casualty Incidents (greater than ten (10) patients)
  - Triage tape and triage tags will be utilized on scene and during transport.
  - After the mass casualty emergency has been mitigated, ePCR reports shall be completed by ALS First Responder Units to the extent possible. Ambulance Units shall ensure an ePCR record is completed for all transports.

- Any ancillary forms required shall be completed as required by the EMS Authority or EMS Medical Director
- When a paper PCR is utilized, the form's color paper carbon copies shall be distributed as indicated on the report

Transfer of Patient Care – ALS First Responder to Ambulance

- When patient care is transferred from one Unit to another Unit (e.g. ALS First Responder to Ambulance), a verbal report shall be provided including:
  - History of present illness/injury
  - Past medical history/medications/allergies
  - Treatments or interventions performed
  - Proposed plan of care
- Any electronic or paper documentation, available at the time of the transfer of patient care, shall be provided including:
  - Uploading ECGs
  - Copying ePCR data to the receiving Unit
  - Providing a copy of any paper forms (e.g. patient transfer forms, face sheets, medication lists, DNR forms, paper EMS forms, etc.)
- Transport shall not be delayed for report completion. ALS First Responders can electronically update and complete their ePCR record after patient transport is initiated.
- For a critically ill or injured patient, a single ePCR tablet shall be utilized for the duration of the call or until the patient is transferred to hospital personnel. At conclusion of the call, the ePCR and ECG data shall be copied to the ALS First Responder or Ambulance to ensure both reports are complete

Transfer of Patient Care – Ambulance to Hospital

- When patient care is transferred from the Ambulance or ALS First Responder to hospital personnel, a verbal report (including the history of present illness/injury, past medical history/medications/allergies, and treatments or interventions performed) shall be provided
- Ambulance units (or an ALS First Responder Unit that transported a patient) shall leave a completed PCR (paper or ePCR) including ECGs and copies of any paper forms (e.g. patient transfer forms, face sheets, medication lists-MAR, DNR forms, etc.) at the hospital for all patients at the time patient care is transferred
- Label all ECGs with the patient's name and date of birth prior to 12 Lead ECG transmission and label all electronic/paper ECGs provided for the patient's medical record
- The only exceptions to ***NOT*** leaving a completed PCR prior to leaving the hospital are as follows:
  - A "Partially Available" ambulance is needed to respond as the closest unit to an emergency call. After such response, any incomplete PCRs must be completed
    - "Partially Available" means a patient has been transferred to hospital staff with a verbal report and the Ambulance can respond to the next call.
  - A Mass Casualty Incident that has ***NOT*** been mitigated
  - Declared Disaster or EMS Emergency
- When possible, place the patient's belongings and medications in a clear Patient Belongings bag

    - Write the patient's name on the bag and seal it
    - Ensure the patient's medications and belongings are transferred to the hospital staff
- Obtain a signature for receipt of the patient and their belongings from the hospital or facility staff

Intentionally Left Blank

CS8 MANDATORY STATE REPORTING REQUIREMENTS

Child Abuse/Abandonment/Neglect (Reference § 39.201, Fla. Stat. (2019)	**Reporting**
Any person who knows, or has reasonable cause to suspect, that a child is abused, abandoned, or neglected by a parent, adult other than a parent, legal custodian, caregiver, or other person responsible for the child's welfare, or that a child is in need of supervision and care and has no parent, legal custodian, or responsible adult relative immediately known and available to provide supervision and care shall report such knowledge or suspicion	• Fully document the situation and observations in the Patient Care Report • Notify the Florida Department of Children and Families o Refer to Florida Department of Children and Families Abuse Reporting Portal: https://reportabuse.dcf.state.fl.us/ • Notify the appropriate Law Enforcement agency • Notify receiving hospital personnel
Any person who knows, or has reasonable cause to suspect, that a child is the victim of childhood sexual abuse or the victim of a known or suspected juvenile sexual offender, shall report such knowledge or suspicion	
Vulnerable Adult Abuse/Neglect/Exploitation (Reference § 415.1034, Fla. Stat. (2019)	
Any person who knows, or has reasonable cause to suspect, that a vulnerable adult (e.g. elderly, person with diminished mental capacity, etc.) has been or is being abused, neglected, or exploited shall immediately report such knowledge or suspicion	
Burns (Reference § 877.155, Fla. Stat. (2019)	**Reporting**
Any person who initially treats or is requested to treat a person with second-degree or third-degree burn injuries affecting 10 percent or more of the surface area of his or her body shall immediately report such treatment to the local sheriff's department if: • The treating person determines that the burns were caused by a flammable substance ***and*** • If the treating person suspects the injury is a result of violence or unlawful activity o The report shall state the name and address of the injured person and the extent of his or her injuries. o This section does not apply to burn injuries received by a member of the armed forces, or by a governmental employee, engaged in the performance of his or her duties. Any person who willfully fails to make the report required by subsection is guilty of a misdemeanor of the first degree, punishable as provided in s. 775.082 or s. 775.083.	• Fully document the situation and observations in the patient care report • Notify the Pinellas County Sheriff's Office

Intentionally Left Blank

CS9 NARRATIVE DOCUMENTATION

SUBJECTIVE	**What were you told?**
OBJECTIVE	**What did you find? What did you see?**
ASSESSMENT	**What did you think?**
PLAN	**What did you do and who did you tell?**

Rationale:

- The purpose of this narrative format is to:
  - Illustrate your clinical thought process as you cared for your patient
  - Show why that thought process was reasonable
- A series of check boxes and data points as collected in the rest of the PCR is not able to tell a story that shows the reader why they would have done the same under similar circumstances

*****Pinellas County uses a modified S.O.A.P. template for the patient care narrative*****

Examples:

- To assist the clinician in utilizing this template, the following thought process can be applied when completing the patient care narrative:
  1. Start by stating what kind of patient you had (this is the "A" of SOAP)
  2. Then describe the patient specific, complaint specific, pertinent positives and negatives of the ***subjective assessment*** ("S") that support Step #1
  3. Then describe the patient specific, complaint specific, pertinent positives and negatives of the ***objective assessment***("O") that support Step #1
  4. State Step #1 and how Steps #2 and #3 convinced you that Step #1 was the correct assessment. What treatment ("P"), specific to your assessment did you complete? How did the patient respond? What did you tell the person that you ultimately transferred?

PEARLS:

- Poor documentation, in-of-itself, can qualify as legal negligence
- No humorous acronyms or terminology – keep it professional
- Ensure you document how you determined the patient had decisional capacity, not just whether or not it was present.
- Use correct spelling – utilize the tablet on-board spell check and/or dictionary

Intentionally Left Blank

CS10 ONLINE MEDICAL CONTROL (OLMC)

The premise of OLMC consultation, in general, is that certain situations require increased levels of critical decision making and/or weighing of patient specific risk/benefit considerations, must be tracked for quality assurance purposes, pose a medicolegal risk to the EMS system and providers, or may benefit from the unique perspective and knowledge of the OLMC staff.

Therefore, **OLMC contact shall be made in the following circumstances:**

1. Any time medical advice is needed

2. To make any of the following requests:
    - OLMC treatment options
    - Physician Field Response
    - Deviation from a treatment or transport protocol—required **prior** to initiation of deviation.
    - Discontinuation of cardiopulmonary resuscitation (CPR)
    - Assistance in resolving differences of opinion regarding patient care between system clinicians and other healthcare providers, healthcare facilities, or law enforcement.
    - Authorization for Air Transport of patients not meeting Trauma Alert Criteria (dispatch may be initiated pending OLMC contact to minimize scene)
    - Poison Information Center consultation

3. In all of the following situations:
    - A protocol specifically requires OLMC consultation
    - A medication, treatment or transport error or patient injury has occurred
    - An unsuccessful attempt at medication facilitated intubation—required at the time of the event so that additional orders may be given, not at conclusion of patient care.
    - A request to leaving one Emergency Department or hospital property to go to another, except where formal interfacility transfer arrangements have been made by the transferring physician.
    - A Law Enforcement is considering transporting a patient to a healthcare facility in a vehicle other than an ambulance
    - A bystander physician or other health care provider wants to participate in patient care or specify a transport destination contrary to protocol
    - A piece of EMS equipment has malfunctioned or is of concern to the Paramedic and has impacted patient care. (malfunctions or concerns that did not impact care to be reported directly to your supervisor or EMS Coordinator)
    - A patient originally agrees to go to the hospital by ambulance, but who later refuse because of receiving information about their potential financial obligations

4. As otherwise required in specific interim and/or Emergency Orders or Protocols

Intentionally Left Blank

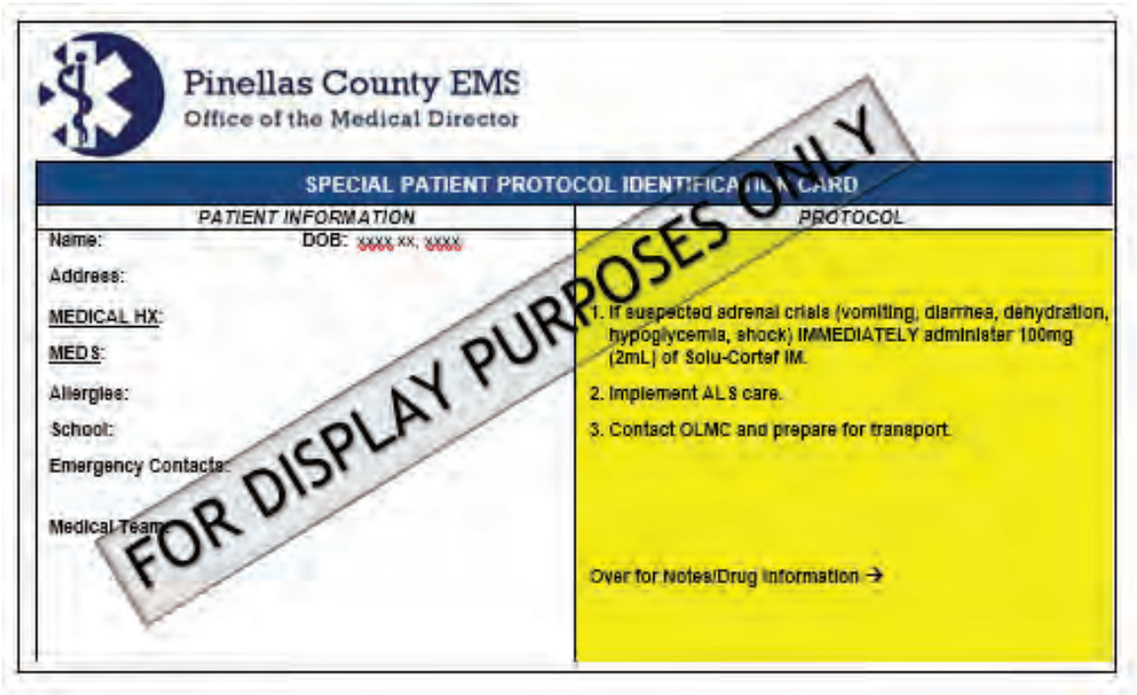
CS11 SPECIAL PATIENT PROTOCOL

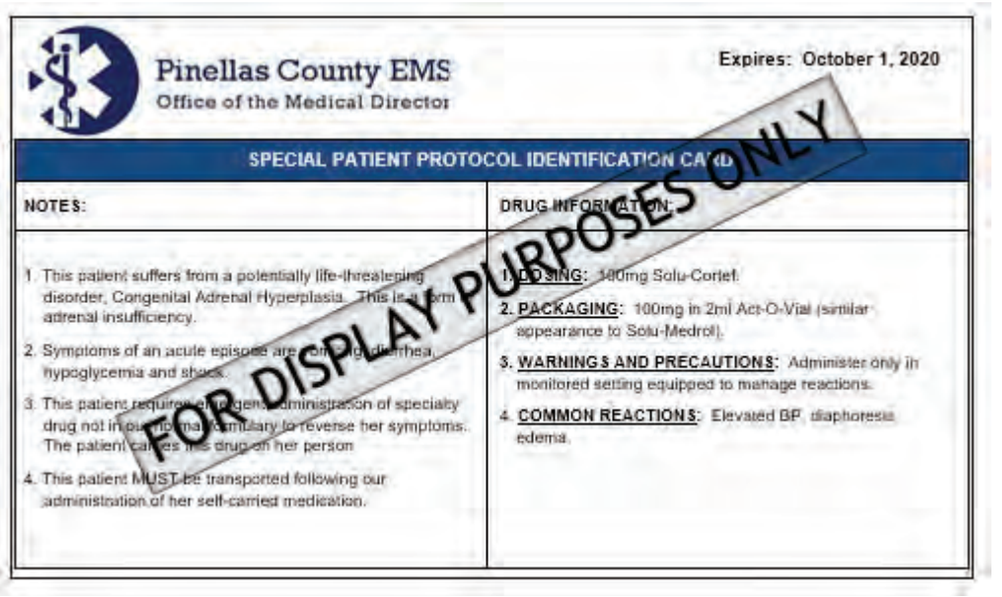
Background:

- From time to time, we encounter a patient who has an unusual medical condition or requires specialized treatment modalities outside of our normal operating protocols
- We cannot write protocols for each of these unusual situations into the Medical Operations Manual (MOM)
- It is important to be able to rapidly identify these types of patients and implement the appropriate specialized care

Policy:

- A patient with an unusual medical condition(s), that requires specialized treatment, will be issued a Pinellas County EMS "Special Patient Protocol Identification Card". The card contains the patient demographics, background information, standing orders and any applicable drug information
- The patient will be instructed to carry the card with them at all times and present to EMS clinicians upon initial contact. Any specialized medications needed, shall be kept by the patient with the card
- Pinellas County EMS Clinicians are authorized to follow the standing orders as printed on the card, upon being presented with such a card, after verifying the patient's identity
- OLMC Physicians retain ultimate discretion in the management of all patients and may be contacted for any clinical guidance or questions or as specified on the card
- This card will have an expiration date and a copy of the card with supporting information will be kept on file. ALS First Responders in areas frequented by such patients (e.g. home, work, school) will be advised when a card is issued and provided with a copy of the card. Additionally, CAD Caution Notes will be added to the home address for these patients





Pinellas County EMS
Office of the Medical Director

Expires: October 1, 2020

SPECIAL PATIENT PROTOCOL IDENTIFICATION CARD

NOTES:	DRUG INFORMATION:
1. This patient suffers from a potentially life-threatening disorder, Congenital Adrenal Hyperplasia. This is a form adrenal insufficiency. 2. Symptoms of an acute episode are [illegible] diarrhea, hypoglycemia and shock. 3. This patient requires emergent administration of specialty drug not in our normal formulary to reverse her symptoms. The patient carries this drug on her person. 4. This patient MUST be transported following our administration of her self-carried medication.	1. DOSING: 100mg Solu-Cortef. 2. PACKAGING: 100mg in 2ml Act-O-Vial (similar appearance to Solu-Medrol). 3. WARNINGS AND PRECAUTIONS: Administer only in monitored setting equipped to manage reactions. 4. COMMON REACTIONS: Elevated BP, diaphoresis, edema.

FOR DISPLAY PURPOSES ONLY

CS12 REFUSAL OF CARE

All patients who themselves, or through a third party, have summoned emergency medical assistance within the Pinellas County EMS system are presumed to have a condition requiring evaluation, treatment and transportation to the closest appropriate hospital emergency department. Patients have the right to refuse part or all the evaluation, treatment and transport if they have *Decisional Capacity.* This Clinical Standard describes how a patient may make an informed decision to refuse evaluation, treatment and/or transport

Definitions:

- **"Decisional Capacity"** – means a patient that can understand their current medical condition, as well as, the risks, benefits and alternatives of the proposed treatment plan and has the legal ability to provide consent (e.g. is not a minor unless emancipated or an adult who is known to have been adjudicated incompetent by a court)
- **"Expressed Consent"** – exists when a patient (adult or emancipated minor), with *Decisional Capacity*, agrees to or requests evaluation, treatment and/or transport
- **"Implied Consent"** – exists when a patient's current medical condition prevents them from being able to provide expressed consent or when a third party is not present to provide Third Party Consent
- **"Third Party Consent"** – means a parent/guardian of a minor, power of attorney, legal guardian of a legally incompetent adult, law enforcement officer or healthcare surrogate, as appropriate, who may accept or refuse evaluation, treatment and/or transport on behalf of a minor, detained/incarcerated person, or a person determined to be legally incompetent

BLS/ALS:

- Evaluate all patents to the fullest extent indicated, if possible and determine if the patient or a third party is the appropriate decision maker.
- If the patient does not appear to have *Decisional Capacity*, proceed with evaluation, treatment and transport under implied consent
- If the patient appears to have *Decisional Capacity*, he/she may refuse all or part of the indicated evaluation, treatment recommended, destination and/or transport
- If the patient's *Decisional Capacity* is in question, administer an EMS Cognitive Evaluation to assist in determining capacity
- In cases involving Third Party Consent, ensure the responsible party has *Decisional Capacity* prior to allowing any decisions to be made on behalf of the patient. Document the third parties' relationship to the patient. If there is doubt as to whether the third party is acting in the patient's best interest (e.g. abuse or neglect) immediately involve law enforcement.
- Documentation for a patient refusing part or all of the evaluation, treatment and/or transport must include at a minimum:
  - The benefits of allowing care
  - The risks of refusing the proposed care including severe complications or death
  - The alternatives explained and offered to the patient
- Attempt to ensure the patient is left in a safe location

OLMC:

- Contact OLMC if:
  - After passing the EMS Cognitive Evaluation, doubt remains as to a patient's *Decisional Capacity*, or if the patient's current medical condition (e.g. hypotension, hypoxia, head injury, etc.) calls into question their *Decisional Capacity*
  - Other unusual situations where the correct course of action is not apparent based on the criteria contained within this standard

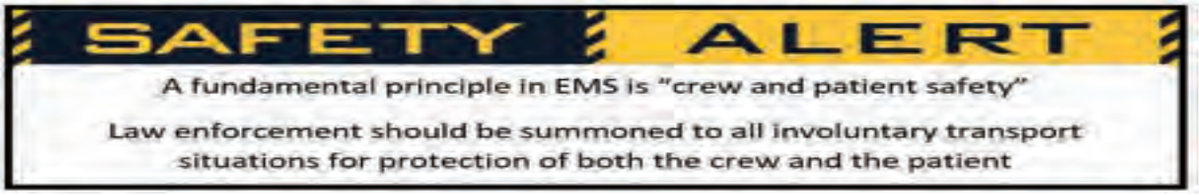
Quality Measures:

- Were two complete sets of vital signs obtained at least 5 minutes apart?
- Final GCS equals 15?
- Was a Chief Complaint documented?
- Were the Medical History, Medications, and Allergies of the patient documented?
- Witness Signature obtained
- Narrative >150 characters
- Free Text "*Decisional Capacity*" present

References:

- Pinellas County EMS Medical Quality Management Plan

CS13 INVOLUNTARY TRANSPORT



This protocol describes the options available for the involuntary care and transport of patients. There are three legal provisions for EMS to care for patients against their wishes. Refer to Protocol CS12 for guidance on determination of decisional capacity and the ability of a patient to refusal care.

- **Baker Act** – Florida Statute Chapter 394 allows a law enforcement officer, physician, clinical psychologist or other mental health professional or the Court through an ex parte order to initiate an involuntary examination of a person having mental illness.

    - **Neglect** – The law requires such professional, listed above, to determine that without care or treatment, the person is likely to suffer from neglect or refuse to care for himself or herself; such neglect of 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 of the provision of other services.

    - **Potential to Harm Self or Others** – The law requires such professional, listed above, to determine that there is 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 evident by recent behavior

- **Marchman Act** – Florida Statute Chapter 397 allows a law enforcement officer to initiate protective custody and involuntary admission of a person having a substance abuse impairment in a public place and appears to be incapacitated. The officer must have a good faith reason to believe the person is substance abuse impaired and has:
    - Lost the power of self-control with respect to substance abuse ***OR***
    - Has inflicted or threatened or attempted to inflict or unless admitted is likely to inflict physical harm on himself, herself or another ***OR***
    - Is in need of substance abuse services

- **Chapter 401 –** Florida Statute Chapter 401.445 allows for the involuntary care and transport of a patient who does not have the *Decisional Capacity* to make their own healthcare decisions (Ref. CS12)

Requirements:

- Assist the law enforcement officer or medical professional by providing appropriate medical assessment, treatment and safe/dignified transport to the appropriate hospital or Baker Act Receiving Facility
- Refer to Treatment Protocol M3
- For interfacility transports refer to Protocol CS6

Intentionally Left Blank

CS14 DECEASED/OBVIOUS DEATH/WITHHOLDING RESUSCITATION

SAFETY ALERT

Resuscitation ***MUST*** be attempted for ***EVERY*** patient unless both Criteria #1 and #2 in the appropriate category below are met

Resuscitation MUST be attempted for EVERY patient unless both Criteria #1 and #2 in the appropriate category below are met

If any doubt exists, (e.g. uncertain if criteria are met, uncertain if DNR is Valid, uncertain if Healthcare Surrogate is positively identified, etc.) initiate resuscitation and contact OLMC for consideration of cessation of efforts (Ref. CS10)

Medical (Atraumatic) Cardiac Arrest:

- Attempt resuscitation for ***EVERY*** patient unless both criteria are met:

  1. Found pulseless and apneic
     AND
  2. Any of the following criteria are present:
     - Signs of irreversible death (e.g. Decomposition)
     - A valid Florida Do Not Resuscitate Order (Form 1896) (Ref. CS15)
     - Healthcare Surrogate indicates that resuscitation is not desired
     - When attempts to perform resuscitation would place the rescuer(s) at risk of physical injury (e.g. scene safety concern)

Traumatic Cardiac Arrest:

- Attempt resuscitation for ***EVERY*** patient unless both criteria are met:

  1. Found pulseless and apneic
     AND
  2. Any of the following criteria are present:
     - Signs of irreversible death (e.g. Decomposition)
     - Injuries incompatible with life (e.g. decapitation, incineration, or hemicorpectomy)
     - Other ***massive*** blunt or penetrating trauma with initial rhythm Asystole or PEA < 40 bpm
       - Notes:
         - Pads may be used to *rapidly* assess rhythm prior to initiating resuscitation
         - The mere presence of exposed brain matter does not constitute “massive trauma”

- If suspected arrest time > 10 minutes or circumstances/locations of incident precludes rapid removal to a hospital (e.g. entrapment, inability to rapidly extricate, remote location)

CS15 HONORING DNRO/MOLST/POLST

In situations in which cardiopulmonary resuscitation is being administered (e.g. nursing home staff, family and bystanders), EMS should either ask for their continued delivery of care due to the adequacy of the cardio pulmonary resuscitation being performed or should request their discontinuance of efforts. EMS personnel are to assume continuation of resuscitation while making decisions on whether the patient meets the criteria of this protocol

Florida Do Not Resuscitate Order (DNRO):

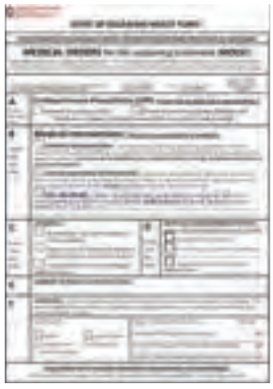
The presentation of a valid Florida DNRO also constitutes objective criteria for withholding cardiopulmonary resuscitation, to include cardiac compressions, endotracheal intubation and/or other advanced airway management, artificial ventilation, defibrillation and related procedures, in the event of a cardiac or respiratory arrest. A DNRO may apply to patients with any type of electrocardiogram (ECG) rhythm, not just those in asystole. The presentation of a valid DNRO does not relieve EMS of the responsibility to provide interventions in the non-arrested patient for comfort care or to alleviate pain. Pain relieving measures may be particularly appropriate in prehospital care of such patients.

Living Will:

DO NOT confuse a DNRO with a Living Will. A Living Will serves an entirely different purpose and should not influence the acute application of resuscitation (e.g. a healthy 20-year-old may have a valid Living Will which does not mean EMS should withhold care if that person is involved in a serious motor vehicle accident or goes into cardiac arrest. However, if this person was later determined to be brain dead, the Living Will would direct ventilators, etc.to be disconnected and that the patient is allowed to die naturally, with comfort measures only)

Medical Orders for Life Sustaining Treatment (MOLST) and Physician Orders for Life Sustaining Treatment (POLST)

A Medical Orders for Life Sustaining Treatment (MOLST) or Physician Orders for Life Sustaining Treatment (POLST) is a physician order that helps provide health care treatment instructions for seriously ill adults nearing death. These documents are for patients who are both seriously ill and have a life expectancy of less than one year. Although not yet officially recognized in Florida, if you see one, consult OLMC for permission to follow patient/family wishes.



A Prehospital DNRO may be considered valid by any of the following methods:

- Method 1 – Florida Prehospital Do Not Resuscitate Order (Form #1896)
  - Information is on the original State of Florida Do Not Resuscitate Order Form #1896 or is a copy on yellow paper of an original Form #1896. This provides the ability the ability to generate their own supply of DNROs
  - Has signatures from the attending physician and the patient, or if the patient is incompetent, their health care surrogate, proxy or guardian
  - The DNRO has not been orally withdrawn by the patient, court appointed guardian, patient's health care surrogate or healthcare proxy. Next-of-kin, other family and friends do not have the right to withdraw a valid DNRO unless they are the patient's health care surrogate, proxy or guardian. If in doubt, contact OLMC while resuscitation is initiated
  - Patient identity is verified with a legal photo ID (e.g. driver's license, etc.), other legal photo identification or someone on-scene attests to the patient's identity

- Method 2 – DNRO document from a licensed health care facility, licensed Hospice provider or from another State:
  - Document clearly states that it is a DNRO
  - Clearly states that the patient is NOT to be resuscitate in the event of a cardiac or respiratory arrest.
  - An effective date is documented that predates the date the assistance is requested
  - The patient's full legal name is documented (typed or printed)
  - Is signed and dated by the patient, patient's health care surrogate or proxy, or legal guardian if one is appointed.
  - Is signed and dated by at least two witnesses

Honoring a DNRO:

- The following steps must be completed:
  - Determine the identity of the patient with the DNRO through a driver's license, other photo identification or from a witness in the presence of the patient
  - Determine that the DNRO form is fully and properly executed in that it has the required signatures, has been witnessed and has an effective date which predates the date the assistance is requested
  - Documentation is made of the following items in the narrative portion of the EMS patient care report anytime a DNRO is honored:
    - Effective date of the DNRO
    - Information pertaining to witness (name, address, telephone number and relationship to the patient) if one was used to establish patient identification
    - Name of the attending physician who signed the DNRO
    - Name of the patient or other person (surrogate or proxy) who signed the DNRO
    - Whether the patient dies at home or during transportation

Transfer arrangements:

When arrangements are being made to transfer a patient with a DNRO between facilities or from their primary residence to a healthcare facility, the receiving facility shall be contacted and informed of the patients DNRO prior to transport. The receiving facility shall agree to accept the patient if during transport the patient expires and the DNRO is honored. When possible, coordination of the proposed transportation should be made on a recorded transmission, documenting the facilities acceptance and the name of the facilities representative agreeing to the above conditions. During such transport the following guidelines shall be followed:

- Ensure that the original or a copy (Reference Special Notes & Situations) of the prehospital DNRO accompanies the patient. Every attempt should be made to transport a copy of the prehospital DNRO with the patient. The original should remain at the patient's residence or at the nursing facility they reside. The EMS provider shall relinquish the DNRO form along with the patient to the receiving facility
- If the EMS provider receives a request to transport the patient home or to another health facility for further treatment, the EMS provider shall obtain a valid copy of the DNRO form from the sending facility prior to the transport.
- Before the transport may occur, OLMC must be consulted in situations where the field clinician finds the family or healthcare facility requesting transport of a patient who has either, lost or misplaced the DNRO or verbally requested that the patient not be resuscitated, has not valid DNRO or in which a "copy" of a DNRO is unable to be validated.

Special Notes and Situations:

In situations where it is impossible to copy the document, the original should accompany the patient and be delivered to the receiving facility. IN these situations, it may be beneficial to document in the patient care record where the original DNRO was left and who took custody of it.

- If the original DNRO is transported with the patient, inform either the receiving facility or the family member of the importance of archiving the original and in making additional copies.

A Basic Life Support (BLS) capable unit arriving on the scene before a County Certified Paramedic may honor a valid DNRO if the patient has met either Method #1 or Method #2 outlined within this protocol. The BLS unit may consult with OLMC describing the circumstances and the reason for honoring or discontinuing a resuscitative effort. However, a county certified Paramedic must arrive at the patient and continue the complete documentation of the facts and circumstances in making this decision.

Patient Identification Device – State of Florida Do Not Resuscitate Order Form #1896

The patient identification device is a miniature version of the State of Florida Do Not Resuscitate Order Form #1896 and is incorporated by reference as part of the DNRO form. Use of the patient identification device is voluntary and is intended to provide convenient and portable DNRO which travels with the patient. The device is perforated so that is can be separated from the DNRO form. It can also be hole punched, attached to a chain in some fashion and visibly displayed on the patient. In order to protect this device from hazardous conditions, it should be laminated after completing it. Failure to laminate the device shall NOT be grounds for not honoring a patient's DNRO order, if the device is otherwise properly completed.

In order to not inconvenience patients or waste the current supply of DNRO forms, all previous versions of DH Form 1896 are considered valid.

References:

- http://polst.org/
- http://www.floridahealth.gov/about-the-department-of-health/about-us/patient-rights-and-safety/do-not-resuscitate/index.html
- http://www.floridahealth.gov/licensing-and-regulation/trauma-system/_documents/dnro-form-multi-lingual2004bwyw.pdf

CS16 BLOOD SPECIMEN COLLECTION

The purpose of this protocol is to describe the legal authority and proper procedures to be followed when obtaining a blood specimen at the request of a law enforcement officer

Introduction:

- There are several situations in which a County Certified Paramedic or EMS Physician may be called upon to draw blood samples at the request of law enforcement for determination of alcohol or drug levels. The highest priority of EMS, in any case, is to render emergency medical care as needed. ***Blood samples may be drawn only after those needs have been addressed***. Situations may arise where blood sampling must be delayed or deferred to the receiving emergency department to attend to higher medical priorities
- Types of situations in which law enforcement may request blood specimens include the following:
  - An accident scene in which a fatality or potentially fatal injury has occurred
  - Cases of DUI (driving under the influence (of drugs or alcohol)) where an accident is of lesser severity or in which no accident has occurred
  - Cases involving crimes apart from those involving traffic, such as rape, assault, etc. Contact OLMC any time medical advice is needed
- Regardless of the situation, if a blood sample is drawn at the request of law enforcement for determining blood alcohol or drug levels, the following procedure shall be used:

  NOTE: Blood samples requested by law enforcement for DNA testing are not currently approved by the EMS Medical Director

Procedure:

1. A patient care report (PCR) must be initiated for any blood collection requested. The patient is to sign the refusal after the blood collection is completed if not being transported to the hospital
2. Check the "supplemental form" box to indicate a blood sample form is attached
3. Note the following in the "Remarks" section:
   - A Pinellas County Blood Specimen Kit was utilized
   - Betadine (povidone-iodine) solution was used for skin preparation
   - Time of the blood specimen draw
   - If paramedic drawing the specimen sample is different from the one signing the report, that paramedic will sign under the above information
   - A Pinellas County Blood Specimen form was completed
   - The expiration date of the Pinellas County Blood Specimen Kit
4. Log the time of the blood sample as a procedure
5. Pinellas County Blood Specimen Kit Specific Details (Use ONLY the kit provided by Pinellas County EMS per the Federal Needlestick Safety and Prevention Act)
   - Check the kit to ensure it is within date and the "KIT Integrity Seal" is intact
   - Show the kit to the law enforcement officer noting the expiration date and intact "Kit Integrity Seal"
   - Show the patient, who is having blood drawn, the kit expiration date and intact "Kit Integrity Seal" in the presence of the law enforcement officer.

- Open the kit in the presence of the patient and the law enforcement officer.
- Use only the contents in the kit, specific to the draw. DO NOT utilize any other medical supplies without first showing the law enforcement officer and patient
- Complete the collection and labeling of the blood samples following the specific "Blood Specimen Collection Instructions" (blue sheet) contained within the kit
- Per the instructions, provide only what is indicated to the law enforcement officer. Discard all other material
- Document all details and actions of the blood collection on the patient care record

6. All blood samples taken shall be surrendered to the requesting law enforcement officer
7. The Paramedic shall:
   - Render emergency medical service or treatment as necessary prior to the drawing of any blood specimens
   - Obtain blood specimens only at the request of a law enforcement officer
   - Obtain a minimum of two samples per person per draw.

Consent:

- § 316.1933 (1)(a), Fla. Stat. (2019)) – Blood test for impairment or intoxication in cases of death or serious bodily injury; right to use reasonable force
- In cases at an accident scene where a fatality or potentially fatal injury has occurred, the law allows for blood collection even if the subject/patient does not consent. Consent and cooperation should be sought, but if the law enforcement officers can adequately restrain the patient (using "reasonable force" if necessary), a County Certified Paramedic or EMS Physician may draw the blood sample in these circumstances. The test shall be performed in a reasonable manner
- Any person who is incapable of refusal by reason of unconsciousness or other mental or physical condition shall be deemed to have not withdrawn his or her consent to such test. A blood test may be administered whether such person is told that his failure to submit to such test will result in the suspension of the person's privilege to operate a motor vehicle in the State of Florida
- In cases where an accident is of lesser severity or in which a DUI violation is suspected without an accident, blood samples may be drawn by a County Certified Paramedic or EMS Physician if the patient gives consent. The subject/patient may not be forced into providing a blood sample in such cases.
- For cases involving crimes other than traffic accidents or DUI, law enforcement officer may bring suspects/patients to fire stations or to ambulances to obtain your assistance in drawing blood specimens. Again, the subject/patient must consent to the procedure. The subject/patient may not be forced into giving a blood sample in such cases
- For cases of blood sampling requiring consent, the Pinellas County EMS Blood Sampling Consent Form shall be utilized. Use of the form is self-explanatory

Additional Information:

- No hospital, clinical laboratory, medical clinic, or similar medical institution or physician, certified Paramedic, registered nurse, licensed practical nurse or other person authorized by a hospital to draw, or duly licensed clinical laboratory director, supervisor, technologist or technician or the person assisting a law enforcement officer shall incur any civil or criminal liability as a result of the withdrawal or analysis of a blood or urine specimen or chemical test of a person's breathe pursuant to accepted medical standards when requested by a law enforcement officer, regardless of whether or not the subject resisted administration of the test
- § 316.1933 (1)(b), Fla. Stat. (2019) defines the term "serious bodily injury" as an injury to any person, including the driver, which consists of a physical condition that creates a substantial risk of death, serious personal disfigurement or protracted loss of impairment of the function of any bodily member or organ
- § 843.06, Fla. Stat. (2019) Neglect or refusal to aid peace officers.—Whoever, being required in the name of the state by any officer of the Florida Highway Patrol, police officer, beverage enforcement agent, or watchman, neglects or refuses to assist him or her in the execution of his or her office in a criminal case, or in the preservation of the peace, or the apprehending or securing of any person for a breach of the peace, or in case of the rescue or escape of a person arrested upon civil process, shall be guilty of a misdemeanor of the second degree, punishable as provided in s. 775.082 or s.775.083.

Intentionally Left Blank

CS17 APPROACH TO MASS CASUALTY INCIDENTS (MCI)

Triage Group:

- The START/JumpSTART triage algorithms will be used whenever the number of patients on scene exceeds the number of responders on scene or when the number of patients at an incident t reasonably may present challenges to routine patient tracking procedures. All system clinicians must be able to rapidly and effectively employ this method
- Although it is preferable to employ state approved standardized triage tags, in the initial sorting it is acceptable to use color coded alternative marking devices
- Prior to initiation of triage procedures:
  - Determine whether the scene is safe for triage personnel to proceed
  - Request additional resources; ALS units, transport units, the mass casualty trailer and law enforcement, if appropriate
  - Consider a chemical/hazmat incident if multiple patients on scene have similar, non-traumatic, complaints, signs & symptoms
- When more than one clinician is required for triage, a triage office will be responsible for determining the total number of patients in each category

Treatment Group:

- Treatment group leader will set up the Red, Yellow, Green and Black treatment areas
- Treatment group leader will ensure a secondary triage of all patients in the treatment areas is conducted and that appropriate state approved triage tags are affixed to each patient
- Treatment group leader will communicate to the transport group leader any transport needs
- Re-triage on ongoing recurrent assessment is mandatory for all patients who remain in the treatment sector > 30 minutes

Transport Group:

- The transport group leader should contact Sunstar Dispatch for assistance in determining transportation destination and to alert the hospital network to initiate disaster plans, as appropriate
- EVERY patient (including those who deny injury) must have at least the following documented by the Transport group leader:
  - Name
  - Age
  - Condition at transport
  - Destination

PEARLS:

- Each patient can be assigned a triage within 60 seconds or less
- The only treatment during START/JumpSTART triage is one manual attempt at opening the airway for adults or 5 rescue breathes for children and placing pressure on a source of major bleeding

CS18 MED OPS – INCIDENTS WITH ONGOING THREATS

Purpose:

The purpose of this Clinical Standard is to describe the appropriate and authorized interventions for operations in the civilian tactical environment. Use of this protocol is restricted to major incidents with ongoing threats (e.g. active shooter or similar events).

Background:

Although medical priorities remain the same as in general EMS, the tactical environment requires modifications to protocol, training, and approach to address the following challenges:

- Functioning in a known, suspected, or potentially hostile environment (Hot or Warm Zone)
- Limitations to equipment, assessment, and treatment options due to the ongoing threat environment

The above factors contribute to different risk/benefit considerations than normal EMS operations and dictate alterations in the standards of care by zone.

Clinical Standard by Zones of Care:

Hot Zone: The Hot Zone (Care Under Fire) is defined as any hostile location subject to effective incoming fire or exposed to an active threat without cover or security. The nature of the Hot Zone necessitates severe limitations in patient assessment and care including the following:

- Triage must be based on limited information and by necessity may be completed at a distance assessing for movement or other signs of life
- Cardiac arrest patients in this zone may not be considered viable due to the inability to provide further care
- Formal Spinal Precautions is inappropriate in this zone. When feasible, attempt to move the patient along the body's long axis during extraction attempts
- Care in this situation should be **limited** to extraction to cover, followed by control of life-threatening external hemorrhage and application of vented chest seal if practical

NOTE: Severe external hemorrhage control should be accomplished utilizing tourniquets or wound packing with hemostatic gauze/ETD as the first line treatment modality in both the Hot and Warm Zones. Reference CP16 and CP18

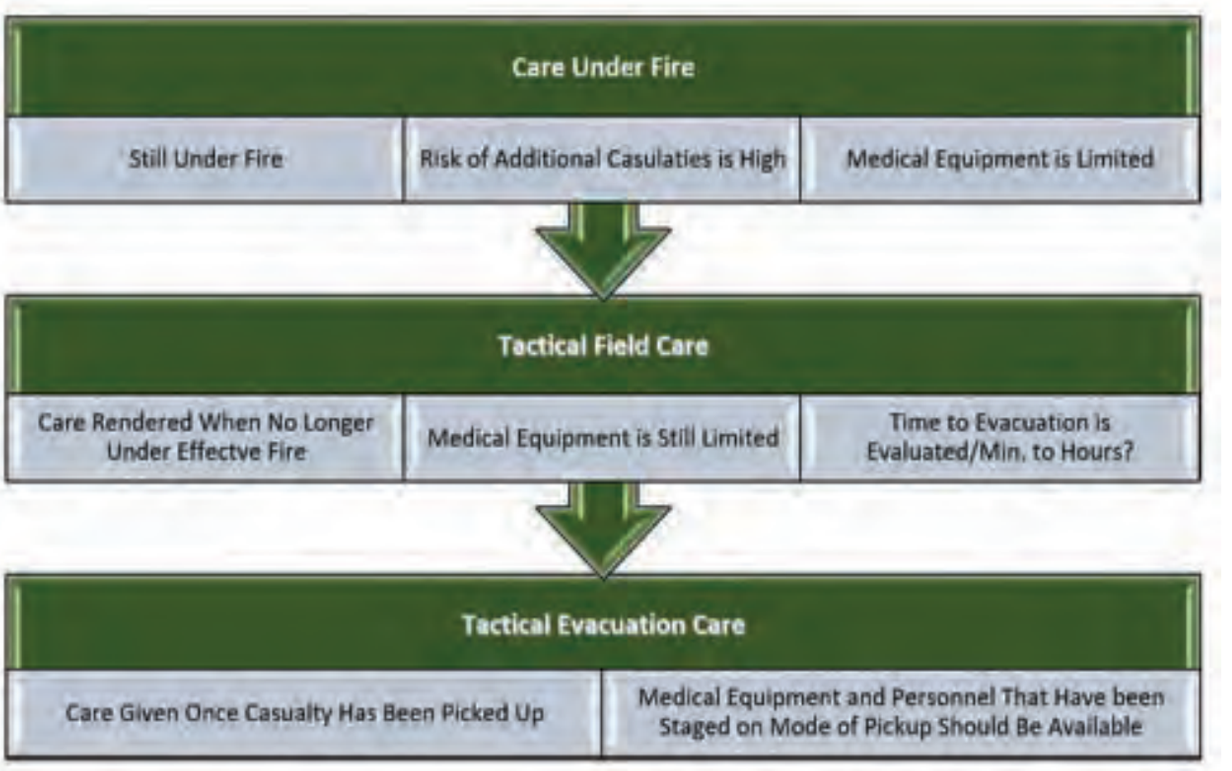
Warm Zone: The Warm Zone (Tactical Field Care) is defined as a potentially hostile location with the benefit of cover or security. The Casualty Collection Point may be located in the warm zone. The nature of the Warm Zone necessitates limitations in patient assessment and care including the following:

- Triage assessment using standard START categories may be attempted.

- Cardiac arrest patients may still not be considered viable candidates for resuscitation efforts based upon available resources.
- Care in this situation should be **focused** on control of external hemorrhage, management of penetrating chest trauma and tension pneumothorax, and basic airway maneuvers.
- Other limited ALS interventions may be possible dependent upon level of threat and available resources but are not required.

NOTE: Severe external hemorrhage control should be accomplished utilizing tourniquets or wound packing with hemostatic gauze/ETD as the first line treatment modality in both the Hot and Warm Zones. Reference CP16 and CP18

Cold Zone: The Cold Zone (Evacuation Care) is defined as a location not subject to immediate threat. The transport sector ambulance loading point and treatment areas as needed may be located in the cold zone. Care in this situation should include care per **normal** protocols and initiation of transport with or without transfer of care to other providers.



CS19 STANDARDIZED RESPONSE GEAR INVENTORY

Required Medical Equipment

This protocol defines the required medical equipment and supplies for each type of response unit in the Pinellas County EMS System in accordance with Florida rules and state approved local substitutions (Ref. AD13). Where equipment has local configuration options, those are established separately in administrative protocol (Ref. AD15 and AD16).

Standardization of Equipment

All front-line units shall utilize standardized medical bags and inventories to promote patient safety.

Unauthorized Equipment

Patient care items (medical equipment, medical supplies, medications, monitors, defibrillators, or any other medical device or equipment, etc.) may not be carried or employed by Certified Professionals in the Pinellas County EMS System while on duty unless specifically authorized in this protocol.

Required Equipment by Unit Type

	BLS Ambulance	ALS Ambulance	BLS Fire -Engine, Squad, Truck, Pumper, Utility	ALS Fire - Medic Unit, Squad, Truck, Pumper or Engine	ALS Fire – Transport Capable Rescue
BLS Airway	✓		✓		
ALS Airway		✓		✓	✓
Trauma		✓		✓	✓
Medical		✓		✓	✓
Handtevy		✓		✓	✓
Major Trauma			✓	✓	✓
Suction	✓	✓	✓	✓	✓
PPE	✓	✓	✓	✓	✓
Documentation	✓	✓	✓	✓	✓
Supplies	✓	✓	✓	✓	✓

Intentionally Left Blank

CS19.2 PCEMS BLS RESPONSE BAG - ADMINISTRATIVE

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Bag			
Statpack Golden Hour - Orange			
Main – Lid – Exterior Zipper			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
Trauma Shears	2		
Emesis Bag	1		
10”x 30” Trauma Dressing	1		
7.5 sterile gloves (pair)	1		
8.5 sterile gloves (pair)	1		
Main – Lid – Interior Zipper Pocket			
Cold Pack	1		
Moldable Aluminum Splint	1		
5”x 9” ABD Gauze Pad	1		
Main – Interior			
M6 portable oxygen cylinder bracket	1		
M6 portable oxygen cylinder (min. 1000 psi)	1		
Portable oxygen regulator w/2, 4, 6, 8, 10, 15, 20- and 25-liter flow settings	1		
BVM Module	See separate inventory		
Adult Non-rebreather Mask	1		
Adult BP Cuff	1		
Adult/Pediatric Sprague Rappaport Stethoscope	1		
Internal Main - BVM Module			
Adult BVM resuscitator with adult mask and filter	1		
Infant Mask	1		
Child Mask	1		
Interior Main – BVM Module – Lid Zipper Pocket			
OPA 40 mm, 50 mm, 60 mm, 80 mm, 90 mm, 100 mm, 110 mm (each size)	1		
Main – Interior – Lower Access – Interior Left Elastic Net			
Adult Nasal Cannula	1		
Main – Interior – Lower Access – Interior Right Elastic Net			
RESERVED FOR FUTURE USE			

Left Exterior Pocket – Interior Zipper Pocket			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
Hand Sanitizing Wipe	5		
Safety Glasses (pair)	1		
3M 1870+ N95/Surgical Mask	1		
Small Biohazard Waste Bag	1		
Left Exterior Pocket – Interior Left Net			
3” Silk Tape	1		
1” Silk Tape	3		
Left Exterior Pocket – Interior Right Net			
4” Elastic Bandage	1		
4” Roll Gauze	2		
Right Exterior Pocket – Interior Zipper Pocket			
Hyfin Vent Chest Seal (2 pack)	1		
Combat Application Tourniquet (CAT), Orange	2		
Right Exterior Pocket – Interior Left Net			
4” Emergency Trauma Dressing (ETD)	2		
Right Exterior Pocket – Interior Right Net			
4”x 4” Gauze, Sterile (2 pack)	5		
3”x 4” Non-adherent Dressing, Sterile	10		
1” Band-Aid	10		
2” Band-Aid	10		

CS19.3 PCEMS BLS RESPONSE BAG - OPERATIONAL

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Bag			
Statpack Custom Breather - Orange			
Exterior Main – Lid Net			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
Emesis Bag	4		
Exterior Main - Interior			
Trauma Shears	1		
Adult/pediatric Sprague Style Stethoscope	1		
Penlight	1		
Bandage Shears	1		
Exterior Main – Interior Net			
Infant Blood Pressure Cuff	1		
Child Blood Pressure Cuff	1		
Adult Blood Pressure Cuff	1		
Large Adult Blood Pressure Cuff	1		
Finger Pulse Oximeter (in 1010 hard case)	1		
Pelican 1010 Case	1		
Left Exterior Pocket – Interior Left Net			
CAT (orange)	2		
Hyfin Vent Chest Seal (two pack)	1		
Left Exterior Pocket – Interior Right Net			
Emergency Trauma Dressing (ETD)	2		
3” Tape	1		
Left Exterior Pocket – Interior Zipper Pocket			
5” x 9” ABD	4		
1” Self-Adherent Tape	1		
1” Silk Tape	1		
10” x 30” Trauma Dressings	2		
Right Exterior Pocket – Interior Left Net			
Infant Simple Mask	1		
Pediatric NRBM	1		
Pediatric Nasal Cannula	1		
Right Exterior Pocket – Interior Right Net			
Adult Nasal Cannula	2		
Adult Non-rebreather Mask	1		

Right Exterior Pocket – Zippered Pocket			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
Moldex FastFit 1712 N95/Surgical Mask	2		
3M 1870+ N95/Surgical Mask	2		
Small Biohazard Waste Bag	2		
Hand Sanitizing Wipe	10		
Interior Main – Lid – Right Zipper Pocket			
Moldable Padded Aluminum Splint	1		
Interior Main – Lid – Left Zipper Pocket			
OB Kit	1		
Interior Main			
M6 portable oxygen cylinder bracket	1		
M6 portable oxygen cylinder (min. 1000 psi)	1		
Portable oxygen regulator w/2, 4, 6, 8, 10, 15, 20 and 25 liter flow settings	1		
Pinellas County EMS Pediatric BLS Reference Rev.09/2019	1		
BVM module	See separate inventory		
PEDIATRIC module	See separate inventory		
UNMARKED module	See separate inventory		
Trauma #1	See separate inventory		
Trauma #2	See separate inventory		
Internal Main - BVM Module			
Adult BVM resuscitator with adult mask and filter	1		
Interior Main – BVM Module – Lid Zipper Pocket			
OPA 80 mm, 90 mm, 100 mm, 110 mm (each size)	1		
NPA 22 Fr, 24 Fr, 26 Fr, 28 Fr, 30 Fr (each size)	1		
Lubricating jelly (unit pack)	5		
Internal Main – PEDIATRIC Module			
Pediatric BVM resuscitator with child, infant and neonate masks and filter	1		
Bulb Syringe	1		
Handtevy Length Based Tape	1		
Pinellas County EMS Handtevy Pediatric Medication and Equipment Guide	1		
Interior Main – PEDIATRIC Module – Lid Zipper Pocket			
OPA 40 mm, 50 mm, 60 mm, 80 mm (each size)	1		
NPA 12 Fr, 14 Fr, 16 Fr, 18 Fr, 20 Fr (each size)	1		
Lubricating jelly (unit pack)	5		
Internal Main – UNMARKED Module			
Water for Irrigation, 250 mL, Sterile	2		
Ring Cutter	1		
Glucose Gel 15g (in plastic container)	2		
Narcan Nasal Kit – Two Pack Kit (4 mg each)	1		
Glucometer Kit	See separate inventory		

Internal Main – UNMARKED – Zippered Lid			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
Single Use Sharps Container	1		
2” Band-Aid	5		
1” Band-Aid	5		
Alcohol Prep Pad	4		
Plastic Storage Box (2 part)	1		
Internal Main – TRAUMA #1			
3”x4” Non-adherent Dressing	10		
4”x4” Gauze Pad (2 pack)	5		
4” Elastic Bandage	2		
4”x4” Gauze Pad, Non-sterile	Stack		
4” Roll Gauze	2		
Internal Main – TRAUMA #2			
Hot Pack	1		
Cold Pack	1		
Small Arm Sling	1		
Large Arm Sling	1		

Intentionally Left Blank

CS19.4 PCEMS ALS AIRWAY RESPONSE BAG

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Bag			
Statpack Custom Breather - Green			
Left Exterior Pocket – Interior Left & Right Net			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
Adult nasal cannula (2 per net)	4		
Left Exterior Pocket – Zipper Pocket			
Adult non-rebreather mask	2		
Right Exterior Pocket – Interior Left Net			
Infant mask for bag valve device	1		
Child mask for bag valve device	1		
Right Exterior Pocket – Interior Right Net			
Adult aerosol mask	1		
Right Exterior Pocket – Center			
Nebulizer setup (Nebutech)	2		
Right Exterior Pocket – Zipper Pocket			
Small biohazard waste bag	2		
Large biohazard waste bag	1		
Hand sanitizing wipe	10		
3M Flat Fold N95/Surgical Mask (med/large)	2		
Moldex Flat Fold N95/Surgical Mask (med/large)	2		
Exterior Main – Inside of Lid			
Emesis bags	4		
Penlight	2		
Exterior Main – Interior			
Adult/Pediatric (Sprague style) stethoscope	1		
Adult BP cuff (manual)	1		
Large adult BP cuff (manual)	1		
Trauma shears	1		
Interior Main – Lid – Left Zipper Pocket			
18 Fr Salem Sump orogastric tube	2		
60 mL syringe with catheter tip	2		
Interior Main – Lid – Right Zipper Pocket			
Size 3 King LTS-D airway	1		
Size 4 King LTS-D airway	1		
Size 5 King LTS-D airway	1		
60 mL luer-lock syringe	2		
Adult tube holder	1		

Interior Main				
Item Name		Qty Rqd	Qty Present	Exp Date
M6 portable oxygen cylinder (min. 1000 psi)		1		
M6 portable oxygen cylinder bracket		1		
Gauge Bumper – RED = Fire/ GREEN = Ambulance	Portable oxygen regulator w/2, 4, 6, 8, 10, 15, 20, 25-liter flow settings	1		
CPAP module		See separate inventory		
BVM module		See separate inventory		
Intubation module		See separate inventory		
Interior Main – BVM Module				
Adult BVM resuscitator with adult mask and filter		1		
Adult/Pediatric EtCO2 filterline set		2		
Interior Main – BVM Module – Lid Zipper Pocket				
OPA 80 mm, 90 mm, 100 mm, 110 mm (each size)		1		
NPA 22Fr, 24Fr, 26Fr, 28Fr, 30Fr (each size)		1		
Lubricating jelly (unit packs)		5		
Interior Main – CPAP Module				
Large Adult CPAP setup		1		
Child CPAP setup		1		
Interior Main – CPAP Module – Lid Zipper Pocket				
Tee adapter		2		
Superset with mask elbow adapter		2		
Interior Main – Intubation Module - Lid				
Medium laryngoscope handle - disposable		1		
10 mL luer-lock syringe		2		
Lubricating jelly (unit packs)		3		
Mac 3 laryngoscope blade		1		
Mac 4 laryngoscope blade		1		
Interior Main – Intubation Module - Center				
Adult tube holder		1		
6.0 ET tube (cuffed with stylet)		1		
7.0 ET tube (cuffed with stylet)		1		
7.5 ET tube (cuffed with stylet)		1		
8.0 ET tube (cuffed with stylet)		1		
8.5 ET tube (cuffed with stylet)		1		
Interior Main – Intubation Module – Secondary Pocket				
Adult Magill forceps		1		
Penlight laryngoscope handle - disposable		1		
10 mL luer-lock syringe		2		
Lubricating jelly (unit packs)		3		
Miller 3 laryngoscope blade		1		
Miller 4 laryngoscope blade		1		
Pocket Bougie		1		
Interior Main – Intubation Module – Secondary Pocket - Lid				
Scalpel (safety)		2		
Kelly curved forceps		2		

CS19.5 PCEMS TRAUMA RESPONSE BAG

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Item Name	Qty Rqd	Qty Present	Exp Date
Bag			
Statpack G3 Perfusion - Red			
Top Exterior Pocket - Center			
Adult/pediatric (Sprague style) stethoscope	1		
Adult BP cuff (manual)	1		
Top Exterior Pocket – Zipper Lid Pocket			
Trauma shears	1		
Bandage shears	1		
Ring cutter	1		
Tweezers	1		
Penlight	1		
Right Exterior Pocket – Interior Left & Right Nets			
4” emergency trauma dressing (ETD)	2		
CAT tourniquet (orange)	2		
10g – 3.25” decompression needle ***(DECOMPRESSION ONLY) ALS ONLY Procedure***	2		
Right Exterior Pocket – Zipper Pocket			
Hyfin Compact Vent Chest seal (2 pack)	1		
Combat gauze	2		
Left Exterior Pocket – Interior Left Net			
Large arm sling	2		
Small arm sling	2		
Left Exterior Pocket – Interior Right Net			
1” Band-Aids	10		
2” Band-Aids	10		
Left Exterior Pocket – Zipper Pocket			
Triangular bandage	2		
Moldable padded aluminum splint	2		
Top Main Interior Pocket – Left Side			
4” elastic bandage	4		
4” roll gauze, sterile	6		
Top Main Interior Pocket – Right Side			
4” x 4” gauze (2 per pack), sterile	25 Packs		
3” x 4” non-adherent dressing, sterile	25		

Top Main Interior Pocket – Zipper Lid			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
Small Biohazard Waste Bag	2		
Large Biohazard Waste Bag	1		
Middle Main Interior Pocket – Left Side			
Multi-trauma dressing (10” x 30”), sterile	4		
ABD pad (5” x 9”), sterile	4		
Middle Main Interior Pocket – Right Side			
4” x 4” gauze (sufficient quantity to fill the storage container*), non-sterile	*		
Lower Main Interior Pocket – Left Side			
Water for irrigation, 250 mL bottle, sterile (single patient use)	4 btls		
Lower Main Interior Pocket – Right Side			
Heat Pack	1		
Cold pack	3		
Lower/Center Main Interior Pocket – Zippered Lid			
1” silk tape (roll – single patient use)	2		
3” silk tape (roll – single patient use)	1		
1” self-adherent tape (roll – single patient use)	2		

CS19.6 PCEMS ALS MEDICAL RESPONSE BAG

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Bag				
Statpack G3 Perfusion - Blue				
Top Exterior Pocket – Center - Glucometer Kit				
Item Name		**Qty Rqd**	**Qty Present**	**Exp Date**
Glucometer (Bayer Contour)		1		
Glucometer test strips (must be kept in original bottle and must retain bottom of external packaging for initial and monthly quality control testing info)		1 bottle		
Lancets		10		
1” Band-Aids		10		
Alcohol prep pads		10		
Top Exterior Pocket – Interior Left Net				
Oral glucose gel		2		
INCIDENT NUMBER OF USE OR INCIDENT REPORT NECESSARY FOR REPLACEMENT	Glucagon (Glucagen)	1		
Top Exterior Pocket – Interior Right Net – Naloxone Kit				
Naloxone 2 mg/2 mL prefilled		2		
Mucosal atomization device (MAD)		2		
Pelican 1015 Case		1		
Top Exterior Pocket – Lid Zippered Pocket				
Dextrose 10% in Water – 250 mL		1		
20 gtt (Macro) IV drip set		1		
Left Exterior Pocket – Center				
IV Start kit		3		
Left Exterior Pocket – Interior Left Net				
20 gtt (macro) IV drip set		1		
Tourniquet (loose) – IV start		3		
4” x 4” gauze (2 per pack), sterile		10		
1” Silk Tape (roll – single patient use)		1		
1” Self-Adherent Tape (roll – single patient use – color may vary)		1		
Left Exterior Pocket – Interior Right Net				
16 g IV catheter		2		
18 g IV catheter		4		
20 g IV catheter		4		
22 g IV catheter		4		
4” Roll Gauze, sterile		1		

Left Exterior Pocket – Zipper Pocket				
Item Name		**Qty Rqd**	**Qty Present**	**Exp Date**
0.9% Sodium Chloride, 1000 mL		1		
0.9% Sodium Chloride, 10 mL, prefilled syringe		3		
Right Exterior Pocket - Center				
EZIO driver w/ trigger guard (replace if battery indicator light flashing)		1		
Right Exterior Pocket – Interior Left Net				
20 gtt (macro) IV drip set		1		
INCIDENT NUMBER OF USE OR INCIDENT REPORT NECESSARY FOR REPLACEMENT	45 mm EZIO needle set	2		
EZIO Stabilizer		1		
Right Exterior Pocket – Interior Right Net				
INCIDENT NUMBER OF USE OR INCIDENT REPORT NECESSARY FOR REPLACEMENT	25 mm EZIO needle set	2		
EZIO Stabilizer		1		
Right Exterior Pocket – Zipper Pocket				
0.9% Sodium Chloride, 1000 mL		1		
Pressure infusion bag, 1000 mL		1		
0.9% Sodium Chloride, 10 mL, prefilled syringe		3		
Top Center Interior Pocket				
Controlled Substance Box - Complete		Reference separate inventory		
Top Center Interior Pocket – Lid Zipper Pocket				
Carpuject Holder ***(single patient use)***		2		
Lower Center Interior Pocket – Upper Level				
Calcium Chloride 1 g/10 mL (prefilled syringe)		2		
Atropine Sulfate 1 mg/10 mL (prefilled syringe)		2		
Sodium Bicarbonate 50 mEq/50 mL (prefilled syringe or vial format)		2		
Epinephrine 1 mg/10 mL (0.1 mg/mL) prefilled syringe or Epinephrine 1 mg/mL – 1 mL vial kit		6		
Lidocaine 100 mg/5 mL (prefilled syringe)		2		
Individual Single Use Sharps Container		2		
Lower Center Interior Pocket – Lower Level				
Medication Kit		See separate inventory		
Syringe Kit		See separate inventory		
Infusion Kit #1		See separate inventory		
Infusion Kit #2		See separate inventory		
Medication Kit				
Ondansetron 4 mg ODT (unit dose)		2		
Ondansetron 4 mg/2 mL (prefilled syringe)		2		
Diphenhydramine 50 mg/1 mL (prefilled syringe or vial format)		2		
Epinephrine 1 mg/mL – 1 mL vial		2		
Adenosine 6 mg/2 mL		5		
Amiodarone 150 mg/3 mL		3		
Methylprednisolone Sodium Succinate 125 mg/2 mL		2		
Nitroglycerin Aerosol Spray 0.4 mg/spray (Replace when liquid level is below site hole)		1 bottle		
Baby Aspirin 81 mg (chewable tablet – unit dose)		8		
Ipratropium Bromide 0.5 mg/2.5 mL (unit dose)		2		
Albuterol Sulfate 2.5 mg/3 mL (unit dose)		4		
Diltiazem 25 mg/5 mL	***Date deployed_____*** ***MAX OF 30 DAYS OUT OF REFRIGERATION***	1		
Norepinephrine 4 mg/4 mL		1		

Syringe Kit			
Item Name	Qty Rqd	Qty Present	Exp Date
Flambeau 6747TE Box	1		
1 mL Vanishpoint (safety syringe)	4		
3 mL Vanishpoint (safety syringe)	4		
20 mL syringe (luer lock)	2		
10 mL syringe (luer lock)	2		
3 mL syringe (luer lock)	2		
1 mL syringe (luer lock)	2		
Alcohol prep pad	10		
3-way stopcock	2		
18 g x 1.5” blunt fill needle with filter	5		
Infusion Kit #1			
Flambeau 6734TE Box	1		
Medication “ADD” label	4		
Stat2 Pumpette 60 gtt (micro) IV drip set with flow controller	1		
Dextrose 5% in Water – 100 mL	1		
Magnesium Sulfate 2 g/50 mL (premixed)	2		
Lower Center Interior Pocket – Lid Zipper Pocket			
Trauma shears	1		
Small biohazard waste bag	2		
Large biohazard waste bag	1		
Controlled Substance Box			
Seahorse 120 Gray/Black with Cyberlock			
Controlled substance content shield (PCEMS)	1		
Etomidate 40 mg/20 mL	2		
Midazolam 5 mg/1 mL (vial or prefilled syringe)	4		
Fentanyl 100 mcg/2 mL (vial or Carpuject prefilled syringe)	4		

Intentionally Left Blank

CS19.7 PCEMS ALS HANDTEVY PEDIATRIC RESPONSE BAG

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Lid – Exterior (xsmall pocket)			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
Handtevy length-based tape	1		
Lid – Exterior (small pocket)			
Pediatric aerosol mask	1		
Infant simple face mask	1		
Pediatric EtCO2 cannula	2		
Pediatric nasal cannula	1		
Child non-rebreather mask	1		
Trauma shears	1		
Lid – Exterior (large pocket)			
OB kit	1		
Personal Infection Control Kit	1		
Bulb syringe	2		
60 mL syringe with catheter tip	1		
6.5 sterile gloves (pair)	1		
7.5 sterile gloves (pair)	1		
8.5 sterile gloves (pair)	1		
Lid – Interior			
4” Roll gauze (pocket #1)	2		
Non-adherent tape (pocket #2)	1		
1” Silk Tape (pocket #3)	1		
3 Way Stopcock (pocket #4)	3		
Penlight laryngoscope handle (disposable – pocket #5)	1		
Neo/Infant EtCO2 Filterline Set (pocket #5)	2		
Child/Adult EtCO2 Filterline Set (pocket #5)	2		
Pediatric Magill Forceps (pocket #7)	1		
Needle Cricothyrotomy Kit (pocket #7)	2		

Main Bag – Interior Right Side			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
Adult/Pediatric (Sprague style) stethoscope	1		
Pediatric ET tube holder	2		
Pediatric BVM resuscitator with neonate, infant and child masks and filter	1		
Infant (labeled "CHILD") BP cuff (manual)	1		
Child (labeled "SMALL ADULT") BP cuff (manual)	1		
Main Bag – Interior Bottom			
JumpSTART triage/FACES reference sheet (laminated)	2		
Main Bag – Interior Left			
Moldable padded aluminum splint	1		
Pinellas County Handtevy EMS Medication/Equipment Guidebook – Revision 1.1 05/2015	1		
9 – 13-Year-Old Patient Care Pouch	See separate inventory		
7 – 8-Year-Old Patient Care Pouch	See separate inventory		
5 -6-Year-Old Patient Care Pouch	See separate inventory		
3 – 4-Year-Old Patient Care Pouch	See separate inventory		
2-Year-Old Patient Care Pouch	See separate inventory		
1 Year Old Patient Care Pouch	See separate inventory		
Under 1 Year Old Patient Care Pouch	See separate inventory		

Under 1 Year Old Patient Care Pouch			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
2.5 mm ET tube (uncuffed)	1		
3.0 mm ET tube (cuffed)	1		
Miller "0" laryngoscope blade	1		
Miller "1" laryngoscope blade	1		
40 mm OPA	1		
50 mm OPA	1		
12 Fr NPA	1		
14 Fr NPA	1		
6 Fr suction catheter	1		
8 Fr suction catheter	1		
22 g IV catheter	1		
24 g IV catheter	1		
6 Fr Salem Sump OG tube	1		
Salem Sump anti-reflux valve	1		
10 mL syringe (luer-lock)	1		
Lubricating jelly pack	3		

1-Year Old Patient Care Pouch			
Item Name	Qty Rqd	Qty Present	Exp Date
3.5 mm ET tube (cuffed)	1		
Miller “1” laryngoscope blade	1		
60 mm OPA	1		
16 Fr NPA	1		
18 Fr NPA	1		
10 Fr suction catheter	1		
20 g IV catheter	1		
22 g IV catheter	1		
24 g IV catheter	1		
6 Fr Salem Sump OG tube	1		
Salem Sump anti-reflux valve	1		
10 mL syringe (luer-lock)	1		
Lubricating jelly pack	3		

2-Year Old Patient Care Pouch			
4.0 mm ET tube (cuffed)	1		
Miller “2” laryngoscope blade	1		
60 mm OPA	1		
20 Fr NPA	1		
10 Fr suction catheter	1		
18 g IV catheter	1		
20 g IV catheter	1		
22 g IV catheter	1		
6 Fr Salem Sump OG tube	1		
Salem Sump anti-reflux valve	1		
10 mL syringe (luer-lock)	1		
Lubricating jelly pack	3		

3 – 4-Year-Old Patient Care Pouch			
4.5 mm ET tube (cuffed)	1		
Miller “2” laryngoscope blade	1		
60 mm OPA	1		
22 Fr NPA	1		
10 Fr suction catheter	1		
18 g IV catheter	1		
20 g IV catheter	1		
22 g IV catheter	1		
12 Fr Salem Sump OG tube	1		
10 mL syringe (luer-lock)	1		
Lubricating jelly pack	3		

5 – 6-Year-Old Patient Care Pouch			
Item Name	Qty Rqd	Qty Present	Exp Date
5.0 mm ET tube	1		
Miller "2" laryngoscope blade	1		
Mac "2" laryngoscope blade	1		
60 mm OPA	1		
80 mm OPA	1		
24 Fr NPA	1		
10 Fr suction catheter	1		
18 g IV catheter	1		
20 g IV catheter	1		
12 Fr Salem Sump OG tube	1		
10 mL syringe (luer-lock)	1		
Lubricating jelly pack	3		

7 – 8-Year-Old Patient Care Pouch			
5.5 mm ET tube (cuffed)	1		
6.0 mm ET tube (cuffed)	1		
Miller "2" laryngoscope blade	1		
Mac "2" laryngoscope blade	1		
80 mm OPA	1		
26 Fr NPA	1		
10 Fr suction catheter	1		
18 g IV catheter	1		
20 g IV catheter	1		
18 Fr Salem Sump OG tube	1		
10 mL syringe (luer-lock)	1		
Lubricating jelly pack	3		

9 – 13-Year-Old Patient Care Pouch			
6.0 mm ET tube	1		
7.0 mm ET tube	1		
Miller "3" laryngoscope blade	1		
Mac "3" laryngoscope blade	1		
80 mm OPA	1		
26 Fr NPA	1		
10 Fr suction catheter	1		
12 Fr suction catheter	1		
18 g IV catheter	1		
20 g IV catheter	1		
18 Fr Salem Sump OG tube	1		
10 mL syringe (luer-lock)	1		
Lubricating jelly pack	3		

CS19.8 PCEMS PHILIPS MRX MONITOR/DEFIBRILLATOR (ALS)

Serial #_____ Asset Tag #_____

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Device (inventory looking at the device screen)				
Item Name		**Qty Rqd**	**Qty Present**	**Exp Date**
Printer paper- roll (in printer)		1		
Philips MRx screen protector (in place)		1		
Philips MRx black soft case with shoulder strap (attached)		1		
Philips lithium battery Serial #_____		1		
Philips lithium battery Serial #_____		1		
Left External Pouch				
All cables labeled with matching serial number	Chest lead wire set	1		
	Limb lead wire set (pre-attached to main monitoring trunk cable)	1		
	Main monitoring trunk cable (with appropriate labeling)	1		
Pulse oximeter sensor – boot style (reusable)		1		
Adult long NIBP cuff (pre-attached to NIBP hose)		1		
NIBP hose		1		
Left External Pouch – Inside of Lid				
Adult EtCO2 nasal cannula (one per net pocket)		2		
Rear Pouch - Exterior				
ECG monitoring electrode (packaging may vary)		30		
Rear Pouch - Interior				
Printer paper – roll		1		
Prep razor (safety)		2		
Philips disposable pulse oximetry sensor		2		
Labeled with serial number that matches all monitoring cables	Philips pulse oximetry adapter (for use with disposable pulse oximetry sensor)	1		
70% Isopropyl Alcohol (4 oz. bottle)		2		

Right External Pouch			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
QCPR meter	1		
Therapy/QCPR meter cable	1		
Therapy/QCPR meter cable safety cover	1		
QCPR adhesive pad (each) in protective bag (1 pre-attached to QCPR meter)	3		
Adult/pediatric (greater than 10 kg) multi-function hands free therapy pads)	2		
Right External Pouch – Inside of Lid			
Adult/Pediatric EtCO2 filter line set	2		
Right Side of Carry Handle			
Pit Crew Clinical Tool (attached to device)	1		

CS19.9 PCEMS PHILIPS FR3 AUTOMATED EXTERNAL DEFIBRILLATOR (AED)

Serial #_____ Asset Tag #_____

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Device			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
Pelican 1400 Orange Waterproof Hard Case (PCEMS assets assigned to marine units)	1		
Philips FR3 AED System (soft) Case or Philips FR3 AED Hard Case (non-marine units)	1		
Philips FR3 Pad Sentry Insert	1		
Philips FR3 AED CPR Meter Cradle (non-marine units)	1		
Philips lithium AED battery Serial #_____	1		
Device - Interior			
Philips FR3 Infant/Child Key	1		
Philips FR3 AED 3 Lead Cable and Zipper Case (each)	1		
AMBU Blue Offset ECG Electrode (pack)	1		
Prep razor (safety)	2		
QCPR Meter & QCPR Meter Cable Link Adapter (each)(non-marine units)	1		
QCPR adhesive pad (each) in protective bag (1 pre-attached to QCPR meter)	3		
Adult/pediatric (greater than 10 kg) multi-function hands free therapy pads (one set removed from the packaging and inserted into the pad sentry and plugged into the device)	2		

Intentionally Left Blank

CS19.10 PCEMS MAJOR TRAUMA BAG*

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Main Bag			
5.11 Bailout Bag - Black			
External 3 Front Pockets			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
CAT tourniquet (orange)(2 per pocket)	6		
Right External Pocket			
Combat gauze	2		
ABD pad (5” x 9”), sterile	4		
Left External Pocket			
1” webbing (10 ft. section)	1		
Main Pocket			
4” emergency trauma dressing (ETD)	4		
Multi-trauma dressing (10” x 30”), sterile	4		
3” silk tape	1		
Trauma shears	2		
Hyfin compact vented chest seal (2 pack)	2		

***This bag is located on ALS & BLS First Responder Units ONLY**

Intentionally Left Blank

CS19.11 PCEMS SSCOR III Suction Unit*

Serial #_____

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

***This unit is for all PCEMS authorized ALS & BLS first response units**

Device				
Shoulder pouch		See separate inventory		
REQUIRED TO BE ON CONSTANT CHARGE – BATTERY RUN TEST REQUIRED TO BE COMPLETED ON THE FIRST OF EACH MONTH	Battery – sealed lead acid Lot #_____	1		
CHANGE ALL TUBING (SUCTION AND VACUUM) AND THE CANISTER AFTER EACH USE REGARDLESS OF ANY VISIBLE CONTENTS	Suction canister – complete set (canister, lid, suction tubing, vacuum tubing –	1		
Yankauer (pre-attached to suction tubing)		1		
Shoulder Pouch				
Yankauer		1		
14 Fr suction catheter		2		
18 Fr suction catheter		2		
6.5 sterile gloves (pair)		1		
7.5 sterile gloves (pair)		1		
8.5 sterile gloves (pair)		1		
Pediatric immobilizer (vacuum splint) suction adapter		2		

Intentionally Left Blank

CS19.12 PCEMS Personal Protective Equipment (PPE)

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

PPE Respirator (full-face) Kit (ALS & BLS) – ID #_____

Pinellas County EMS Storage Bag			
Pinellas County EMS Mask Kit Bag	1		
3M 6000 Series Mask (appropriate size per clinician)	1		
3M 7093 Cartridge Filter (2 per mask)	4 eaches		

PPE Suit Kit (ALS & BLS) – ID #_____

Pinellas County EMS Storage Bag			
Main Interior Pocket			
Pinellas County EMS Suit Kit Bag	1		
XXL Tychem suit	2		
XXXL Tychem suit	2		
XXXXL Tychem suit	2		
Side Pocket Interior			
Tychem boot covers (pairs – universal size)	6 pairs		
End Pocket Interior			
Chem tape (roll)	1		

Ballistic Vest Kit (ALS & BLS) – ID #_____

Kit Bag	1		
Rescue Task Force Vest (Level III) MK-II with Side Armor and "Rescue" name patch	1		
Large patient mover – In rear vest back compartment	1		
Vest Front and Rear Rifle Plates (Level III)	1 each		
Vest Utility Pouch (1 – left & 1 – right)	2		
Safety Eyewear (pair – left utility pouch)	1		
Vest Radio Pouch (center)	1		
Batlskin Viper A3 Helmet	1		

Intentionally Left Blank

CS19.13 PCEMS REQUIRED DOCUMENTATION/FORMS

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Paper Format			
Item Name	**Qty Rqd**	**Qty Present**	**Exp Date**
Blood Alcohol Testing Consent form	2		
PCEMS Patient Care Record/EMS Cognitive Evaluation form	3		
PCEMS Patient Care Record Supplemental/Supplemental Refusal form	3		
Electronic Format – ID #_____			
Panasonic Toughbook with ePCR software -(primary patient care documentation) – ***Fire ONLY!!!***	1		
Microsoft Surface Pro with ePCR software – (primary patient care documentation) ***Sunstar ONLY!!!***	1		
PCEMS Computer Stylus *(ensure compatibility – CF19, CF20 or Surface Pro)*	2		
Panasonic Toughbook Battery – ***Fire ONLY!!!***	2		
EMS Communication Plan – Volume II – September 2017 (paper or electronic) - ***Transport Capable Units ONLY!!***	1		
Miscellaneous			
Patient Chain of Custody Bags (e.g. medications, personal belongings)	3		
Licensing			
FL Department of Health ALS or BLS vehicle permit sticker (visible on windshield)	1		
Medical Operations Manual – Current Version (electronic or hard copy)	1		

Intentionally Left Blank

CS19.14 VEHICLE SUPPLEMENTAL EQUIPMENT & MEDICAL SUPPLIES

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Equipment & Medical Supplies – Patient Care Action Area							
Item Name	**Ambulance**		**Fire**			**Qty Present**	**Exp Date**
	ALS Ambulance	**BLS Ambulance**	**ALS Transport Capable Rescue**	**ALS Medic Unit, Squad, Truck, Pumper or Engine**	**BLS Engine, Squad, Truck, Pumper, Utility**		
Finger Pulse Oximeter, Portable (in Pelican 1010 case)	-	1	-	-	-		
Adult/Pediatric Sprague Rappaport Stethoscope	1	1	1	-	-		
Infant BP Cuff	1	1	1	-	-		
Child BP Cuff	1	1	1	-	-		
Adult BP Cuff	1	1	1	-	-		
Lrg. Adult BP Cuff	1	1	1	-	-		
Glucometer, Bayer Contour	1	1	-	-			
Glucometer test strips – bottle (retain bottom of external packaging for quality control testing)	1	1	-	-			

Equipment & Medical Supplies - Reserve							
Item Name	Ambulance		Fire			Qty Present	Exp Date
	ALS Ambulance	BLS Ambulance	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper or Engine	BLS Engine, Squad, Truck, Pumper, Utility		
M6 oxygen cylinder (min. 1000 psi) - spare		1	1	1	-		
"D" oxygen cylinder (min. 1000 psi) - spare	1	1	1	1	-		
Onboard oxygen (min. "M" cylinder w/500 psi)	1	1	1	-	-		
Oxygen regulator - Onboard oxygen cylinder	1	1	1	-	-		
O2 flowmeter (onboard oxygen) with hose barb adapter – min. 2, 4, 6, 8, 10, 15, 20, 25L flow settings	2	2	2	-	-		
Adult nasal cannula	8	4	-	-	-		
Adult non-rebreather mask	4	2	-	-	-		
Adult aerosol mask	2	-	-	-	-		
Nebulizer Setup (Nebutech)	4	-	-	-	-		
Size 3 King LTS-D airway	1	-	-	-	-		
Size 4 King LTS-D airway	1	-	-	-	-		
Size 5 King LTS-D airway	1	-	-	-	-		
60 mL luer lock syringe	1	-	-	-	-		
Adult tube holder	1	-	-	-	-		
Adult BVM resuscitator with adult mask and filter	1	1	1	1	-		
Pediatric BVM resuscitator with child, infant and neonate masks and filter	1	1	1	1	-		
OPA 80mm, 90mm, 100mm, 110mm	1 each	1 each	-	-	-		

Item Name	Ambulance		Fire			Qty Present	Exp Date
	ALS	BLS	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper or Engine	BLS Engine, Squad, Truck, Pumper, Utility		
Adult/pediatric EtCO2 filterline set	1	-	1	1	-		
Adult (large) CPAP setup	1	-	1	1	-		
Child CPAP setup	1	-	-	-	-		
Superset with Mask Elbow Adapter	1	-	-	-	-		
Medium laryngoscope handle	1	-	-	-	-		
Suction canister with suction and vacuum tubing (disposable)	1	1	1	1	-		
Mac "3" laryngoscope blade	1	-	-	-	-		
Mac "4" laryngoscope blade	1	-	-	-	-		
Miller "4" laryngoscope blade	1	-	-	-	-		
6.0 ET tube (cuffed)	1	-	-	-	-		
7.0 ET tube (cuffed)	1	-	-	-	-		
7.5 ET tube (cuffed)	1	-	-	-	-		
8.0 ET tube (cuffed)	1	-	-	-	-		
8.5 ET tube (cuffed)	1	-	-	-	-		
Pocket Bougie	1	-	-	-	-		
Cold Pack	3	3	-	-	-		
Heat Pack	2	2	-	-	-		
1" Band-Aids	10	10	-	-	-		
2" Band-Aids	10	10	-	-	-		
1" Silk Tape	2	2	-	-	-		
3" Silk Tape	2	2	-	-	-		
1" Self-adherent Tape	2	2	-	-	-		
4" Roll Gauze, Sterile	2	2	-	-	-		
10" x 30" Trauma Dressing	-	2	-	-	-		
Moldable padded aluminum splint	2	2	2	2	-		
C-collar, AMBU Perfit Ace	2	2	2	2	-		
C-collar, AMBU Mini Perfit Ace	2	2	2	2	-		

Item Name	Ambulance		Fire			Qty Present	Exp Date
	ALS	BLS	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper or Engine	BLS Engine, Squad, Truck, Pumper, Utility		
20 gtt (macro) IV drip set	7	-	-	-	-		
IV Start Kit	8	-	-	-	-		
16 g IV catheter	2	-	-	-	-		
18 g IV catheter	6	-	-	-	-		
20 g IV catheter	8	-	-	-	-		
22 g IV catheter	4	-	-	-	-		
Stat2 Pumpette 60 gtt (micro) IV drip set with flow controller	1	-	1	-	-		
1 mL Vanishpoint (safety syringe)	4	-	-	-	-		
3 mL Vanishpoint (safety syringe)	4	-	-	-	-		
20 mL syringe (luer-lock)	2	-	-	-	-		
10 mL syringe (luer-lock)	2	-	-	-	-		
3 mL syringe (luer-lock)	2	-	-	-	-		
1 mL syringe (luer-lock)	2	-	-	-	-		
3-way stopcocks	2	-	-	-	-		
18 g x 1.5” blunt fill needle with filter	5	-	-	-	-		
Naloxone 2 mg/2 mL prefilled	2	-	-	-	-		
Mucosal atomization device (MAD)	2	-	-	-	-		
Dextrose 10% in Water 250 mL	2	-	-	-	-		
0.9% Sodium Chloride, 1000 mL	7	-	-	-	-		
0.9% Sodium Chloride, 10 mL (prefilled syringe)	6	-	-	-	-		
Sodium Bicarbonate 50 mEq/50 mL (prefilled syringe or vial)	2	-	-	-	-		

Item Name	Ambulance		Fire			Qty Present	Exp Date
	ALS Ambulance	BLS Ambulance	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper or Engine	BLS Engine, Squad, Truck, Pumper, Utility		
Epinephrine 1 mg/10 mL (0.1 mg/mL) prefilled syringe or Epinephrine 1 mg/mL – 1 mL vial kit	5	-	-	-	-		
Ondansetron 4 mg ODT (unit dose)	2	-	-	-	-		
Ondansetron 4 mg/2 mL (prefilled syringe)	2	-	-	-	-		
Diphenhydramine 50 mg/1 mL (prefilled syringe or vial)	2	-	-	-	-		
Epinephrine 1 mg/mL – 1 mL Vial	2	-	-	-	-		
Adenosine 6 mg/2 mL	5	-	-	-	-		
Methylprednisolone Sodium Succinate 125 mg/2 mL	2	-	-	-	-		
Nitroglycerin Aerosol Spray 0.4 mg/spray	1 bottle	-	-	-	-		
Baby Aspirin 81 mg (chewable tablet – unit dose)	8	-	-	-	-		
Ipratropium Bromide 0.5 mg/2.5 mL (unit dose)	2	-	-	-	-		
Albuterol Sulfate 2.5 mg/3 mL (unit dose)	4	-	-	-	-		
Diltiazem 25 mg/5 mL	1	-	-	-	-		
Norepinephrine 4 mg/4 mL	1	-	-	-	-		
Pelican 1015 Case	1	-	-	-	-		
ECG monitoring electrodes (50 total electrodes)	Pack-aging Varies	Pack-aging Varies	-	-	-		

Item Name	Ambulance		Fire			Qty Present	Exp Date
	ALS Ambulance	BLS Ambulance	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper or Engine	BLS Engine, Squad, Truck, Pumper, Utility		
Alcohol prep pads	10	10	-	-	-		
Blood specimen draw kit	2	-	2	2	-		
OB birthing kit	1	1	1	1	-		
Head Immobilizer	2	1	1	1	-		
Large patient mover	2	2	1	1	-		
Disposable restraints (pairs)	2	2	2	2	-		
Poly style limb restraints (wrist and ankle) – **reusable**	2 pairs	-	2 pairs	-	-		
Poly style limb restraint belts (wrist and ankle) – **reusable**	2 pairs	-	2 pairs	-	-		
Poly style limb restraint protective liners (wrist and ankle) – **disposable**	5	-	5	-	-		
Triage tags – FL Version – Rev. 5/12 (50 tags/pack)	1 pack	1 pack	1 pack	1 pack	-		
Triage ribbon dispenser system (complete with tape – green, red, yellow, black, magenta) ***(Fire ONLY!!!)***	-	-	2	2	-		
Tamper Evident Security Bags	5	5	-	-	-		
Patient Belonging Bags	5	5	-	-	-		
Bed pan	2	2	2	-	-		
Urinal	2	2	2	-	-		
Moldex FastFit N95 Mask	2	2	-	-	-		
3M 1870+ N95 Mask	2	2	-	-	-		
Infectious linen bags (YELLOW)	3	3	3	3	-		
Small Biohazard Waste Plastic Bag (RED)	4	4	-	-	-		

Item Name	Ambulance		Fire			Qty Present	Exp Date
	ALS Ambulance	BLS Ambulance	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper or Engine	BLS Engine, Squad, Truck, Pumper, Utility		
Large Biohazard Waste Plastic Bag (RED)	4	4	-	-	-		
Biohazard Waste Bag Impervious Container	1	1	1	-	-		
Individual Single Use Sharps Container	2	2	3	3	-		
Sharps disposal container (vehicle)	1	1	1	1	-		
Hand Sanitizing Wipe	50	50	-	-	-		
Infection control kit (*per person)	*	*	*	*	-		
Clorox hydrogen peroxide cleaner/disinfectant	1 bottle	1 bottle	1 bottle	1 bottle	-		
Alcohol, 4 oz bottle	-	2	-	-	-		
Tough wipe towels (box)	1	1	1	1	-		
Nitrile gloves (non-sterile) – appropriate size	Multiple Pairs	Multiple Pairs	Multiple Pairs	Multiple Pairs	-		
Primary stretcher and 3 straps	1	1	1	-	-		
Stretcher sheets (fitted and flat)	10	10	5	-	-		
Pillow, disposable	2	2	2	-	-		
Pillow Case	10	10	5	-	-		
Blanket – Cot quilt ***(Sunstar ONLY – for warmth)***	1	1	-	-	-		
Blanket – cotton for warmth (disposable)	4	4	4	4	-		
Blanket – yellow – patient rain cover (disposable)	2	2	2	2	-		
Pedi-mate pediatric restraint device	1	1	1	-	-		
Vacuum splint (complete)	1	1	1	1	-		

Item Name	Ambulance		Fire			Qty Present	Exp Date
	ALS Ambulance	BLS Ambulance	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper or Engine	BLS Engine, Squad, Truck, Pumper, Utility		
Long spine board with four straps	2	1	1	1	-		
Scoop Stretcher	1	1	1	-	-		
Stair Chair	1	1	-	-	-		
Patient Slider	2	1	-	-	-		
Sager splint	1	1	1	1	-		
Child car seat ***(Sunstar ONLY)***	1	-	-	-	-		

CS19.15 PCEMS REQUIRED VEHICLE MECHANICAL & OPERATIONAL READINESS

(This protocol reflects required compliance with 64J-01 F.A.C.)

Date Completed (mm/dd/yyyy)	
Unit ID #	
Completed By: (first and last name)	
EMS ID#	
Comments	

Vehicle – Mechanical/Operational - All ALS & BLS Permitted Units

Vehicle		
Item Name	**Qty Rqd**	**Comments**
Exhaust system		
Brake, tail and backup lights		
Headlights – high & low beams		
Turn signals – front & rear		
Emergency lighting (all)		
Back-up audible warning		
Siren		
Steering wheel horn		
Windshield wipers		
Tires		
Vehicle free of rust and dents		
Doors open, close & lock properly		
Windows, windshield & rear/side view mirrors intact		
Exterior lettering identifying the name of the licensee and unit number		
Lockable compartment storage of ALL pharma items		
Flashlight with batteries	1	
ABC Extinguisher (minimum 5 lbs.) – fully charged, inspected, tagged and secured	2	

Mechanical/Operational - ALS & BLS Transport Capable

Vehicle		
Item Name	**Qty Rqd**	**Comments**
IV ceiling holder	2	
Overhead grab rail	1	
Bench seat & three sets of seatbelts – pt. compt.		
Installed suction (minimum 300 mmHg vacuum)		
"NO SMOKING" signs	2	
Interior lights, loading lights & exterior flood lights		
Heat and air conditioning with fan		
Sanitation and maintenance		
Word "AMBULANCE" – sides, back and mirror image on front windshield ***(Sunstar ONLY)***		

Intentionally Left Blank

UNIVERSAL

UNIVERSAL

U1 UNIVERSAL APPROACH TO PATIENT CARE

	GOALS OF CARE
ADULT and PEDIATRIC	• Provide every patient with a professional, complete and accurate assessment, all indicated treatment to your certification level, and transport to an appropriate facility • Maintain a high level of suspicion for injury or illness • Treat every patient with courtesy and respect, with appreciation of his or her individual dignity and with protection of his or her need for privacy

BLS

Certified EMT's, when acting independently on a BLS unit or as part an ALS patient care team, shall ensure completion of all applicable BLS care in the Universal Protocol and all other appropriate treatment protocols and clinical standards

- **General Considerations:**
  - Ensure scene safety and employ "Universal Precautions" on every patient
  - Bring all appropriate equipment to the patient's side, based upon pre-arrival notes
  - Determine number of patients, request additional resources, and initiate triage when appropriate (Ref. CS17)

- **Patient Assessment:**
  - Perform full assessment (history, exam, diagnostic testing) appropriate to a patient's condition and/or complaint
  - Obtain baseline and repeat vital signs:
    - Minimum two sets (including at least SBP, HR, RR, GCS, and Pain Scale if GCS 15) at least 5 minutes apart.
    - Assess and document vital signs before and after each administration of a controlled substance/sedating medication
    - Recommended additional/ongoing vital sign frequency by patient severity category in minutes:

RED	YELLOW	GREEN
5	10	15

  - Utilize the Pediatric Assessment Triangle (PAT) to assess a pediatric patient (Ref. CT1)
  - Utilize the Handtevy Pediatric Length Based Tape for age/weight estimation, confirmation of caregiver provided age/weight information, and determination of appropriate equipment sizing and medication dosing of a pediatric patient
  - Determine presence of any indwelling medical devices or external medical equipment (Ref. CP26)

- **Treatment:**
  - If the patient has evidence of dyspnea, apply supplemental O2
  - Provide ventilation assistance (BVM and airway adjunct) as needed (Ref. CP1.1, CP3.1)
  - Proceed to the appropriate treatment protocol for a patient's specific condition

Note: *if a pediatric specific protocol does not exist, implement the appropriate adult protocol*

- **Transport:**
  - Ensure safe and appropriate transport:
    - Utilize an approved patient restraint device for patients not in Spinal Precautions:
      - Stretcher or seatbelts for an adult patient
      - Pedi-Mate or appropriately sized car seat for a pediatric patient
    - Transport to the appropriate facility per the destination protocol (Ref. CS4)
    - Provide appropriate and accurate pre-arrival notification and bedside report to the receiving facility

- **Documentation:**
  - Complete appropriate and accurate patient care documentation (Ref. CS7):
    - Chief complaint, past history, medications, allergies
    - Any bystander interventions (e.g. dispatch directed Aspirin)
    - Baseline and repeat vital signs and pain/distress levels
    - All assessments and interventions (including name of performing clinician)
  - Narrative (Ref. CS9)

ALS

Certified Paramedics, as part of the patient care team, shall ensure completion of all applicable BLS and ALS care in this and all appropriate treatment protocols and clinical standards

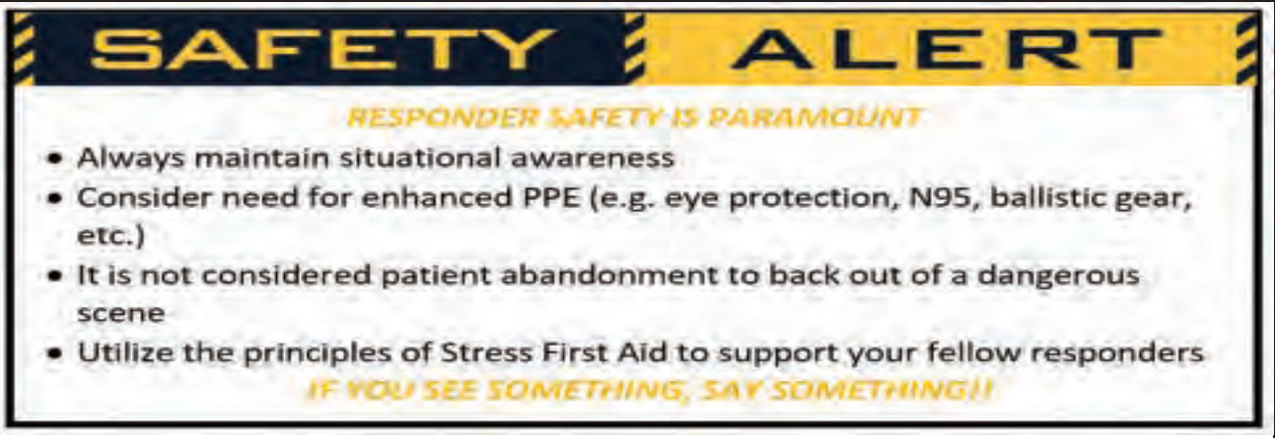
- **Patient assessment and monitoring:**
  - When indicated, ensure continuous cardiac monitoring (should not be interrupted for routine patient movement or uploading data/entering data management mode)
  - When indicated, ensure continuous waveform capnography (Ref. CP5)
  - Assess and document vital signs before and after each administration of a controlled substance/sedating medication
- **Treatment:**
  - If the patient SpO2 is less than 94% or has evidence of dyspnea apply supplemental O2
  - Provide airway management as required (Ref. CP1, CP3)
  - Ensure vascular access for medication administration in all patients that are unstable, potentially unstable, or require intravenous medication administration (Ref. CP21, CP25)

- Proceed to the appropriate protocol(s) and perform all ALS assessments and interventions as appropriate for patient's specific condition and authorized by protocol or OLMC

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS



QUALITY MEASURES

- Two complete sets of vital signs at least 5 minutes apart
- SpO2 measured and if less than 94% was O2 administered
- Chief Complaint documented
- Medical history, medications, and allergies of the patient documented

REFERENCES

- Pinellas County EMS Medical Quality Management Plan
- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

Intentionally
Left Blank

AIRWAY

AIRWAY

A1 FOREIGN BODY AIRWAY OBSTRUCTION

ADULT ONLY (Peds Ref. P1)	GOALS OF CARE
	Rapidly intervene to relieve severe or complete airway obstructions.

BLS

- Have suction readily available
- Mild/partial obstruction:
  - ***DO NOT interfere*.** Monitor the patient for signs of worsening or severe/complete foreign body airway obstruction
  - Allow the patient to clear their airway by coughing
  - Reassure the patient and allow for position of comfort
- Severe/complete obstruction:
  - If responsive:
    - Perform abdominal thrusts until object is expelled or pt. becomes unresponsive
      - Use chest thrusts if obese patient (unable to encircle the patient's abdomen)
      - Use chest thrusts if patient in late stage pregnancy
  - If unresponsive:
    - Start Compression Performance Resuscitation (Ref. CP9)
    - Check and remove any visible foreign body in the airway each time the airway is opened during Compression Performance Resuscitation
    - ***DO NOT perform blind finger sweeps***

ALS

- If unresponsive:
  1. Perform direct laryngoscopy:
     a. Attempt to remove foreign body at or above cords with Magill forceps
     b. If unable to visualize foreign body (e.g. below cords), perform endotracheal intubation (Ref. CP1.3)
  2. If still unable to ventilate:
     a. Deflate endotracheal tube cuff
     b. Attempt to push the obstruction deeper with the endotracheal tube
     c. Retract endotracheal tube to original position, re-inflate endotracheal tube cuff and attempt ventilation
  3. If all prior interventions unsuccessful, perform surgical cricothyrotomy (Ref. CP2)

OLMC

- Consult Online Medical Control Physician as needed.

PEARLS
• Signs of foreign body airway obstruction include an acute onset of respiratory distress with coughing, gagging, stridor or wheezing • A severe obstruction develops when a cough becomes silent, respiratory effort increases and is accompanied by stridor or unresponsiveness • ***DO NOT delay transport for multiple intubation attempts*** • Transport to the closest hospital is mandatory for an unmanageable/uncontrolled airway (Ref. CS4)

QUALITY MEASURES
1. Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • https://eccguidelines.heart.org/circulation/cpr-ecc-guidelines/part-5-adult-basic-life-support-and-cardiopulmonary-resuscitation-quality/?strue=1&id=10-5

A2 ASTHMA/CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

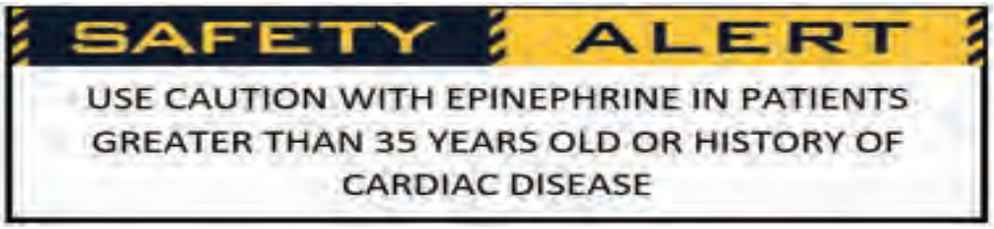
ADULT ONLY (Peds Ref. P2)	GOALS OF CARE
	Recognize and treat obstructive respiratory pathophysiology in an aggressive and safe manner

BLS

- Allow the patient to assume position of comfort
- Assist patient with their own medication, as needed (e.g. albuterol, metered dose inhaler (MDI), epinephrine auto-injector) (Ref. CP22.1)
- Provide ventilation assistance (BVM with adjunct) if in respiratory failure

ALS

- Bronchodilator aerosol therapy:
  - Albuterol 2.5 mg mixed with ipratropium 0.5 mg. May repeat x 1 ***followed by***
  - Albuterol 2.5 mg repeat as needed
- Administer methylprednisolone sodium succinate 125 mg slow IVP
- Monitor EtCO2 and SpO2
- Assess cardiac rhythm and treat dysrhythmias (Ref. C4, C5)
- Obtain 12-lead ECG
- If no improvement with initial aerosol treatment, may initiate CPAP (Ref. CP6) and continue aerosol therapy via tee piece (Ref. CP8.2).
- *Asthma Patients Only*:



  - If patient does not improve or is **in extremis at patient contact:**
    - 0.3 mg epinephrine (1 mg/mL concentration) intramuscular in the mid-anterolateral thigh, may repeat once in 3 – 5 minutes, if needed
  - Consider epinephrine drip infusion, if no improvement (OLMC Required – Ref. CT20)
- If patient progresses to respiratory failure, provide ventilation assistance (BVM and adjunct) followed by airway management (Ref. CP1) and continue aerosol therapy via tee piece

OLMC

- Additional doses of intramuscular epinephrine (1 mg/mL concentration)
- Epinephrine drip infusion (Ref. CT20)
- Magnesium sulfate 2 grams intravenous over 10 minutes (recommended only in severe patients after exhausting all other available interventions without improvement)

PEARLS

- Asthma is a deadly disease
- Patients with a history of being intubated in the past may deteriorate rapidly
- A silent chest = pre-respiratory arrest
- Think of tension pneumothorax if patient decompensates after intubation/CPAP

QUALITY MEASURES

1. Bilateral lung sounds documented at least twice (min 5 minutes apart)
2. EtCO2 monitored
3. Respiratory rate improved (if initial less than 8 was final greater than 14 or if initial greater than 35 was final decreased)
4. SpO2 improved (if initial less than 94 was final greater than 94%)
5. Methylprednisolone sodium succinate administered
6. CPAP not applied if contraindicated (SBP less than 90 or GCS less than 14 prior to application)
7. Both nitroglycerin and albuterol not administered to same patient
8. Epinephrine administered if age greater than 35 (tracking only)

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- Pinellas County EMS Medical Quality Management Plan

A3 TRACHEOSTOMY EMERGENCIES

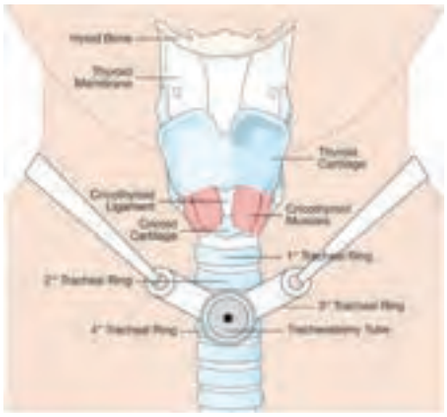
ADULT and PEDIATRIC	GOALS OF CARE
	Recognize and mitigate tracheostomy tube obstruction, displacement, or another malfunction

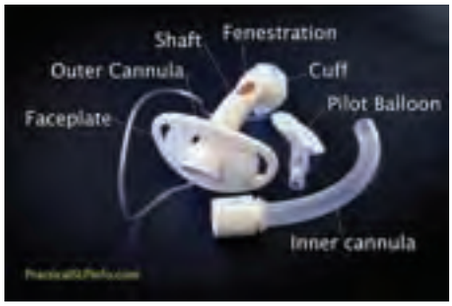
BLS

- If a ventilator-dependent patient is in respiratory distress and the cause is not immediately determined and corrected, remove the patient from the ventilator and begin bag-valve ventilation
- Encourage coughing to attempt to clear a tracheostomy tube obstruction
- Have suction readily available

ALS

- If suspected obstruction of tracheostomy
  - Instill 1 mL – 3 mL of 0.9% sodium chloride or sterile water into the tracheostomy tube
  - Suction as needed
- If unable to clear obstruction, ventilate effectively, and the caretaker is familiar with tracheostomy changes and has a spare tube, assist with the removal and replacement of the tube with a new one (same size or smaller). ***DO NOT FORCE TUBE!***
- If a replacement tracheostomy tube is unavailable and the patient is unable to be ventilated, insert an endotracheal tube of similar size in the stoma, assist ventilations, and hold manual stabilization of tube until arrival at hospital.
- If unable to insert an endotracheal tube, ventilate with bag-valve-mask (BVM) over stoma or over patient's mouth while covering the stoma
- May transport patient on home ventilator if caretaker/family member can accompany the patient during transport to assist with operation of the ventilator





OLMC

- Consult OLMC Physician as needed

PEARLS

- Type of ventilator alarms:

Low pressure or apnea	May be caused by a loose or disconnected circuit or an air leak. Maybe result in inadequate ventilation
Low power	Caused by depleted battery
High pressure	Can be caused by a plugged or obstructed airway or circuit tubing by coughing or by bronchospasm
Setting error	Is caused by ventilator settings outside the capability of the equipment
Power switchover	Occurs when the unit switches from AC power to the internal battery for power

- Signs of tracheostomy tube obstruction:
  - Excess secretions
  - No chest wall movement
  - Cyanosis
  - Accessory muscle use
  - No chest rise with bag-valve ventilation

QUALITY MEASURES

- Pending

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- http://www.tracheostomy.org.uk/NTSP-Algorithms-and-Bedheads

A4 CARBON MONOXIDE (CO) EXPOSURE/TOXICITY

ADULT and PEDIATRIC	GOALS OF CARE
	Rapid identification of a patient(s) at risk for CO exposure and appropriate initiation of displacement therapy with high flow O2

BLS

- Avoid exposure to EMS personnel

- Move patient(s) to fresh air immediately
- Consider need for environmental monitoring (call early for additional resources)
- Administer O2, minimum 15 L via NRBM
- Provide ventilation assistance with BVM and airway adjunct as needed
- Note and inform hospital personnel of any environmental CO reading levels obtained at the scene
- Assess for signs and symptoms of exposure:

Mild	Headache, Nausea, Vomiting, Fatigue
Severe	Altered Mental Status, Respiratory Distress/Arrest

ALS

- If "severe" exposure symptoms:
  - Establish vascular access
  - Provide airway management as needed (Ref. CP1, CP3)
  - Assess cardiac rhythm and treat dysthymias (Ref. C4, C5)
  - Provide seizure control as needed (Ref. M14)
- For patients not requiring ventilation assistance, continue displacement therapy via:
  - Initiation of CPAP (Ref. CP6), ***or***
  - Oxygen 15 L via NRBM, if CPAP contraindicated or not tolerated

OLMC

- Consult Online Medical Control Physician as needed

PEARLS
• Remember Carbon Monoxide (CO) is produced from incomplete combustion and is odorless, tasteless, and colorless • A meter is required for the detection of Carbon Monoxide (CO) • **Do not rely on SpO2 readings (CO will cause false readings)**

QUALITY MEASURES
• Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • https://www.cdc.gov/disasters/co_guidance.html

A5 CYANIDE POISONING – SMOKE INHALATION

ADULT and PEDIATRIC	GOALS OF CARE
	Recognition of potential cyanide exposure and rapid implementation of treatment

BLS

- Avoid exposure to EMS personnel
- Provide appropriate decontamination of the patient to prevent secondary contamination
- Move patient(s) to fresh air immediately
- Consider need for environmental monitoring
- Administer O2 minimum 15 L via NRBM
- Assess for risk of exposure and signs of Cyanide poisoning:

Exposure	Fire or Smoke in an enclosed space, Industrial use of Cyanide, Report or suspicion if intentional exposure
Manifestations of Acute Cyanide Poisoning	Anxiety, headache, confusion, tachypnea, lethargy, agitation, bradypnea, seizures, coma

ALS

- Establish two (2) vascular access sites
- If symptomatic (altered mental status or unstable vital signs) or in cardiac arrest
  - Initiate airway management or CPR as needed (Ref. CP1, CP3, CP9)
  - Administer a Cyanokit 5 grams intravenous over 15 minutes
    - Draw blood samples prior to administration unless in cardiac arrest
    - Use dedicated vascular site for Cyanokit

DO NOT FALL INTO THE TRAP OF ADMINSTERING A CYANOKIT TO AN ISOLATED CARBON MONOXIDE EXPOSURE

  - Assess cardiac rhythm and treat dysrhythmias as needed (Ref. C4, C5, P6, P7)
  - For SBP less than 90, bolus 0.9% sodium chloride to max of 2000 mL (or 20 mL/kg if less than 100 kg) assessing for adverse effects (e.g. pulmonary edema) after each 500 mL
  - May initiate vasopressor support if no response to fluid bolus (Ref. C6)

OLMC

- Consult Online Medical Control Physician as needed

PEARLS

- Cyanide is a product of the combustion of materials commonly found in household furnishings and should be **strongly** considered in all symptomatic patients with significant smoke exposure (e.g. rescued civilians or firefighters)
- It is important to remember that exposure to Cyanide and Carbon Monoxide (CO) are two separate clinical entities. An exposure can occur to either individually or to both combined.

QUALITY MEASURES

- Pending

REFERENCES

- https://emergency.cdc.gov/agent/cyanide/basics/facts.asp
- http://www.medscape.org/viewarticle/559849 The Role of Cyanide in Smoke Inhalation: New Treatment for a Silent Killer 2008
- http://www.cyanideinsight.com/first-responders/the-big-three-signs
- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

CARDIAC

CARDIAC

C1 MEDICAL CARDIAC ARREST

ADULT ONLY (Peds Ref. P3)	GOALS OF CARE
	Provide high quality, evidence based, resuscitation focusing on maximizing perfusion and correction of reversible causes of medical cardiac arrest

BLS

- Establish Compression Performance Resuscitation procedure and Pit Crew Model (Ref. CP9.1, CP10, CT4)
- If downtime greater than four (4) minutes without adequate bystander CPR, perform two (2) minutes of Compression Performance Resuscitation prior to initiating rhythm assessment with AED/Philips MRx
- If downtime less than four (4) minutes or adequate bystander CPR is being performed upon arrival, start/continue compression performance resuscitation and immediately initiate rhythm assessment with AED/Philips MRx and shock if indicated
- Continue Compression Performance Resuscitation and reassess rhythm every two (2) minutes and defibrillate when indicated by AED/Philips MRx
- Document any bystander (non-911 responder) interventions (e.g. CPR, rescue breathing, AED use) that occurred prior to arrival
- Document any occurrence of ROSC and last known patient status at hospital, if transported
- Transport should generally be deferred until after ROSC unless dictated by scene factors

ALS

- Ensure BLS resuscitation steps are completed
- Secure airway and establish vascular access per Compression Performance Resuscitation procedure (Ref. CP9)
- Defibrillate with Philips MRx at 150J as indicated for ventricular fibrillation or pulseless ventricular tachycardia
- Administer medications as indicated:
  - Asystole/Pulseless Electrical Activity:
    - 1 mg epinephrine (0.1 mg/mL concentration) intravenous/intraosseous every 3 – 5 minutes. Maximum 3 doses
  - Ventricular Fibrillation/Pulseless Ventricular Tachycardia:
    - 1 mg epinephrine (0.1 mg/mL concentration) intravenous/intraosseous every 3-5 minutes. Maximum 3 doses
    - If refractory, administer amiodarone 300 mg intravenous/intraosseous, then 150 mg intravenous/intraosseous in 3 – 5 minutes ***OR***
    - If Torsade's de Pointes, administer magnesium sulfate 2 grams intravenous/intraosseous
- Monitor the progress of resuscitation using EtCO2

- Address potential reversible causes:
  - Suspected hyperkalemia – sodium bicarbonate 8.4% (100 mEq) and calcium chloride (1 gram) intravenous/intraosseous (flush intravenous line between meds)
  - Hypoglycemia – dextrose 10% 25 grams intravenous/intraosseous, repeat once in 3-5 min if no effect
  - Opioid overdose – naloxone 2 mg intravenous/intraosseous, repeat once in 3-5 min if no effect
  - Suspected Cyanide exposure – Cyanokit 5 grams intravenous/intraosseous rapid intravenous push (Ref. A5)
  - Suspected tension pneumothorax – Perform needle thoracostomy (Ref. CP7)

OLMC

- Consult for unusual circumstances or other specific treatment requests (e.g. lidocaine, additional naloxone, etc.)
- Consult for defibrillation vector change: in cases of refractory V-fib (e.g. remains in V-fib despite antiarrhythmic drug therapy and at least 3 defibrillation attempts) clinicians may consider placing a second set of pads in an alternate position (e.g. anterior/posterior vs. apex/sternum), switching monitor to new pads, and attempting further defibrillation via new pads.
- Consult for cessation of resuscitation efforts after **minimum 20 minutes of EMS resuscitation attempts** without any response (e.g. no rhythm changes, no increase in EtCO2, etc.)
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Reversible causes of cardiac arrest:

H's	Hypoxia	Hypovolemia	Hypokalemia	Hydrogen Ion (acidosis)
	Hypoglycemia	Hypothermia	Hyperkalemia	

T's	Tension Pneumothorax	Tamponade (cardiac)	Thrombosis (coronary/pulmonary)
	Trauma	Toxins	

- Hyperkalemia should be suspected in patients with renal failure/dialysis or diabetes, and those who take potassium sparing diuretics or potassium supplementation medications.
- New synthetic opiates may require higher doses of naloxone.

QUALITY MEASURES

1. Compressions initiated within 1 minute
2. Extraglottic airway utilized
3. EtCO2 monitored
4. EtCO2 less than 35 if not transported
5. OLMC contacted if not transported
6. ROSC obtained (tracking only)

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • http://circ.ahajournals.org/content/132/18_suppl_2.toc • Pinellas County EMS Medical Quality Management Plan • 2018 JEMS "Variabilities in the Use of IV Epinephrine in the management of Cardiac Arrest Patients" • https://warwick.ac.uk/fac/sci/med/research/ctu/trials/critical/paramedic2/

Intentionally
Left Blank

C2 POST MEDICAL CARDIAC ARREST

ADULT ONLY (Peds. Ref. P4)	GOALS OF CARE
	Aggressively manage post-arrest cardiogenic shock and ensure transport to appropriate receiving hospital

BLS

- Assess post-ROSC vital signs and mental status
- Initiate CPR if pulses lost again (Ref. CP9)
- Assist ventilations with BVM if needed -- **Avoid Hyperventilation!**
- Transport patient to a PCI capable facility

ALS

- Assess cardiac rhythm and treat dysrhythmias as needed (Ref. C4, C5)
- Obtain 12-Lead ECG and declare STEMI Alert, if indicated (Ref. C3)
- If SBP less than 90 mmHg:
  - Bolus 0.9% Sodium Chloride to max of 2000 mL (or 20 mL/kg if less than 100 kg) assessing for adverse effects (e.g. pulmonary edema) after each 500 mL **AND**
  - Norepinephrine Drip Infusion 1 – 10 mcg/min (Ref. CT21)
- If patient with RONF and apparent discomfort from airway or fighting ventilations, may administer Midazolam 2.5 mg intravenous/intraosseous and Fentanyl 50 mcg intravenous/intraosseous. May repeat once in 5 minutes if needed

OLMC

- Additional doses of sedation/pain management
- Consult Online Medical Control Physician as needed

PEARLS

- Aggressive post cardiac care is essential to ensure continued perfusion of vital organs and to maximize outcomes

QUALITY MEASURES

- Pending

REFERENCES

- https://eccguidelines.heart.org/wp-content/uploads/2015/10/2015-AHA-Guidelines-Highlights-English.pdf

Intentionally
Left Blank

C3 SUSPECTED ACUTE CORONARY SYNDROME (ACS)

ADULT ONLY (consult OLMC if suspected ACS in Peds)	GOALS OF CARE
	Identify patients who may be experiencing ACS, initiate appropriate initial medical therapy and hospital pre-notification, and provide rapid transport to definitive care

BLS

- If no ALS available, assist patient with self-administration of Aspirin by mouth (if not previously taken):
  - Four 81 mg chewable baby aspirin **or**
  - One 325 mg aspirin tablet

ALS

- Assess cardiac rhythm and treat dysrhythmias (Ref. C4, C5)
- Obtain 12-lead ECG
- Declare STEMI Alert or PREACT STEMI Alert as indicated below, transmit ECG (must include patient name and date of birth), and notify receiving facility (Ref CT7):

STEMI ALERT	PreACT STEMI Alert	
Anginal Equivalent	Anginal Equivalent	No DNR Order
ST segment elevation greater than 1 mm in two or more contiguous leads	ST segment elevation greater than 2 mm in two or more contiguous leads	No significant arrhythmia
	Heart rate less than 130	No paced rhythm
	Patient age 30 to 90	
	Patient able to give consent	
	Pain less than 24 hours	
	QRS complex less than 0.12 seconds (Okay if RBBB)	
	PARAMEDIC CONFIDENT IN STEMI IMPRESSION AND AGREE WITH APPROPRIATE CANDIDACY	

ALS (cont.)

- Administer Aspirin 324 mg (four 81 mg chewable baby aspirin) if not already taken
- Establish vascular access
- Administer nitroglycerin 0.4 mg sublingual every 3 – 5 minutes until chest pain/anginal equivalent resolves
  - Contraindications
    - SBP less than 90 mmHg
    - Recent use of erectile dysfunction medications:

Taken within 12 hours	**Stendra (Avanafil)**
Taken within 24 hours	Levitra (Vardenafil), Staxyn (Vardenafil), Viagra (Sildenafil)
Taken within 48 hours	Cialis (Tadalafil)

- If SBP less than 90 mmHg:
  - Administer fluid bolus, 500 mL 0.9% sodium chloride. May repeat to maximum 2000 mL
  - If evidence of cardiogenic shock (e.g. SBP less than 80 mmHg, pulmonary edema, etc.) (Ref. C6)
- If unable to achieve symptom relief with nitroglycerine in suspected ACS, may initiate pain management with fentanyl as needed (Ref. M13)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Anginal equivalents include difficulty breathing, syncope, palpitations, unexplained nausea, fatigue, unease, diaphoresis, unexplained jaw, arm, epigastric, or shoulder pain
- Maintain a high index of suspicion in the geriatric population as their complaints are often vague and nonspecific
- If an inferior wall myocardial infarction is suspected:
  - IV access is preferred prior to the administration of nitrates due to the risk of hypotension (NOTE: IV access is never *required* prior to initiating nitroglycerin).
  - ***May*** consider performing right sided electrocardiogram (ECG) to assess for ST segment elevation in V4R

QUALITY MEASURES
1. 12-lead ECG performed 2. 12-lead ECG transmitted, if STEMI Alert 3. Nitroglycerin administered if not allergic or SBP less than 90 4. Aspirin administered if not allergic 5. Final pain score less than initial pain score 6. 12-Lead performed within 5 minutes of at patient (Tracking Only)

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • Pinellas County EMS Medical Quality Management Plan

Intentionally
Left Blank

C4 BRADYCARDIA

ADULT ONLY (Peds. Ref. P6)	GOALS OF CARE
	Identification and treatment of brady-dysrhythmias

BLS

- Obtain baseline and repeat vital signs
- If patient has evidence of dyspnea, apply supplemental O2
- Shock position as required

ALS

- Establish vascular access
- Assess cardiac rhythm and treat as follows:

Stable – Asymptomatic	Stable – Symptomatic	Unstable (e.g. hypotension, altered mental status)
Obtain 12 lead ECG to assess for ischemia or other abnormalities	SBP less than 90, bolus 0.9% sodium chloride to max of 2000 mL (or 20 mL/kg if less than 100 kg) assessing for adverse effects (e.g. pulmonary edema) after each 500 mL **and** Atropine 0.5 mg bolus. Repeat every 3 – 5 minutes. Maximum combined dosing 3 mg	Initiate transcutaneous pacing (Ref. CP14) **and** May give atropine 0.5 mg while preparing to pace, but **DO NOT DELAY PACING!**
Consider underlying causes	Obtain 12 lead ECG to assess for ischemia or other abnormalities	o Midazolam: ▪ First Dose: 2.5 mg intravenous/intramuscular ***OR*** 5 mg (2.5 mg per nare) intranasal ▪ Second Dose (if required after 3-5 min): 2.5 mg intravenous/intramuscular or 5 mg intranasal (2.5 mg per nare)

OLMC

- Norepinephrine Drip Infusion 1 – 10 mcg/min (Ref. CT21)
- Epinephrine Drip Infusion 2 – 5 mcg/min (Ref. CT20)
- Calcium Chloride for suspected calcium channel blocker overdose induced bradycardia
- Additional sedation
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- 12 lead ECG should be completed early to rule out an acute myocardial infarction (AMI), but it should not delay treatment if the patient is unstable
- Generally, do not administer Atropine in the presence of acute coronary ischemia or an AMI. An Atropine mediated increase in heart rate may worsen ischemia or increase the size of an infarct
- Atropine may be attempted in Mobitz Type 2 or third-degree AV block with a new wide QRS complex in the absence of an AMI/ischemia
- Consider a lower dose of Midazolam (e.g. ½ dose) in patients greater than 60 years old or less than 60 kg

QUALITY MEASURES

If Midazolam administered:

1. Complete set of vital signs before and after each administration
2. EtCO2 documented after each administration
3. Waste documented if name of administering clinician matches crew on PCR
4. Midazolam dose does not exceed max or OLMC contact initiated
5. Benzodiazepines and opiates not mixed

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- https://eccguidelines.heart.org/wp-content/themes/eccstaging/dompdf-master/pdffiles/part-7-adult-advanced-cardiovascular-life-support.pdf
- Pinellas County EMS Medical Quality Management Plan

C5 TACHYCARDIA (WIDE/NARROW)

ADULT ONLY (Peds. Ref. P7)	GOALS OF CARE
	Identification and treatment of tachydysrhythmias

BLS

- Shock position as required

ALS

- Identify and treat underlying cause, if secondary tachycardia
- Establish vascular access
- Determine stability/instability: Unstable = persistent tachyarrhythmia causing hypotension (SBP less than 90 mmHg), acutely altered mental status, signs of shock, chest discomfort, acute heart failure
- Assess cardiac rhythm and treat as follows:

STABLE - WIDE	
Vagal Manuevers (***excluding carotid massage***)	
Regular - monomorphic	amiodarone 150 mg infusion over minimum of ten minutes. Repeat once if tachycardia re-occurs
Irregular	amiodarone 150 mg infusion over minimum of ten minutes. Repeat once if tachycardia re-occurs
Irregular – Torsades	magnesium sulfate 2 grams intravenous over a minimum of ten minutes

STABLE - NARROW	
Vagal Manuevers (***excluding carotid massage***)/ fluid challenge	
Regular	adenosine 6 mg rapid intravenous push
	adenosine 12 mg rapid intravenous push
	If no change, consult OLMC
Regular – history of atrial fibrillation	Diltiazem 0.25 mg/kg slow intravenous push. Max single 20 mg dose
Irregular	Diltiazem 0.25 mg/kg slow intravenous push. Max single 20 mg dose

UNSTABLE – WIDE NARROW		
If patient condition permits, pre-medicate with midazolam 2.5 mg – 5 mg intravenous. May repeat one time in five minutes, if needed		
Regular – narrow or wide	100j, 120j, 150j, 170j,	synchromized cardioversion
Irregular – narrow	120j, 150j, 170j	synchromized cardioversion
Irregular – wide or polymorphic	150j	unsynchronized defibrillation

OLMC

- Additional sedation

PEARLS

- Primary tachycardia rates are generally over 150/minute
- Secondary tachycardia rates are usually, but not always lower
- Ventricular rates less than 150/minute usually do not cause signs or symptoms
- ***DO NOT*** delay immediate cardioversion for the acquisition of the 12 Lead ECG or sedation if the patient is unstable
- Keys to management
  - Determine if pulses are present
  - If pulses are present, is the patient stable, borderline unstable or obviously unstable
  - Provide treatment based on the patient's condition and rhythm. It may be best to monitor the patient versus treat the patient if they are minimally symptomatic

QUALITY MEASURES

<u>If Midazolam given:</u>

1. Complete set of vital signs before and after each administration
2. EtCO2 documented after each administration
3. Waste documented if name of administering clinician matches crew on PCR
4. Midazolam dose does not exceed max or OLMC contact initiated
5. Benzodiazepines and Opiates not mixed

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- Pinellas County EMS Medical Quality Management Plan

C6 CARDIOGENIC SHOCK

ADULT ONLY (consult OLMC if suspected cardiogenic shock in Peds)	GOALS OF CARE
	Rapidly identify and aggressively treat cardiogenic shock

BLS

- Shock position as required

ALS

- Establish vascular access
- Assess cardiac rhythm and treat dysrhythmias as needed (Ref. C4, C5)
- For SBP less than 90 mmHg, bolus 0.9% sodium chloride to max of 2000 mL (or 20 mL/kg if less than 100 kg) assessing for adverse effects (e.g. pulmonary edema) after each 500 mL
- Norepinephrine Drip Infusion 1 – 10 mcg/min (Ref. CT21)
- Obtain 12-lead ECG

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Destination should be closest PCI facility

QUALITY MEASURES

1. Pending

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

Intentionally
Left Blank

C7 CONGESTIVE HEART FAILURE (CHF)/PULMONARY EDEMA

ADULT ONLY (consult OLMC if suspected CHF in Peds)	GOALS OF CARE
	Accurate assessment, appropriate stabilization, and rapid transport to definitive care

BLS

- Allow patient to assume position of comfort
- Assist with one dose of patient's own prescription nitroglycerin, if available and SBP greater than 120 mmHg

ALS

- Establish vascular access
- Assess cardiac rhythm and treat dysrhythmias as needed (Ref. C4, C5)
- Administer nitroglycerin continuously every 3 – 5 minutes based on patient's SBP:
    - SBP greater than 90 mmHg – nitroglycerin 0.4 mg SL
    - SBP greater than 120 mmHg – nitroglycerin 0.8 mg SL
    - SBP greater than 160 mmHg – nitroglycerin 1.2 mg SL
        - Contraindications
            - SBP less than 90 mmHg (Ref. C6)
            - Recent use of erectile dysfunction medications:

Taken within 12 hours	**Stendra (Avanafil)**
Taken within 24 hours	Levitra (Vardenafil), Staxyn (Vardenafil), Viagra (Sildenafil)
Taken within 48 hours	Cialis (Tadalafil)

- Initiate CPAP unless contraindicated (Ref. CP6)
- Obtain 12-lead ECG

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Consider alternate causes of abnormal lung sounds (Pneumonia, COPD, etc.) if clinical picture not fully consistent with CHF
- Be vigilant in identifying and treating what is causing the heart failure exacerbation (e.g. AMI, PE, etc.)

QUALITY MEASURES
1. Bilateral lung sounds documented at least twice (min 5 minutes apart) 2. EtCO2 monitored 3. Respiratory rate improved (if initial less than 8 was final greater than 14 or if initial greater than 35 was final decreased) 4. SpO2 improved (if initial less than 94 was final greater that 94%) 5. BP improved (if initial SBP greater than 140 was final less than 140) 6. Nitroglycerin administered or documented contraindications (erectile dysfunction meds or SBP less than 90) 7. CPAP not applied if contraindicated (SBP less than 90 mmHg or GCS less than 14 prior to application) 8. Both Nitroglycerin and Albuterol not given to same patient 9. If Nitroglycerin administered, was first dose less than 5 min after at patient (Tracking only)

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • Pinellas County EMS Medical Quality Management Plan

MEDICAL

MEDICAL

M1 ABDOMINAL PAIN/NAUSEA & VOMITING

ADULT and PEDIATRIC	GOALS OF CARE
	Manage symptoms, search for, and appropriately treat underlying or alternate causes (e.g. pregnancy complications, cardiac, trauma, etc.)

BLS

- Assess vital signs including pain using the numeric scale or the Wong-Baker Faces scale (Ref. CT15)
- Allow patient to assume position of comfort unless spinal precautions are required

ALS

- Establish vascular access
- Obtain 12-Lead ECG, if epigastric pain or concern for cardiac etiology
- If nauseated and/or vomiting, administer:
  - Antiemetic
    - Adult: ondansetron 4 mg slow intravenous push (IVP) or ondansetron oral dissolving tablet (ODT) 4 mg. May repeat once in fifteen (15) minutes, as needed
    - Pediatric: ondansetron slow intravenous push (IVP) or ondansetron oral dissolving tablet (ODT). May repeat once in fifteen (15) minutes, as needed
  - Fluids
    - Adult: 500 mL 0.9% sodium chloride bolus for dehydration/symptom control. Refer to T1 for fluid resuscitation/BP goals if SBP less than 90 mmHg or internal hemorrhage/gastrointestinal bleeding is suspected
    - Pediatric: 0.9% sodium chloride bolus
- Initiate pain management for **ACUTE** onset abdominal pain (Ref. M13, P15)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Consider potential underlying causes for nausea/vomiting such as acute coronary syndrome, head trauma, bowel obstruction, pregnancy, drug side effects, etc.
- Consider the potential of gastrointestinal bleeding and assess for presence of hematemesis, coffee ground emesis, rectal bleeding, rectal trauma, or recent abdominal trauma
- Many of the potential side effects of ondansetron are related to rapid administration of the injectable format.

QUALITY MEASURES

1. Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

M2 ALLERGIC REACTION & ANAPHYLAXIS

ADULT ONLY (Peds. Ref. P8)	GOALS OF CARE
	Reverse allergic reactions and provide early and aggressive treatment of anaphylaxis

BLS

- Assess for presence and extent of skin changes (e.g. rash, hives, swelling, etc.)
- Assess for signs of severe reaction/anaphylaxis:
  - Mucosal – severe swelling of lips, tongue, or throat
  - Respiratory—severe wheezing, stridor, or respiratory distress
  - Cardiovascular—SBP less than 90 mmHg, severe tachycardia (greater than 140 bpm), change in mental status
- If severe symptoms and epinephrine auto-injector is available, may administer (Ref. CP22.1)
- Provide ventilatory assistance with BVM and airway adjunct, if needed (Ref. CP1.1)

ALS

- If severe symptoms/anaphylaxis immediately initiate:
  - 0.3 mg epinephrine (1 mg/mL concentration) intramuscular in the mid-anterolateral thigh, may repeat once in 3 – 5 minutes, if needed
  - Perform airway management as needed (Ref. CP1)
  - Administer 0.9% sodium chloride 500 mL, repeat to max 2000 mL, if no evidence of pulmonary edema
- Diphenhydramine 50 mg intravenous, intramuscular or intraosseous
- Methylprednisolone sodium succinate 125 mg intravenous push (IVP)
- Albuterol 2.5 mg nebulized for wheezing/shortness of breath, may repeat once
  - May administer via inline tee piece if assisting ventilations or active airway management
- Obtain 12-lead ECG after any epinephrine administration

OLMC

- Additional doses of intramuscular epinephrine (1 mg/mL concentration)
- Epinephrine drip infusion 1 - 4 mcg/min (Ref. CT20)
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Epinephrine should be the first treatment in patients with severe symptoms/anaphylaxis (e.g. prior to diphenhydramine and methylprednisolone sodium succinate)

QUALITY MEASURES

- Pending

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

Intentionally Left Blank

M3 BEHAVIORAL EMERGENCY

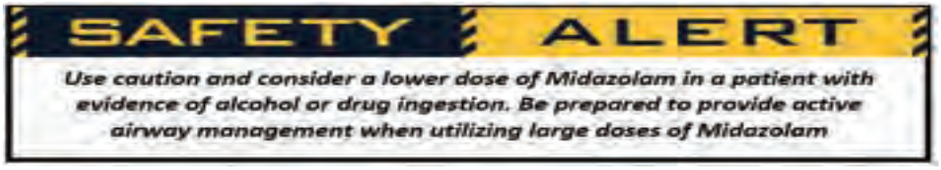
ADULT and PEDIATRIC	GOALS OF CARE
	Ensure the safety of both the patient and all responders

BLS

- Request law enforcement if needed and not already dispatched
- Obtain baseline and repeat vital signs and assess mental status
- If unable to safely obtain vital signs, assess airway, breathing and circulation from a distance
- Attempt to verbally de-escalate the patient (see PEARLS)
- If necessary, for safety and adequate personnel available, place patient in soft or hard restraints, using the minimal amount of force necessary (Ref. CP23)
    - Check and document distal pulse, motor, and sensation (PMS) before, immediately after, and every ten (10) minutes of any restrained limb
    - ***DO NOT*** restrain a patient in the prone position
- Assess for and address underlying medical/traumatic conditions (e.g. diabetes, hypoxia, ETOH, narcotics, head injury, etc.)

ALS

- Establish vascular access, if able to do so safely
- **ADULTS ONLY**: For uncooperative **and potentially violent** patients who are not able to be verbally de-escalated or otherwise safely restrained:
    - Midazolam:
        - First Dose: 2.5 mg intravenous/intramuscular ***OR*** 5 mg (2.5 mg per nare) intranasal
        - Second Dose (if required after 3-5 min): 2.5 mg intravenous/intramuscular or 5 mg intranasal (2.5 mg per nare)
- **ADULTS ONLY**: For ***actively violent patients who pose an <u>immediate</u> threat*** to responders or themselves, who are not able to be verbally de-escalated or otherwise safely restrained:



    - Midazolam:
        - Initial Dose: 5 mg intravenous/intramuscular ***OR*** 10 mg intranasal (5 mg per nare)
        - Second Dose (if required after 3-5 min): 2.5 mg intravenous/intramuscular or 5 mg intranasal (2.5 mg per nare)
- It's mandatory to frequently assess and document patient's vital signs including EtC02 and SpO2, as well as cardiac rhythm any time chemical restraints are employed
- Obtain 12-Lead ECG

- Assess and treat cardiac dysrhythmias (Ref. C4, C5, P6, P7)
- Obtain blood glucose measurement (Ref. M5, P11)
- Consider possibility of poisoning/overdose (Ref. M12, head trauma (Ref. T1), hypoxia and other underlying causes of behavioral change/altered mental status

OLMC

- Midazolam administration for a pediatric patient
- Additional midazolam for adults
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Chemical sedation should only be used to facilitate patient and crew safety. Every effort should be made to use verbal de-escalation and simple restraint prior to employing chemical sedation.
- Verbal de-escalation techniques should include explanation of the current situation to the patient, treatment plan and outcome for compliance versus noncompliance using a professional demeanor
- Intravenous or intranasal drug administration is preferred over intramuscular for chemical sedation due to shorter onset of action.
- Any increase in EtCO2 greater than 45 mmHg or decrease in SpO2 less than 94% should prompt concern for over sedation and respiratory depression. Clinicians should be prepared to aggressively intervene.

QUALITY MEASURES

If Midazolam given:

1. Complete set of vital signs before and after each administration
2. EtCO2 documented after each administration
3. Waste documented if name of administering clinician matches crew on PCR
4. Midazolam dose does not exceed max or OLMC contact initiated
5. Benzodiazepines and opiates not mixed

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- https://www.acep.org/clinical---practice-management/clinical-policy--critical-issues-in-the-diagnosis-and-management-of-the-adult-psychiatric-patient-in-the-emergency-department
- Pinellas County EMS Medical Quality Management Plan

M4 SUSPECTED CEREBRAL VASCULAR ACCIDENT (CVA)

ADULT ONLY (consult OLMC if suspected CVA in Peds)	GOALS OF CARE
	Recognize patients potentially experiencing a CVA, gather critical history, and rapidly transport to appropriate receiving facility

BLS

- If CVA suspected:
  1. Determine and document time interval:
     a. ***EXACT*** time of symptom onset or discovery (hh:mm)
     b. Last ***KNOWN*** Normal Time (hh:mm) (may or may not be same as onset)
     c. If symptoms were present upon awakening from sleep
     d. Name and phone number of individual who witnessed event
  2. Perform FAST Stroke Screening exam (Ref CT17)
  3. Declare "STROKE ALERT" if:
     a. Positive Stroke Screening Exam ***AND***
     b. Time interval less than 24 hrs
        i. Use last known normal if exact onset unknown or symptoms present upon awakening from sleep
  4. Determine presence of any of the following "Complex Stroke" upgrade criteria:
     a. FAST-ED score greater than or equal to four (4) (Ref. CT17)
     b. Suspected intracranial hemorrhage (ICH)
     c. Any previous ICH, brain tumor, or cerebral aneurysm
     d. Any head trauma, head or spine surgery, or stroke in last 3 months
     e. Active internal bleeding or known bleeding disorder
     f. Any anticoagulation other than aspirin
  5. Determine appropriate destination:
     a. If no "complex stroke" upgrade criteria and Time Window less than 3.5 hrs → Closest Stroke Center (Primary or Comprehensive)
     b. All others ("Complex Stroke" or time greater than or equal to 3.5 hrs) –> Comprehensive Stroke Center
- Obtain baseline and repeat vital signs
- If the patient has evidence of dyspnea, apply supplemental O2 (avoid unnecessary O2 in the stroke patient)
- If suspected intracranial hemorrhage:
  - Elevate head of bed 30 degrees
  - Reference T1 for further care/resuscitation goals
- Determine capillary blood glucose, if available
- Provide ventilation assistance with BVM and airway adjunct, if needed (Ref. CP1.1)

ALS

- Establish vascular access
- Perform airway management as needed (Ref CP1)
- Determine capillary blood glucose level, to rule out hypoglycemia as cause of symptoms
- Assess cardiac rhythm and treat dysrhythmias as needed (Ref. C4, C5)
- Obtain 12-Lead ECG, if able

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Avoid interventions that may:
  - decrease cerebral perfusion (e.g. lower blood pressure)
  - increase metabolic rate (e.g. unnecessary supplemental oxygen, glucose, or warming) in the setting of a suspected stroke, as these will increase ischemia

QUALITY MEASURES

- Stroke screening tool completed and STROKE ALERT within 5 minutes
- Glucose checked
- Scene time less than 15 minutes (goal 10 minutes)
- Time of Onset, Last Known Normal, and Witness contact information documented

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- https://www.ahajournals.org/doi/abs/10.1161/STR.0000000000000158

M5 DIABETIC EMERGENCY

ADULT ONLY (Peds. Ref. P11)	GOALS OF CARE
	Rapidly reverse hypoglycemia and provide supportive care to patients experiencing diabetic emergencies

BLS

- Obtain baseline and repeat vital signs and assess mental status
- Apply supplemental oxygen if evidence of dyspnea
- Provide ventilation assistance with BVM and airway adjunct, if needed (Ref. CP1.1)
- Determine capillary blood glucose level
  - Determine capillary blood glucose level
  - If hypoglycemia (less than 60 mg/dL) or if symptomatic and able to protect their own airway administer 15 g oral glucose
- If suspected hypoglycemia and patient has an insulin pump, turn it off
- Assess for and treat possible underlying conditions (e.g. hypoxia, overdose, head injury, etc.)

ALS

- Establish vascular access
- If hypoglycemia (less than 60 mg/dL) or symptomatic:
  - 15g oral glucose gel if conscious and able to protect their own airway ***OR***
  - 25g dextrose (250 mL of D10W) intravenous ***OR***
  - 1 mg of glucagon intramuscular, if unable to complete either above option
  - Repeat capillary blood glucose level 5 - 10 minutes after treatment and if still less than 60 mg/dL or symptomatic, repeat treatment once
- If hyperglycemia (greater than 300 mg/dL):
  - 0.9% sodium chloride 500 mL may repeat once if no sign of pulmonary edema.
- Perform endotracheal intubation as needed (Ref. CP1.3)

OLMC

- Requests for utilization of intraosseous access to treat hypoglycemia
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- If in doubt, it is safer to assume hypoglycemia rather than hyperglycemia
- Alcoholics frequently develop hypoglycemia
- Use caution obtaining refusal for transport if the patient is taking long acting hypoglycemic agent (e.g. Lantus, Levemir, Glyburide (Diabeta))

QUALITY MEASURES
1. Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

M6 DROWNING/SUBMERSION

ADULT ONLY (Peds. Ref. P12)	GOALS OF CARE
	Rapidly intervene to remove patient from hazard and minimize impact

BLS

- Consider Spinal Precautions (Ref. CT11)
- Remove wet clothing and keep warm
- Administer O2 minimum 15 L via NRBM
- Suction as needed
- Provide ventilation assistance using BVM and airway adjunct, if needed (Ref CP1.1)

ALS

- Obtain vascular access
- If bronchospasm:
  - Aerosol therapy
    - Albuterol 2.5 mg and ipratropium 0.5 mg, may repeat x 1
    - Albuterol 2.5 mg, repeat as needed
- If rales, decreased Sp02, significant dyspnea initiate CPAP (Ref. CP6)
  - May continue aerosol therapy with t-piece (Ref. CP8.2)
- If respiratory failure, perform endotracheal intubation (Ref. CP1.3)
  - May continue aerosol therapy with t-piece (Ref. CP8.3)
  - ***DO NOT*** delay ventilation and oxygenation for suctioning of foam
- Assess and treat cardiac dysrhythmias (Ref. C4, C5)
- Obtain 12-lead ECG, if able

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- The current long spine board in the system will float, but will not support a patient
- Be prepared to turn an immobilized patient due to the high occurrence of vomiting
- Drowning alone doesn't meet defined trauma alert criteria

QUALITY MEASURES

- Pending

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

Intentionally Left Blank

M7 COLD EMERGENCY

ADULT ONLY (Peds. Ref. P13)	GOALS OF CARE
	Remove patient from environment, initiate warming and appropriate supportive care

BLS

- Remove the patient from the cold environment
- Remove wet clothing and gently dry the skin by patting, not rubbing, with dry towels
- Initiate re-warming with blankets on top of and underneath the patient; insulate the patient from the ground, backboard/scoop, or stretcher. Apply hot packs in the axilla and groin

- Minimize movement during transport and consider transport to a burn center if evidence of frostbite
- Provide ventilatory assistance with BVM and adjunct, if needed (Ref. CP1.1)

ALS

- Establish vascular access
- If hypotensive, tachycardic, or altered mental status:
  - Intravenous/intraosseous bolus 0.9% Sodium Chloride to max of 2000 mL (or 20 mL/kg if less than 100 kg) assessing for adverse effects (e.g. pulmonary edema) after each 500 mL
- Assess cardiac rhythm and treat dysrhythmias as needed (Ref. C4, C5)
- Obtain 12-lead ECG
- Consider Pain Management for frostbite, if needed (Ref. M13)
- Perform endotracheal intubation as needed (Ref. CP1.3)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Peripheral vascular access may be difficult to establish in a hypothermic patient; intraosseous is acceptable for patients in extremis
- Extended exposure to a patient's environment (e.g. water, air, and ground/floor) even in normal temperatures can cause the loss of body heat
- An elderly patient often has less subcutaneous fat for insulation or may be taking medications that inhibit the body's ability to withstand temperature extremes
- Alcohol or drug use can increase the risk of cold-related emergencies

QUALITY MEASURES

- Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

M8 HEAT EMERGENCY

ADULT and PEDIATRIC	GOALS OF CARE
	Remove patient from environment, initiate cooling, and appropriate supportive care

BLS

- Move patient to an area with shade, air conditioning, air movement, etc.
- Remove excess clothing
- If normal mental status:
  - Provide oral fluids (e.g. cool water, Gatorade, Pedialyte, etc.), if patient able to tolerate
- If altered mental status (heat stroke):
  - Begin rapid cooling: Apply ice packs to neck, armpits, and groin and may cover patient(s) with cool wet sheets
- If Exertional Heat Stoke suspected in an athlete (i.e. organized sports, marathon, etc.):
  - If cooling (cold water immersion or ice water tarp wrap) has been initiated by Athletic Trainers/Sports Medicine personnel, it may be reasonable to delay transport up to 15 minutes to achieve appropriate core temperature reduction provided no need for urgent interventions (i.e. seizure control. arrythmia, airway management, trauma resuscitation etc.)
  - Continue aggressive cooling (ice water tarp wrap) during transport
- Provide ventilation assistance with BVM and airway adjunct, if needed (Ref. CP1.1)

ALS

- Establish vascular access
- If nauseated/vomiting:
  - Ondansetron 4 mg intravenous/intraosseous slow push (2+ minutes) ***OR***
  - Ondansetron 4 mg orally dissolving tablet.
  - May repeat once after in 15 minutes as needed
- If hypotensive, tachycardic, or altered mental status (heat stroke):
  - Bolus 0.9% sodium chloride to max of 2000 mL (or 20 mL/kg if less than 100 kg) assessing for adverse effects (e.g. pulmonary edema) after each 500 mL
- Monitor for seizures and treat per protocol (Ref. M14)
- Assess and treat cardiac dysrhythmias as needed (Ref. C4, C5)
- Obtain 12-lead ECG
- Perform endotracheal intubation as needed (Ref. CP1.3)

OLMC

- Consult Online Medical Control Physician as needed.

PEARLS

- Tricyclic antidepressants, phenothiazine's, anticholinergic medications, alcohol, cocaine, ecstasy, amphetamines, and salicylates may elevate body temperature
- Core temperature (rectal, esophageal, or pill thermometer) is most accurate and preferred. Oral temperature is less accurate. Forehead and tympanic measurements should not be considered accurate enough to guide care.
- Goal is rapid reduction of core temperature to <101.5 in athletes suffering exertional heat stroke

QUALITY MEASURES

- Pending

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- Luke N et al. (2018) Consensus Statement- Prehospital Care of Exertional Heat Stroke, Prehospital Emergency Care, 22:3, 392-397, DOI: 10.1080/10903127.2017.1392666

M9 SUSPECTED SEPSIS

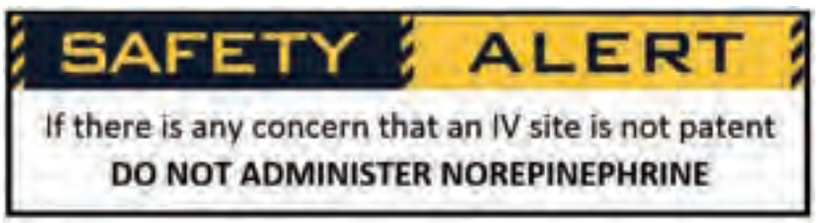
ADULT ONLY (Peds. Ref. P18)	GOALS OF CARE
	Early recognition and aggressive treatment of suspected sepsis

BLS

- Place in shock position if SBP less than 90 mmHg
- Provide ventilation assistance with BVM and airway adjunct, if needed (Ref. CP1.1)
- Assess for and document suspicion/evidence of infection

ALS

- Evaluate for evidence of physiologic response to infection:
  - HR greater than 100
  - RR greater than 20 or EtCO2 less than or equal to 30 mmHg
  - SBP less than 90 mmHg or capillary refill greater than 4 seconds or mottled skin
  - ***Acute*** decreased mental status/confusion or GCS less than or equal to 12
- If suspected infection and greater than or equal to two (2) criteria above, declare *Sepsis Alert*, notify receiving hospital, and initiate early emergency transport
- Establish intravenous access and initiate fluid resuscitation
  - Initial bolus 1000 mL 0.9% sodium chloride
  - If no evidence of pulmonary edema and above criteria have not improved, continue repeated 500 mL boluses until arrival at hospital or a maximum of 20 mL/kg reached
- If SBP remains less than 90 mmHg after initial 1000 mL bolus, add vasopressor support:
  - Initiate norepinephrine drip Infusion at 1 mcg/min (Ref. CT21)
    - Norepinephrine may *ONLY* be administered via 18 gauge or larger intravenous catheter in the Antecubital Fossa or intraosseous



  - Titrate by 1 mcg/min every 1 minute to SBP greater than 90 mmHg or max rate of 10 mcg/min
- Assess cardiac rhythm and treat dysrhythmias as needed (Ref. C4, C5)
- Obtain 12-lead ECG
- Measure and treat blood glucose level, as needed (Ref. M5)
- Perform airway management/intubation, as needed (Ref. CP1)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Changes in respiratory rate/depth and mental status will be the first physiologic signs visible with occult shock.
- EMS clinicians can have the greatest impact on the mortality of septic patients by focusing on early recognition and aggressive resuscitation, and by notifying our hospital partners of the suspicion of sepsis.
- IMPORTANT — IF YOU SUSPECT IV INFILTRATED WITH NOREPINEPHRINE:
  - RELAY THE FOLLOWING TO THE RECEIVING HOSPITAL: Antidote for Extravasation Ischemia: To prevent sloughing and necrosis in areas in which extravasation has taken place, the area should be infiltrated as soon as possible with 10 mL to 15 mL of saline solution containing from 5 mg to 10 mg of Regitine® (brand of Phentolamine), an adrenergic blocking agent. A syringe with a fine hypodermic needle should be used, with the solution being infiltrated liberally throughout the area, which is easily identified by its cold, hard, and pallid appearance. Sympathetic blockade with Phentolamine causes immediate and conspicuous local hyperemic changes if the area is infiltrated within 12 hours. Therefore, Phentolamine should be given as soon as possible after the extravasation is noted.

QUALITY MEASURES

1. Capillary blood glucose measured
2. IV established and fluid administered
3. At least 1000 mL administered if "Time with patient" greater than or equal to 20 minutes
4. Norepinephrine administered if no response to fluids (e.g. SBP remains less than 90) and "Time with patient" greater than or equal to 25 minutes
5. *Sepsis Alert* declared
6. Final SBP greater than or equal to 90 (Track/Trend only)

   Note: "Time with patient" = "At Patient" to "At Destination"

REFERENCES

- https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=c4de72a8-2a75-4984-ce90-e4870226dc12
- http://www.cdc.gov/sepsis/clinicaltools/index.html
- https://www.acep.org/DART/
- http://survivingsepsis.org/Guidelines/Documents/Hemodynamic%20Support%20Table.pdf
- Pinellas County EMS Medical Quality Management Plan

M10 PREECLAMPSIA/ECLAMPSIA

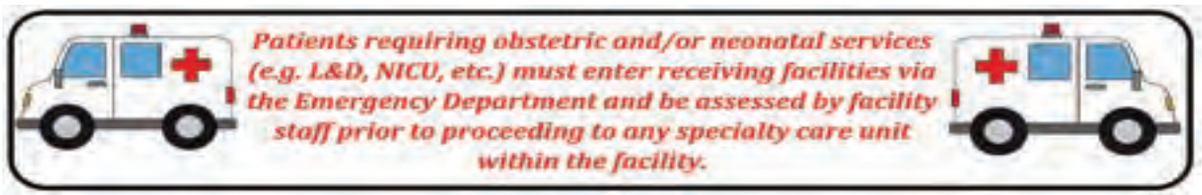
ADULT and PEDIATRIC	GOALS OF CARE
	Early recognition & treatment of preeclampsia/eclampsia in pregnant and post-partum patients

BLS

- Obtain baseline and repeat vital signs and assess mental status
- Provide supplemental O2 regardless of dyspnea/hypoxia
- Obtain as complete a history as possible (see PEARLS next page)
- If seizure protect from environment (Ref. M14, P16)
- Assist ventilations with BVM and airway adjunct, if needed (Ref. CP1.1, CP3.1)
- Initiate early transport to hospital (left lateral recumbent position)
- Consider other underlying etiology such as hypoglycemia, drug overdose, head injury or fever/infection

ALS

- Establish vascular access
- Monitor respiratory status (with SpO2 and EtCO2) closely
- If SBP less than 90 mmHg:
  - Administer 0.9% sodium chloride 500 mL and repeat to max 20 mL/kg, if no signs of pulmonary edema
- If signs of pre-eclampsia: (hypertension, headache, vision changes, right upper quadrant abdominal pain, peripheral edema, dark urine)
  - Transport to closest obstetrical receiving facility



- If seizure (eclampsia):
  - Magnesium sulfate 4 g intravenous over 10 minutes
  - Midazolam
    - 2.5 mg intravenous/intraosseous, repeat every 5 minutes to max combined 10 mg if seizure continues ***OR***
    - 5 mg intranasal (intravenous/intraosseous preferred for additional doses due to need for Magnesium)

  - Transport to closest facility for uncontrolled seizure
- Perform airway management as needed (Ref. CP1, CP3)

OLMC

- Consult OLMC for initiation of Magnesium Sulfate prior to seizing patients presenting with severe hypertension and other signs of pre-eclampsia
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Pre-eclampsia/eclampsia (seizures)
  - Disease of unknown origin
  - Usually occurs after the 20th week of gestation
  - May occur up to two weeks' post-partum

QUALITY MEASURES

If Midazolam administered:

- Complete set of vital signs before and after each administration
- EtCO2 documented after each administration
- Waste documented if name of administering clinician matches crew on PCR
- Midazolam dose does not exceed max or OLMC contact initiated
- Benzodiazepines and opiates not mixed

REFERENCES

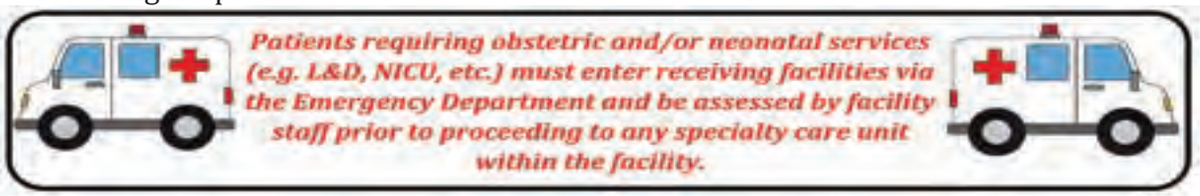
- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- Pinellas County EMS Medical Quality Management Plan
- https://www.acog.org/Clinical-Guidance-and-Publications/Committee-Opinions/Committee-on-Obstetric-Practice/Emergent-Therapy-for-Acute-Onset-Severe-Hypertension-During-Pregnancy-and-the-Postpartum-Period?IsMobileSet=false

M11 OBSTETRICAL EMERGENCY

ADULT and PEDIATRIC	GOALS OF CARE
	Facilitation of imminent delivery. Early recognition and management of obstetrical emergencies

BLS

- Anticipate need for body substance isolation precautions
- Obtain appropriate history including:
  - Gravidity
  - Estimated date of delivery
  - Maternal medical history
  - Parity
  - Prior c-sections and/or complications
  - Any indication of "High-risk" classification by physician
  - Prenatal care
  - Length of Gestation
- Assess for the presence of:
  - contractions
  - length of time between contractions
  - presence/absence of membrane rupture
  - presence/absence of vaginal bleeding.
- Visual inspection of perineum is mandatory if contractions are present and regular in an obviously pregnant female to determine if delivery is imminent (e.g. crowning).
- If delivery is imminent, prepare for and assist with delivery per clinical procedure (Ref. CP27)
- If in active labor, but not crowning, initiate rapid transport to closest obstetrical receiving hospital.



Abnormal Presentation / Emergencies:

- **Prolapsed Umbilical Cord**
  - Elevate patient's hips, place in shock (Trendelenburg) or knee-chest position in order to relieve pressure on the cord, and do not encourage pushing during contractions
  - Elevate the presenting fetal part to relieve pressure on the cord using a gloved hand inserted into the vagina.
  - Do not attempt to reposition the cord. The cord may spontaneously retract, depending on the degree of prolapse, but should never be manually replaced/pushed back in because severe compression may occur.
  - The cord should be gently wrapped in moist gauze
  - Maintain hand position and expedite transport—**prolapsed cord is an emergency**!
- **Breech Presentation**
  - Place patient in knee-chest position
  - Expedite transport

- **Failure of baby to deliver fully:**
  - Hyperflex hips, apply mild suprapubic pressure
  - Trial push with patient in all 4's position
  - If not delivered in 1-2 min with above, expedite transport to closest OB receiving hospital.

ALS

- Initiate IV 0.9% sodium chloride (KVO). If systolic blood pressure is less than 100 mmHg, administer 250 mL bolus and titrate to patient's hemodynamic status.

OLMC

- Consult OLMC Physician as needed or required (Ref. CS10)

PEARLS

- Primary role for EMS is to determine whether the delivery will occur on scene
- ***Digital vaginal exams are NOT to be performed unless providing a critical intervention during the birthing process as listed above***
- Patients with history of multiple births will typically progress quicker through labor
- If presenting part is an extremity, anticipate difficult delivery and expedite transport

QUALITY MEASURES

- Pending

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

M12 POISONING & OVERDOSE

ADULT and PEDIATRIC	GOALS OF CARE
	Recognize common toxidromes and withdrawal syndromes and initiate appropriate care

BLS

- Search for causes and/or clues at the scene
- Avoid exposure to EMS personnel
- Consider fire/hazmat response, if indicated for decontamination
- Obtain baseline and repeat vital signs and assess mental status
- If evidence of dyspnea or altered mental status provide supplemental O2
- Provide ventilation assistance with BVM and airway adjunct, if needed (Ref. CP1.1, CP3.1)
- If suspected opioid overdose and Narcan™ 4 mg prepackaged nasal spray available, administer as directed, may repeat one time in three (3) minutes, as needed
- Consider behavioral/psychiatric issue, diabetic emergency or seizure as alternate cause of symptoms (Ref. M3, M5, M14, P11, P16)
- Ensure receiving hospital is notified if decontamination will be required

ALS

- Establish vascular access
- If SBP less than 90 mmHg, significant tachycardia, altered mental status, or hyperthermia:
    - 0.9% sodium chloride 500 mL repeat to goal of SBP greater than 90 mmHg, if no evidence of pulmonary edema
- Measure blood glucose level and treat as needed (Ref. M5, P11)
- Evaluate for toxidrome or withdrawal/medication reaction syndrome and treat as needed (Ref. CT18):
    - Sympathomimetic: supportive care, if agitated/violent (Ref. M3)
    - Opioid/sedative (not in cardiac arrest):
        - Naloxone 0.5 mg IV may repeat to maximum 4 mg, as needed **OR**
        - Naloxone 2 mg intranasal, may repeat one time in 3 minutes as needed
    - Cholinergic:
        - Atropine 2 mg IV repeat every 2 minutes until secretions dry
        - Consult OLMC for NAAK (Duodote kit) authorization (Ref. CP22.2)
    - Anticholinergic: Supportive care, if agitated/violent (Ref. M3)
    - Opiate/benzodiazepine/alcohol withdrawal
        - If HR greater than 120 or SBP greater than 140 mmHg:
            - Midazolam:
                - First Dose: 2.5 mg intravenous/intramuscular
                - Second Dose (if required after 3-5 min): 2.5 mg intravenous/intramuscular
        - If seizing (Ref. M14, P16)

- Acute dystonic reaction (psychiatric/nausea meds)
  - Diphenhydramine 50 mg IV
  - Midazolam:
    - First Dose: 2.5 mg intravenous/intramuscular
    - Second Dose (if required after 3-5 min): 2.5 mg intravenous/intramuscular
- Oleoresin capsicum (OC)/pepper spray
  - Remove contaminated clothing/contact lenses and flush copiously

- Assess and treat cardiac dysrhythmias as needed (Ref. C4, C5, P6, P7)
- Perform airway management as needed (Ref. CP1, CP3)

OLMC

- Authorization to use Duodote kits in suspected cholinergic (organophosphate/carbamate) poisoning
- Treatment of widened QRS (sodium channel blockade) secondary to anticholinergics, antihistamines, or tricyclic antidepressants (TCS's)
  - Sodium bicarbonate 1 mEq/kg intravenous
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- None

QUALITY MEASURES

If Midazolam administered:

- Complete set of vital signs before and after each administration
- EtCO2 documented after each administration
- Waste documented if name of administering clinician matches crew on PCR
- Midazolam dose does not exceed max or OLMC contact initiated
- Benzodiazepines and opiates not mixed

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- www.rightdiagnosis.com/c/chemical_poisoning_pepper_spray
- http://www.cs.amedd.army.mil/FileDownloadpublic.aspx?docid=ba3991d8-b563-4147-8f26-343cf45e06be
- Pinellas County EMS Medical Quality Management Plan

M13 ACUTE PAIN MANAGEMENT

ADULT ONLY (Peds. Ref. P15)	GOALS OF CARE
	Provide reasonable and safe pain management

BLS

- Obtain baseline and repeat vital signs including pain scores (may use the Wong-Baker Faces scale for patients unable to provide a number) (Ref. CT15)
- Allow patient to assume position of comfort, unless spinal precautions or splinting is required
- Treat specific injuries as needed with splinting/immobilization/cold pack (Ref. T1)
- Refer to appropriate protocol for underlying cause

ALS

- Establish vascular access
- Monitor EtCO2 and SpO2
- Administer fentanyl:
  - 1 mcg/kg intravenous or intraosseous to a maximum single dose of 100 mcg. May repeat every 10 minutes to a maximum combined total dose of 3 mcg/kg ***OR***
  - 1 mcg/kg intranasal to a maximum single dose of 100 mcg (max 1 mL per nare/side). May repeat every 5 minutes to a maximum combined total dose of 3 mcg/kg

- If nauseated and/or vomiting because of an opioid administration, administer:
  - Ondansetron 4 mg slow intravenous push over at least two (2) minutes or intramuscular ***OR***
  - Ondansetron orally dissolving tablet 4 mg
  - May repeat either option once in 15 minutes, as needed
- Refer to appropriate protocol for underlying cause

OLMC

- Consult OLMC Physician as needed

PEARLS

- The objective of pain management is not the complete removal of pain, but rather to make the pain tolerable
- Due to limitation on volume of fluid able to be absorbed across the mucosa, the intranasal dose of fentanyl is not doubled as in other medications. To compensate for this, the dosing frequency is increased when using the intranasal route.
- The co-administration of opioids and benzodiazepines should be avoided as it increases the risk of adverse events (e.g. respiratory depression)

QUALITY MEASURES
1. Complete set of vital signs with pain scale before and after each administration 2. EtCO2 documented after each administration 3. Waste documented if name of administering clinician matches crew on PCR 4. Single fentanyl dose does not exceed max or OLMC contact initiated 5. Total fentanyl dose does not exceed max or OLMC contact initiated 6. Benzodiazepines and opiates not combined

REFERENCES
• http://www.teleflex.com/en/usa/productAreas/ems/documents/AN_ATM_MAD-Nasal-Usage_Guide_AI_2012-1528.pdf • http://wongbakerfaces.org/ • https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm518110.htm • Pinellas County EMS Medical Quality Management Plan

M14 SEIZURE

ADULT ONLY (Peds. Ref. P16)	GOALS OF CARE
	Protect actively seizing patients, address reversible causes, and control seizure activity

BLS

- Obtain baseline and repeat vital signs and assess mental status
- If seizing:
  - Protect patient from injury if actively seizing
  - Provide supplemental O2 at 15L via non-rebreather mask
  - May assist with administration of patient's own seizure medication (e.g. Diastat)
- If post-ictal:
  - Provide supplemental O2 at 15L via non-rebreather mask
  - Suction as needed
  - Consider need for spinal precautions (Ref. CP15, CT11)
- Assist ventilations with BVM device and airway adjunct, if needed (Ref. CP1.1)
- Consider hypoglycemia as reversible cause of seizure (Ref. M5)
- Consider other causes of seizure (trauma, overdose/withdrawal, eclampsia, etc.) (Ref. T1, M12, M10)

ALS

- Initiate vascular access, if able to do so rapidly (if any delay, give first dose intranasal!)
- If actively seizing:
  - Midazolam:
    - First Dose: 2.5 mg intravenous/intramuscular ***OR*** 5 mg (2.5 mg per nare) intranasal
    - Second Dose (if required after 3-5 min): 2.5 mg intravenous/intramuscular or 5 mg intranasal (2.5 mg per nare)
      - Midazolam 2.5 mg intravenous/intraosseous, repeat every five (5) minutes to max 10 mg if seizure continues ***or***
      - Midazolam 5 mg intranasal, repeat once in five (5) minutes if seizure continues

- Measure blood glucose level and treat as needed (Ref. M5)
- Perform airway management as needed (Ref. CP1)

OLMC

- Additional Midazolam
- Administration of medication for atypical seizures
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
• Request Law Enforcement for any patient who was driving prior to a seizure

QUALITY MEASURES
If Midazolam administered: 1. Complete set of vital signs before and after each administration 2. EtCO2 documented after each administration 3. Waste documented if name of administering clinician matches crew on PCR 4. Midazolam dose does not exceed max or OLMC contact initiated 5. Benzodiazepines and opiates not mixed

REFERENCES
• http://www.teleflex.com/en/usa/productAreas/ems/documents/AN_ATM_MAD-Nasal-Usage_Guide_AI_2012-1528.pdf • https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm518110.htm • Pinellas County EMS Medical Quality Management Plan

TRAUMA

TRAUMA

T1 GENERAL TRAUMA CARE

ADULT ONLY (Peds Ref. P17 if age < 16)	GOALS OF CARE
	Accurate assessment, appropriate stabilization, and rapid transport to definitive care

BLS

- Perform Primary Trauma Assessment (ABCDE) and implement initial treatments as needed:
  - Open airway (BLS maneuvers), provide oxygen and assist ventilations at 12 breaths per minute with bag-valve-mask (BVM) device and appropriate airway adjunct
  - Control hemorrhage with direct pressure followed by appropriate device or procedure when indicated – Ref. CP16 and CP18
  - Seal chest wounds – Ref. CP17
  - Assess neurologic function and implement spinal precautions as indicated – Ref. CP15, CT11
  - Expose patient and protect from environment
- Assess trauma transport criteria, declare "*Trauma Alert*" if indicated – Ref. CT9

- Perform Secondary Trauma Assessment (head-to-toe physical exam on exposed skin)
- Implement additional appropriate stabilizing care
  - All major trauma patients should receive supplemental oxygen
  - Stabilize impaled objects in place – ***DO NOT REMOVE***
  - Stabilize flail chest segments
  - Dress wounds - moist sterile for eviscerations, dry and clean for burns
  - Amputated body parts – moist sterile inner packaging, ice/cold pack outer packaging
- Splint fractures and dislocations and document distal motor function, circulation, and sensation before and after; Elevate and apply cold packs when practical

ALS

Except in cases of delayed transport (e.g. entrapment), the only ALS interventions allowed prior to transport are CP1 Airway Management, if BLS maneuvers fail, and CP7 Needle Thoracostomy, as part of a Paramedic level primary trauma assessment and treatment

- Perform Needle Thoracostomy (Ref CP7) for suspected *TENSION* Pneumothorax.
-

- Maintain EtCO2 of 35-45 mmHg (hyperventilation to 30-35 mmHg allowed *ONLY* with signs of ACTIVE herniation – see PEARLS next page)
- Establish IV/Intraosseous Access and initiate fluid resuscitation with 0.9% sodium chloride in 500 mL increments to target and maximum as indicated:
  - Major/Multi-System Trauma – systolic blood pressure (SBP) greater than or equal to 90 mmHg or palpable radial pulse (maximum of 2000 mL)
  - Major Head Injury - SBP greater than or equal to 110 mmHg (maximum of 2 L)
  - Burns – bolus 20 mL/kg (maximum of 2000 mL)
- Implement appropriate pain management – Ref. M13
- Assess patient for underlying or co-morbid medical conditions
- Repeat Primary Trauma Assessment (ABCDE) after treatments and frequently during transport

OLMC

- Consult Online Medical Control Physician as needed and for:
  - Replant services
  - Crush and Compartment Syndrome management
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Treatment Strategy Considerations:
  - In major trauma, excess use of fluids may increase bleeding. However, patients with major head injuries/traumatic brain injuries (TBI) require a higher SBP to support cerebral perfusion and burn patients require replacement of massive fluid losses; Be sure to follow guideline
  - In TBI, single short episodes of SBP less than 90 mmHg, SaO2 less than 90 %, and EtCO2 less than 35 mmHg all independently increase mortality. Consider using an Extraglottic airway device to avoid apneic time associated with endotracheal intubation and be diligent to avoid hyperventilation except with signs of active herniation and then only to a goal of 30 mmHg.
  - Signs of active herniation include rapid decrease in level of consciousness leading to coma, development of unequal pupils or non-reactive pupils, onset of seizure or posturing, and deteriorating vital signs consistent with Cushing's Response
  - Prevent hypothermia. Trauma patients who become hypothermic have increased mortality
- Refer to CS18 for alterations in standard of care during Major Incidents with Ongoing Threats (e.g. Active Shooter Response)

QUALITY MEASURES

1. Scene Time less than 10 minutes (Sunstar) or *Trauma Alert* time less than 5 min (FD)
2. Oxygen delivered
3. IV Established
4. *Trauma Alert* declared if Indicated
5. Spinal precautions employed (Track/Trend only)

REFERENCES
• NAEMT, Pre-hospital Trauma Life Support Committee. American College of Surgeons, Committee on Trauma. (2016). PHTLS: Prehospital Trauma Life Support (8th ed.). Burlington, MA: Jones & Bartlett Learning. • Committee for Tactical Emergency Casualty Care. (June, 2015). Tactical Emergency Casualty Care (TECC) Guidelines. Retrieved 6/28/2016 from http://www.c-tecc.org/images/content/TECC_Guidelines_-_JUNE_2015_update.pdf • Pinellas County EMS Medical Quality Management Plan

Intentionally Left Blank

T2 TRAUMATIC CARDIAC ARREST

ADULT and PEDIATRIC	GOALS OF CARE
	Quality CPR, treat reversible causes, and rapid transport to nearest hospital ER

BLS

- Perform Primary Trauma Assessment (ABCDE) and implement initial interventions as needed:
  - Open airway (BLS maneuvers), provide oxygen and assist ventilations at 12 breaths per minute with bag-valve-mask (BVM) device and appropriate airway adjunct
  - Initiate chest compressions
  - Control hemorrhage with direct pressure followed by appropriate device or procedure, when indicated (Ref. CP16, CP18)
  - Seal chest wounds (Ref. CP17)
  - Implement Spinal Precautions, as indicated (Ref. CP15, CT11)
  - Expose patient and protect from environment
- Declare "Trauma Alert" (Ref. CT9, CT10)

- Notify Receiving Facility as soon as possible

ALS

- Ensure airway control (Ref. CP1, CP2, CP3, CP4)
- Perform bilateral Needle Thoracostomy if any evidence of chest trauma (Ref. CP7)
- Establish vascular access and initiate fluid resuscitation:
  - Adults: 2000 mL 0.9% sodium chloride
  - 14-15 years old: 1500 mL 0.9% sodium chloride
  - 13 years of age and younger: 0.9% sodium chloride Per Handtevy
- Assess patient for underlying or co-morbid medical conditions and initiate appropriate pharmacologic and electrical ACLS treatment (Ref. C1, P3)
- Repeat Primary Trauma Assessment (ABCDE) after treatments and frequently during transport

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
• Resuscitation must be attempted in all cases unless the patient is confirmed pulseless and apneic on arrival (i.e. no signs of life) **and** meets the specific criteria listed in CS14 • EMS Providers may elect to perform resuscitative efforts on trauma arrest patients for a variety of reasons, including scene safety concerns, even though the patient meets criteria for withholding resuscitative efforts • ACLS is secondary to addressing reversible causes in traumatic arrest • A Traumatic Cardiac Arrest patient should not be transported to a freestanding ER. • Refer to CS18 for alterations in standard of care during Major Incidents with Ongoing Threats (e.g. Active Shooter Response)

QUALITY MEASURES
• Pending

REFERENCES
• http://nasemso.org/Projects/ModelEMSClinicalGuidelines/index.asp

T3 ELECTROCUTION/LIGHTNING STRIKE

ADULT and PEDIATRIC	GOALS OF CARE
	Rapidly assess and intervene to resuscitate a victim of electrocution and understand that these patients often survive initial cardiac arrest

BLS

- If in cardiac arrest, initiate Compression Performance Resuscitation/CPR (Ref. C1, P3, CP9)
- Assess neurologic function and implement Spinal Precautions, as indicated (Ref. CP15, CT11)
- Manage Burn injuries as needed (Ref. T6)

ALS

- If in cardiac arrest **or** evidence of significant electrical burns, ensure intravenous/intraosseous access and initiate fluid resuscitation:
    - Adults: 2000 mL 0.9% sodium chloride
    - 14-15 years old: 1500 mL 0.9% sodium chloride
    - 13 years of age or younger: 0.9% sodium chloride Per Handtevy
- If ***NOT*** in cardiac arrest:
    - Establish vascular access
    - Assess for and treat cardiac dysrhythmias (Ref. C4, C5, P6, P7)
    - Obtain 12-Lead ECG
    - Provide Seizure control as needed (Ref. M14, P16)
    - Provide Pain Management as needed (Ref. M13, P15)
    - Perform Airway Management as indicated (Ref. CP1, CP3)
    - Consider need for Trauma Center and/or Burn Center (Ref. CT9, CT10, CT11, CT12, T6)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Lightning strike victims found in cardiac arrest should be considered among our most salvageable patients and every effort should be made at resuscitation!
    - Although burn injuries in lightning patients often look severe, there may be very little internal damage due to current conduction superficially along wet skin and clothes.
    - Electrical shock may cause tetany, seizure, or muscle paralysis including of the diaphragm and pupils. Evidence of respiratory effort and pupillary response are unreliable!
- Large electrical burns may cause electrolyte disturbances such as hyperkalemia

QUALITY MEASURES

- Pending

REFERENCES

- http://nasemso.org/Projects/ModelEMSClinicalGuidelines/index.asp
- Wilderness Medical Society Practice Guidelines for the Prevention and Treatment of Lightning Injuries: 2014 Update https://www.wemjournal.org/article/S1080-6032(14)00274-9/fulltext

T4 EYE INJURY

ADULT and PEDIATRIC	GOALS OF CARE
	Accurate assessment of ocular trauma, prevention of further injury, and safe pain management

BLS

- Collect information regarding mechanism of injury or type of exposure
- Assess for pain, loss of vision and eye muscle function (side-to-side and up-and-down eye motion)
- Encourage and assist patient to remove contact lenses, if possible
- If surface foreign body or chemical exposure is suspected, initiate continuous irrigation with sterile water or 0.9% sodium chloride—may use nasal cannula on bridge of nose
- ***DO NOT*** remove impaled object(s). Secure/stabilize without placing additional pressure on object
- Transport patient in upright position, if possible

ALS

- Establish vascular access
- Provide Pain Management as needed (Ref. M13, P15)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Patients who suffer eye injuries or develop eye pain after using power tools (e.g. metal grinders, etc.) or welding equipment should always be encouraged to seek care immediately due to possibility of severe but initially unapparent injury

QUALITY MEASURES

- Pending

REFERENCES

- http://nasemso.org/Projects/ModelEMSClinicalGuidelines/index.asp

Intentionally Left Blank

T5 BITES/STINGS/ENVENOMATION

ADULT and PEDIATRIC	GOALS OF CARE
	Recognize specific types of envenomation and provided appropriate supportive care and pain management

BLS

- Monitor for and treat signs of allergic reaction/anaphylaxis (Ref. M2, P8)
- Specific Management:
  - Stingray:
    - Refer to T1, P17, or other appropriate trauma protocols for injuries other than isolated distal extremity or if any major hemorrhage
    - Control any active bleeding with pressure over wound
    - Apply hot pack to wound, or if available, submerge injured extremity in hot water

    - Assess for remnants of barb remaining in wound (***DO NOT*** remove)
    - Clean and dress wound appropriately

  - Jellyfish/Man-o-War:
    - *AVOID SELF-CONTAMINATION*
    - Remove stinging cells by scraping with rigid edge (e.g. credit card)
    - Rinse thoroughly with seawater or 0.9% Sodium Chloride IV fluid
    - Apply copious amounts of rubbing alcohol if available

  - Snakebites:
    - Attempt to identify species of snake (***DO NOT*** attempt to capture/kill)
    - Remove all constricting clothing/jewelry from affected extremity
    - Mark area of envenomation to track progression
    - Maintain affected extremity at or below level of heart
    - Splint affected extremity in neutral position

  - Insect Stings:
    - Attempt to identify species of insect, if possible
    - Remove visible stinger via rigid edge (e.g. credit card). ***DO NOT*** use tweezers/forceps
    - Apply cold pack to injury site

ALS
• Consider need for pain management (Ref. M13, P15)

OLMC
• Consult Online Medical Control Physician if needed.

PEARLS
• Stingray: o Consider adding soap or ammonia to hot water, if available • Jellyfish/Man-o-War or Insect Stings: o Consider applying paste of baking soda or flour and water to wound site, if available • Snakebites: o Do not apply tourniquet or use cold pack o If snake is dead/destroyed prior to EMS arrival, transport snake with patient in a closed container, or take a photo of snake

QUALITY MEASURES
• Pending

REFERENCES
• http://nasemso.org/Projects/ModelEMSClinicalGuidelines/index.asp • https://www.diversalertnetwork.org/health/hazardous-marine-life

T6 BURNS

ADULT and PEDIATRIC	GOALS OF CARE
	Assessment of type and extent of burn, initiation of fluid resuscitation and pain management, and transport to appropriate receiving facility

BLS

- STOP the burning process
  - Thermal – Remove any sources of heat or burning clothes and cool the area
  - Chemical burns –
    - Consider Hazmat Team consult or response
    - If able to do so safely, brush off chemical and flush copiously with water
- Cover the burns with a clean dry dressing and keep the patient warm
- Monitor the patient's airway closely and provide ventilation assistance with BVM and airway adjunct, if needed (Ref. CP1.1, CP3.1)
- Assess burn extent and determine appropriate destination (Ref. CT12):
  - For a 2nd and/or 3rd degree burn with a total body surface area (TBSA) greater than 15%, along with multi system trauma, declare trauma alert and transport to the closest trauma center unless the Burn Center at Tampa General Hospital is closer or equal distance by ground or air
  - Any 2nd and/or 3rd degree burns to high risk areas, such as the face/airway, hands, feet, perineum or circumferential burns to the chest or extremities, transport to the Burn Center at Tampa General Hospital
  - For an isolated 2nd and/or 3rd degree burn with a total body surface area (TBSA) greater than 15%, declare trauma alert and transport to the Burn Center at Tampa General Hospital
- Evaluate for blast injury or other associated trauma (Ref. T1, P17)

ALS

- Establish vascular access
- Monitor respiratory status closely with SpO2 and EtCO2
- Perform advanced airway management as needed (Ref. CP1, CP3)
  - Be prepared for immediate airway intervention if there are signs of airway burn and/or edema
- Initiate fluid resuscitation:
  - Adults: 2000 mL 0.9% sodium chloride
  - 14-15 years old: 1500 mL 0.9% sodium chloride
  - 13 years of age or younger: 0.9% sodium chloride Per Handtevy
- Provide appropriate Pain Management (Ref. M13, P15)
- Consider Cyanokit treatment (Ref. A5) see Handtevy for pediatric dosing
- Consider Carbon Monoxide (CO) treatment (Ref. A4)
- Evaluate and treat cardiac dysrhythmias (Ref. C4, C5, P6, P7)
- Obtain 12-lead ECG

OLMC
• Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
• None

QUALITY MEASURES
• Pending

REFERENCES
• http://nasemso.org/Projects/ModelEMSClinicalGuidelines/index.asp

T7 BAROTRAUMA/DIVING INJURIES

ADULT and PEDIATRIC	GOALS OF CARE
	Recognize possible barotrauma/diving injuries and initiate appropriate care

BLS

- Obtain baseline and repeat vital signs and assess mental status
- Administer O2, 15 liters via non-rebreather mask
- Provide ventilation assistance with BVM and airway adjunct, if needed (Ref. CP1.1 CP3.1)
- Obtain and document a thorough dive history
  - Maximum depth and length of dives
  - Number of dives in the last 48 hours
  - Any air travel in last 24 hours
  - Type of compressed air (e.g. oxygen, helium, nitrogen, argon)
  - Was there a rapid ascent or any other emergencies under water
- Assess for and treat other traumatic injuries (Ref. T1, P17)
- Remove wet clothes, keep the patient warm

ALS

- Establish IV access
- Monitor respiratory status closely with SpO2 and EtCO2, ensure high flow O2
- Perform advanced airway management as needed (Ref. CP1, CP3)
- Initiate fluid resuscitation:
  - Adults: 2000 mL 0.9% sodium chloride
  - 14-15 years old: 1500 mL 0.9% sodium chloride
  - 13 years of age or younger: 0.9% sodium chloride Per Handtevy
- Provide appropriate pain management (Ref. M13, P15)
- Evaluate and treat cardiac dysrhythmias (Ref. C4, C5, P6, P7)
- Obtain 12-lead ECG (concern for gas embolism in coronary artery→MI)
- Administer antiemetic for nausea and vomiting as needed:
  - Adults: ondansetron 4 mg slow intravenous push (IVP) ***or*** ondansetron oral dissolving tablet 4 mg. May repeat once in fifteen (15) minutes as needed
  - Peds: ondansetron slow intravenous push (IVP) ***or*** ondansetron oral dissolving tablet. May repeat once in fifteen (15) minutes as needed

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

• Signs and symptoms can occur during dive and up to 48 hours afterwards
• Barotrauma
  o Pneumothorax, Mediastinal Emphysema – pain, dyspnea, decreased of absent lung sounds. Breath holding on ascent, even for 6 – 10 feet may cause.
  o Ears - ruptured ear drum, vertigo, ringing in the ears (tinnitus), partial deafness, nausea/vomiting
• Decompression sickness
  o "The bends " Gas embolisms – symptoms depend on location of bubble blocking blood flow (joint pain, headache, vision change, stroke, PE, MI)
• Bring the patients diving gear if possible
• May contact DAN (Divers Alert Network) 919-684-9111 in consultation with OLMC for hyperbaric chamber resources

QUALITY MEASURES
1. Pending

REFERENCES
• http://nasemso.org/Projects/ModelEMSClinicalGuidelines/index.asp • https://www.diversalertnetwork.org/

PEDIATRIC

PEDIATRIC

P1 PEDIATRIC FOREIGN BODY AIRWAY OBSTRUCTION

PEDIATRIC ONLY	GOALS OF CARE
	Rapidly intervene to relieve severe or complete airway obstructions

BLS

- Have suction readily available
- Mild / partial obstruction:
  - ***DO NOT interfere.*** Monitor the patient for signs of worsening or severe/complete foreign body airway obstruction
  - Allow the patient to clear the airway by coughing
  - Reassure the patient and allow for position of comfort
- Severe/complete obstruction:
  - If responsive:
    - Child - Perform abdominal thrusts until the object is expelled or becomes unresponsive
    - Infant - Deliver repeated cycles of 5 back blows (slaps) then 5 chest compressions until the object is expelled or becomes unresponsive
  - If unresponsive:
    - Start cardiopulmonary resuscitation - after 30 chest compressions, open the airway. If a foreign body is visible, remove it.
    - ***DO NOT perform blind finger sweeps***

ALS

- If unresponsive:
  1. Perform direct laryngoscopy:
     a. Attempt to remove foreign body at or above cords with Magill forceps
     b. If unable to visualize foreign body (e.g. below cords), perform endotracheal intubation (Ref. CP3.2)
  2. If still unable to ventilate after above maneuvers:
     a. Ensure cuff is deflated, then attempt to push the obstruction deeper with the endotracheal tube, then retract endotracheal tube to original position, re-inflate cuff and attempt ventilation
  3. If all prior interventions unsuccessful:
     a. Age less than or equal to 10: Needle Cricothyrotomy (Ref. CP4)
     b. Age greater than 10: Surgical Cricothyrotomy (Ref. CP2)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
• Signs of foreign body airway obstruction include an acute onset of respiratory distress with coughing, gagging, stridor or wheezing • Sudden onset of respiratory distress in the absence of fever or other respiratory symptoms suggests foreign body airway obstruction rather than an infectious cause of respiratory distress, such as croup • A severe obstruction develops when a cough becomes silent, respiratory effort increases and is accompanied by stridor or unresponsiveness • ***DO NOT delay transport for multiple intubation attempts*** • Transport to the closest hospital is mandatory for an unmanageable/uncontrolled airway (Ref. CS4)

QUALITY MEASURES
• Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

P2 PEDIATRIC ASTHMA

PEDIATRIC ONLY	GOALS OF CARE
	Recognize and treat obstructive respiratory pathophysiology in an aggressive and safe manner

BLS

- Allow the patient to assume position of comfort
- Administer supplemental oxygen
- Assist patient with their own medication, as needed (e.g. Albuterol)
- If severe symptoms, and epinephrine auto-injector is available, may administer as below and repeat once if needed in 5 minutes (Ref. CP22.1):
  - Adult auto-injector (0.3 mg) for patients 9 years or older (greater than 30 kg/66 lbs.)
  - Pediatric auto-injector (0.15 mg) for patients 3-9 years old (15-30 kg/33-66 lbs.)
- Provide ventilation assistance with BVM and airway adjunct, if needed (Ref. CP3.1)

ALS

- Aerosol therapy:
  - Albuterol mixed with ipratropium. May repeat x 1 ***followed by***
  - Albuterol, repeat as needed/continuously
- Administer methylprednisolone sodium succinate slow intravenous push (IVP)
- Monitor EtCO2 and SpO2
- If no improvement with initial aerosol treatment, may initiate CPAP (Ref. CP6) and continue aerosol therapy via t-piece (Ref. CP8)
- If patient does not improve or is **in extremis at patient contact:**
  - Epinephrine intramuscular (1 mg/mL concentration) in the mid-anterolateral thigh, may repeat once in 3-5 minutes if needed.
- If patient progresses to respiratory failure, perform airway management (Ref. CP3) and continue aerosol therapy via t-piece (Ref. CP8)

OLMC

- Additional doses of epinephrine intramuscular (1 mg/mL concentration)
- Epinephrine drip infusion (Ref. CT20)
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Asthma is a deadly disease
- A pediatric patient can tolerate an elevated high heart rate. Do not let a high heart rate deter you from administering Albuterol
- Do not attempt invasive airway procedures unless the patient is in respiratory arrest
- Patients with a history of being intubated in the past may deteriorate rapidly
- A silent chest = pre-respiratory arrest
- Think of tension pneumothorax if patient decompensates after intubation/CPAP

QUALITY MEASURES
• Bilateral lung sounds documented at least twice (min 4 minutes apart) • EtCO2 monitored • Respiratory rate improved (if initial less than 8 was final greater than 14 or if initial greater than 35 was final decreased) • SpO2 improved (if initial less than 94 was final greater than 94%) • Methylprednisolone sodium succinate administered • CPAP not applied if contraindicated (SBP less than 90 or GCS greater than 14 prior to application) • Both nitroglycerin and albuterol not given to same patient

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • Pinellas County EMS Medical Quality Management Plan

P3 PEDIATRIC MEDICAL CARDIAC ARREST

PEDIATRIC ONLY	GOALS OF CARE
	Provide high quality, evidence based, resuscitation focusing on maximizing perfusion and correction of reversible causes of medical cardiac arrest

BLS

- Open airway and initiate ventilation assistance with BVM and appropriate airway adjunct (Ref. CP3.1)
- Establish Compression Performance Resuscitation procedure and Pit Crew Model (Ref. CP9.2, CP9.3, CP10, CT5)
- Continue Compression Performance Resuscitation and reassess rhythm every two (2) minutes and defibrillate when indicated by AED/Philips MRx
- Document any bystander (non-911 responder) interventions (e.g. CPR, rescue breathing, AED use) that occurred prior to arrival
- Document any occurrence of ROSC and last known patient status at hospital, if transported

ALS

- Ensure BLS resuscitation steps completed
- Secure airway if unable to adequately ventilate with BVM (Ref. CP3) and establish vascular access per Compression Performance Resuscitation procedure (Ref. CP9.2 CP9.3)
- Assess rhythm and defibrillate as indicated for ventricular fibrillation or pulseless ventricular tachycardia (escalate joules per Handtevy)
- Administer medications as indicated:
  - Epinephrine (0.1 mg/mL concentration), repeat every 3-5 minutes through arrest
  - If continued ventricular fibrillation or pulseless ventricular tachycardia administer amiodarone, may repeat twice as needed
- Place orogastric tube to decompress stomach and facilitate ventilation (Ref. CP20)
- Ensure establishment of effective resuscitation procedures including compressions, ventilations, electrical, and pharmacologic therapy **prior** to initiating transport
- Monitor progress of resuscitation using EtCO2
- Identify and treat potential reversible causes:
  - Suspected hyperkalemia – sodium bicarbonate 4.2% (Dilute 8.4% 1:1 with NS) and calcium chloride
  - Hypoglycemia – dextrose 10%
  - Opioid Overdose – naloxone
  - Suspected Cyanide exposure – Cyanokit (see dosing table in rear of Handtevy)
  - Suspected Tension Pneumothorax – Perform Needle Thoracostomy (Ref. CP7)

OLMC

- Consult for unusual circumstances or other specific treatment request (e.g. Lidocaine, etc.)
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
• If 13 years of age or older, greater than 60 kg, or signs of puberty present, refer to adult cardiac arrest • Hand bore intraosseous (NO DRILL) needle on children less than one (1) year of age

QUALITY MEASURES
• Pending

REFERENCES
• http://circ.ahajournals.org/content/132/18_suppl_2/S519/tab-figures-data • http://circ.ahajournals.org/content/132/18_suppl_2/S526/tab-figures-data

P4 PEDIATRIC POST MEDICAL CARDIAC ARREST

PEDIATRIC ONLY	GOALS OF CARE
	Aggressively manage post-arrest cardiogenic shock and ensure transport to appropriate receiving hospital

BLS

- Assess post-ROSC vital signs and mental status
- Initiate CPR if pulses lost again (Ref. CP9)
- Assist ventilations with BVM if needed - **Avoid Hyperventilation!** (Ref. CP3.1)
- Transport patient to a pediatric receiving facility (Ref. CS4)

ALS

- Assess cardiac rhythm and treat dysrhythmias as needed (Ref. P6, P7)
- Obtain 12-Lead ECG
- If SBP less than 90 mmHg:
  - 0.9% sodium chloride bolus
  - Epinephrine drip infusion - titrate to achieve SBP greater than 90 mmHg (Ref. CT20)
- If patient with RONF and apparent discomfort from airway or fighting ventilations, may administer midazolam intravenous/intraosseous and Fentanyl intravenous/intraosseous. May repeat once in 5 minutes if needed

OLMC

- Additional doses of sedation/pain management
- Norepinephrine drip infusion 1 – 10 mcg/min (Ref. CT21)
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Aggressive post cardiac care is essential to ensure continued perfusion of vital organs and to maximize outcomes

QUALITY MEASURES

- Pending

REFERENCES

- Pending

Intentionally
Left Blank

P5 NEONATAL RESUSCITATION

PEDIATRIC ONLY	GOALS OF CARE
	Perform aggressive neonatal resuscitation in accordance with established guidelines

BLS

- Stimulate, position and warm infant
- Gather gestational and birth history
- Assess for good activity/muscle tone and respiratory effort/strength of cry and initiate resuscitation efforts as below (Ref. CT16):
    - If normal:
        - continue warming and drying, clear secretions and position airway as needed
        - Allow infant to stay with mother prior to transport
    - If abnormal:
        - Position airway, clear secretions, and provide supplemental Oxygen
        - If HR less than 100 provide ventilation assistance with BVM and adjunct (Ref. CP3.1)
        - If HR less than 60 initiate chest compressions as per cardiac arrest protocol (Ref. P3)
- Document Apgar Score at 1 and 10 minutes (Ref. CT16)
- Transport to appropriate facility (Ref. CS4)

ALS

- Ensure BLS treatment as above
- Assess and monitor cardiac rhythm, SpO2, EtCO2
- Continue resuscitation per algorithm (Ref. CP9.3, CT5):
    - If SpO2 not improving perform airway management as indicated (Ref. CP3)
    - If heart rate not improving with ventilation support, establish vascular access as indicated
    - If heart rate remains less than 60, administer epinephrine (0.1 mg/mL concentration)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- None

QUALITY MEASURES

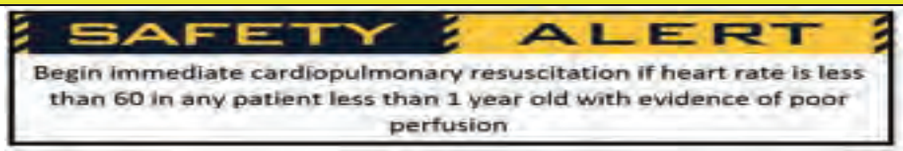
- Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines • http://circ.ahajournals.org/content/132/18_suppl_2/S543 • https://www2.aap.org/NRP/docs/15535_NRP%20Guidelines%20Flyer_English_FINAL.pdf

P6 PEDIATRIC BRADYCARDIA

PEDIATRIC ONLY	GOALS OF CARE
	Recognize and treat primary and secondary bradycardias

BLS



- If signs of poor perfusion (BP less than Handtevy minimum for age, poor capillary refill, change in mental status) place patient in shock position
- If patient has evidence of dyspnea, apply supplemental O2
- Provide ventilation assistance with BVM and airway adjunct if needed (Ref. CP3.1)
- If patient remains symptomatic after assuring adequate oxygenation and ventilation as above, assess for other underlying causes:
  - Suspected hypoglycemia (Ref. P11)
  - If suspected opioid overdose and Narcan™ 4 mg prepackaged nasal spray available, administer as directed, may repeat one time in three (3) minutes, as needed

ALS

- Establish vascular access
- Assess cardiac rhythm
- Assess for and treat common quickly reversible causes:
  - Hypoxia/hypoventilation (Ref. CP3)
  - Suspected hypoglycemia (Ref. P11)
  - Suspected opioid overdose – administer Naloxone, may repeat in 3-5 minutes as needed
- If patient remains bradycardic after addressing above, initiate treatment as follows:
  - Epinephrine (0.1 mg/mL concentration) intravenous/intraosseous, repeat every 3 -5 minutes as needed
  - Atropine intravenous/intraosseous if primary AV block, increased vagal tone, or cholinergic drug toxicity (e.g. organophosphates)
  - Pace patients with 3rd degree AV block (Ref. CP14)
  - 0.9% sodium chloride bolus, may repeat once if needed
- Obtain 12-lead ECG (do not delay therapy to obtain)

OLMC

- Consideration for the administration of sodium bicarbonate, calcium chloride, or additional epinephrine to treat reversible causes.
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- A pediatric patient is heart rate dependent for their cardiac output because they are unable to adjust their stroke volume like an adult patient
- Reversible causes of bradycardia: Hypoxia, Hydrogen Ions (acidosis), Hyperkalemia, Hypothermia, Hypokalemia, Hypoglycemia, Hypovolemia, Toxins/poisons/drugs

QUALITY MEASURES
• Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

P7 PEDIATRIC TACHYCARDIA (WIDE/NARROW)

PEDIATRIC ONLY	GOALS OF CARE
	Identification and treatment of tachydysrhythmias

BLS

- Shock position as required

ALS

- Consider underlying causes
- Establish vascular access
- Determine stability/instability: Unstable = persistent tachyarrhythmia causing hypotension (SBP less than 90 mm Hg), acutely altered mental status, signs of shock, chest discomfort, acute heart failure
- Assess cardiac rhythm and treat as follows:
    - Stable (narrow or wide rhythm)
        - Administer 0.9% sodium chloride bolus intravenous or intraosseous
        - If HR greater than or equal to 220 for infants or greater than or equal to 180 for children:
            - Vagal maneuvers
            - Adenosine rapid intravenous push
            - Adenosine rapid intravenous push
            - Amiodarone drip infusion intravenous over 20 minutes
    - Unstable (narrow or wide rhythm)
        - May sedate with midazolam intravenous
        - Synchronized cardioversion (Ref. CP13). May repeat until cardioversion is successful and rhythm corrects.

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- You must quickly determine whether the patient's tachycardia is primary (that is producing hemodynamic instability due to the rate) or secondary (that is tachycardia produced as the result of an underlying process such as dehydration, fever, pain, anxiety, drugs, etc.)
- Primary tachycardia rates are generally over 150/minute
- Secondary tachycardia rates are usually but not always lower
- Ventricular rates less than 150/minute usually do not cause signs or symptoms
- DO NOT delay immediate cardioversion for the acquisition of the twelve lead or sedation if the patient is unstable
- Keys to management
  - Determine if pulses are present
  - If pulses are present, is the patient stable, borderline unstable or obviously unstable
  - Provide treatment based on the patient's condition and rhythm. It may be best to monitor the patient versus treat the patient if they are minimally symptomatic
- Unstable:
  - Poor systemic perfusion
  - Respiratory distress or respiratory failure
  - Acutely altered mental status
  - Hypotension
- Signs and symptoms of SVT
  - History of vague or nonspecific symptoms
  - P waves are absent or abnormal
  - Heart rate does not vary with activity or stimulation
- Vagal Maneuvers
  - Place a bag of ice over the upper half of the infant's face (without obstructing the airway)
  - If the child can follow commands have them attempt to blow the plunger of a syringe at you

QUALITY MEASURES

<u>If Midazolam given:</u>

- Complete set of vital signs before and after each administration
- EtCO2 documented after each administration
- Waste documented if name of administering clinician matches crew on PCR
- Midazolam dose does not exceed max or OLMC contact initiated
- Benzodiazepines and Opiates not mixed
- Any pediatric administration

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- Pinellas County EMS Medical Quality Management Plan

P8 PEDIATRIC ALLERGIC REACTION AND ANAPHYLAXIS

PEDIATRIC ONLY	GOALS OF CARE
	Reverse allergic reactions and provide early and aggressive treatment of anaphylaxis

BLS

- Assess for presence and extent of skin changes (rash, hives, swelling, etc.)
- Assess for signs of severe reaction/anaphylaxis:
  - Mucosal – severe swelling of lips, tongue, or throat
  - Respiratory—severe wheezing, stridor, or respiratory distress
  - Cardiovascular—SBP less than Handtevy minimum for age, poor capillary refill, severe tachycardia, change in mental status
- If severe reaction/anaphylaxis, and epinephrine auto-injector is available, may administer as below and repeat once if needed in 5 minutes (Ref. CP22.1):
  - Adult auto-injector (0.3 mg) for patients 9 years or older (greater than 30 kg/66 lbs.)
  - Pediatric auto-injector (0.15 mg) for patients 3-9 years old (15-30 kg/33-66 lbs.)
- Provide ventilation assistance with BVM and airway adjunct if needed (Ref. CP3.1)

ALS

- If severe symptoms/anaphylaxis immediately initiate:
  - Epinephrine intramuscular (1 mg/mL concentration) in the mid-anterolateral thigh, may repeat once in 3 – 5 minutes, if needed.
  - Administer 0.9% sodium chloride bolus, may repeat once if needed with no evidence of pulmonary edema
- Diphenhydramine intravenous/intraosseous or intramuscular
- Methylprednisolone sodium succinate intravenous push (IVP)
- Albuterol nebulized for wheezing/shortness of breath, may repeat once.
- Perform airway management as needed (Ref. CP3)

OLMC

- Additional doses of Epinephrine intramuscular (1 mg/mL concentration)
- Epinephrine drip infusion 1 - 4 mcg/min (Ref. CT20)
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Epinephrine should be the first treatment in patients with severe symptoms/anaphylaxis (e.g. prior to diphenhydramine and methylprednisolone sodium succinate)

QUALITY MEASURES
• Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

P9 PEDIATRIC ALTERED MENTAL STATUS

PEDIATRIC ONLY	GOALS OF CARE
	Recognize altered mental status in the pediatric patient, provide appropriate stabilizing/supportive care, and search for potential underlying causes

BLS

- Maintain cervical spine if trauma is known or suspected and immobilize per protocol (Ref. P17, CP15, CT11)
- Administer Oxygen (O2) minimum 15 L via non-rebreather mask
- Open airway and assist ventilations with bag-valve-mask (BVM) device and appropriate airway adjunct, if indicated (Ref. CP3.1)
- Consider hypoglycemia as cause of AMS (Ref. P11)
- If suspected opioid overdose and Narcan™ 4 mg prepackaged nasal spray available, administer as directed, may repeat one time in three (3) minutes, as needed
- If patient's temperature is high or low and is at risk for heat or cold exposure refer to hypothermia or hyperthermia protocols (Ref. P13, P14)

ALS

- Assess for and treat cardiac dysrhythmias (Ref. P6, P7)
- Establish vascular access
- If signs of shock (SBP less than minimum for age per Handtevy, poor capillary refill, etc.) administer 0.9% Sodium Chloride bolus intravenous, may repeat once if needed
- Determine capillary blood glucose level and treat according to diabetic emergencies protocol (Ref. P11)
- Administer Naloxone for patients with suspected opioid overdose and are unable to protect their own airway and/or has ineffective respirations. May repeat in 3 - 5 minutes if respiratory depression continues
- Consider advanced airway **ONLY** if immediately reversible causes have been treated (hypoglycemia, narcotic ingestion, dehydration, seizure) **and** ventilations with a bag-valve-mask (BVM) are ineffective (Ref. CP3)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Listening to the caregiver's opinion about alteration from a child's norm is key to your assessment
- Accidental ingestion of household products, medication, or a foreign body is very common in young children (especially when they are in a non-child proofed environment). Always consider an accidental ingestion in a pediatric patient with unexplained altered mental status
- Use Naloxone cautiously in an infant patient with a history of maternal drug addiction

QUALITY MEASURES
• Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

P10 PEDIATRIC BRIEF RESOLVED UNEXPLAINED EVENT (BRUE)

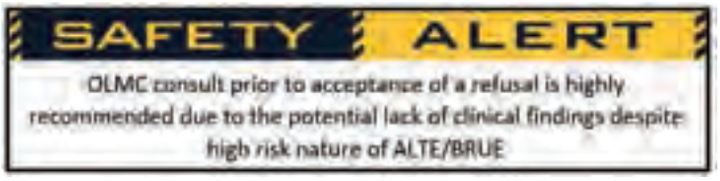
PEDIATRIC ONLY	GOALS OF CARE
	Recognize the presence and significance of an ALTE/BRUE and search for potential underlying causes

BLS

- Obtain and document a full history including gestational age and problems during pregnancy/delivery
- Perform full head to toe assessment on bare skin paying special attention for signs of airway compromise, trauma, infection, and dehydration
- Consider hypoglycemia (Ref. P11)
- Proceed to appropriate treatment protocol for any conditions identified
- Transport to appropriate facility (Ref. CS4)

ALS

- Assess for and treat cardiac dysrhythmias (Ref. P6, P7)
- Establish continuous cardiac monitoring with pulse oximetry
- Determine capillary blood glucose level and treat according to diabetic emergencies Protocol (Ref. P11)
- Search for any abnormal history/exam findings that may reveal underlying cause of episode
- Proceed to appropriate treatment protocol for any conditions identified



OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Even though patients usually look fine on EMS arrival, BRUE is SERIOUS!
  - BRUE is an episode that is frightening to the observer and characterized by some combination of apnea, color change, change in muscle tone, choking, or gagging that resolves quickly.
  - Occurs in infants under 1 year of age, most common in infants 10 - 12 weeks of age
  - 50% of infants with BRUE are found to have an underlying medical condition and 10% get admitted to ICU!

QUALITY MEASURES

- Pending

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- https://pediatrics.aappublications.org/content/pediatrics/137/5/e20160590.full.pdf
- https://www.merckmanuals.com/professional/pediatrics/miscellaneous-disorders-in-infants-and-children/alte-and-brue
- https://www.ncbi.nlm.nih.gov/books/NBK441897/

P11 PEDIATRIC DIABETIC EMERGENCY

PEDIATRIC ONLY	GOALS OF CARE
	Rapidly reverse hypoglycemia and provide supportive care to patients experiencing diabetic emergencies

BLS

- Determine capillary blood glucose level
  - Determine capillary blood glucose level
  - If less than 60 mg/dL (less than 45 mg/dL for neonate) or if symptomatic and able to protect their own airway administer 15 g Oral glucose gel
  - May repeat once in 5-10 minutes as needed
- If suspected hypoglycemia and patient has an insulin pump, turn it off
- Assess for and treat possible underlying conditions (hypoxia, overdose, head injury, etc.)
- Provide ventilation assistance with BVM and airway adjunct, if needed (Ref. CP3.1)

ALS

- Establish vascular access (Ref. CP21, CP25)
- If hypoglycemia (less than 45 mg/dL for a neonate or less than 60 mg/dL for a patient less than 12 years of age) or symptomatic:
  - Oral Glucose Gel if conscious and able to protect their own airway ***OR***
  - Dextrose 10% intravenous ***OR***
  - Glucagon intramuscular, if unable to complete either above option
  - Repeat capillary blood glucose level 5 - 10 minutes after treatment and if still less than 45 mg/dL for a neonate or less than 60 mg/dL for a patient less than 12 years of age or symptomatic, repeat treatment once
- If hyperglycemia (greater than 300 mg/dL):
  - Single 0.9% Sodium Chloride bolus intravenus
- Assess for and treat possible underlying conditions (e.g. hypoxia, overdose, head injury, etc.)
- Perform airway management as needed (Ref. CP3)

OLMC

- Requests for utilization of IO or indwelling catheter access
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- A neonate born to a diabetic mother is at extremely high risk for hypoglycemia immediately after birth
- A pediatric patient in diabetic ketoacidosis is a neuro patient. He is at high risk for cerebral edema and herniation. DO NOT allow parents to administer insulin because a rapid drop in blood glucose can cause permanent brain damage or death

QUALITY MEASURES
• Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

P12 PEDIATRIC DROWNING/SUBMERSION

PEDIATRIC ONLY	GOALS OF CARE
	Rapidly intervene to remove patient from hazard and minimize impact

BLS

- Consider Spinal Precautions (Ref. CP15, CT11)
- Remove wet clothing and keep warm
- Administer O2 minimum 15 L via NRBM
- Provide ventilation assistance (BVM and airway adjunct) as needed (Ref. CP3.1)
    - If excessive fluid in airway/lungs is preventing adequate oxygenation/ventilation, may disengage popoff valve on BVM taking care not to generate pressures in the RED (greater than 40 cmH2O)
- Suction as needed
    - ***DO NOT*** delay BVM for suction

ALS

- Establish vascular access
- If evidence of bronchospasm, initiate treatment per Asthma Protocol (Ref. P2)
- If rales, decreased Sp02, significant dyspnea initiate CPAP (Ref. CP6)
    - May continue aerosol therapy with t-piece (Ref. CP8)
- If respiratory failure, perform airway management (Ref. CP3)
    - May continue aerosol therapy with Superset/t-piece (Ref. CP8.2)
    - Do not delay ventilation and oxygenation for suctioning of foam
- Place an orogastric tube if assisting ventilations (Ref. CP20)
- Assess and treat cardiac dysrhythmias (Ref. P3, P6, P7)
- Obtain 12-lead ECG, if able

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- The long spine board currently in the system will float, but will not support a patient
- Be prepared to turn an immobilized patient due to the high occurrence of vomiting
- Drowning alone doesn't meet defined trauma alert criteria
- If return of spontaneous circulation (ROSC) is achieved, transport to a pediatric specialty facility

QUALITY MEASURES

- Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • https://www.heart.org/-/media/data-import/downloadables/resuscitating-the-drowning-victim-and-other-environmental-emergencies-ucm_486065.pdf?la=en&hash=DC93F7D179A95817BAF666D47DBEFA0C3FB7B5B8 • https://derangedphysiology.com/main/required-reading/trauma-burns-and-drowning/Chapter%204.0.7/immersion-submersion-and-drowning

P13 PEDIATRIC COLD EMERGENCY

PEDIATRIC ONLY	GOALS OF CARE
	Remove patient from environment then initiate warming and appropriate supportive care

BLS

- Remove the patient from the cold environment
- Remove wet clothing and gently dry the skin by patting, not rubbing, with dry towels
- Initiate rewarming with blankets on top of and underneath the patient; insulate the patient from the ground, backboard/scoop, or stretcher. Apply hot packs in the axilla and groin

- Minimize movement during transport and consider transport to a burn center if evidence of frostbite
- Consider hypoglycemia (Ref. P11)
- Provide ventilation assistance (BVM and airway adjunct) as needed (Ref. CP3.1)

ALS

- Establish vascular access
- Determine capillary blood glucose level and treat as needed (Ref. P11)
- If signs of shock (SBP less than minimum for age per Handtevy, poor capillary refill etc.) administer 0.9% Sodium Chloride bolus intravenous, may repeat once if needed
- Assess cardiac rhythm and treat dysrhythmias as needed (Ref. P6, P7)
- Obtain 12-lead ECG
- Consider pain management for frostbite if needed (Ref. P15)
- Perform airway management as needed (Ref. CP3)
- *DO NOT* pronounce a hypothermic patient deceased. Always transport to the hospital

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
• Peripheral vascular access may be difficult to establish in a hypothermic patient; IO is acceptable for patients in extremis • Extended exposure to a patient's environment (e.g. water, air, and ground/floor) even in normal temperatures can cause the loss of body heat • Hypothermia is an emergency resulting from exposure to cold temperatures. It most often occurs in association with submersions (even in Florida), but may be the result of prolonged exposure to a cold ambient environment. • Neonates often cannot mount the immune response to be febrile when they have an infection. A low temperature can often be a sign of sepsis. • Aggressive rewarming in the field can do more harm than good. Hypothermia can be protective of brain function and rapid rewarming can induce arrhythmias • Hypothermia can cause bradycardia by slowing the sinus node pacemaker or slowing the conduction through the AV node. • Shivering can increase glucose consumption and lead to hypoglycemia.

QUALITY MEASURES
• Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

P14 PEDIATRIC HYPERTHERMIA

PEDIATRIC ONLY	GOALS OF CARE
	Remove patient from environment then initiate cooling and appropriate supportive care

BLS

- Move patient into an area with shade, air conditioning, air movement, etc.
- Remove excessive clothing
- If no altered mental status:
  - Provide oral fluids (e.g. cool water, Gatorade, Pedialyte, etc.) if patient able to tolerate
- If altered mental status (heat stroke):
  - Begin rapid cooling, but avoid inducing shivering
  - Apply ice packs to neck, armpits, and groin
  - May cover patient with cool wet sheets
- Provide ventilation assistance (BVM and airway adjunct) as needed (Ref. CP3.1)

ALS

- Establish vascular access
- If nauseated/vomiting:
  - Ondansetron intravenous/intraosseous slow push (2+ minutes) ***OR***
  - Ondansetron ODT
  - May repeat once in 15 minutes as needed
- If hypotensive, tachycardic, or altered mental status (heat stroke):
  - Bolus 0.9% Sodium Chloride, may repeat once
- Monitor for seizures and treat per protocol (Ref. P16)
- Assess and treat cardiac dysrhythmias as needed (Ref. P3, P6, P7)
- Obtain 12-lead ECG
- Perform airway management as needed (Ref. CP3)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Heat Stroke is a neurological event and rapid assessment; treatment and transport is essential for good patient outcome
- An increased temperature can result in dehydration, hypoxia and hypoglycemia due to increased metabolic rate.

QUALITY MEASURES
• Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

P15 PEDIATRIC ACUTE PAIN MANAGEMENT

PEDIATRIC ONLY	GOALS OF CARE
	Provide reasonable and safe pain management

BLS

- Obtain baseline and repeat vital signs including pain scores (may use the Wong-Baker Faces scale for patients unable to give a number) (Ref. CT15)
- Allow patient to assume position of comfort unless spinal precautions or splinting is required (Ref. CP15, CT11)
- Treat specific injuries as needed with splinting/immobilization/cold pack (Ref. P17)
- Refer to appropriate protocol for underlying cause

ALS

- Establish vascular access (Ref. CP21, CP25)
- Monitor EtCO2 and SpO2
- Administer Fentanyl:
  - Intravenous or intraosseous to a maximum single dose of 50 mcg. May repeat every 10 minutes to a maximum combined total dose of 3 mcg/kg
  - Intranasal to a maximum single dose of 100 mcg (max 1 mL per nare/side). May repeat every 5 minutes to a maximum combined total dose of 3 mcg/kg
- If nauseated and/or vomiting because of an opioid administration, administer:
  - Ondansetron slow intravenous push over at least two (2) minutes or intramuscular ***OR***
  - Ondansetron orally dissolving tablet
  - May repeat either option once in 15 minutes as needed
- Refer to appropriate protocol for underlying cause

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- The objective of pain management is not the complete removal of pain, but rather to make the pain tolerable
- Note that the maximum Fentanyl intranasal single dose is limited to 100 mcg or 1 mL per side and the dose is not doubled as in other intranasal medications due to limitations on the amount of fluid able to be absorbed across mucosa at one time. Frequency of dosing is increased to every 5 minutes to ensure adequate pain management when using the intranasal route. OLMC consult is still required for cumulative doses greater than 3 mcg/kg.
- The co-administration of opioids and benzodiazepines should be avoided as it increases the risk of adverse events (e.g. respiratory depression)

QUALITY MEASURES
• Complete set of V/S with pain scale before and after each administration • EtCO2 documented after each administration • Waste documented if name of administering clinician matches crew on PCR • Single Fentanyl dose does not exceed max or OLMC contact initiated • Total Fentanyl dose does not exceed max or OLMC contact initiated • Benzodiazepines and opiates not combined • Any pediatric administration

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • Pinellas County EMS Medical Quality Management Plan

P16 PEDIATRIC SEIZURE

PEDIATRIC ONLY	GOALS OF CARE
	Protect actively seizing patients, address reversible causes, and control seizure activity

BLS

- Obtain baseline and repeat vital signs and assess mental status
- If seizing:
  - Protect patient from injury if actively seizing
  - Provide supplemental Oxygen at 15L via non-rebreather mask
  - May assist with administration of patient's own seizure medication (e.g. Diastat)
- If post-ictal:
  - Provide supplemental Oxygen at 15L via non-rebreather mask
  - Suction as needed
  - Consider need for Spinal Precautions (Ref. CP15, CT11)
- Assist ventilations with (BVM) device and airway adjunct if needed (Ref. CP3.1)
- Consider hypoglycemia as reversible cause of seizure (Ref. P11)
- Consider trauma as cause of seizure (Ref. P17)

ALS

- If seizing:
  - Midazolam intranasal (no more than 1 mL of medication per nare)
  - May repeat once with continued or repeat seizure activity

- Measure blood glucose level and treat as needed (Ref. P11)
- If no response to intranasal Midazolam:
  - Administer midazolam intravenous/intramuscular – may repeat once with continued or repeat seizure activity
- Perform airway management as needed (Ref. CP3)

OLMC

- Additional Midazolam doses
- Pharmaceutical treatment above stated dosing in the Pinellas County EMS Handtevy Medication Guidebook
- Administration of medication for atypical seizures
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Intubating a seizing patient is extremely difficult and the complication rates are high

QUALITY MEASURES
If Midazolam given: 1. Complete set of vital signs before and after each administration 2. EtCO2 documented after each administration 3. Waste documented if name of administering clinician matches crew on PCR 4. Midazolam dose does not exceed max or OLMC contact initiated 5. Benzodiazepines and opiates not mixed 6. Any pediatric administration

REFERENCES
• http://www.teleflex.com/en/usa/productAreas/ems/documents/AN_ATM_MAD-Nasal-Usage_Guide_AI_2012-1528.pdf • http://wongbakerfaces.org/ • https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm518110.htm • Pinellas County EMS Medical Quality Management Plan

P17 PEDIATRIC GENERAL TRAUMA CARE

PEDIATRIC ONLY	GOALS OF CARE
	Accurate assessment, appropriate stabilization, and rapid transport to definitive care

BLS

- Perform Primary Trauma Assessment (ABCDE) and implement initial treatments as needed:
  - Open Airway (BLS maneuvers), provide oxygen and assist ventilations with bag-valve-mask (BVM) device and appropriate airway adjunct (Ref. CP3)
  - Control hemorrhage with direct pressure followed by appropriate device or procedure when indicated – Ref. CP16 (if older child/device fits) and CP18
  - Seal chest wounds – Ref. CP17
  - Assess neurologic function and implement Spinal Precautions as indicated – Ref. CP15, CT11
  - Expose patient and protect from environment
- Assess trauma transport criteria, declare "Trauma Alert" if indicated – Ref. CT10

- Perform Secondary Trauma Assessment (head-to-toe physical exam on exposed skin)
- Implement additional appropriate stabilizing care:
  - All major trauma patients should receive supplemental oxygen
  - Stabilize impaled objects in place – ***DO NOT REMOVE***
  - Stabilize flail chest segments
  - Dress wounds - Moist sterile for eviscerations, dry and clean for burns
  - Amputated body parts – Moist sterile inner packaging, ice/cold pack outer packaging
- Splint fractures and dislocations and document distal motor function, circulation, and sensation before and after; Elevate and apply cold packs when practical
- Implement injury-specific additional BLS care as indicated (Ref. T3-T7)

ALS

- Maintain EtCO2 of 35-45 mmHg. (hyperventilation to 30-35 mmHg allowed *ONLY* with signs of ACTIVE herniation – see PEARLS)
- Intubate only if unable to provide adequate ventilation/oxygenation with bag-valve-mask (BVM) device and airway adjuncts
- Decompress tension pneumothorax, if indicated (Ref. CP7)
- Establish intravenous/intraosseous access for altered mental status, signs of poor perfusion and/or need for intravenous/intraosseous medications
- Initiate fluid resuscitation with 0.9% Sodium Chloride bolus if SBP < Handtevy minimum for age or if signs of poor perfusion. May repeat twice as needed.
- Implement appropriate pain management (Ref. P15)
- Repeat Primary Trauma Assessment (ABCDE) after treatments and frequently during transport
- Implement injury-specific additional ALS care as indicated (Ref. T3-T7)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- A pediatric patient requires a complete head to toe assessment due to being unreliable historians
- Keep the patient warm
- A Sager Splint will fit a patient > 4 years old. For patients < 4 years of age requiring traction, use manual traction
- A head injury should be considered in a pediatric patient with altered mental status.
- Maintain a high index of suspicion for "non-accidental trauma" (child-abuse) and document all details including what the caregivers state happened in quotation and a complete physical exam including details of all bruises and marks.
- Every healthcare provider that suspects child abuse is required by law to file a report with the Florida Department of Children and Families Abuse Hotline at 1-800-96-ABUSE (1-800-962-2873) (Ref. CS8)
- Refer to CS18 for alterations in standard of care during Major Incidents with Ongoing Threats (e.g. Active Shooter Response)

QUALITY MEASURES

- Pending

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

P18 PEDIATRIC FEVER/SUSPECTED SEPSIS

PEDIATRIC ONLY	GOALS OF CARE
	Early recognition and aggressive treatment of suspected sepsis

BLS

- Place in Shock position if hypotensive (Ref. Handtevy Pediatric vital sign ranges)
- Provide ventilation assistance with BVM and airway adjunct if needed (Ref. CP3.1)
- Assess for and document suspicion/evidence of infection and/or high-risk condition including:
  - Indwelling catheters (e.g. vascular or foley)
  - Immunosuppression or compromise (e.g. cancer with chemo, radiation or BMT, or sickle cell disease)
  - Other significant medical history
- Obtain information from caregiver on baseline status, encourage caregiver to accompany patient to hospital, obtain contact information (cell number) if they will be traveling separately so that ER staff may contact as needed.
- Determine capillary blood glucose

ALS

- Evaluate for evidence of physiologic response to infection
  - Tachycardia or thready/weak pulse
  - Tachypnea or EtCO2 less than or equal to thirty (30)
  - Hypotension, capillary refill greater than three (3) seconds or mottled skin
  - Acute decreased mental status, confusion, or other significant alteration from baseline as described by caregiver
- If suspected infection and greater than or equal to two (2) criteria above, declare *Sepsis Alert*, notify receiving hospital, and initiate early emergency transport
  - If High Risk Condition present may initiate based on suspected infection and 1+ above criteria
- Establish IV access and initiate fluid bolus (intraosseous may be used if unable to obtain intravenous access and patient meets alert criteria above):
  - 0.9% sodium chloride bolus — use syringe push for infants less than 1 year of age
  - Re-assess after 10 mL/kg, if cardiac history and consult OLMC prior to additional fluids if pulmonary edema/significant worsening
  - If no resolution of above criteria may repeat 0.9% sodium chloride
- If SBP hypotension persists initiate pressor:
  - Epinephrine drip infusion (Ref. CT20)
- Determine capillary blood glucose and test according to Diabetic Emergency Protocol (Ref. P11)
- Assess for and treat cardiac dysrhythmias (Ref. P6, P7)
- ***DO NOT*** treat secondary tachycardias
- Perform Airway Management as needed (Ref CP3)

OLMC

- Consult Online Medical Control Physician as needed or required (Ref. CS10)
- Accessing indwelling catheters if intravenous/intraosseous unsuccessful (generally to be avoided)
- Fluid direction in cardiac patients

PEARLS
• Pts with genetic disorders, immunocompromised, indwelling catheters (IV/Foley/etc), or medical devices are at significantly increased risk of sepsis • Caregivers will be your best source of information • Caution in fluids if cardiac history (10 mL/kg at a time) due to high sensitivity to small fluid volume changes • Children are at high risk for sudden decompensation

QUALITY MEASURES
• Pending

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5072914/

CLINICAL PROCEDURE

CLINICAL PROCEDURE

CP1 ADULT AIRWAY MGMT. & ADVANCED AIRWAY PLACEMENT

NOTES
Because of the uncontrolled environments encountered in prehospital care and the fact that all our airways are "Crash Airways" every attempt at prehospital airway management should be considered a "Difficult Airway". Success in management is predicted on an algorithmic approach focused on preparedness and thinking several steps ahead. The six (6) steps below outline this approach and are followed by the specifics of the individual procedures Prehospital adult airway management will be approached in the following stepwise fashion always being prepared to rapidly move to the next step if unsuccessful: 1. All patients requiring ventilation assistance will be bag-valve-mask (BVM) and airway adjunct (OPA/NPA) until choice of advanced airway device is made and preparations for placement are completed 2. Patients in cardiac arrest or in whom endotracheal intubation is anticipated to be especially difficult will have the King airway device employed primarily 3. Other patients may receive a maximum of 2 total attempts at endotracheal intubation, with facilitated medication, if indicated 4. If Step #2 or #3 is unsuccessful, the alternate may be attempted 5. If both Step #2 and Step #3 are unsuccessful, bag-valve-mask (BVM) ventilations should be employed as a temporizing measure until arrival at the hospital 6. If endotracheal intubation, King Airway placement and bag-valve-mask (BVM) ventilations are all unsuccessful, emergency cricothyrotomy (Ref. CP2) will be performed as a last resort.

EQUIPMENT	

• Bag-valve-mask device
• Appropriately sized:
  o OPA & NPA
  o EtCO2 filterline set
  o King LTD-S airway
  o Laryngoscope blade
  o Endotracheal tube
• Suction
• Lubrication gel
	• 60 mL luer lock syringe
	• 18 Fr orogastric tube
	• 60 mL catheter tip syringe
	• Laryngoscope handle
	• 10 mL luer lock syringe
	• Bougie
	• Scalpel
	• Kelly curved forceps

CP1.1 BAG-VALVE-MASK VENTILATION

INDICATIONS	
• Respiratory insufficiency/failure/arrest	• Pre-oxygenation prior to advanced airway placement attempt

CONTRAINDICATIONS
• None

CAUTIONS
• Effective seal may be difficult in patients with facial abnormalities, beards, lack of teeth, and facial trauma

PROCEDURE
1. Assemble equipment per manufacturer's instructions and connect to Oxygen source 2. Attach EtCO2 filterline set between mask and bag-valve device (ALS ONLY) 3. Place NPA/OPA if patient tolerates and not contraindicated (NPA in head/facial trauma) 4. Utilizing 2-person technique whenever possible, ventilate at a baseline rate of 12 – 16 breaths per minute. 5. Adjust ventilation rate to achieve adequate SpO2 and EtCO2 of 35 – 45 mmH_2O (ALS ONLY)

COMPLICATIONS	
• Inability to maintain adequate seal • Inappropriate hyperventilation	• Gastric distention • Hypotension and/or pneumothorax resulting from positive pressure ventilation

CP1.2 KING AIRWAY PLACEMENT (ALS ONLY)

INDICATIONS	
• Cardiac arrest	• Respiratory insufficiency/failure/arrest

CONTRAINDICATIONS	
• Known esophageal disease (varices) • Caustic substance ingestion	• Height less than four (4) feet

CAUTIONS
• May be difficult or ineffective in patients with significant head/neck face structure abnormalities or trauma causing instability of the face or oropharynx

PROCEDURE
1. Choose appropriate size device, assemble equipment per manufacturer's directions, test balloon and lubricate 2. Grasp jaw and tongue and lift anteriorly 3. Place device from corner of mouth with device rotated 45 – 90 degrees laterally 4. Insert device and advance along the posterior tongue while rotating back to midline until hub is at lip/gum line 5. Inflate balloon with up to 60 mL air to achieve seal 6. Attach EtCO2 between tube and bag-valve device 7. Begin ventilations while gently retracting tube until it seats, and ventilations are easy. If air leaking is still noted, instill up to an additional 20 mL air into balloon

8. Secure with tape or appropriately sized commercial tube holder device
9. Ventilate at a baseline rate of 12 – 16 breaths per minute. Adjust ventilation to maintain adequate SpO2 and EtCO2 of 35 – 45 mmH_2O

COMPLICATIONS

- Failure to insert device to appropriate depth prior to inflating balloon may cause it to not seat properly
- The device may inadvertently enter the trachea, in a very small percentage of patients, instead of the esophagus and will be ineffective
- Multiple placement attempts, to forceful manipulation or over-inflation of the balloon may cause trauma to the oropharynx, esophagus or trachea
- Hypotension and/or pneumothorax resulting from positive pressure ventilation

CP1.3 ENDOTRACHEAL INTUBATION

INDICATIONS

- Respiratory insufficiency/failure/arrest

CONTRAINDICATIONS

- None

CAUTIONS

- May be difficult in patients with facial/neck trauma, blood or other secretions in the airway
- Difficulty with patients who lack teeth
- Limited mobility or congenital malformation of the neck or jaw
- Patients with beards and/or excess soft tissue of the face and neck

PROCEDURE

1. Assemble all needed equipment within reach of operator and test endotracheal tube cuff
2. Pre-oxygenate the patient
3. Perform direct laryngoscopy and pass endotracheal tube so the cuff is just distal to the vocal cords.
   - Maximum of 15 seconds per attempt
   - Maximum of 2 total combined attempts by all clinicians
4. Inflate endotracheal tube cuff, attach EtCO2 filterline set and ventilate to check for bilateral breath sounds, quiet epigastrium and confirm placement with EtCO2
5. If suspected mainstem intubation (diminished sounds unilaterally), retract 1 – 2 cm and reassess
6. Secure endotracheal tube with commercial tube holder device
7. Ventilate at a baseline rate of 12 – 16 breaths per minute. Adjust ventilation to maintain adequate SpO2 and EtCO2 of 35 – 45 mmH_2O

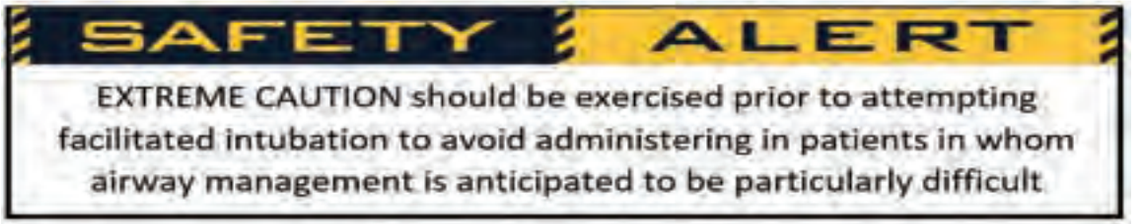
COMPLICATIONS	
• Inability to place tube • Esophageal placement • Mainstem placement	• Unrecognized displacement • Hypotension and/or pneumothorax resulting from positive pressure ventilation

CP1.4 MEDICATION FACILITATED INTUBATION

INDICATIONS
• Respiratory insufficiency/failure/arrest requiring airway management in patients with retained consciousness, gag reflex or jaw clenching

CONTRAINDICATIONS
• Allergic or adverse reaction history to any of the medications

CAUTIONS



PROCEDURE

1. Prepare all equipment as per "CP1.3 Endotracheal Intubation"
2. Ensure patent IV/IO access and prepare medications
3. Fentanyl 2 mcg/kg IVP followed by Etomidate 0.3 mg/kg SLOW IVP (over > 20 seconds)
4. Perform "CP1.3 Endotracheal Intubation" as listed above
5. Following confirmation of successful intubation, Midazolam 2.5 mg, may repeat one time

COMPLICATIONS
• Adverse reactions to medications (e.g. trismus due to rapid administration of etomidate) • Ineffectiveness of medications • Sedation with failure to secure airway

QUALITY MEASURES	
• Ventilation assistance provided • Single airway type used • Confirmation of placement with EtCO2	• Airway re-confirmed • Multiple EtCO2 values

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/ • Pinellas County EMS Medical Quality Management Plan

CP2 ADULT SURGICAL CRICOTHYROTOMY AIRWAY ACCESS

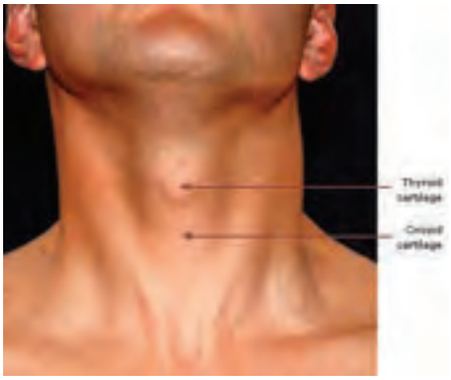
INDICATIONS
• 10 years of age or older • Respiratory insufficiency/failure/arrest with inability to adequately provide oxygenation or ventilation by bag-valve-mask (BVM), endotracheal tube or extraglottic airway device

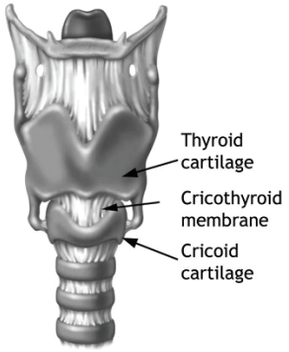
CONTRAINDICATIONS
• Less than ten (10) years of age • Inability to find landmarks

CAUTIONS
• Anticipate difficulty with excess soft tissue and previous scarring to neck

PROCEDURE

- Prep area with alcohol preps and chlorprep or betadine (if available)
- Grasp larynx with thumb and middle finger to stabilize the thyroid cartilage and locate laryngeal prominence (point of the Adam's apple). Slide finger downward to locate the cricothyroid membrane





- Make 3-4 cm vertical midline incision overlying the cricothyroid membrane
- Locate the cricothyroid membrane with index finger and make transverse incision through the cricothyroid membrane the width of the cricothyroid space
- Insert a bougie (coude tip first) and gently advance no more than 5 cm feeling for tracheal rings to confirm location and stopping immediately if any resistance is encountered.
- Insert a 6.0 mm endotracheal tube by sliding over the bougie (may require a twisting motion and gentle pressure) until the cuff is just inside the trachea and inflate. Remove bougie once endotracheal tube is in place being careful not to displace tube.
- If unable to pass tube without using excessive force, dilate a tract using curved Kelly forceps with bougie still in place.

- Manually stabilize tube and begin ventilations at baseline rate of 12-16 breaths per minute. Adjust ventilate rate to achieve adequate oxygen (O2) saturation and EtCO2 35-45 mmHg
- May secure the endotracheal tube using tape, but manual stabilization should be maintained until transfer of care at the receiving facility

COMPLICATIONS

- Inability to find landmarks
- Bleeding
- Paratracheal tracking of the endotracheal tube
- Subcutaneous emphysema

NOTES

- None

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

CP3 PEDIATRIC AIRWAY MGMT. & ADVANCED AIRWAY PLACEMENT

BACKGROUND

Because of the uncontrolled environments encountered in prehospital care and the fact that all our airways are "Crash Airways" every attempt at prehospital airway management should be considered a "Difficult Airway". Success in management is predicted on an algorithmic approach focused on preparedness and thinking several steps ahead.

Pediatric prehospital airway management is particularly anxiety inducing and requires an organized stepwise approach. It is important to remember that research has demonstrated that outcomes are equivalent in pediatric patients managed with either prehospital BVM or ETI. Pediatric facilitated intubation is not to be performed except in exceptional circumstances and after OLMC consultation.

Prehospital pediatric airway management will be approached in the following stepwise fashion:

1. All pediatric patients requiring ventilatory assistance will be primarily managed with appropriate positioning, bag-valve-mask (BVM) and airway adjunct (OPA/NPA) when such a device is not contraindicated.
2. Clinicians may attempt endotracheal intubation with a cuffed (***Do Not Inflate***) endotracheal tube, if bag-valve-mask (BVM) is inadequate to maintain ventilation and/or oxygenation. Equipment size will be determined by the patient's length, not the weight.
3. No more than two (2) total attempts at direct laryngoscopy may be performed.
4. Needle cricothyrotomy (Ref. CP4) shall be performed as a last resort on the pediatric patient whose airway is unable to be managed using any other means.
5. Pediatric patients who are receiving positive pressure ventilation (bag-valve-mask [BVM] or intubated) should have an orogastric tube placed (Reference CP20) to decompress the stomach and facilitate ventilation, unless contraindicated

EQUIPMENT

- Handtevy Pediatric bag
- Bay-valve-mask device
- Appropriately sized OPA & NPA
- Approrpiately sized EtCO2 filterline set
- Suction
- Lubrication gel
- Apppropriately sized OG Tube
- Laryngoscope handle
- Appropriately sized laryngoscope blade
- Appropriately sized endotracheal tube
- 10 mL Syringe
- Needle cricothyrotomy kit

CP3.1 PEDIATRIC BAG-VALVE-MASK VENTILATION

INDICATIONS
• Respiratory insufficiency/failure/arrest • Pre-oxygenation prior to advanced airway placement attempt

CONTRAINDICATIONS
• None

CAUTIONS
• Effective seal is crucial and may be difficult in pediatric patients • Facial trauma may further complicate

PROCEDURE
1. Assemble equipment per manufacturer's instructions and connect to Oxygen source 2. Attach EtCO2 filterline set (appropriate size) between mask and bag-valve device (ALS Only) 3. Position patient in a "sniffing position" (place a folded sheet under the scapulae for a patient less than two (2) years old or under the occiput for a patient older than two (2) years old 4. Place NPA/OPA if patient tolerates and not contraindicated (e.g. no NPA in head/facial trauma) 5. Utilizing 2-person technique whenever possible, ventilate at a baseline rate of 12 – 16 breaths per minute 6. Adjust ventilation rate to achieve adequate SpO2 and EtCO2 of 35 – 45 mmHg (ALS Only)

COMPLICATIONS
• Inability to maintain adequate seal • Inappropriate hyperventilation • Gastric distention • Hypotension and/or pneumothorax resulting from positive pressure ventilation

CP3.2 PEDIATRIC ENDOTRACHEAL INTUBATION

INDICATIONS
• Respiratory insufficiency/failure/arrest

CONTRAINDICATIONS
• Ability to effectively manage with bag-valve-mask ventilation

CAUTIONS
• Endotracheal intubation in children will alter hemodynamic status • May be difficult with facial/neck trauma, blood or other secretions in the airway • Limited mobility or congenital malformation of the neck or jaw

PROCEDURE
1. Assemble all needed equipment within reach of operator and test endotracheal tube cuff 2. Pre-oxygenate the patient 3. Choose appropriately sized equipment using the Pinellas County Handtevy Medication and Equipment Guidebook 4. Perform direct laryngoscopy and pass endotracheal tube so the cuff is just distal to the vocal cords. o Maximum of 15 seconds per attempt o Maximum of 2 total combined attempts by all clinicians 5. ***DO NOT*** inflate the cuff 6. Attach EtCO2 filterline set and ventilate to check for bilateral breath sounds, quiet epigastrium, and confirm placement with EtCO2 7. Secure endotracheal tube with commercial tube holder device (if appropriately sized) 8. Ventilate at a baseline rate of 12 – 16 breaths per minute. Adjust ventilation to maintain adequate SpO2 and EtCO2 of 35 – 45 mmHg

COMPLICATIONS
• Inability to place tube • Esophageal placement • Unrecognized displacement • Hypotension and/or pneumothorax resulting from positive pressure ventilation

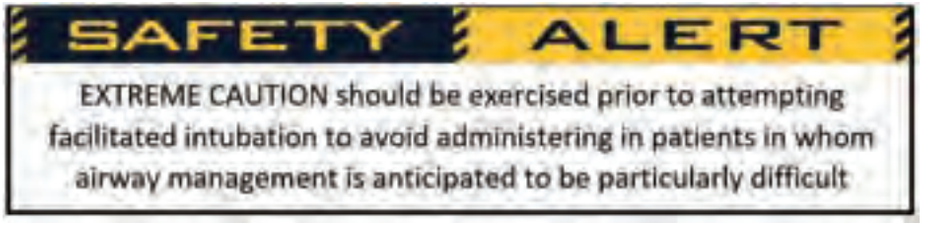
CP3.3 PEDIATRIC FACILITATED INTUBATION

INDICATIONS
• Respiratory insufficiency/failure/arrest requiring airway management in patients with retained consciousness, gag reflex or jaw clenching

CONTRAINDICATIONS

- Allergic or adverse reaction history to any of the medications

CAUTIONS



- ***OLMC consult is mandatory prior to attempting facilitated intubation***

PROCEDURE

1. Prepare all equipment as per "CP3.2 Pediatric Endotracheal Intubation"
2. Ensure patent intravenous/intraosseous access and prepare medications
3. Fentanyl 2 mcg/kg intravenous push followed by etomidate 0.3 mg/kg ***SLOW*** intravenous push (over greater than 20 seconds)
4. Perform "CP3.2 Pediatric Endotracheal Intubation" as listed above
5. Following confirmation of successful intubation, Midazolam, may repeat one time

COMPLICATIONS

- Adverse reactions to medications (e.g. trismus due to rapid administration of etomidate)
- Ineffectiveness of medications
- Sedation with failure to secure airway

QUALITY MEASURES

- Ventilation assistance provided
- Single airway type used
- Confirmation of placement with EtCO2
- Airway re-confirmed
- Multiple EtCO2 values

NOTES

- ***OLMC CONSULT IS MANDATORY PRIOR TO ATTEMPTING FACILITATED INTUBATION***
- Prehospital pediatric facilitated intubation is generally not indicated and should only be considered in exceptional circumstances in consultation with the OLMC physician
- Extreme caution should be exercised prior to attempting facilitated intubation to avoid administration in patients who airway management is anticipated to be particularly difficult

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- Pinellas County EMS Medical Quality Management Plan

CP4 PEDIATRIC NEEDLE CRICOTHYROTOMY

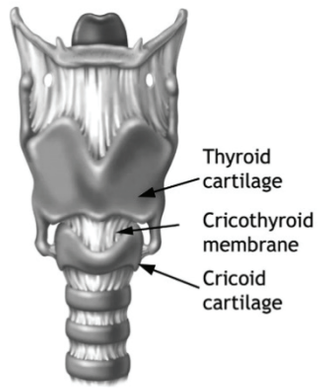
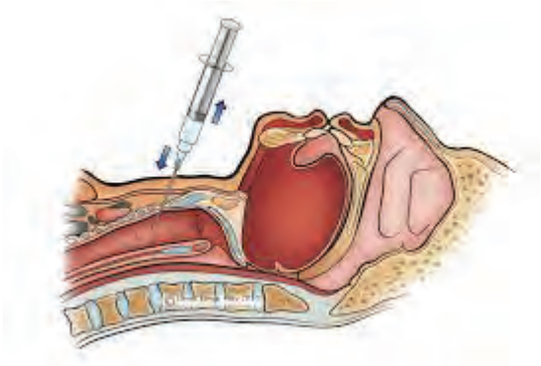
INDICATIONS

• Pediatric patient up to the age of 10 years' old
• Inability to adequately ventilate with an established airway of other means (e.g. bag-valve-mask device with adjunct, endotracheal tube) due to:
  o Severe oral or facia trauma
  o Airway obstruction unable to be cleared by other techniques

CONTRAINDICATIONS
• Neck tumor that obstructs the ability to identify anatomical landmarks • Inability to identify anatomical landmarks

CAUTIONS
• This is a rescue procedure ONLY

EQUIPMENT
• Alcohol prep pads • Chlorprep or betadine (if available) • 14 gauge – 1-inch IV catheter • 10 mL syringe • 3.0 mm Endotracheal tube • Pediatric bag-valve-mask (BVM)

PROCEDURE
• Position patient in a supine position. Slightly hyperextend neck (without suspicion of a c-spine injury) • Secure larynx laterally between the thumb and forefinger • Identify the cricothyroid membrane utilizing anatomical landmarks     • Prep area well with alcohol preps and chlorprep or betadine (if available) • Insert the 14-gauge IV catheter t a 45-degree angle caudally (towards feet) • Pull back on syringe while inserting the catheter. Once you can freely pull back air, you are in the trachea • Once placement in the trachea is confirmed, advance the plastic cannula along the needle into the trachea, until the hub rests against the neck

- Carefully remove the IV needle while maintaining the catheter securely in place
- Attach the 15 mm adapter (removed from the 3.0 endotracheal tube) to the IV catheter hub

- Ventilate at a baseline rate of 12 – 16 breaths per minute
- Adjust the ventilation rate to achieve a SpO2 greater than 94% and EtCO2 of 35- 45 mmHg. Ensure adequate time for exhalation
- Secure the catheter by the best method available, recognizing that this method may be by direct control with hands on the device

COMPLICATIONS

- Inability to identify anatomical landmarks
- Tracheal perforation
- Bleeding
- Inability to access the trachea

NOTES

- A skill required in less than 1% of all pediatric patients

References

- https://www.vdh.virginia.gov/OEMS/Files_Page/symposium/2012Presentations/ALS-309.pdf
- http://www.orangecountyfl.net/emsref/EMSrefMainMenu/ProcedureManual/AirwayProcedures.aspx
- http://www.orangecountyfl.net/emsref/EMSrefMainMenu/ProcedureManual/AirwayProcedures.aspx
- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

CP5 CONTINUOUS WAVEFORM CAPNOGRAPHY

INDICATIONS
• Continuous waveform capnography use is ***mandatory*** in: o Advanced airway placement (endotracheal tube or King airway) ▪ Continuous waveform capnography is the only acceptable method of confirmation for endotracheal tube placement o Altered mental status o Sedating medication administration o BVM ventilations – unless EtCO2 capability is unavailable o Patient experiencing respiratory distress (e.g. asthma, COPD, etc.)

CONTRAINDICATIONS
• None

CAUTIONS
• There is a moisture sensitive filter in the sensor tubing that is designed to occlude the tubing to prevent secretions from entering the pump in the Philips MRx. The sensor may need to be periodically changed out due to occlusion even in the absence of copious secretions

PROCEDURE
1. Attach adult/pediatric or infant/neonate (4.5 mm ET tube or less) EtCO2 filterline set between mask or advanced airway device (endotracheal tube or King) and bag-valve device or ventilator circuit and connect to the monitor 2. If no advanced airway, may use appropriate (adult or pediatric) EtCO2 nasal cannula 3. Continuously monitor capnometry (numeric value) and reassess capnography (waveform) 4. Document numeric value and interpretation of waveform shape multiple times throughout patient care encounter (e.g. after each new intervention, change in patient condition, patient movement, etc.)

COMPLICATIONS
• None

NOTES
• ***Failure to continuously monitor and appropriately interpret data may result in misplacement or unrecognized displacement of advanced airways and respiratory compromise in patients receiving sedating medications and is grounds for immediate clinical suspension***

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

Intentionally Left Blank

CP6 CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)

INDICATIONS
• Congestive heart failure (CHF)/Acute pulmonary edema • Reactive airway disease (Asthma/COPD) • Drowning/near drowning • Selected toxic inhalations

CONTRAINDICATIONS
• Hypotension (SBP < 90 mmHg) • Altered mental status • Respiratory arrest/respiratory rate < 8 • Suspected or known pneumothorax • Tracheostomy/cricothyrotomy • Vomiting

CAUTIONS
• None

PROCEDURE
• Assemble device according to manufacturer's instructions and connect to oxygen source • Explain procedure to the patient and encourage them to work with the mask • Place the delivery device over the mouth and nose and secure the mask with provided straps and ensure no air leaks • Begin at 5 cmH_2O and titrate by 2.5 cmH_2O pressure every 3 – 5 minutes to maximum 10 cmH_2O pressure as patient tolerates and symptoms require • Monitoring for worsening respiratory status and decreasing mental status continuously and document vital signs at least every five minutes

COMPLICATIONS	
• Pneumothorax	• Apnea
• Hypotension	• Inability to tolerate

NOTES
• CPAP therapy needs to be continuous and shouldn't be removed except for medication administration (e.g. nitroglycerin) or unless the patient can't tolerate the mask or experiences continued or worsening respiratory failure or other complication.

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

Intentionally Left Blank

CP7 NEEDLE THORACOSTOMY

INDICATIONS

- Suspected pneumothorax with severe respiratory distress, hypotension or cardiovascular collapse
- Traumatic cardiac arrest with chest or abdominal injury

CONTRAINDICATIONS

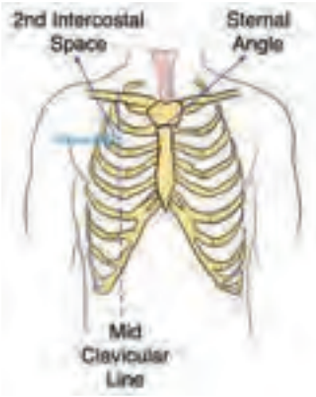
- Simple pneumothorax

CAUTIONS

- None

PROCEDURE

- Expose entire chest and identify landmarks
- Prep area well with alcohol preps and chlorprep or betadine (if available)
- Adult
  - Insert 10 gauge 3.25-inch decompression needle into one of the following:
    - 2nd intercostal space, mid-clavicular *(preferred)*
    - 5th intercostal space, mid-axillary
- Pediatric (age less than 13 y/o)
  - Insert 16 gauge 1.16-inch IV catheter into:
    - 2nd intercostal space, mid-clavicular
- Remove needle leaving angiocath in place
- Notify receiving facility of needle thoracostomy
- Reassess patient and interventions frequently (minimum every 5 minutes)



COMPLICATIONS

- Inability to find landmarks
- Bleeding
- Failure to penetrate the pleural cavity
- Clogging of needle by blood or soft tissue
- Subcutaneous emphysema
- Internal bleeding due to incorrect placement

NOTES

- None

REFERENCES

- https://www.narescue.com/ars-for-needle-decompression-3-25-in
- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

Intentionally Left Blank

CP8 NEBULIZER INHALATION THERAPY

CP8.1 Nebulizer Inhalation Therapy - mouthpiece or aerosol mask

INDICATIONS
• Bronchospasm

CONTRAINDICATIONS
• Allergy to medication

CAUTIONS
• Nebulized administration of sympathomimetic medications may cause tachycardia and increased myocardial oxygen demand

PROCEDURE
• Assemble device according to manufacturer's instructions • Instill premixed drug in the reservoir well of the nebulizer • Explain procedure to the patient • Connect the nebulizer device to oxygen at eight (8) liters per minute • Instruct the patient to inhale normally through the mouthpiece of the nebulizer (primary method for use). The patient needs to have a good lip seal around the mouthpiece • For pediatric patients or those unable to hold the mouthpiece with good seal, may use mask • The treatment should last until the solution is depleted. Tapping the reservoir well near the end of the treatment will assist in utilizing all the solution. • Monitor the patient for medication effects. This should include the patient's assessment of his/her response to the treatment and reassessment of vital signs, ECG, and breath sounds.

COMPLICATIONS
• Pneumothorax • Hypotension • Apnea • Inability to tolerate • Severe Tachycardia • Myocardial Ischemia

CP8.2 Nebulizer Inhalation Therapy with CPAP

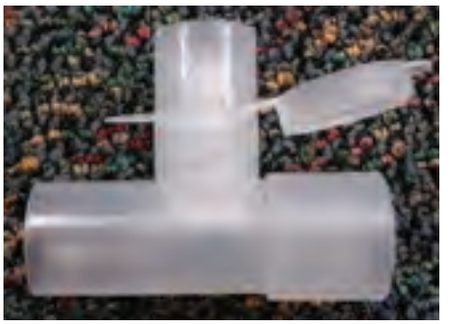
INDICATIONS
• Patients experiencing bronchospasm who are receiving CPAP treatment

CONTRAINDICATIONS	
• Altered Mental Status • Hypotension	• Inadequate tidal volumes/respiratory failure

CAUTIONS
• Nebulized administration of sympathomimetic medications may cause tachycardia and increased myocardial oxygen demand

PROCEDURE

- ***THIS PROCEDURE REQUIRES TWO OXYGEN SOURCES WITH INDEPENDENT REGULATORS***
- Assemble nebulizer and CPAP device according to manufacturer's instructions
- Attach nebulizer device to CPAP device with tee piece adapter
- Instill premixed drug in the reservoir well of the nebulizer
- Explain procedure to the patient
- Connect the nebulizer device to oxygen at eight (8) liters per minute



- Instruct the patient to breath normally
- The treatment should last until the solution is depleted. Tapping the reservoir well near the end of the treatment will assist in utilizing all the solution.
- Monitor the patient for medication effects. This should include the patient's assessment of his/her response to the treatment and reassessment of vital signs, ECG, and breath sounds.

COMPLICATIONS	
• Pneumothorax • Hypotension • Apnea	• Inability to tolerate • Severe Tachycardia • Myocardial Ischemia

NOTES

- CPAP therapy needs to be continuous and shouldn't be removed except:
  - for medication administration (e.g. nitroglycerin)
  - the patient can't tolerate the mask
  - The patient experiences continued or worsening respiratory failure or other complication.

CP8.3 Nebulizer Inhalation Therapy – Intubated Patient

INDICATIONS
• Patients experiencing bronchospasm who are being ventilated through an advanced airway (ETI, King Airway, trach/cric)

CONTRAINDICATIONS
• Allergy to medication

CAUTIONS
• Nebulized administration of sympathomimetic medications may cause tachycardia and increased myocardial oxygen demand

PROCEDURE

- THIS PROCEDURE REQUIRES TWO OXYGEN SOURCES WITH INDEPENDENT REGULATORS
- Assemble nebulizer device according to manufacturer's instructions
- Attach nebulizer device to BVM device with tee piece adapter and Superset adapter

- Instill premixed drug in the reservoir well of the nebulizer
- Explain procedure to the patient
- Connect the nebulizer device to oxygen at eight (8) liters per minute
- The treatment should last until the solution is depleted. Tapping the reservoir well near the end of the treatment will assist in utilizing all the solution.
- Monitor the patient for medication effects.

COMPLICATIONS	
• Pneumothorax • Hypotension	• Severe Tachycardia • Myocardial Ischemia

NOTES
• None

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

CP9 COMPRESSION PERFORMANCE RESUSCITATION

CP9.1 Adult CPR

INDICATIONS
• Atraumatic adult cardiac arrest • Atraumatic cardiac arrest in adults and children greater than 13 years old/60 kg

CONTRAINDICATIONS
• Presence of valid DNR (Ref. CS15) • Presence of criteria for withholding resuscitation (Ref. CS14) • Functioning LVAD

CAUTIONS
• Requires adequate room to work around the patient

PROCEDURE

- To ensure the best possible resuscitation, follow the choreography of the Compression Performance Resuscitation (Ref. CT4):
  - Position 1 – Compress/Defib (EMT or Paramedic)
    - Initiate uninterrupted compressions
    - Attach monitor/AED during pauses for ventilations
    - Deliver shock if indicated at conclusion of first two (2) minute cycle and on following cycles
    - Continue providing uninterrupted high-quality compressions alternating with Position 3, verbally announcing count so all rescuers are prepared for switching compressors
  - Position 2—Airway/Ventilation (Paramedic if available)
    - Open/clear airway
    - Position and ready monitor/AED during initial cycle of compressions
    - Attach oxygen and ETCO2 and provide ventilations with BVM and adjunct at appropriate ratio for number of rescuers
    - Insert King Airway (Paramedic Only) and confirm with ETCO2
    - Provide ongoing ventilations at rate of 10-12 per minute
  - Position 3—Compress/Defib (EMT or Paramedic)
    - If present during initial cycle, assist position 1 by attaching monitor/AED
    - Initiate uninterrupted compressions following initial rhythm/pulse check and shock delivery
    - Deliver subsequent shocks as indicated alternating with Position 1 on following cycles
    - Continue providing uninterrupted high-quality compressions alternating with Position 1, verbally announcing count so all rescuers are prepared for switching compressors

- Position 4—Vascular Access/Meds (Paramedic Only)
  - Establish vascular access with EZ-IO (Ref. CP21) or IV/accessing indwelling catheter if unable to obtain IO (Ref. CP25)
  - Administer medications as indicated
  - Assist with other ALS procedures as needed
- Position 5—Documentation/Family Liaison (EMT or Paramedic/Officer or Supervisor preferred)
  - Gather and document patient information and pre-arrival/Bystander interventions
  - Document EMS care provided
  - Provide family updates
  - Maintain overall situation awareness and prepare for transport logistics

- Utilize the Philips MRx Q-CPR meter to ensure adequate compression depth, rate, and recoil
- "Triangle" position functions have the greatest impact on survival and should not be interfered with for other functions
- Ensure minimization of interruptions for rotation of personnel and around shock delivery
- Provide electrical and pharmacologic therapy as indicated in Protocol C1

COMPLICATIONS

- Chest wall trauma/rib fractures
- Skin tear from Q-CPR meter use
- Return of neurologic function prior to ROSC

NOTES

- Goal of team approach is to minimize interruption of compressions (no more than 5-10 seconds per two (2) minute cycle)
- Transport should generally be deferred until after ROSC unless dictated by scene factors
- "Bystander" is defined as any person who was not dispatched to call as part of the 911 response system
- "ROSC" is defined as persistent presence of patient generated palpable pulse or blood pressure

CP9.2 CHILD CPR

INDICATIONS
• Atraumatic cardiac arrest in patients 1 year to 13 years of age

CONTRAINDICATIONS
• Presence of valid DNR (Ref. CS15) • Presence of criteria for withholding resuscitation (Ref. CS14)

CAUTIONS
• Requires adequate room to work around the patient

PROCEDURE

- To ensure the best possible resuscitation, follow the choreography of the Compression Performance Resuscitation (Ref. CT5):
  - Position 1 – Compress/Defib (EMT or Paramedic)
    - Initiate uninterrupted compressions
    - Attach monitor/AED using age-appropriate pads (and pediatric key when indicated/available) during pauses for ventilations
    - Deliver shock if indicated at conclusion of first two (2) minute cycle and on following cycles
    - Continue providing uninterrupted high-quality compressions alternating with Position 3, verbally announcing count so all rescuers are prepared for switching compressors
  - Position 2—Airway/Ventilation (Paramedic if available)
    - Open/clear airway
    - Attach oxygen and ETCO2 and provide ventilations with BVM and adjunct at appropriate ratio for number of rescuers and age of patient (Ref. CP3)
    - Perform airway management if unable to adequately ventilate with BVM (Ref. CP3)
    - Provide ongoing ventilations at rate of 12-20 per minute
  - Position 3—Compress/Defib (EMT or Paramedic)
    - If present during initial cycle, assist position 1 by attaching monitor/AED
    - Initiate uninterrupted compressions following initial rhythm/pulse check and shock delivery
    - Deliver subsequent shocks as indicated alternating with Position 1 on following cycles
    - Continue providing uninterrupted high-quality compressions alternating with Position 1, verbally announcing count so all rescuers are prepared for switching compressors

  - Position 4—Vascular Access/Meds (Paramedic Only)
    - Establish vascular access with EZ-IO (Ref. CP21) or IV/accessing indwelling catheter if unable to obtain IO (Ref. CP25)
    - Administer medications as indicated
    - Assist with other ALS procedures as needed
  - Position 5—Documentation/Family Liaison (EMT or Paramedic/Officer or Supervisor preferred)
    - Gather and document patient information and pre-arrival/Bystander interventions
    - Document EMS care provided
    - Provide family updates
    - Maintain overall situation awareness and prepare for transport logistics
- Utilize the Philips MRx Q-CPR meter to ensure adequate compression depth, rate, and recoil in patients 8 years and older
- Compress at a rate of 100-120 per minute and a depth of 1/3 the chest diameter ensuring complete recoil in patients 1 – 8 years of age
- "Triangle" position functions have the greatest impact on survival and should not be interfered with for other functions
- Ensure minimization of interruptions for rotation of personnel and around shock delivery
- Provide electrical and pharmacologic therapy as indicated in Protocol
- **"RESTART THE HEART BEFORE YOU DEPART"** -- *EVERY EFFORT SHOULD BE MADE TO ENSURE ESTABLISHMENT OF EFFECTIVE RESUSCITATION (INCLUDING EPINEPRHINE) PRIOR TO TRANPSPORT*

COMPLICATIONS
• Chest wall trauma/rib fractures • Skin tear from Q-CPR meter use

NOTES
• Team approach to minimize interruption of compressions resulting in at least a < 10 second break (< 5 seconds is optimal) during every cycle. • If personnel need rotation out of a position and appropriate personnel are on scene, it may be done as long as there is no interruption in cardiopulmonary resuscitation • Any additional personnel may be added into available positions as the situation dictates as long as it does not interfere with the "triangle" positions that have the greatest impact on patient outcome. • "ROSC" is intended to represent a brief (approximately > 30 seconds) restoration of spontaneous circulation that provides evidence of more than an occasional gasp, occasional fleeting palpable pulse or arterial waveform

CP9.3 Infant CPR

INDICATIONS
• Atraumatic cardiac arrest in patients < 1 year of age • Circulatory collapse (HR<60 and evidence of poor perfusion) in patients < 1 year of age

CONTRAINDICATIONS
• Presence of valid DNR (Ref. CS15) • Presence of criteria for withholding resuscitation (Ref. CS14)

CAUTIONS
• Requires adequate room to work around the patient

PROCEDURE

- To ensure the best possible resuscitation, follow the choreography of the Compression Performance Resuscitation (Ref. CT5):
    - Position 1 – Compress/Defib (EMT or Paramedic)
        - Initiate uninterrupted compressions using fingers or thumb encircling technique
        - Attach monitor/AED using age-appropriate pads (and pediatric key when indicated/available) during pauses for ventilations
        - Deliver shock if indicated at conclusion of first 2-minute cycle and on following cycles
        - Continue providing uninterrupted high-quality compressions alternating with Position 3, verbally announcing count so all rescuers are prepared for switching compressors
    - Position 2—Airway/Ventilation (Paramedic if available)
        - Open/clear airway
        - Attach oxygen and ETCO2 and provide ventilations with BVM and adjunct at appropriate ratio for number of rescuers and age of patient (Ref. CP3.1)
        - Perform airway management if unable to adequately ventilate with BVM (Ref. CP3)
        - Provide ongoing ventilations at rate of 12-20 per minute
    - Position 3—Compress/Defib (EMT or Paramedic)
        - If present during initial cycle, assist position 1 by attaching monitor/AED
        - Initiate uninterrupted compressions following initial rhythm/pulse check and shock delivery
        - Deliver subsequent shocks as indicated alternating with Position 1 on following cycles
        - Continue providing uninterrupted high-quality compressions alternating with Position 1, verbally announcing count so all rescuers are prepared for switching compressors

- Position 4—Vascular Access/Meds (Paramedic Only)
  - Establish vascular access with EZ-IO (Ref. CP21) or IV/accessing indwelling catheter if unable to obtain IO (Ref. CP25)
  - Administer medications as indicated
  - Assist with other ALS procedures as needed
- Position 5—Documentation/Family Liaison (EMT or Paramedic/Officer or Supervisor preferred)
  - Gather and document patient information and pre-arrival/Bystander interventions
  - Document EMS care provided
  - Provide family updates
  - Maintain overall situation awareness and prepare for transport logistics

- Compress at a rate of 100-120 per minute and a depth of 1/3 the chest diameter ensuring complete recoil
- "Triangle" position functions have the greatest impact on survival and should not be interfered with for other functions
- Ensure minimization of interruptions for rotation of personnel and around shock delivery
- Provide electrical and pharmacologic therapy as indicated in Protocol
- **"RESTART THE HEART BEFORE YOU DEPART"** -- *EVERY EFFORT SHOULD BE MADE TO ENSURE ESTABLISHMENT OF EFFECTIVE RESUSCITATION (INCLUDING EPINEPRHINE) PRIOR TO TRANPSPORT*

COMPLICATIONS	
• Chest wall trauma/rib fractures	• Skin tear from Q-CPR meter use

NOTES

- Team approach to minimize interruption of compressions resulting in at least a < 10 second break (< 5 seconds is optimal) during every cycle.
- If personnel need rotation out of a position and appropriate personnel are on scene, it may be done as long as there is no interruption in cardiopulmonary resuscitation
- Any additional personnel may be added into available positions as the situation dictates as long as it does not interfere with the "triangle" positions that have the greatest impact on patient outcome.
- "ROSC" is intended to represent a brief (approximately > 30 seconds) restoration of spontaneous circulation that provides evidence of more than an occasional gasp, occasional fleeting palpable pulse or arterial waveform

REFERENCES

- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/
- http://circ.ahajournals.org/content/132/18_suppl_2
- https://eccguidelines.heart.org/index.php/circulation/cpr-ecc-guidelines-2/part-12-pediatric-advanced-life-support/
- https://eccguidelines.heart.org/index.php/circulation/cpr-ecc-guidelines-2/part-13-neonatal-resuscitation/

CP10 AUTOMATED EXTERNAL DEFIBRILLATOR (AED)

INDICATIONS
• Cardiac arrest

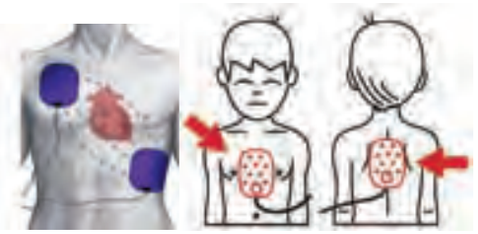
CONTRAINDICATIONS
• Hazardous environments (e.g. standing water, fire/ignition hazards, etc.)

CAUTIONS

• Transdermal medication patches should be removed and the area wiped clean before an AED electrode pad is attached
• Implanted Pacemakers/ICDs
  o Place electrode pad at least 1 inch away
  o If implanted cardio-defibrillator (ICD) is delivering shocks, allow 30 to 60 seconds for the ICD to complete the treatment cycle

PROCEDURE

- Universal AED
  a. Operation preferred from the patient's left side ear
  b. **POWER ON** the AED – Follow the prompts
  c. **Attach electrode pads** to patient's bare skin
     - Upper right sternal border (directly below the clavicle)
     - Lateral to left nipple and a few inches below the axilla



  d. **Plug electrode pads into device,** if not already preconnected
  e. **Analyze the Rhythm –** clear rescuers and bystanders from patient and ensure no one is touching the patient
  f. **Clear the Patient and Press the SHOCK button**
     - Loudly state "I'm Clear, You're Clear, Everybody Clear"
     - Visually check at the same time that no one is in contact
  g. After first shock, **DO NOT** restart CPR – Follow the device prompts
  h. After three (3) shocks, check signs of circulation and prepare to provide chest compressions
  i. Continue compressions and ventilations for one (1) minute
  j. Continue to follow the voice prompts until ALS personnel arrive and provide direction.
  k. DO NOT discontinue compressions or ventilations until instructed to do so by ALS personnel.

COMPLICATIONS
• If patient noticeably diaphoretic, dry the chest with a cloth or towel before attaching the electrode pads • If patient has a hairy chest and first set of pads will not stick, shave the hair prior to application of the second set of pads • Agonal respirations • Use of radio receivers and transmitters should be avoided during rhythm analysis

NOTES
• It is important to continue to hold the Shock button until the shock is delivered. The defibrillator shocks with the next detected R-wave • If AED equipped with pediatric pads/key, use with patient < 8 years of age

REFERENCES
• http://circ.ahajournals.org/content/102/suppl_1/I-60#sec-17 • https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

CP11 MANUAL DEFIBRILLATION

INDICATIONS
• Ventricular Fibrillation, Pulseless Ventricular Tachycardia, Polymorphic Ventricular Tachycardia

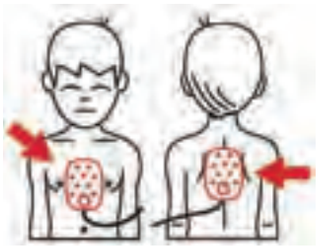
CONTRAINDICATIONS
• Hazardous environments (e.g. standing water, fire/ignition hazards, etc.) • Valid Florida Do Not Resuscitate Order (DNRO)

CAUTIONS
• Oxygen enriched environments

PROCEDURE

1. Prepare patient's chest:
   - Clean and dry skin, remove excess hair, if necessary
   - Determine presence of AICD, pacemaker, other implanted medical devices
2. Apply hands free multi-function pads to patient's skin
   - Pad placement

Adult – Anterior/Anterior **Pediatric – Anterior/Posterior**



3. Connect hands free multi-function pad connector to therapy cable
4. Turn the **Therapy Knob** to **Manual Defib** and select an appropriate energy setting
   - Selected energy can be increased or decreased at any time during charging or after charging is complete; the defibrillator charges to the selected energy level automatically
5. Press the ***CHARGE*** button (a continuous, low-pitched charging tone sounds until the desired energy level is reached, at which point the high-pitched charge sound is heard)
   - Press **[Disarm]** to disarm the device once charged if no shock is indicated

6. Call "I'm Clear", "You're Clear", "Oxygen Clear" and visually verify all clear
7. Confirm that the defibrillator has charged to the desired energy level
8. Press the flashing ***SHOCK*** button

COMPLICATIONS
• Air pockets between patient skin and multifunction pads may cause skin burns • Pain • Burns

NOTES
• *DO NOT* place hands free pads over monitor electrodes, cables, pacemakers, dressings, implantable cardiac rhythm devices or transdermal patches

REFERENCES
• https://www.usa.philips.com/healthcare/medical-specialties/business-and-government/emergency-response/clinical-excellence-in-emergency-care

CP12 VECTOR CHANGE DEFIBRILLATION

INDICATIONS

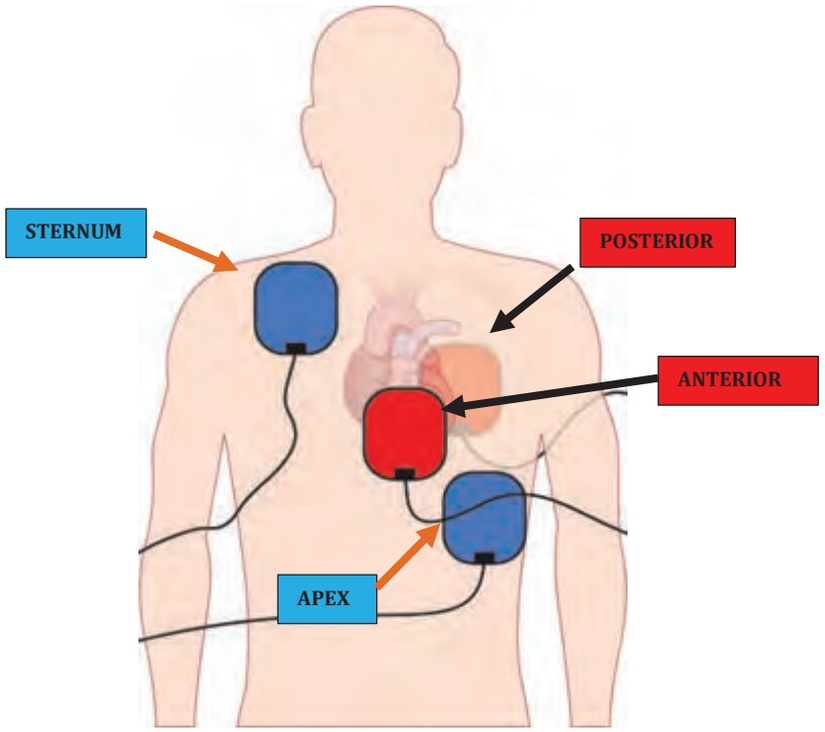
• Adult
• Refractory ventricular fibrillation
  o Has already received 3+ shocks
  o Has already received antiarrythmic drug therapy
• ***OLMC Authorization Required***

CONTRAINDICATIONS
• Hazardous environments (e.g. standing water, fire/ignition hazards, etc.)

CAUTIONS
• Ensure minimal interruption to compressions

PROCEDURE

- Apply a second set of Phillips Hands Free Multi-function Pads in the alternate position (e.g. anterior-posterior vs. apex-sternum) from the initial pads during the next pulse check.



- Switch MRX to the new set of pads after CPR resumes.
- At the next indicated shock, perfrom standard defibrillation using the new pads.
- Continue the remainder of the resuscitation with the new pads.

COMPLICATIONS
• Asystole

NOTES
• Pending

REFERENCES
• Pending

CP13 SYNCHRONIZED CARDIOVERSION

INDICATIONS
• Unstable tachydysrhythmias

CONTRAINDICATIONS
• Hazardous environments (e.g. standing water, fire/ignition hazards, etc.)

CAUTIONS
• **Failure to SYNC may result in "R on T syndrome" and induce asystole**

PROCEDURE

- Philips MRx
  - Turn the **Therapy Knob** to **Monitor** and press the **SYNC** button. A sync message appears in the upper right corner of Wave Sector 1
  - Confirm that the sync marker appears with each R-wave. If the marker does not appear, select another lead
  - Turn the **Therapy Knob** to the desired energy level setting
  - Press the **CHARGE** button on the MRx
    - Wait until the charge has reached the selected energy level at which point you will hear a continuous charge done tone.
    - To disarm the defibrillator prior to discharging the energy, press **(Disarm)**.
    - The selected energy can be changed at any time during charging or after charging is complete. The MRx charges to the selected energy level automatically.
  - Call "I'm Clear", "You're Clear", "Oxygen Clear" and visually verify all clear
  - Continue to hold the **SHOCK** button until the shock is delivered so that the defibrillator shocks the next detected R-wave

COMPLICATIONS
• Pain • Burns • Arrhythmias

NOTES
• None

REFERENCES

- http://incenter.medical.philips.com/doclib/enc/fetch/2000/4504/577242/577243/577245/577817/577891/HeartStart_MRx.pdf%3fnodeid%3d8602907%26vernum%3d-2

Intentionally Left Blank

CP14 TRANSCUTANEOUS PACING (TCP)

INDICATIONS
• Unstable bradycardia

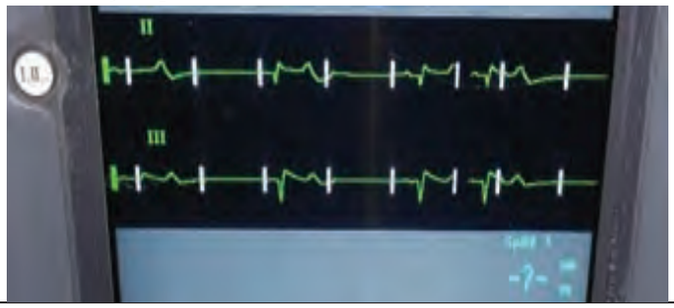
CONTRAINDICATIONS
• Hazardous environments (e.g. standing water, fire/ignition hazards, etc.)

CAUTIONS
• Although TCP is a painful procedure, initiation of pacing must not be delayed for analgesia in the unstable patient

14.1 DEMAND MODE (DEFAULT) PHILIPS MRX

PROCEDURE

1. Apply ECG monitoring electrodes
2. Press the ***LEAD SELECT*** button to select the best lead with an easily detectable R-wave
3. Apply hands free multi-function pads
4. Connect hands free multi-function pad connector to therapy cable
5. Turn the therapy knob to the ***PACER*** position
6. Verify that the white R-wave markers appear above or on the electrocardiogram (ECG) waveform
7. Press ***PACER RATE*** and increase the rate to 60 bpm initially
8. Press ***PACER OUTPUT*** and increase the output to 60 milliamps initially
9. Press ***START PACING***. The message ***PACING*** appears
10. Rapidly increase energy in increments of 10 milliamps until electrical capture is attained
11. Increase the output until cardiac (mechanical) capture occurs

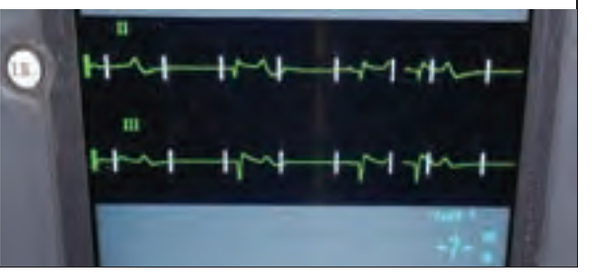


14.2 Fixed Mode – Philips MRx

PROCEDURE

1. Apply hands free multifunction pads
2. Connect hands free multi-function pad connector to therapy cable
3. Change the pacer mode to Fixed Mode
4. Turn the therapy knob to the ***PACER*** position
5. Press ***PACER RATE*** and increase the rate to 60 bpm initially

6. Press ***PACER OUTPUT*** and increase the output to 60 milliamps initially
7. Press ***START PACING***. The message ***PACING*** appears
8. Rapidly increase energy in increments of 10 milliamps until electrical capture is attained
9. Increase the output until cardiac capture occurs



COMPLICATIONS

- Pain
- Burns
- Failure to achieve or maintain electrical and mechanical capture

NOTES

- Spontaneous beats may be present which are not associated with the delivery of paced pulses
- Demand Mode –
  - Pace pulses are delivered when the patient's heart rate is lower that the selected pacing rate.
  - If the patient's heart rate is above the pacer rate, paced pulses are not delivered therefore pacing markers do not appear
  - Requires the use of ECG monitoring cables and hands-free pads
- Fixed Mode –
  - Pace pulses are delivered at the selected rate regardless of the patient's underlying heart rate
- A pulse oximeter can be useful for confirming capture (by comparing the pulse rate measured by the pulse oximeter to set pacing rate) and perfusion

REFERENCES

- http://incenter.medical.philips.com/doclib/enc/fetch/2000/4504/577242/577243/577245/577817/577891/HeartStart_MRx.pdf%3fnodeid%3d8602907%26vernum%3d-2

CP15 SPINAL PRECAUTIONS

INDICATIONS
• Any sign of blunt trauma or mechanism • Spine pain or tenderness or anatomical deformity of the neck or back • Altered mental status less than GCS 15 • Signs of intoxication with alcohol or drugs • Patient distracted by painful injury • Neuro deficit after trauma (signs and symptoms of extremity weakness or numbness)

CONTRAINDICATIONS
• Inability to perform without causing further injury to patient (e.g. unsafe environment requiring rapid extrication)

CAUTIONS
• Spinal precautions are not a benign procedure and may cause significant discomfort and potentially physiologic compromise. ***It should be applied only when necessary*** • Airway assessment and management takes priority over spinal precautions in patients with isolated penetrating trauma to the neck

PROCEDURE
• Maintain manual stabilization while determining if patient meets criteria for spinal precautions (Ref. CT11) • If extrication may be required: o From a vehicle: 1. After placing a cervical collar, if indicated, children in a booster seat and adults should be allowed to self-extricate. 2. For infants and toddlers already strapped in a car seat with a built-in harness, extricate the child while strapped in his/her car seat o Other situations requiring extrication: 1. A padded long board may be used for extrication, using the lift and slide (rather than a logroll) technique o Helmet removal: 1. If a football helmet needs to be removed, it is recommended to remove the facemask followed by manual removal (rather than the use of automated devices) of the helmet while keeping the neck immobilized. 2. Occipital padding should be applied, as needed, with the patient in a supine position, in order to maintain neutral cervical spine positioning (e.g. when wearing shoulder pads) • ***Patients should not routinely be transported on long boards, unless the clinical situation warrants long board use.*** An example of this may be facilitation of immobilization of multiple extremity injuries or an unstable patient where removal of a board will delay transport and/or other treatment priorities. In these rare situations,

long boards should be padded or have a vacuum mattress applied to minimize secondary injury to the patient

COMPLICATIONS

- Increased pain
- Pressure ulcers
- Respiratory compromise

NOTES

- Be aware of potential airway compromise or aspiration in immobilized patient with nausea/vomiting, or with facial/oral bleeding
- Excessively tight immobilization straps can limit chest excursion and cause hypoventilation
- Prolonged immobilization on spine board can lead to ischemic pressure injuries to skin
- Prolonged immobilization on spine board can be very uncomfortable for a patient
- Children are abdominal breathers, so immobilization straps should go across chest and pelvis and not across the abdomen, when possible

REFERENCES

- Hoffman JR, Wolfson AB, Todd K, Mower WR. (1998). "Selective cervical spine radiography in blunt trauma: methodology of the National Emergency X-Radiography Utilization Study (NEXUS)." Ann Emerg Med. 32 (4): 461–9. doi:10.1016/s0196-0644(98)70176-3. PMID 9774931
- "EMS Spinal Precautions and the Use of the Long Backboard" http://www.naemsp.org/pages/position-statements.aspx
- "EMS Spinal Precautions and the Use of the Long Backboard—Resource Document to the Position Statement of the National Association of EMS Physicians and the American College of Surgeons Committee on Trauma. http://www.naemsp.org/pages/position-statements.aspx
- https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

CP16 COMBAT APPLICATION TOURNIQUET (CAT)

INDICATIONS

- Control of life threatening external hemorrhage when standard methods such as direct pressure are inadequate

CONTRAINDICATIONS

- Inability to place proximal to wound

CAUTIONS

- Incorrectly placed tourniquets may increase venous bleeding
- Do not place over a joint

PROCEDURE

1. Apply tourniquet proximal to wound according to manufacturer's instructions. Avoid placing over joints.
2. Tighten tourniquet until bleeding stops.
3. Apply second tourniquet proximal to first (directly adjacent) if needed.
4. Note the time and date of application on the tourniquet or patient's skin near the tourniquet.
5. Monitor for recurrent hemorrhage.
6. Provide analgesia after application when possible (Ref. M13)
7. Tourniquets should only be removed by the receiving facility, once properly placed.

COMPLICATIONS

- Pain
- Even when properly applied may cause nerve and vascular damage as well as tissue loss

NOTES

- Tourniquets may be used as first line treatment in:
  - Traumatic Cardiac Arrest
  - During incidents with ongoing threats – Ref. CS21
  - When other standard methods of hemorrhage control are not feasible

REFERENCES

- https://www.narescue.com/combat-application-tourniquet-c-a-t

Intentionally Left Blank

CP17 HYFIN VENT COMPACT CHEST SEAL

INDICATIONS
• Penetrating wounds to the chest

CONTRAINDICATIONS
• None

CAUTIONS
• Anticipate difficulty with excess blood, skin moisture, or debris

PROCEDURE

1. Clean and dry the wound as practical
2. Remove one vented chest seal from release liner
3. Place firmly over wound, centered, with adhesive side down
4. Apply light direct pressure to assure occlusive seal
5. Repeat with second dressing if a second wound (e.g. exit wound) is present

COMPLICATIONS
• Improper placement may contribute to the development of tension pneumothorax

REFERENCES
• https://www.narescue.com/hyfin-vent-compact-chest-seal-twin-pack

Intentionally Left Blank

CP18 WOUND PACKING - QUIKCLOT® COMBAT GAUZE & EMERGENCY TRAUMA DRESSING (ETD)

INDICATIONS
• Control of life-threatening external hemorrhage in areas where proximal tourniquet application is not possible (e.g. junctional wounds) and standard methods such as direct pressure are inadequate.

CONTRAINDICATIONS
• None

CAUTIONS
• Hemorrhage control using external hemostatic dressings may be difficult at non-compressible sites • Avoid hemostatic dressing contact with eyes

PROCEDURE

1. Expose wound, remove excess-pooled blood from around wound while preserving any clots already in the wound if possible.
2. Locate source of bleeding and pack hemostatic gauze into wound tightly and directly onto bleeding source. Use as much gauze as needed to stem blood flow. Remainder of roll can be used on top of wound or to fill wound cavity.
3. Apply manual direct pressure for 3 – 5 minutes or until bleeding stops.
4. Leave gauze in place. Place the pad of the ETD dressing over wound and wrap tightly to create a pressure dressing. Secure as directed.
5. Consider pain management.

COMPLICATIONS
• Failure to adequately control hemorrhage • Pain

NOTES

- Wound packing may be used as first line treatment in:
  - Traumatic Cardiac Arrest
  - During incidents with ongoing threats – Ref. CS21
  - When other standard methods of hemorrhage control are not feasible
- QuikClot® Combat Gauze causes rapid, localized coagulation and the formation of a stable blood clot in a variety of wounds. It does not absorb into the body and is safe to leave in the wound until further medical care is available. QuikClot® Combat Gauze does not produce any heat and controls bleeding faster than conventional methods.

REFERENCES
• https://www.narescue.com/combat-gauze-z-fold-hemostatic • https://www.narescue.com/responder-emergency-trauma-dressings

CP19 TRACTION SPLINT

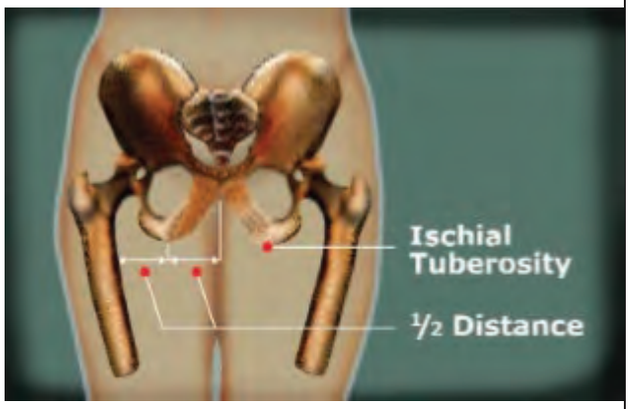
INDICATIONS
• Treatment of unilateral proximal third and mid-shaft femoral fractures • Pain relief

CONTRAINDICATIONS
• Pelvic fracture • Distal femur or supracondylar fractures • Compound or open fractures of the femur • Fractures of the ankle and foot

CAUTIONS
• None

PROCEDURE

- Position the Sager S301 between the patient's legs resting the ischial perineal cushion (the saddle) against the ischial tuberosity, with the shortest end of the articulating base towards the ground
- The pulley wheel should be on the same side and towards the injured limb
- Apply the abductor bridle (thigh strap) around the upper thigh on the injured limb
- Push the ischial perineal cushion gently down at the same time pulling the thigh strap laterally under the patient's thigh
- Tighten the thigh strap lightly
- Lift the spring coil to extend the inner shaft until the pulley (traction) wheel is adjacent to the patient's heels.
- Note the absence or presence of distal pulses. Check for sensation
- Position the malleolar harness (ankle harness) beneath the heel(s) and just above the ankle
- Fold down the number of comfort cushions needed to engage all of the ankle above the medial and lateral malleoli
- Using the attached hook and loop straps, wrap the ankle harness around the ankle too secure snugly
- Pull control tabs on the ankle harness to shorten the ankle sling, pulling it up against the sole of the foot
- Extend the splint shaft to achieve the amount of traction desired while observing the amount registered on the traction scale (use 10% of the patient's weight per fractured femur up to 7 kg (15 pounds))



- At the hollow of the knees, gently slide the large elastic leg cravat through and upwards to the thigh repeating with the smaller cravats to minimize lower and mid-limb movement
- Adjust the thigh strap at the upper thigh making sure it is not too tight but snug and secure, then firmly secure the elastic leg cravats
- Apply the pedal pinion around the feet to prevent rotation
- Note the presence or absence of distal pulses. Check for sensation.

COMPLICATIONS

- Inadequate or excessive traction
- Improper positioning
- Increased pain (rare)
- Neurovascular compromise

NOTES

- None

REFERENCES

- http://www.sagersplints.com/pdf/SEFRS-InstructorsManual.pdf

CP20 OROGASTRIC TUBE INSERTION

ADULT and PEDIATRIC	INDICATIONS
	• Gastric decompression and emptying in pediatric and adult patients receiving assisted ventilation • Remove gastric distention of air and to minimize change of aspiration

CONTRAINDICATIONS
• Awake patient • Patient with intact gag reflex • Caustic ingestions • History of esophageal structures, varices and/or other esophageal disease • Adult patient without an advanced airway in place

CAUTIONS
• Excessive force should not be necessary to pass tube

PROCEDURE

- ***NASAL GASTRIC TUBE INSERTION IS NOT PERMITTED***
- Choose the appropriately sized gastric tube:
  - 6 Fr – Infant/Pediatric 3 kg – 15 kg
  - 12 Fr – Pediatric 16 kg – 25 kg
  - 18 Fr greater than 25 kg

- Measure the tube from the corner of the mouth to the earlobe and then to the point midway between the patient's navel and tip of the sternum
  - King LTS-D gastric lumen access
    - Lubricate the gastric tube with water soluble jelly prior to insertion into the gastric access lumen

  - Endotracheal tube
    - Lubricate the gastric tube with water soluble jelly prior to insertion and slowly advance the tube into the oropharynx ***NEXT TO*** the endotracheal tube to the appropriate depth
  - Non-intubated pediatric patient
    - An OPA should be in place. Measure and insert the gastric tube as previously described.
- If there is resistance, rotate and retract the tube slightly and try again. Keep insertion attempt to 10 seconds or less
- Keeping the patient's head and neck in a neutral position will facilitate passage of the gastric tube
- Once inserted, draw 5 – 20 mL of air (dependent on patient size) into a 60 mL catheter tip syringe and quickly inject the bolus of air into the stomach while auscultating with a stethoscope. If the tube is in the stomach, a gurgling should be audible. If the tube is in the esophagus or trachea, the air sounds will be absent or muffled

- Once placement is confirmed, attach orogastric tube to suction tubing. Place to low, non-continuous suction to facilitate evacuation of stomach contents. Discontinue suction when there is no further return of stomach contents
- Secure the gastric tube to the exterior cheek lightly with tape

COMPLICATIONS
• Bleeding • Inadvertent tracheal placement

NOTES
• None

REFERENCES
• https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/

CP21 INTRAOSSEOUS ACCESS

INDICATIONS
• Primary vascular access for a patient in cardiac arrest • Inability to obtain peripheral vascular access in other category **RED** patients (adult and pediatric) requiring urgent vascular access.

CONTRAINDICATIONS
• Fracture in targeted bone • Excessive tissue or absence of adequate anatomical landmarks • Infection at area of insertion site • Previous significant orthopedic procedure at site (e.g. prosthetic limb/joint) • Intraosseous access in targeted bone within past 48 hours

CAUTIONS
• None

PROCEDURE
• Determine landmarks for approved sites (proximal tibial plateau, proximal humeral head and distal tibia just proximal to medial malleolus) per manufacturer provided diagrams and choose appropriate needle size • Prep area well with alcohol preps and Chlorprep or betadine (if available) • Insert needle using EZ-IO (device per manufacturer's instructions) • Confirm placement with aspiration of bone marrow, flush and then secure with the EZ-IO Stabilizer device • Infuse fluids and medications as needed • In conscious patients, may administer 2% lidocaine (adults 30 mg & pediatrics 0.5 mg/kg to a max dose of 30 mg) via slow intraosseous push to control infusion related pain • Write time of placement and operator name on provided band and affix to limb where intraosseous placed

COMPLICATIONS
• Improper placement may cause injury to the bone • Bleeding • Extravasation of fluids and medications • Necrosis • Loss of limb

NOTES
• None

REFERENCES
• http://www.arrowezio.com/

Intentionally Left Blank

CP22 AUTO-INJECTOR USE

CP22.1 EPINEPHRINE AUTO-INJECTOR (e.g. Epi-pen, Epi-pen Jr.)

INDICATIONS
• Anaphylaxis • Anaphylactic Shock • Life threatening bronchospasm/obstructive respiratory disease

CONTRAINDICATIONS
• None

CAUTIONS
• Caution in patients suspected of coronary disease as may precipitate ACS. • Avoid accidental self-administration

PROCEDURE
1. Expose skin and cleanse if possible 2. Grasp age appropriate auto injector without covering end with fingers and remove safety cap 3. Press tip firmly against patient's outer thigh until device fires holding on skin 10 seconds after firing to ensure full delivery of medication

COMPLICATIONS
• Bleeding • Infection • Adverse medication reaction

CP22.2 NERVE AGENT ANTIDOTE (Duodote Auto-injector)

INDICATIONS

- Treatment of life-threatening symptoms of poisoning by organophosphorus nerve agents, as well as organophosphorus insecticides

CONTRAINDICATIONS

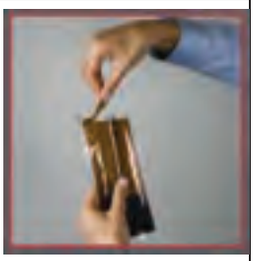
- None

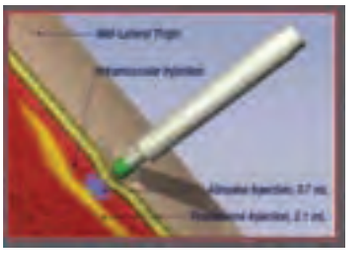
CAUTIONS

- Individuals should not rely solely upon Atropine and Pralidoxime to provide complete protection from chemical nerve agents and insecticide poisoning

PROCEDURE

1. The injection site is the mid-outer thigh area
2. Swing and firmly push GREEN TIP straight down (at a 90-degree angle) against mid-outer thigh. Continue to push firmly until you feel the auto-injector trigger
3. Hold in place firmly against the injection site for 10 seconds
4. Remove the Duodote from the thigh. Inspect the GREEN TIP; if the needle is visible, then the injection was successful
5. If the needle is not visible, make sure the Gray Safety Release is removed and repeat the preceding steps
6. Keep used auto-injectors with the patient so others will be aware of how many injections were administered





COMPLICATIONS

- Bleeding
- Infection
- Adverse medication reaction

NOTES

- Children less than 9 years old – Consult OLMC for administration/dosing determination
- You can inject through clothing, but make sure that pockets are empty
- Injector needle may not penetrate bunker gear
- Give injections into a large muscle mass area such as the outer thigh or buttocks

REFERENCES

- http://www.meridianmeds.com/products/duodote

CP23 PHYSICAL RESTRAINT

INDICATIONS
• **Soft restraints** are appropriate for non-violent patients who require restraint from interfering with therapy (e.g. pulling lines, tubes, etc.) • **Hard restraints** are appropriate for patients that are violent and pose a threat to responders or themselves when verbal de-escalation is ineffective and chemical sedation is not feasible

CONTRAINDICATIONS
• None

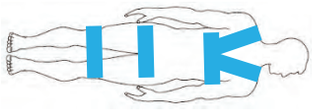
CAUTIONS
• Physical restraints are potentially dangerous and should be used only when other methods (verbal de-escalation, chemical sedation) are not effective or feasible

PROCEDURE

- Verbal de-escalation should be attempted prior to moving to chemical/physical restraints
- Choose the appropriate level of physical restraint:
  - Soft restraints – appropriate for non-violent patients who require restraint from interfering with therapy (e.g. pulling lines, tubes, etc.)
  - Hard restraints (with appropriately sized liner) – appropriate for patients who pose a danger to themselves or responders
- Obtain law enforcement assistance for physical restraint, whenever possible
- Apply restraints following the manufacturer's instructions
- Position a patient in the supine position.

NEVER RESTRAIN A PATIENT IN THE PRONE POSITION

- A patient may be placed on backboard or stretcher to facilitate transfer
  - Strap Placement:
    - Ambulance Stretcher
      - Shoulder/Chest straps
      - Hip strap across hips/pelvis
      - Leg strap immediately above the knees



    - Backboard (when utilized) straps
      - Chest straps across the chest (in the form of an "X")
      - Abdominal strap on the hips (not abdomen – in the form of an "X")
      - Leg strap immediately above the knees

- Secure hands/feet - Stretcher
  - Dominate hand (if known) tied to stretcher above head (same side)
  - Non-dominant hand tied down to their side to the stretcher (same side)
  - Secure ankles individually to each side of the stretcher (right ankle to the right side of the stretcher and left ankle to the left side of the stretcher

- If the patient is spitting, a surgical mask/N95 mask may be used to block secretions. If the patient receives any chemical sedation, a non-rebreather mask at 10 – 15 Lpm should be utilized
- Monitor the airway to prevent aspiration. Have suction readily available and be prepared to roll the patient!!
- Assess distal neurovascular function and document a minimum of every 10 minutes

COMPLICATIONS

- Physical injury to patient or responders
- Failure to recognize deteriorating respiratory, neurologic and cardiovascular status
- Extremity injury

NOTES

- Keep the exit between yourself and the patient so that you may safely and quickly exit, if needed. ***Retreating from a violent patient to prevent injury is not abandonment.***
- Never attempt to subdue a violent or combative patient by yourself
- Request law enforcement for a violent and severely combative patient
- Any patient restrained by law enforcement in a prone position ***SHALL IMMEDIATELY BE PLACED IN A SUPINE POSITION*** upon EMS access to the patient. Provide an initial and ongoing assessment for signs and symptoms of positional asphyxia
- Law Enforcement restraints

If the officer does not want to ride in, an OLMC contact shall be made

REFERENCES

- http://i2.wp.com/emcrit.org/wp-content/uploads/2011/11/how-to-restrain.jpg

CP24 PATIENT RESTRAINT FOR TRANSPORT

INDICATIONS

- All patients being transported shall be secured utilizing an appropriate restraint device

CONTRAINDICATIONS

- None

CAUTIONS

- It is imperative that patients are restrained with approved devices applied per the manufacturer's recommendations. Be mindful that access to a patient's airway should never be compromised by the restraint.
- ***At no time should an infant or child be transported in the lap of a parent or guardian***

PROCEDURE

- For children weighing less than 10 pounds, the "Infant/Child Safety Seat" should be utilized, secured to the stretcher
- For children weighing 10 to 40 pounds, the Pedi-Mate should be utilized secured to the stretcher

- A pediatric immobilization device should be used for all pediatric trauma patients
- A patient weighing greater than 40 pounds should be secured to the main stretcher utilizing provided stretcher straps
- Adult trauma patients will be placed in an Immobilization Device as per CP8 and secured to the stretcher or bench seat

COMPLICATIONS

- Caution when securing patients that proper positioning and alignment is maintained to promote good circulation and decrease injury

NOTES

- For the interfacility transport of infants less than 28 days of age and/or weighing 5 kg or less, CCT should be utilized for neonatal care and transport with an isolette or another specialized device

REFERENCES

- http://www.fernoems.com/en/search-results/pedi-mate.aspx

Intentionally Left Blank

CP25 TROUBLESHOOTING & EMERGENCY ACCESS OF INDWELLING CATHETERS

INDICATIONS

- Displacement, fracture, or bleeding from catheter

CONTRAINDICATIONS

- Medication ports ***MAY NOT*** be accessed

CAUTIONS

- There are several types of indwelling catheters that may be encountered. Clinicians may not access a particular catheter unless they are confident on the type and function of each of the ports.

PROCEDURE

- Troubleshooting
  - If catheter is completely out or there is bleeding from the site, apply direct pressure to the site
  - If catheter is partially out, secure in place and cover with sterile dressing
  - Assess for signs and symptoms of embolus, thrombus, or internal bleeding (chest pain, cyanosis, dyspnea, shock)
  - If the catheter is broken in half, with or without bleeding, clamp end of remaining tube with curved Kelly forceps
  - If suspected embolus, thrombus, internal bleeding or air embolus
    - Clamp the line and position patient on left side

- Emergency Access (Paramedic and RN ONLY – Ref. CT24)
  - Make sure clamp is closed, remove end cap, and replace with the extension and cap from the IV Start Kit
  - Identify hub to accessed
  - Cleanse the hub well with alcohol preps x 2 and chlorprep or betadine (if available)
  - Connect syringe and draw back blood waste (Adult - 10 mL/Pediatric - 3 mL)
  - Flush with 0.9% Sodium Chloride to ensure patent line
    - If unable to draw back and flush, DO NOT USE the line
  - Attach 0.9% Sodium Chloride IV fluid ensuring the IV tubing set is primed well
  - Administer medications and fluids as needed

COMPLICATIONS

- Infection
- Bleeding
- Embolization of catheter fragments
- Blood clots
- Air embolism

NOTES

- None

REFERENCES
• Pending

CP26 TROUBLESHOOTING IMPLANTED MEDICAL DEVICES

INDICATIONS
• Acute harm being caused by an implanted medical device due to malfunction or change in patient's condition

CONTRAINDICATIONS
• Unknown type of device

CAUTIONS
• Clinicians should not attempt any manipulation or intervention to any device that they have not positively identified and determined to be causing acute harm to the patient

PROCEDURE

- Identify type of device
  - AICD (automatic implanted cardiac defibrillator)
    - If in consultation with OLMC, you have identified that the patient's AICD is misfiring or causing a dysrhythmia and you have access to the patient's magnet, deactivate the ICD by locating the pulse generator (the large box like structure of the ICD) and place the donut magnet over the generator
    - You may or may not hear a high-pitched tone from the generator, depending on the brand of the ICD
    - Secure the magnet in place with adhesive tape
    - The magnet will inhibit further arrhythmia detection and treatment by the ICD
  - LVAD (left ventricular assist device)
    - Gather information
      - Is patient's complaint related to the device?
      - What type of device is it (color-coded tag on control unit on belt)?
      - Are there any experts on scene?
      - What is the battery status?
      - Is there a hand pump?
      - What hospital do they go to?
    - Contact OLMC – they have a comprehensive, brand specific troubleshooting guide that will assist you in your care
    - Bring all the patient's equipment to the hospital
    - Remember you may not have a palpable pulse but should hear a whirring sound
      - Standard diagnostic measurements will be unreliable (blood pressure, SpO2, heart rate, etc.)
    - NEVER remove both batteries at the same time!!

- ***DO NOT PERFORM CARDIOPULMONARY RESUSCITATION (CPR)*** *on unresponsive and pulseless LVAD patients unless you "cannot" hear the whirring sound on auscultation of the chest as CPR may cause dislodgement of the device and immediate death*

EMERGENCY VAD COORDINATOR CONTACT INFORMATION		
Hospital	**VAD Coordinator 24 hr Phone/Pager**	**Notes**
Tampa General	866-844-8237	If you do not hear back from after paging twice, call the hospital operator 813-844-7000 and ask for the VAD Coordinator
Largo Medical Center	727-588-5823	
St. Joseph's Hospital	813-442-6823	If you receive the answering service, ***STATE YOU HAVE A LVAD PATIENT***

- VNS (Vagus Nerve Stimulator)
  - Clinicians caring for patients in status epilepticus who have a VNS and are not responding to standard medications may assist the family or caretaker to activate/increase the settings of the VNS by passing the patient's control magnet closely over the chest area where the VNS device is implanted every 3 minutes to a maximum of 3 times
  - Remember that VNS stimulators may cause abnormalities on ECG monitoring and 12 leads
- Insulin Pump
  - Clinicians caring for patients who are profoundly hypoglycemic may temporarily pause or disable the pump until the patient has been treated as per protocol
- Patient Controlled Analgesia Pump (PCA)

- PCA pumps encountered in the outpatient setting are most often locked. Troubleshooting will likely be limited to the IV access site

COMPLICATIONS

- Interfering with implanted medical devices is inherently dangerous and should only be attempted if the device is clearly causing acute harm. OLMC consultation should be sought in nearly all cases.

NOTES

- None

REFERENCES

- http://www.mylvad.com/content/ems

CP27 NORMAL CHILDBIRTH PROCEDURE

INDICATIONS
• Imminent or in progress out of hospital delivery

CONTRAINDICATIONS
• None

CAUTIONS
• Ensure appropriate PPE

EQUIPMENT
• 2 - OB Kits • Handtevy Bag • Airway Bag

PROCEDURE

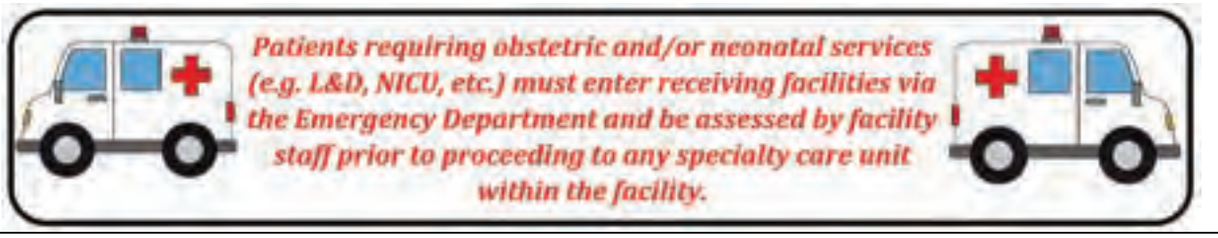
- Normal Childbirth Procedure:
  - Position patient supine, knees drawn up and buttocks elevated
  - Use sterile or aseptic technique
  - Coach patient to breathe deeply between contractions and to PUSH with contractions
    - Upon crowning, control the head with gentle pressure and support during delivery. If the cord is looped (nuchal) around the neck, gently slip it over the newborns head. If unable to do so, clamp and cut the cord

"Nuchal Cord"

  - Suction mouth then the nose ("M" before "N") of the newborn as soon as possible using bulb syringe
  - With gentle pressure, guide the infant's head downward to deliver the anterior shoulder and then upward to release the posterior shoulder
  - Upon delivery, hold the newborn firmly in head dependent position to facilitate drainage of secretions.
  - Clear the airway of any secretions with sterile gauze and repeat suction of the mouth and then the nose ("M" before "N") , if needed
  - Apply two clamps to umbilical cord after it stops pulsating.
    - Place the first one approximately 10 inches from the infant and the second one 2 – 3 inches proximal to the first clamp (7 – 8 inches from the newborns abdomen).
  - Cut the cord between the clamps and check for umbilical cord bleeding. If there is evidence of bleeding, apply additional clamps as needed
  - Dry infant and wrap in warm, dry blankets. Place cap to cover the newborns head
  - Allow the mother to hold the newborn if no signs and symptoms of distress prior to transport

- Document the newborns gender, time of birth and geographical location
- If resuscitation is required, Ref. P5

- Delivery of the Placenta (*Do Not Delay Transport*)
  - As the placenta delivers, encourage the mother to push with contractions
  - Never "pull on" the umbilical cord to assist with placenta delivery
  - Place the placenta in a plastic bag or container and transport with the motheR



COMPLICATIONS
• Prolapsed Cord – Ref. M11 • Breech, failure to progress, shoulder dystocia • Hemorrhage • Perineal injury

NOTES
• Ensure use of appropriate PPE

REFERENCES
•

CP28 RESPONDER MEDICAL SCREENING

Objective
• To ensure members' health and safety through appropriate medical screening before and after strenuous activities.

Procedure

- **Member Pre-Screening – Recommended prior to emergency operations or training exercises that pose a potential safety or health risk to members as determined by agency Incident Commander/Lead Instructor:**
  - Assess for any potential contraindications to participation including:
    - Current or recent illness (less than 72 hrs.) such as GI or Respiratory that predisposes to dehydration.
    - Any recent (less than 48 hrs.) change in prescription medication or OTC use.
    - Any unusual skin color and temperature or open sores/rashes
  - Obtain and document baseline vital signs:
    - Normal Mental Status
    - Blood Pressure Max: SBP less than 160 AND DBP less than 100
    - HR max: 100 bpm
    - Resp Max: 20
    - sPO2 min (if available): greater than 94%
    - Temp max (if available): 100.6 F
  - Concerns related to participation shall be relayed through chain of command for disposition

- **Member Post-Screening – Recommended after emergency operations or training exercises that pose a potential safety or health risk to members as determined by agency Incident Commander/Lead Instructor:**
  - Assess general appearance of member including:
    - Mental status
    - Skin for color, temperature and condition
  - Initiate rest, cooling, oral hydration, and nutrition as needed.
  - Obtain initial and 20 minute vital signs including at a minimum: BP, HR, and RR.
  - Document responder medical screening participation and disposition (Ref. CT26)
  - Acceptable post-screening parameters to complete medical screening are:
    - Asymptomatic
    - Normal Mental Status
    - Blood Pressure: SBP less than 160 AND DBP less than 100
    - HR: less than 100 bpm
    - RR: less than 20
    - sPO2 (if available): greater than 94%
    - Temp (if available): less than 100.6 F

- **Additional Member Rehabilitation/Medical Treatment:**
  - If any significant concerns on initial Post-Screening or any symptoms/complaints member shall be considered a patient and treatment initiated per PCEMS MOM.

- If acceptable parameters are not met by 20 minutes in post-screening and member remains asymptomatic, up to an additional 10-minute period of rest/rehab may be undertaken. If acceptable parameters are not met by the end of the second rest period proceed as follows:
  - If significant VS abnormalities or ANY complaints, member shall be considered a patient and treated per PCEMS MOM.
  - If only minor VS abnormality (no more than one VS mildly outside parameter and ASYMPTOMATIC member may be referred to agency command staff for disposition.
  - At all times, the Pinellas County Certified EMT or Paramedic conducting the medical screening shall have final determination as to when a member shall become a patient.

Complications

- Failure to recognize a potentially unfit team member during pre-screening
- Unrecognized team member injury or illness (toxic exposure, heat exhaustion/stroke, electrolyte abnormality/rhabdomyolysis/dehydration, cardiovascular injury/instability)

References

- Pinellas County 600 Series 600-12
- https://sphhp.buffalo.edu/rehabilitation-science.html
- NFPA 1584
- OSHA Chemical Protective Clothing Technical Manual Section 8, Chapter 1

FORMULARY

FORMULARY

F1 ADENOSINE

Trade Name	Adenocard, Adenoscan	
Class(es)	Antiarrhythmic	
Action(s)	Slows conduction through AV & SA nodes. Can interrupt the reentry pathways through AV node	
Indication(s)	Convert PSVT and PSVT with accessory bypass tracts (Wolff-Parkinson-White Syndrome) to sinus rhythm	
Contraindication(s)	Hypersensitivity to the drug, AV block, preexisting 2nf/3rd degree heart block or sick sinus rhythm without pacemaker	
Precaution(s)	Asthmatics, unstable angina, stenotic valve disease, hypovolemia, hepatic, and renal failure	
Pharmacokinetics	**Onset:** 20 – 30 seconds	**Duration:** N/A
Routes of Administration	IV	
Technique for Administration	Rapid bolus over 1 – 2 seconds. Administer as proximally as possible & follow with rapid 0.9% Sodium Chloride flush	
PEARLS	• Prior to administration – advise patient this will make you feel strange • Start ECG printer just prior to IV administration • Continue printing during IV administration through post administration (10 secs.) • Adverse effects are generally self-limiting • At time of conversion to normal sinus rhythm, PVCs, PACs, sinus bradycardia and sinus tachycardia in addition to various degrees of AV block could be seen on the ECG. Usually only last a few seconds and resolve without intervention	
Y-Site Compatibility	N/A	
Interactions	N/A	
Reference	Pending	

F2 ALBUTEROL SULFATE

Trade Name	Accuneb, Novosalmol, ProAir HFA, Proventil, Proventil HFA, ReliOn Ventolin HFA, Ventolin, Ventolin HFA, VoSpire ER	
Class(es)	Bronchodilator (respiratory smooth muscle relaxant); Beta-adrenergic agonist	
Action(s)	Selective beta2-adrenergic agonist that acts prominently on smooth muscles of the trachea, bronchi, uterus, and vascular supply to skeletal muscles. Inhibits histamine release. Produces bronchodilation by relaxing smooth muscles of the bronchial tree	
Indication(s)	Relieve bronchospasm associated with acute/chronic asthma, bronchitis, or another reversible obstructive airway disease	
Contraindication(s)	Albuterol or Levalbuterol hypersensitivity; congenital long QT syndrome	
Precaution(s)	Cardiovascular disease, hypertension, older adults, history of seizures	
Pharmacokinetics	**Onset:** 5 – 15 minutes	**Duration:** 3 – 6 hours
Routes of Administration	Inhalation	
Technique for Administration	N/A	
PEARLS	• Continuous one on one coaching with the patient will improve effectiveness of the medication	
Y-Site Compatibility	N/A	
Interactions	N/A	
Reference	Pending	

F3 AMIODARONE HYDROCHLORIDE

Trade Name	Cordarone, Nexterone, Pacerone	
Class(es)	Class III anti-arrhythmic	
Action(s)	Acts directly on all cardiac tissues by prolonging duration of action potential and refractory period. Slows conduction time through the AV node and can interrupt the re-entry pathways through the AV node. Has anti-anginal and anti-adrenergic properties	
Indication(s)	Amiodarone injection is an antiarrhythmic agent indicated for initiation of treatment of frequently recurring ventricular fibrillation (VF) and hemodynamically unstable ventricular tachycardia (VT) in patient's refractory to other therapy	
Contraindication(s)	Known hypersensitivity to any of the components of amiodarone, including iodine, cardiogenic shock, marked sinus bradycardia, second- or third-degree atrio-ventricular (AV) block unless a functioning pacemaker is available.	
Precaution(s)	Hypotension, bradycardia and AV block, proarrhythmia	
Pharmacokinetics	**Onset:** Unavailable	**Duration:** Unavailable
Routes of Administration	IV	
Technique for Administration	N/A	
PEARLS	• Monitor BP carefully during infusion and slow the infusion if significant hypotension occurs • Bradycardia should be treated by slowing the infusion or discontinuing it if necessary • Monitor heart rate, rhythm and BP until drug response has stabilized	
Y-Site Compatibility	Aminophylline, amoxicillin, atenolol, digoxin, heparin, levofloxacin, magnesium sulfate, sodium bicarbonate	
Interactions	• Significantly decreases digoxin levels, enhances pharmacological effects and toxicities of disopyramide, procainamide, quinidine, flecanide, lidocaine, verapamil, diltiazem • Fentanyl may cause bradycardia or hypotension	
Reference	Pending	

F4 ASPIRIN

Trade Name	Alka-Seltzer, A.S.A., Bayer, Bayer Children's, Ecotrin, St. Joseph's	
Class(es)	Salicylate, antipyretic, antiplatelet	
Action(s)	Produces analgesia, anti-inflammatory and anti-pyretic effects and reduces platelet aggregation	
Indication(s)	Acute coronary syndrome	
Contraindication(s)	Hypersensitivity to salicylates; sensitivity to other NSAIDs; acute bronchospasm; head trauma, increased intracranial pressure; intracranial bleeding; chronic urticaria; acute GI ulceration, bleeding or other problems; pregnancy; lactation	
Precaution(s)	Immunosuppressed individuals; asthma; GI disease; anemia	
Pharmacokinetics	**Onset:** Unavailable	**Duration:** Unavailable
Routes of Administration	Oral	
Technique for Administration	N/A	
PEARLS	Bleeding time is prolonged 3 – 8 days (life of exposed platelets) following a single 325 mg dose of aspirin	
Y-Site Compatibility	N/A	
Interactions	Anticoagulants increase the risk of bleeding	
Reference	Pending	

F5 ATROPINE

Trade Name	N/A	
Class(es)	Anticholinergic; muscarinic; antiarrhythmic	
Action(s)	Selectively blocks all muscarinic responses to acetylcholine (ach), whether excitatory or inhibitory. Antisecretory action (vagolytic effect) suppresses sweating, lacrimation, salivation & secretions from the nose, mouth, pharynx and bronchi. Block vagal impulse to heart with resulting decrease in AV conduction time, increase in heart rate and cardiac output & shortened PR interval. Produces mydriasis.	
Indication(s)	Symptomatic bradycardia, organophosphate poisoning	
Contraindication(s)	Tachycardia secondary to cardiac insufficiency; acute hemorrhage; acute MI	
Precaution(s)	Myocardial infarction, hypertension, hypotension, coronary artery disease, CHF, tachyarrhythmia, older adults	
Pharmacokinetics	**Onset:** Unavailable	**Duration:** Unavailable
Routes of Administration	IV, IM	
Technique for Administration	N/A	
PEARLS	• Heart rate is a sensitive indicator of the patient's response to Atropine • Be alert to changes in quality, rate and rhythm of the heart rate, respirations, changes in blood pressure and temperature • Initial paradoxical bradycardia following IV Atropine usually lasts only 1 – 2 minutes. It most likely occurs when administered slow via the IV route (over more than a minute) or when small doses (less than 0.5 mg are used	
Y-Site Compatibility	N/A	
Interactions	Procainamide, antihistamines	
Reference	Pending	

F6 CALCIUM CHLORIDE

Trade Name	N/A	
Class(es)	Electrolyte	
Action(s)	Effective cardiac stabilizer under conditions of hyperkalemia or resuscitation. Rapidly and effectively restores serum calcium levels in acute hypocalcemia. Ionizes readily & provides excess chloride ions that promote acidosis and temporary (1-2 days) diuresis secondary to excretion of sodium.	
Indication(s)	Hyperkalemia, hypocalcemia	
Contraindication(s)	Ventricular fibrillation, hypercalcemia, digitalis toxicity	
Precaution(s)	Digitalized patients; cardiac arrhythmias, dehydration, diarrhea, respiratory acidosis, myocardial infarction, hypertension, hypotension, coronary artery disease, CHF, tachyarrhythmias, older adults	
Pharmacokinetics	**Onset:** Unavailable	**Duration:** Unavailable
Routes of Administration	IV	
Technique for Administration	N/A	
PEARLS	• Monitor ECG and vital signs • Intravenous administration may be accompanied by cutaneous burning sensation and peripheral vasodilation, with moderate fall in blood pressure	
Y-Site Compatibility	Propofol, sodium bicarbonate	
Interactions	Other electrolytes	
Reference	Pending	

F7 DEXTROSE

Trade Name	Dextrose 5%, Dextrose 10%	
Class(es)	N/A	
Action(s)	N/A	
Indication(s)	Hypoglycemia, solution for IV medication drip	
Contraindication(s)	May be contraindicated in patients with known allergy to corn or corn products.	
Precaution(s)	Multiple doses of Dextrose injections may result in significant hypokalemia	
Pharmacokinetics	**Onset:** Unavailable	**Duration:** Unavailable
Routes of Administration	IV	
Technique for Administration	• DO NOT use plastic containers in series connections • Pressurizing intravenous solutions contained in flexible plastic containers to increase flow rates can result in air embolism if the residual air in the container is not fully evacuated prior to administration • Use of a vented intravenous administration set with the vent open could result in air embolism	
PEARLS	N/A	
Y-Site Compatibility	Dextrose should not be administered simultaneously with blood through the same administration set because of the possibility of pseudo agglutination or hemolysis	
Interactions	N/A	
Reference	Pending	

F8 DILTIAZEM

Trade Name	Cardizem	
Class(es)	Calcium channel blocking agent, antiarrhythmic, antihypertensive	
Action(s)	Inhibits calcium ion influx into vascular smooth muscle and myocardium, relaxing smooth muscle, decreasing peripheral vascular resistance, dilating coronary arteries and prolonging AV node refractory period	
Indication(s)	Atrial fibrillation, atrial flutter, supraventricular tachycardia	
Contraindication(s)	Known hypersensitivity to the drug; sick sinus syndrome (unless pacemaker is in place and firing); acute MI; severe hypotension (systolic BP < 90 or diastolic < 60); bleeding aneurysm	
Precaution(s)	SA node dysfunction, sick sinus syndrome with functioning pacemaker, right ventricular dysfunction, CHF, severe bradycardia, conduction abnormalities, older adults, pregnancy	
Pharmacokinetics	**Onset:** N/A	**Duration:** 2 – 3 hours
Routes of Administration	IV	
Technique for Administration	Give undiluted	
PEARLS	• Give as a bolus dose over 2 minutes • Pinellas County EMS utilizes a lower max dose than may be referenced	
Y-Site Compatibility	Aminophylline, diazepam, Methylprednisolone, sodium bicarbonate	
Interactions	Furosemide	
Reference	Pending	

F9 Diphenhydramine Hydrochloride

Trade Name	Allerdryl, Benadryl, Benadryl Dye-Free, Sleep Eze 3	
Class(es)	Antihistamine	
Action(s)	Non-selectively antagonizes central and peripheral histamine H1 receptors; suppresses the medullary cough center (antitussive); possesses anticholinergic properties, resulting in antidyskinetic, antiemetic and sedative effects	
Indication(s)	Hives, rashes and itching related to allergic conditions	
Contraindication(s)	Hypersensitivity to antihistamines of similar structure; lower respiratory tract symptoms	
Precaution(s)	Asthma; COPD; convulsive disorders; hypertension; cardiovascular disease; older adults; infants and young children	
Pharmacokinetics	**Onset:** 15 – 30 minutes	**Duration:** 4 – 7 hours
Routes of Administration	Intravenous, intramuscular, oral	
Technique for Administration	• Intravenous administration – give at a rate of 25 mg or fraction there of over one minute • Intramuscular administration – give deep into large muscle mass • Avoid perivascular or subcutaneous injections because of irritating effects	
PEARLS	Monitor for adverse reactions	
Y-Site Compatibility	Aminophylline, ampicillin	
Interactions	Alcohol, CNS depressants	
Reference	Pending	

F11 EPINEPHRINE

Trade Name	Adrenaline, EpiPen, Adrenaclick, Twinject	
Class(es)	Alpha and beta adrenergic agonist; cardiac stimulant; vasopressor	
Action(s)	Stimulates alpha and beta adrenergic receptors (sympathomimetic)	
Indication(s)	Restore cardiac rhythm in cardiac arrest; anaphylactic reactions; acute asthma attack; temporary relief of bronchospasm, mucosal congestion	
Contraindication(s)	Hypersensitivity to drug; hemorrhagic, traumatic or cardiogenic shock; arrhythmias	
Precaution(s)	Older adults; hypertension; diabetes mellitus	
Pharmacokinetics	**Onset:** 3 - 5 minutes	**Duration:** N\A
Routes of Administration	Intravenous, subcutaneous, intramuscular	
Technique for Administration	• Protect from exposure to light at all times • DO NOT remove ampule or vial from carton until ready to use	
PEARLS	N/A	
Y-Site Compatibility	N/A	
Interactions	May increase hypotension in circulatory collapse or hypotension caused by phenothiazines. Additive toxicities with other sympathomimetics	
Reference	Pending	

F12 ETOMIDATE

Trade Name	Amidate	
Class(es)	Ultrashort-acting non-barbiturate hypnotic	
Action(s)	Induces sedation and amnesia	
Indication(s)	Induction of general anesthesia for facilitation of airway management	
Contraindication(s)	Hypersensitivity to drug	
Precaution(s)	Older adults; hypertension; diabetes mellitus	
Pharmacokinetics	**Onset:** within 60 seconds	**Duration:** N\A
Routes of Administration	Intravenous	
Technique for Administration	• Intravenous administration – inject over a period of 30 – 60 seconds • Inject into large forearm vein	
PEARLS	Handled in the same manner as all controlled substances	
Y-Site Compatibility	Vecuronium	
Interactions	N/A	
Reference	Pending	

F13 FENTANYL CITRATE

Trade Name	Sublimaze	
Class(es)	Analgesic; opiate agonist	
Action(s)	Synthetic, potent agonist analgesic that causes analgesia and sedation.	
Indication(s)	Short acting analgesia for pain and sedation	
Contraindication(s)	N/A	
Precaution(s)	Head injuries, older adults, angina, hypotension, bradyarrhythmias	
Pharmacokinetics	**Onset:** Immediate intravenous, 7 – 15 minutes intramuscular	**Duration:** 30 – 60 minutes intravenous, 1 – 2 hours intramuscular
Routes of Administration	Intravenous, intranasal, intramuscular	
Technique for Administration	• l Monitor vital signs and observe patient for signs of skeletal and thoracic muscle (depressed respirations) rigidity and weakness	
PEARLS	DEA Class II Controlled Substance	
Y-Site Compatibility	N/A	
Interactions	Alcohol and other CNS depressants potentiate effects	
Reference	Pending	

F14 GLUCAGON HYDROCHLORIDE

Trade Name	Glucagen	
Class(es)	Antihypoglycemic	
Action(s)	Increases blood glucose secondary to gluconeogenesis, which is the breakdown of glycogen to glucose in the liver. Action in hypoglycemia relies on presence of adequate liver glycogen stores.	
Indication(s)	Hypoglycemia with the inability to obtain vascular access	
Contraindication(s)	Hypersensitivity to glucagon or protein compounds; depleted glycogen stores in liver	
Precaution(s)	Cardiac disease; malnutrition; children	
Pharmacokinetics	**Onset:** 5 – 20 minutes	**Duration:** 1 – 1.5 hours
Routes of Administration	Intravenous, intranasal, intramuscular	
Technique for Administration	Intravenous administration – give over 1 minute	
PEARLS	• Patient usually awakens from (diabetic) hypoglycemic coma 5 – 20 minutes after glucagon injection. • Give PO carbohydrate as soon as possible after patient regains consciousness	
Y-Site Compatibility	N/A	
Interactions	N/A	
Reference	Pending	

F15 HYDROXOCOBALAMIN

Trade Name	Cyanokit	
Class(es)	Antidote	
Action(s)	Binds cyanide to form nontoxic cyanocobalamin that is then excreted in urine	
Indication(s)	Treatment of known or suspected cyanide poisoning	
Contraindication(s)	None	
Precaution(s)	Known anaphylactic reactions to Hydroxocobalamin or cyanocobalamin	
Pharmacokinetics	**Onset:** 5 – 20 minutes	**Duration:** 1 – 1.5 hours
Routes of Administration	Intravenous	
Technique for Administration	• Draw one complete PEP kit while setting up to administer Hydroxocobalamin • Following the addition of the diluent to the lyophilized powder, the vial should be repeatedly inverted and rocked, NOT SHAKEN, for at least 60 seconds prior to infusion. • Intravenous administration – give initial dose over 15 minutes • Cyanokit requires a dedicated intravenous line for administration	
PEARLS	• The recommended diluent is 0.9% Sodium Chloride l Lactated Ringers or Dextrose 5% in Water have also been found to be compatible l Give PO carbohydrate as soon as possible after patient regains consciousness	
Y-Site Compatibility	Sodium Nitrite, Sodium Thiosulfate, blood products	
Interactions	N/A	
Reference	Pending	

F16 IPRATROPIUM BROMIDE

Trade Name	Atrovent	
Class(es)	Anticholinergic; antimuscarinic; bronchodilator	
Action(s)	Bronchodilation by inhibiting acetylcholine at its receptor sites, thereby blocking bronchoconstriction. Also abolishes vagally mediated reflex bronchospasm triggered by such non-specific agents as cigarette smoke, inert dusts, cold air, and a range of inflammatory mediators.	
Indication(s)	Adjunct to Albuterol in asthma/COPD	
Contraindication(s)	Hypersensitivity to Atropine	
Precaution(s)	Pregnancy	
Pharmacokinetics	**Onset:** N/A	**Duration:** 4 – 6 hours
Routes of Administration	Inhalation	
Technique for Administration	N/A	
PEARLS	N/A	
Y-Site Compatibility	N/A	
Interactions	N/A	
Reference	Pending	

F17 LIDOCAINE HYDROCHLORIDE

Trade Name	N/A	
Class(es)	Class IB antiarrhythmic; local anesthetic	
Action(s)	Exerts antiarrhythmic action by suppressing automaticity in His-Purkinje system. It decreases pain through a reversible nerve conduction blockade.	
Indication(s)	Ventricular dysrhythmias; analgesia prior to infusion of fluids via intraosseous needle in conscious patient	
Contraindication(s)	History of hypersensitivity to amide-type local anesthetics, supraventricular arrhythmias; severe degrees of sinoatrial, atrio-ventricular and intraventricular heart block.	
Precaution(s)	CHF, marked hypoxia, respiratory depression, hypovolemia, shock	
Pharmacokinetics	**Onset:** 45 – 90 seconds	**Duration:** 10 – 20 minutes
Routes of Administration	Inhalation, intraosseous	
Technique for Administration	N/A	
PEARLS	Monitor blood pressure and ECG constantly; assess respiratory and neurologic status frequently to avoid potential overdosage and toxicity.	
Y-Site Compatibility	N/A	
Interactions	N/A	
Reference	Pending	

F18 MAGNESIUM SULFATE

Trade Name	N/A	
Class(es)	Electrolyte	
Action(s)	Smooth muscle relaxant and anticonvulsant in labor and delivery and cardiac disorders.	
Indication(s)	Control seizures in toxemia of pregnancy, epilepsy; Prophylaxis and treatment of hypomagnesemia; Severe acute asthma	
Contraindication(s)	Myocardial damage; AV heart block; cardiac arrest except for certain arrhythmias; hypermagnesemia	
Precaution(s)	Acute MI; pregnancy	
Pharmacokinetics	**Onset:** 1 hour intramuscular	**Duration:** 30 minutes intravenous
Routes of Administration	Intravenous, intramuscular	
Technique for Administration	N/A	
PEARLS	• Observe constantly when administered IV • Check blood pressure and pulse every 10-15 minutes or more often if indicated • Monitor respiratory rate close	
Y-Site Compatibility	Amiodarone, ciprofloxacin, haloperidol	
Interactions	Sodium bicarbonate, neuromuscular blocking agents add to respiratory depression and apnea	
Reference	Pending	

F19 METHYLPREDNISOLONE SODIUM SUCCINATE

Trade Name	Solu-Medrol	
Class(es)	Glucocorticoid	
Action(s)	Anti-inflammatory, immune-suppressant	
Indication(s)	Asthma/COPD (chronic inflammatory conditions); Acute allergic/anaphylactic reactions	
Contraindication(s)	Hypersensitivity to corticosteroid drugs	
Precaution(s)	GI ulceration or disease; hypertension; CHF; diabetes	
Pharmacokinetics	**Onset:** N/A	**Duration:** N/A
Routes of Administration	Intravenous, intramuscular	
Technique for Administration	Intramuscular administration - deep into a large muscle mass (not deltoid) l Give each intravenous dose over 2 – 3 minute	
PEARLS	N/A	
Y-Site Compatibility	Amiodarone, ciprofloxacin, haloperidol	
Interactions	Furosemide, Thiazide diuretics increase potassium loss	
Reference	Pending	

F20 MIDAZOLAM HYDROCHLORIDE

Trade Name	Versed	
Class(es)	benzodiazepine; anticonvulsant; anxiolytic	
Action(s)	Produces CNS depression resulting in sedation, hypnosis, skeletal muscle relaxation and anticonvulsant activity dependent on the dosage.	
Indication(s)	Sedative, impair memory, induce hypnosis	
Contraindication(s)	Intolerance to benzodiazepines; shock; coma; acute alcohol intoxication; status asthmaticus; pregnancy	
Precaution(s)	COPD, cardiac disease, dementia, psychosis, CHF, bipolar disorder, older adults	
Pharmacokinetics	**Onset:** 1 – 5 minutes IV, 5 – 15 minutes IM	**Duration:** < 2 hours IV, 1 – 6 hours IM
Routes of Administration	Intravenous, intramuscular, intranasal	
Technique for Administration	• Intramuscular administration - deep into a large muscle mass (not deltoid) • Intranasal administration – 1 mL max volume of drug per nare	
PEARLS	DEA Class IV Controlled Substance	
Y-Site Compatibility	Amoxicillin, bumetanide, furosemide, dexamethasone, sodium bicarbonate, thiopental	
Interactions	Lactated ringers, pentobarbital, prochlorperazine	
Reference	Pending	

F21 NALOXONE HYDROCHLORIDE

Trade Name	Narcan	
Class(es)	Opiate antagonist	
Action(s)	Competitively inhibits opiate receptors	
Indication(s)	Narcotic overdose	
Contraindication(s)	Hypersensitivity to naloxone, naltrexone, nalmefene	
Precaution(s)	Known or suspected narcotic dependence; brain tumor; head trauma; increased ICP; seizure disorders; pregnancy	
Pharmacokinetics	**Onset:** 2 minutes	**Duration:** 45 minutes
Routes of Administration	Intravenous, intramuscular, intranasal	
Technique for Administration	N/A	
PEARLS	• May precipitate opiate withdrawl if administered to a patient who is opiate dependent • Effects of Naloxone usually diminish 20 – 40 minutes after administration	
Y-Site Compatibility	N/A	
Interactions	Reverses analgesic effects of narcotic (opiate) agonists and narcotic (opiate) agonist-antagonist	
Reference	Pending	

F22 NITROGLYCERIN AEROSOL

Trade Name	NitroMist, Nitrostat	
Class(es)	Nitrate vasodilator	
Action(s)	Vasodilator which has effects on both arteries and veins	
Indication(s)	Angina, CHF, acute coronary syndrome	
Contraindication(s)	Hypersensitivity to drug, severe anemia, increased ICP, hypovolemia	
Precaution(s)	Pregnancy	
Pharmacokinetics	**Onset:** 2 minutes	**Duration:** 30 minutes
Routes of Administration	Sublingual	
Technique for Administration	• Bottle requires an initial priming of 10 sprays. The bottle will then stay primed for 6 weeks. If not used in 6 weeks, it can be re-primed with 2 sprays • Do Not shake the bottle • Spray can be released onto or under the tongue • When the liquid reaches the bottom of the hole on the side of the bottle, the remaining doses will have less than the label content	
PEARLS	• Monitor patient closely for change in consciousness and for dysrhythmias • Approximately 50% of all patients experience mild to severe headaches following Nitroglycerin • Supervise ambulation – postural hypotension is possible • Check patient for transdermal patch or ointment in place prior to starting Nitroglycerin	
Y-Site Compatibility	N/A	
Interactions	Antihypertensive agents compound hypotensive effects; vasodilating effects may be enhanced by sildenafil, vardenafil or tadalafil	
Reference	Pending	

F23 NOREPINEPHRINE

Trade Name	Levophed
Class(es)	Sympathomimetic
Action(s)	functions as a peripheral vasoconstrictor (alpha-adrenergic action) and as an inotropic stimulator of the heart and dilator of coronary arteries (beta-adrenergic action).
Indication(s)	For blood pressure control in certain acute hypotensive states (e.g., pheochromocytomectomy, sympathectomy, poliomyelitis, spinal anesthesia, myocardial infarction, septicemia, blood transfusion, and drug reactions). As an adjunct in the treatment of cardiac arrest and profound hypotension.
Contraindication(s)	LEVOPHED should not be given to patients who are hypotensive from blood volume deficits except as an emergency measure to maintain coronary and cerebral artery perfusion until blood volume replacement therapy can be completed. If LEVOPHED is continuously administered to maintain blood pressure in the absence of blood volume replacement, the following may occur: severe peripheral and visceral vasoconstriction, decreased renal perfusion and urine output, poor systemic blood flow despite "normal" blood pressure, tissue hypoxia, and lactate acidosis. LEVOPHED should also not be given to patients with mesenteric or peripheral vascular thrombosis (because of the risk of increasing ischemia and extending the area of infarction) unless, in the opinion of the attending physician, the administration of LEVOPHED is necessary as a life-saving procedure. Cyclopropane and halothane anesthetics increase cardiac autonomic irritability and therefore seem to sensitize the myocardium to the action of intravenously administered epinephrine or norepinephrine. Hence, the use of LEVOPHED during cyclopropane and halothane anesthesia is generally considered contraindicated because of the risk of producing ventricular tachycardia or fibrillation. The same type of cardiac arrhythmias may result from the use of LEVOPHED in patients with profound hypoxia or hypercarbia.

Precaution(s)	**Avoid Hypertension**: Because of the potency of LEVOPHED and because of varying response to pressor substances, the possibility always exists that dangerously high blood pressure may be produced with overdoses of this pressor agent. It is desirable, therefore, to record the blood pressure every two minutes from the time administration is started until the desired blood pressure is obtained, then every five minutes if administration is to be continued. The rate of flow must be watched constantly, and the patient should never be left unattended while receiving LEVOPHED. Headache may be a symptom of hypertension due to overdosage.	
Pharmacokinetics	**Onset:** Rapid	**Duration:** 1-2 minutes
Routes of Administration	IV	
PEARLS	An IV drip chamber or other suitable metering device is essential to permit an accurate estimation of the rate of flow in drops per minute. After observing the response to an initial dose of 2 mL to 3 mL (from 8 mcg to 12 mcg of base) per minute, adjust the rate of flow to establish and maintain a low normal blood pressure (usually 80 mm Hg to 100 mm Hg systolic) sufficient to maintain the circulation to vital organs. In previously hypertensive patients, it is recommended that the blood pressure should be raised no higher than 40 mm Hg below the preexisting systolic pressure. The average maintenance dose ranges from 0.5 mL to 1 mL per minute (from 2 mcg to 4 mcg of base).	
Y-Site Compatibility	N/A	
Interactions	N/A	
Reference	Pending	

F24 ONDANSETRON

Trade Name	Zofran, Zofran ODT, Zuplenz, Ondansetron ODT	
Class(es)	5-HT3 Antagonist, Antiemetic	
Action(s)	Prevents nausea and vomiting	
Indication(s)	Nausea and / or vomiting	
Contraindication(s)	Hypersensitivity to Ondansetron	
Precaution(s)	QT prolongation or pregnancy, concomitant use of apomorphine	
Pharmacokinetics	**Onset:** Unavailable	**Duration:** Unavailable
Routes of Administration	Intravenous, intramuscular, oral	
Technique for Administration	• Do NOT push orally disintegrating tablet through blister foil. Peel foil back and remove tablet. Tablets will disintegrate with/without liquid l Peel open the paper of the outer packaging that displays the product information to access the syringe. Do NOT pop the syringe through l Intravenous administration – give dose over 2 – 5 minutes l Assure that the needleless luer access device is securely attached before beginning the injection	
PEARLS	• Monitor cardiovascular status, especially in patients with a history of coronary artery disease.	
Y-Site Compatibility	Acyclovir, allopurinol, aminophylline, furosemide, lorazepam, methylprednisolone, sodium bicarbonate, TPN.	
Interactions	Rifampin	
Reference	Pending	

F25 ORAL GLUCOSE

Trade Name	Glutose, Insta-Glucose, Level Life Fast Acting Glucose Gel	
Class(es)	Monosaccharide carbohydrate	
Action(s)	Provides an oral source of glucose rapidly utilized for cellular metabolism	
Indication(s)	Conscious patient with signs and/or symptoms of hypoglycemia	
Contraindication(s)	Inability to swallow (aspiration risk), altered level of consciousness	
Precaution(s)	Cannot be absorbed sublingually or buccally	
Pharmacokinetics	**Onset:** within 10 minutes	**Duration:** Unavailable
Routes of Administration	Oral	
Technique for Administration	N/A	
PEARLS	N/A	
Y-Site Compatibility	N/A	
Interactions	N/A	
Reference	Pending	

F26 SODIUM BICARBONATE 8.4%

Trade Name	N/A	
Class(es)	Fluid and electrolyte balance agent	
Action(s)	Short-acting, potent systemic antacid; rapidly neutralizes systemic acidosis	
Indication(s)	Systemic alkalinizer to correct metabolic acidosis	
Contraindication(s)	Hypocalcemia, metabolic alkalosis, respiratory alkalosis, vomiting, diuresis	
Precaution(s)	Pregnancy, hypertension, renal disease, hyperkalemia, older adults	
Pharmacokinetics	**Onset:** 15 minutes	**Duration:** 1 – 2 hours
Routes of Administration	IV	
Technique for Administration	N/A	
PEARLS	Do NOT use Sodium Bicarbonate as an antacid	
Y-Site Compatibility	Allopurinol, Amiodarone, Calcium chloride, Diltiazem, Ciprofloxacin, Lidocaine, Midazolam, Ondansetron, Verapamil	
Interactions	N/A	
Reference	Pending	

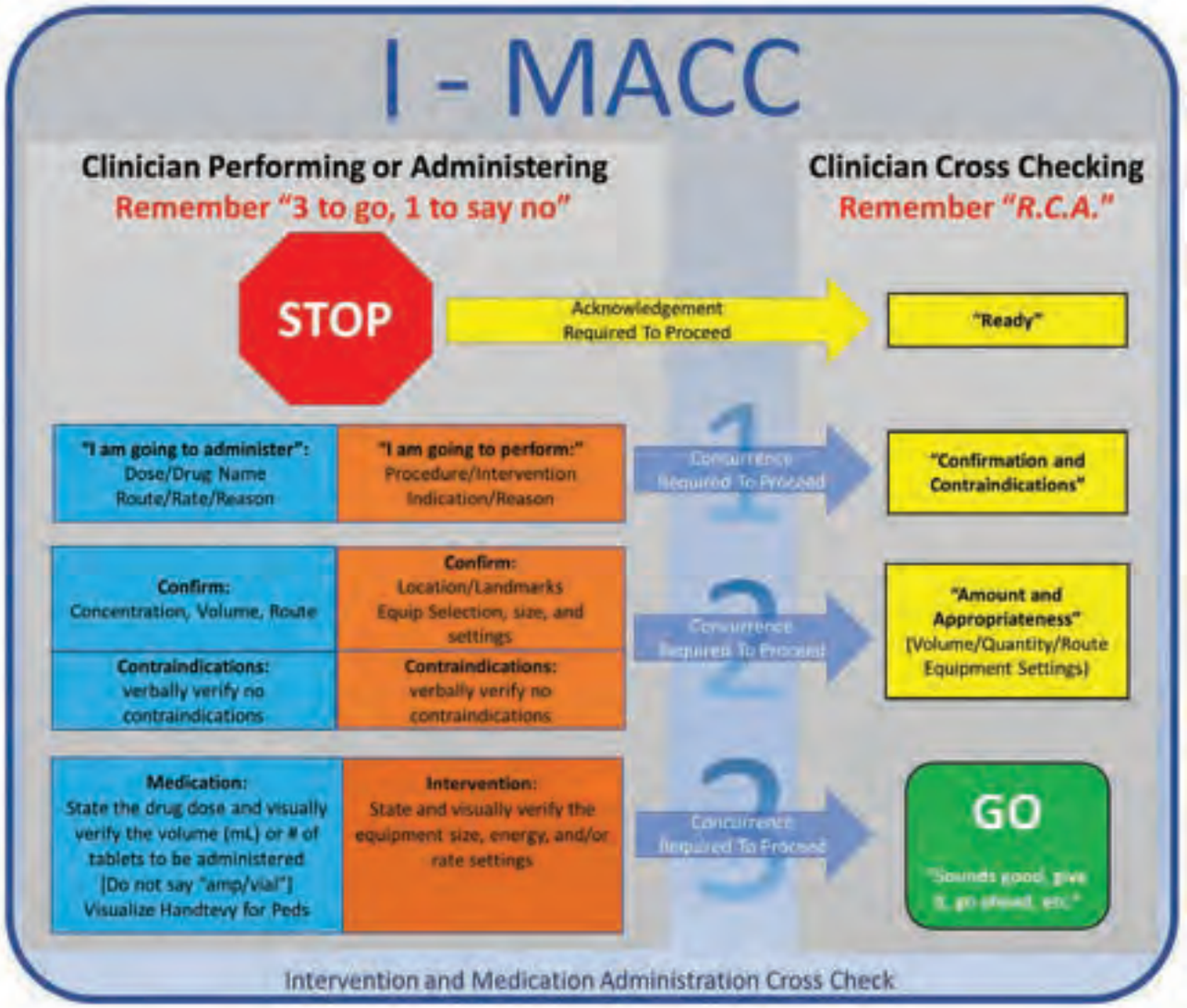
F28 SODIUM CHLORIDE (0.9% IV Fluid) FOR INJECTION

Trade Name	N/A	
Class(es)	Electrolyte	
Action(s)	N/A	
Indication(s)	Source of water and electrolytes	
Contraindication(s)	N/A	
Precaution(s)	CHF	
Pharmacokinetics	**Onset:** Unavailable	**Duration:** Unavailable
Routes of Administration	IV	
Technique for Administration	• Do not use plastic containers in series connections • Do not pressurize intravenous fluids contained in plastic containers	
PEARLS	N/A	
Y-Site Compatibility	Reference compatibility of each specific medication	
Interactions	Reference compatibility of each specific medication	
Reference	Pending	

CLINICAL TOOLS

CLINICAL TOOLS

CT1 INTERVENTION AND MEDICATION ADMINISTRATION CROSS CHECK (I-MACC)



Intentionally
Left Blank

CT2 KING AIRWAY SIZING

King Airway			
Tube Size	Size 3	Size 4	Size 5
Patient	4 – 5 ft.	5 – 6 ft.	6 – 7 ft.
Cuff Volume	40 – 55 mL	50 – 70 mL	60 – 80 mL

Intentionally
Left Blank

CT3 CARDIAC ARREST PIT CREW MODEL - ADULT

Position 2 – Airway/Ventilation
Paramedic (if available)

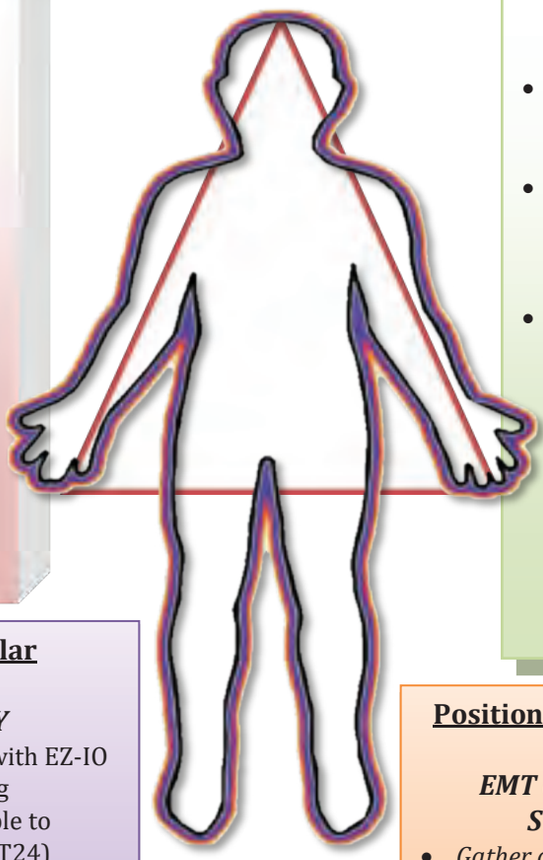
- Open/Clear Airway
- Position/Ready Monitor/AED during initial cycle of compressions
- Attach O2/EtCO2. Provide ventilations with BVM at appropriate ratio for number of rescuers
- Insert King Airway (Paramedic ONLY)/Confirm with EtCO2
- Provide ongoing ventilations 10-12/min.

Philips MRx/AED - Suction/Airway Bag

Philips MRx/AED - Suction/Airway Bag

Position 1 – Compress/Defib
EMT or Paramedic

- **Initiate Uninterrupted Compressions**
- Attached Monitor/AED during pauses for ventilations
- Deliver shock if indicated at conclusion of 1st two (2) min. cycle and on following cycles
- Continue providing uninterrupted high-quality compressions alternating with Position #3, verbally announcing count so all rescuers are prepared for switching compressors



Position 3 – Compress/Defib
EMT or Paramedic

- If present during initial cycle, assist Position #1 by attaching Monitor/AED
- Initiate uninterrupted compressions following initial rhythm/pulse check and shock delivery
- Deliver subsequent shocks as indicated, alternating with Position #1 on following cycles
- Continue providing uninterrupted high-quality compressions alternating with Position #1, verbally announcing count so all rescuers are prepared for switching compressors

Position 4 – Vascular Access/Meds
Paramedic ONLY

- Establish vascular access with EZ-IO (Ref. CP21) or IV/accessing indwelling catheter if unable to obtain IO (Ref. CP25 and CT24)
- Administer medications as indicated
- Assist with other ALS procedures as needed

Position 5 – Documentation/Family Liaison
EMT or Paramedic (Officer or Supervisor Preferred)

- *Gather and document patient information and pre-arrival/Bystander interventions*
- *Document EMS care provided*
- *Provide family updates*
- *Maintain overall situational awareness and prepare for transport logistics*

Medication Response Bag

ePCR

CT3 – CARDIAC ARREST PIT CREW MODEL – ADULT – CT3

Intentionally
Left Blank

CT4 CARDIAC ARREST PIT CREW MODEL – CHILD/INFANT

Philips MRx/AED - Suction/Airway Bag/Handtevy Bag

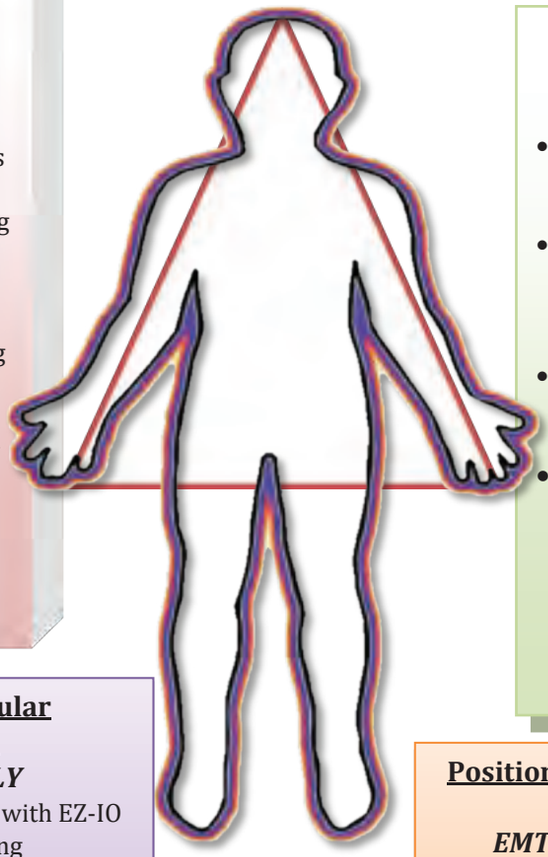
Position 2 – Airway/Ventilation
Paramedic (if available)

- Open/Clear Airway
- Position/Ready Monitor/AED during initial cycle of compressions
- Attach O2/EtCO2. Provide ventilations with BVM and adjunct at appropriate ratio for number of rescuers and age of
- Perform airway management if unable to adequately ventilate with BVM (Ref. CP3)
- Provide ongoing ventilations 12-20/min.

Philips MRx/AED - Suction/Airway Bag/Handtevy Bag

Position 1 – Compress/Defib
EMT or Paramedic

- **Initiate Uninterrupted Compressions**
- Attached Monitor/AED using age appropriate pads (ped key when indicated/available) during pauses for ventilations
- Deliver shock if indicated at conclusion of 1st two (2) min. cycle and on following cycles
- Continue providing uninterrupted high quality compressions alternating with Position #3, verbally announcing count so all rescuers are prepared for switching compressors



Position 3 – Compress/Defib
EMT or Paramedic

- If present during initial cycle, assist Position #1 by attaching Monitor/AED
- Initiate uninterrupted compressions following initial rhythm/pulse check and shock delivery
- Deliver subsequent shocks as indicated, alternating with Position #1 on following cycles
- Continue providing uninterrupted high-quality compressions alternating with Position #1, verbally announcing count so all rescuers are prepared for switching compressors

Position 4 – Vascular Access/Meds
Paramedic ONLY

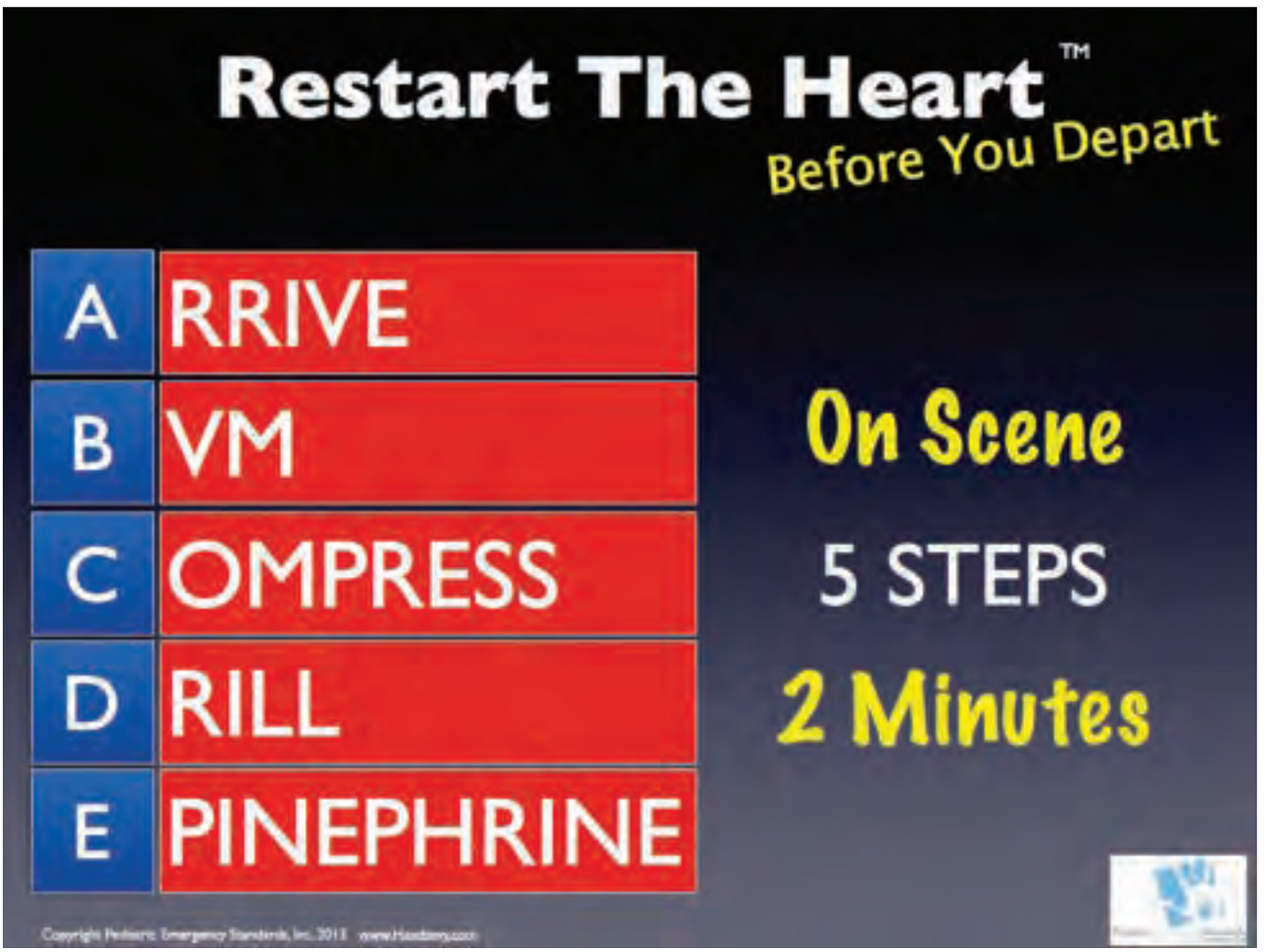
- Establish vascular access with EZ-IO (Ref. CP21) or IV/accessing indwelling catheter if unable to obtain IO (Ref. CP25 and CT24)
- Administer medications as indicated
- Assist with other ALS procedures as needed

Medication Response Bag

Position 5 – Documentation/Family Liaison
EMT or Paramedic (Officer or Supervisor Preferred)

- Provide family updates
- Gather and document patient information and pre-arrival/Bystander interventions
- Document EMS care provided
- Maintain overall situational awareness and prepare for transport logistics

ePCR

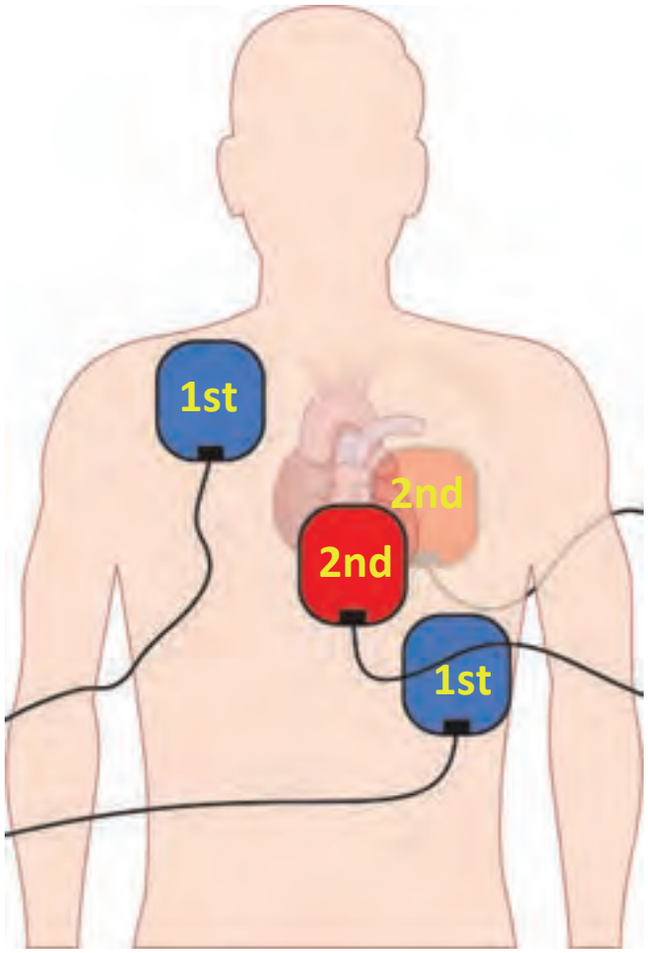

Restart The Heart™
Before You Depart
A RRIVE
B VM
C OMPRESS
D RILL
E PINEPHRINE
On Scene
5 STEPS
2 Minutes

CT5 VECTOR CHANGE DEFIBRILLATION

WARNING

This procedure is performed with two sets of Philips Hands Free Pads and one MRx device

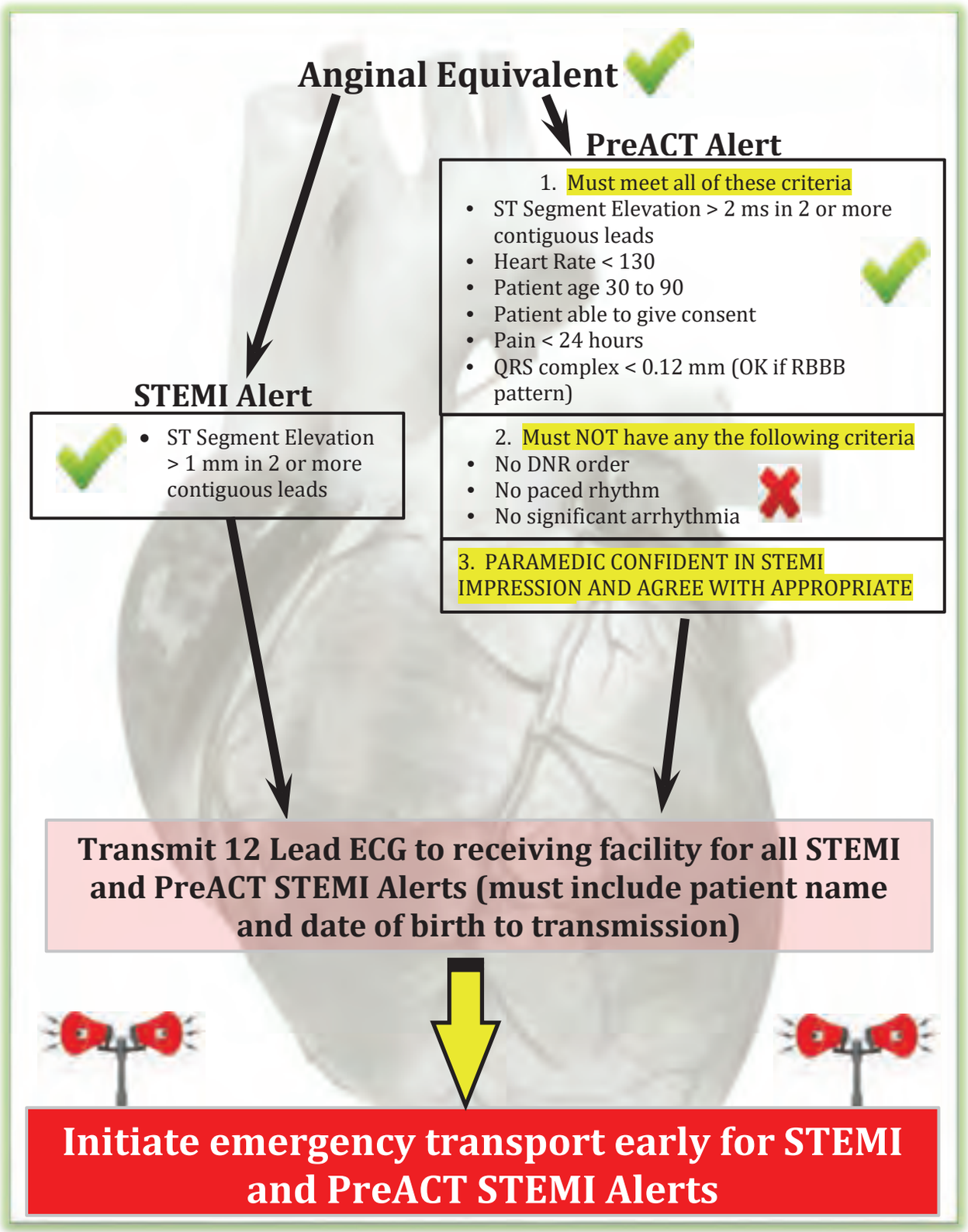
1. First set of pads is placed in standard apex-sternum orientation
2. Second set of pads is placed in an anterior-posterior positioning



3. First shock is done through apex-sternum placed pads
4. Immediately, switch the MRx Therapy Cable to the anterior-posterior placed pads to provide the next shock

Intentionally
Left Blank

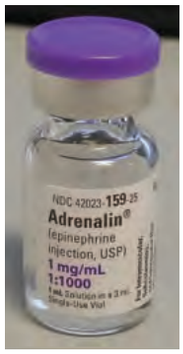
CT6 STEMI ALERT & PREACT STEMI ALERT CRITERIA



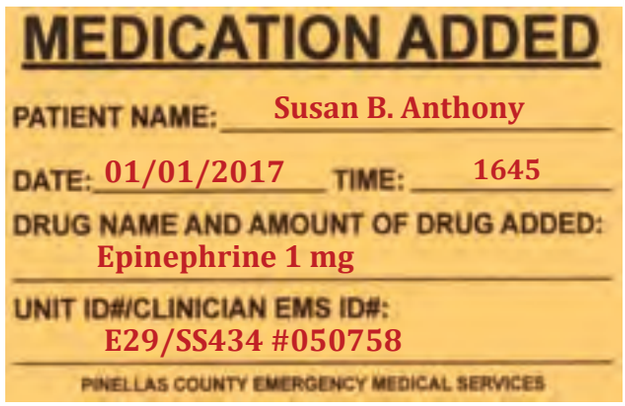
Intentionally
Left Blank

CT7 EPINEPHRINE DRIP INFUSION

OR

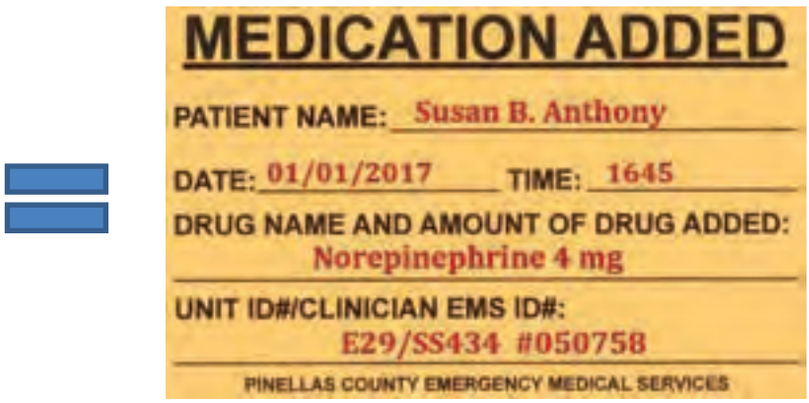


EPINEPHRINE DRIP INFUSION (1 mcg/mL)		
Mix 1 mg of Epinephrine in a 1000 mL Bag of 0.9% sodium chloride		
mcg/min	**gtt/min**	**Set Dial to (mL/hr)**
1	60	60
2	120	120
3	180	180
4	240	240
5	300	300



Intentionally
Left Blank

CT8 NOREPINEPHRINE DRIP INFUSION



NOREPINEPHRINE DRIP INFUSION (4 mcg/mL)		
Mix 4 mg of norepinephrine in a 1000 mL bag of 0.9% sodium chloride		
mcg/min	**gtt/min**	**Set Dial to (mL/hr)**
1	15	15
2	30	30
3	45	45
4	60	60
5	75	75
6	90	90
7	105	105
8	120	120
9	135	135
10	150	150

Intentionally
Left Blank

CT9 CYANOKIT

Cyanide poisoning in smoke-inhalation victims should be suspected if the following manifestations are present

- ✓ Exposure to fire or smoke in an enclosed area
- ✓ Soot around mouth, nose, or back of mouth
- ✓ Altered mental status (eg, confusion, disorientation)

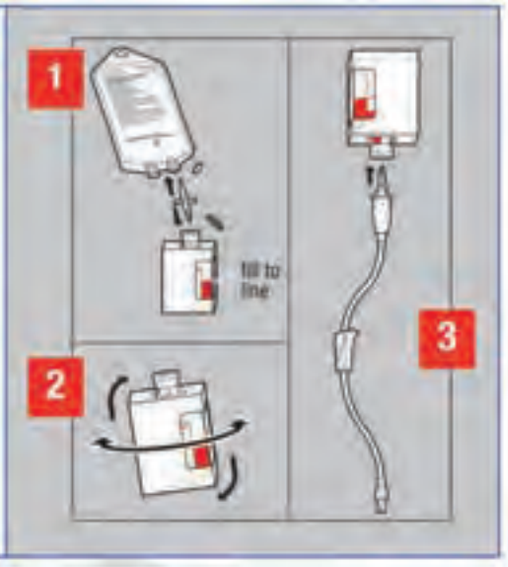
Complete Starting Dose: 5 g

1. **Reconstitute:** Place the vial in an upright position. Add 200 mL of 0.9% Sodium Chloride injection* to the vial using the transfer spike. **Fill to the line.**

   *0.9% Sodium Chloride injection is the recommended diluent (diluent not included in the kit). Lactated Ringers injection and 5% Dextrose injection have also been found to be compatible with hydroxocobalamin and may be used if 0.9% Sodium Chloride is not readily available

2. **Mix:** The vial should be repeatedly inverted or rocked, not shaken, for at least **60 seconds** prior to infusion.
   - CYANOKIT solutions should be visually inspected for particulate matter and color prior to administration
     - Discard solution if particulate matter is present or solution is not dark red

3. **Infuse Vial:** Use vented intravenous tubing, hang and infuse over **15 minutes.**



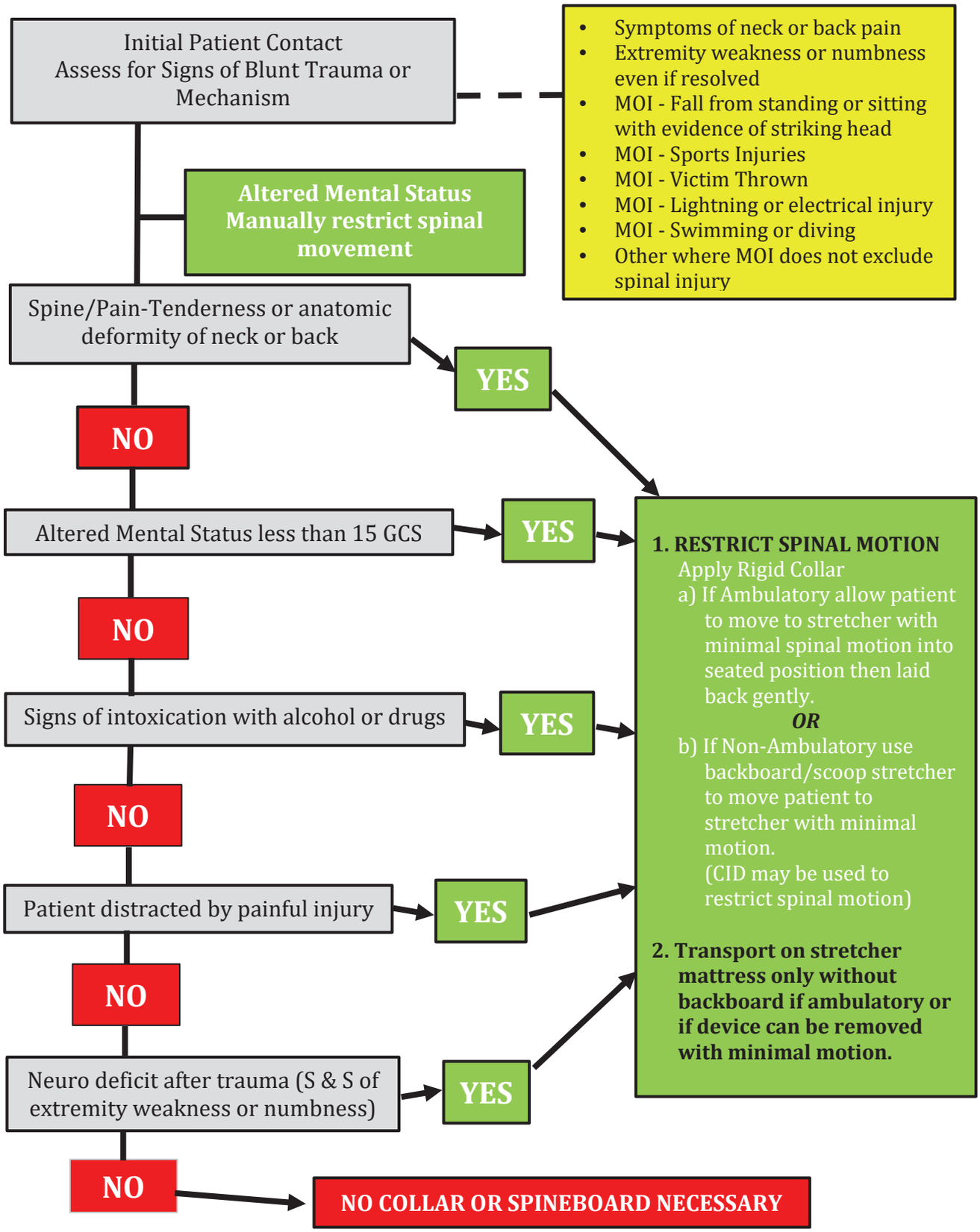
Intentionally
Left Blank

CT10 FIELD ASSESSMENT STROKE TRIAGE FOR EMERGENCY DESTINATION (FAST-ED)

		Test Component	Rapid Screen	Full Scoring
F	**Facial Palsy** Weakness on one side of face with smile	Have the patient look up at you, smile, and show his/her teeth	**Normal:** Symmetry to both sides **Abnormal**: One side of the face droops or does not move symmetrically	Absent or minor paralysis = 0 Partial or complete paralysis = 1
A	**Arm Weak-ness**	Have patient lift arms up and hold them out with eyes closed for 10 seconds	**Normal:** Symmetrical movement in both arms **Abnormal:** One arm drifts down or asymmetrical movement of the arms	No Drift = 0 Drift or some effort against gravity = 1 No effort against gravity or no movement = 2
S	**Speech Changes**	Have the patient say "You can't teach an old dog new tricks"	**Normal:** The correct words are used and no slurring of words is noted **Abnormal:** The words are slurred; the wrong words are used or the patient is aphasic	Absent = 0 Mild to moderate = 1 Severe, global aphasia or mute = 2
T	**Time**	Determine and Document: a. ***EXACT*** time of symptom onset or discovery (hh:mm) b. Last ***KNOWN*** Normal Time (hh:mm) (may or may not be same as onset) c. If symptoms were present upon awakening from sleep d. Name and phone number of person who witnessed event		
E	**Eye Deviation**	Have the patient follow you finger from side to side or have them look at clinicians on opposite sides of body		Absent = 0 Partial = 1 Forced deviation = 2
D	**Denial/ Neglect**	Check for presence of extinction while providing bilateral stimulus Ask the patient “who’s hand is this?”		Absent = 0 Extinction to bilateral simultaneous stimulation in only one sensory modality = 1 Does not recognize own hand or only orients to one side of the body = 2

Intentionally
Left Blank

CT11 SPINAL PRECAUTIONS



Intentionally
Left Blank

CT12 ADULT (AGE ≥ 16) TRAUMA SCORECARD

Any ONE Criteria = Red Trauma Alert	
Active airway assistance beyond the administration of oxygen	Amputation proximal to the wrist or ankle
Lack of radial pulse with sustained heart rate greater than 120	Any penetrating injury to the head, neck or torso (excluding superficial wounds where the depth of the wound can be determined)
Systolic BP less than 90 mmHg	Signs & symptoms two or more long bone fracture sites (humerus, [radius/ulna], femur, [tibia/fibula])
GCS score Best Motor Response equal to or less than 4	GCS score equal to or less than 12 (excluding patients whose normal GCS Score is equal to or less than 12 as established by patient's medical history or preexisting medical condition when known)
Exhibits the presence of paralysis	Signs & symptoms/suspicion of skull fracture, flail chest and/or pelvic fracture**
Suspected spinal cord injury	Major blunt trauma to head, neck, torso or pelvis**
Loss of sensation	Any ejection (complete or partial) from a motor vehicle (***including*** moped, motorcycle, all-terrain vehicle, watercraft)**
2nd or 3rd degree burns equal to or greater than 15% TBSA	Death of another passenger from trauma**

Any TWO Criteria = Blue Trauma Alert	
Respiratory rate equal to or greater than 30	Gunshot wound to an extremity of the body
Sustained heart rate equal to or greater than 120	Signs & symptoms of a single long bone fracture from a MVC
GCS Best Motor Response equals 5	Signs & symptoms of a single long bone fracture from fall equal to or greater than 10 feet
Soft tissue loss from major degloving injury	Age equal to or greater than 55 years old
Major flap avulsion greater than 5 inches	Patient impacted steering wheel causing steering wheel deformity

Paramedic Intuition = "Trauma Alert" (must document basis for declaration on PCR)

Trauma Center Transport Local Criteria = "NON-Trauma Alert"	
Extended extrication time	Moderate – heavy damage without passenger restraints
Rapid deceleration with heavy damage	Falls greater than 15 feet
Passenger space invasion greater than 1 foot	

** = Local Medical Director Trauma Alert Criteria

Intentionally
Left Blank

CT13 PEDIATRIC (≤ 15 y/o) TRAUMA SCORECARD

Any ONE Criteria = Red Trauma Alert	
In order to maintain optimal ventilation, the patient is intubated or breathing is maintained through such measures as manual jaw thrust, continuous suctioning or use of other adjuncts to assist ventilatory efforts	Multiple fracture sites or dislocations (except for isolated wrist or ankle fractures or dislocations)
Exhibits altered mental status including drowsiness, lethargy, inability to follow commands, unresponsiveness to voice, totally unresponsive or coma	Major soft tissue disruption including major degloving injury or major flap avulsions
Presence of paralysis	2nd or 3rd degree burns equal to or greater than 10% TBSA
Loss of sensation	Amputation at or above the Wrist or Ankle
Suspected spinal cord injury	Any penetrating injury to the head, neck or torso (excluding superficial wounds where the depth of the wound can be determined)
Faint or non-palpable carotid or femoral pulse	Major blunt trauma to head, neck, torso or pelvis**
Systolic BP less than 50 mmHg	Signs & symptoms/suspicion of skull fracture, flail chest and/or pelvic fracture**
Evidence of open long bone (humerus, [radius/ulna], femur, [tibia/fibula]) fracture	Any ejection (complete or partial) from a motor vehicle (***including*** moped, motorcycle, all-terrain vehicle, watercraft)**
Death of another passenger from trauma**	

Any TWO Criteria = Blue Trauma Alert	
Symptoms of amnesia exhibited	Weight equal to or less than 11 kilograms or the body length is equivalent to this weight on the Handtevy Tape (the equivalent of 33 inches in measurement or less)
Loss of consciousness	Signs & symptoms of a single closed long bone fracture. Excludes isolated wrist or ankle fractures
Palpable carotid or femoral pulse but the radial or pedal pulses are not palpable	Signs & symptoms single long bone fracture from a fall equal to or greater than 10 feet
Systolic BP less than 90 mmHg	

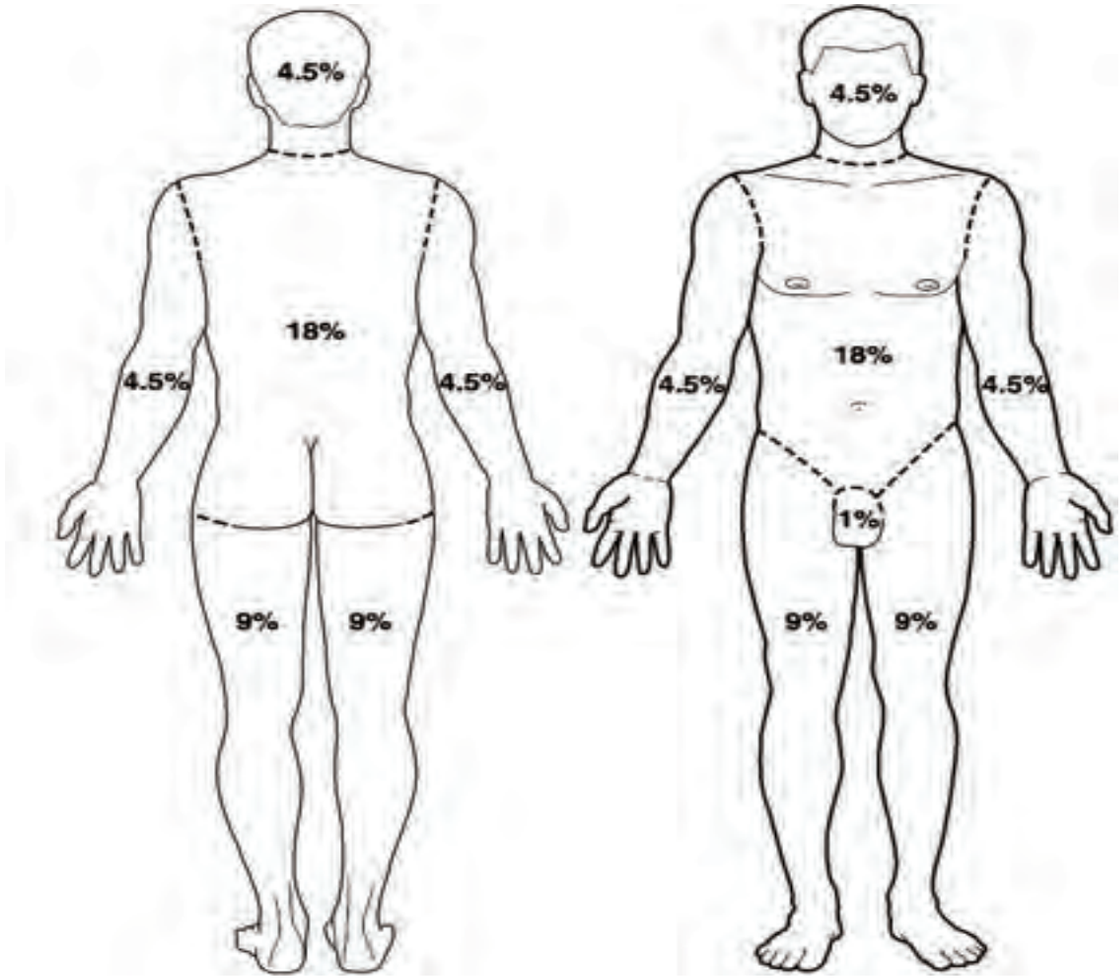
Paramedic Intuition = "Trauma Alert" (must document basis for declaration on PCR)

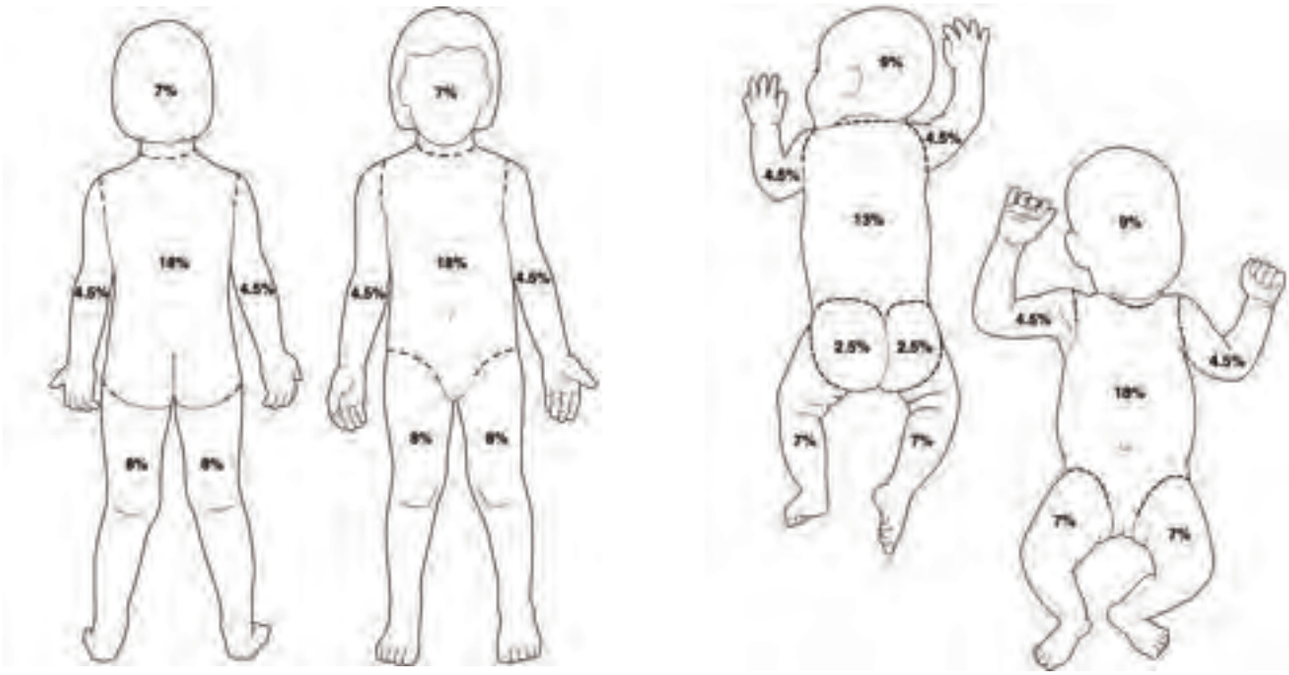
Trauma Center Transport Local Criteria = "NON-Trauma Alert"	
Extended extrication time	Moderate – heavy damage without passenger restraints
Rapid deceleration with heavy damage	Child less than 16 years old struck by a vehicle
Passenger space invasion greater than 1 foot	Falls greater than 15 feet or twice the patient's height

** = Local Medical Director Trauma Alert Criteria

Intentionally
Left Blank

CT14 BURNS – RULES OF 9'S





Intentionally
Left Blank

CT15 TOXIDROMES

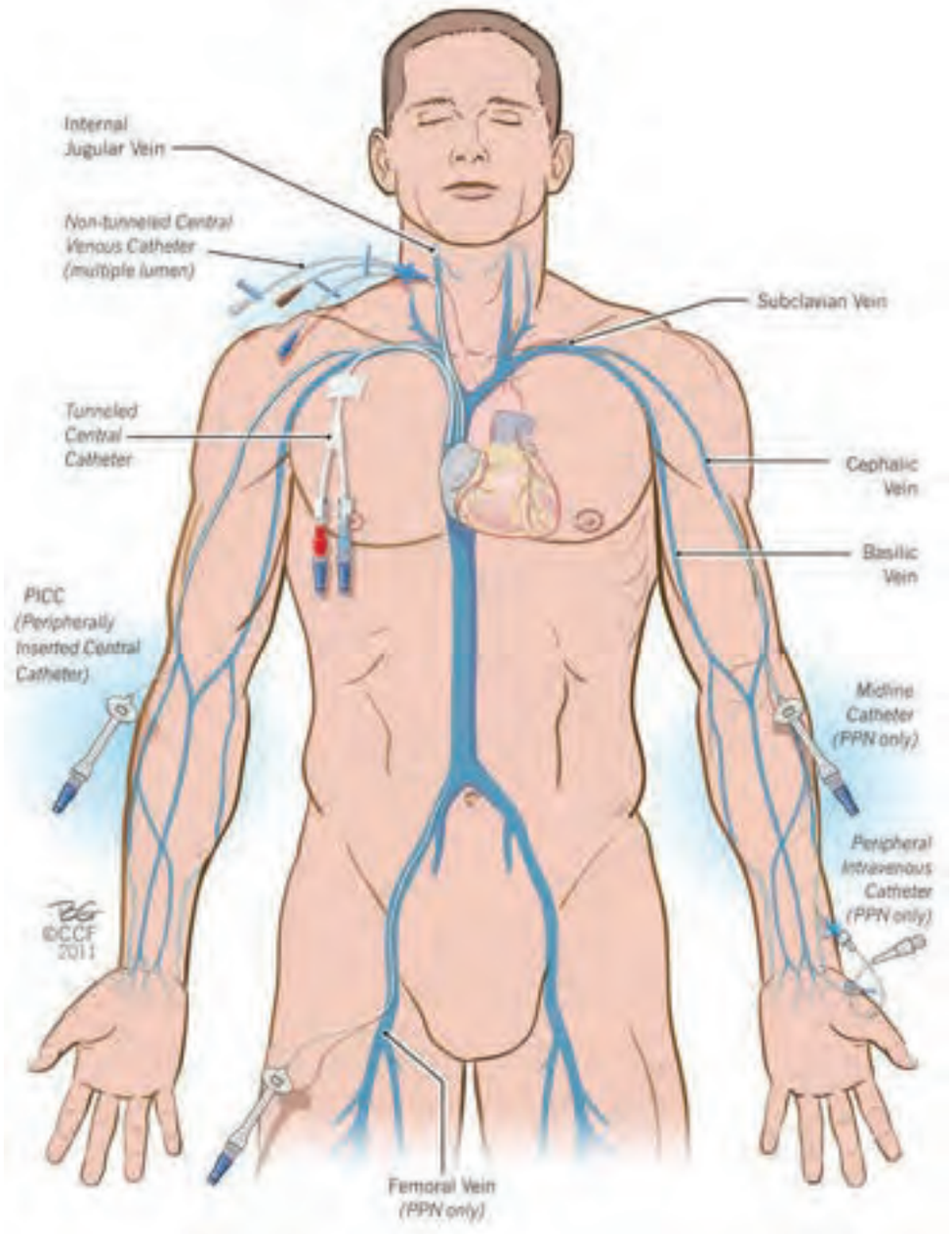
Class	Signs and Symptoms	Agents	Treatment
Sympatho-mimetics	• Agitation • Seizures • Mydriasis • Tachycardia • Hypertension • Diaphoresis • Pallor • Cool Skin • Fever	• Albuterol • Terbutaline • Amphetamines • Cocaine • Methamphetamines • PCP • Theophylline • Caffeine • Catecholamine's • Ketamine	1. Supportive care 2. **Uncooperative/potentially violent:** • Midazolam 2.5 mg IV/IM, may repeat once after 5 minutes if needed 3. **Agitated/Actively violent:** • Midazolam 5 mg IV/IM, may repeat once after 5 minutes, if needed ***OR*** • 10 mg (5 mg per nare) intranasal. May give an additional 5 mg (2.5 mg per nare) after 5 minutes if needed
Cholinergics	(DUMBBELS) - Diarrhea, Urination, Miosis, Bradycardia, Bronchorrhea, Emesis, Lacrimation, Salivation	• Organo-phosphates • Pesticides • Carbamates • Nerve Agents	1. Atropine 2 mg IV every 2 min until secretions dry 2. Contact OLMC for DuoDote utilization 3. If Seizing, Ref. M14
Opioids	• Respiratory Depression • Coma • Miosis • Bradycardia • Hypotension • Constipation	• Morphine • Methadone • Codeine	1. Naloxone 0.4 mg IV, may repeat to maximum 4 mg, as needed ***OR*** 2. Naloxone 2 mg intranasal, may repeat one time in 3 minutes, as needed
Anti-cholinergics	Agitation, Delirium, Coma, Mydriasis, Dry Mouth, Flushed Skin, Tachycardia, Hypertension, Fever, Urinary Retention, "MAD AS A HATTER, BLIND AS A BAT, RED AS A BEET"	• Antihistamines • Atropine • Carbamazepine • Cyclic Antidepressants • Jimson Weed • Oxybutynin • Phenothiazines • Scopolamine	1. Supportive care 2. **Uncooperative/potentially violent:** • Midazolam 2.5 mg IV/IM, may repeat once after 5 minutes if needed 3. **Agitated/violent:** • Midazolam 5 mg IV/IM, may repeat once after 5 minutes, if needed ***OR*** • 10 mg (5 mg per nare) intranasal. May give an additional 5 mg (2.5 mg per nare) after 5 minutes if needed

SPECIFIC WITHDRAWL/MEDICATION REACTIONS			
Acute Withdrawal (opiate, alcohol, Benzodiazepines)	**Sympathetic Storm:** Shakiness, Chills, Tremors, Anxiety, Stress, Depression, Volatile, Mood Swings, Sweating, Pale, Tachycardia, Seizures, Confusion, Psychosis	Withdrawal from: Opiate, Alcohol, Benzodiazepines	1. Supportive care 2. Midazolam 2.5 mg IV/IM, may repeat once after 5 minutes, if needed
Acute Dystonic	Involuntary Muscle Contractions - begin in a single area such as foot, hand or neck. May worsen with stress, fatigue or anxiety	Antipsychotics, antiemetics, and antidepressants most common/ Alcohol and cocaine increase risk.	1. Diphenhydramine 50 mg IV/IM 2. Midazolam 2.5 mg IV/IM, may repeat once after 5 minutes.
Oleoresin Capsicum (OC)/Pepper Spray	Tingling skin, burning skin, skin redness, skin swelling, skin blistering, burning throat, dry cough, wheezing, shortness of breath, gasping, gagging, inability to breath, laryngospasm, laryngeal paralysis, sneezing, nasal irritation, runny nose, eye swelling, eye burning, eye stinging, eye inflammation, tearing, gastrointestinal burning, temporary blindness	Pepper spray	1. Remove contaminated clothing/contact lenses 2. Flush copiously

CT16 INDWELLING CATHETERS

SAFETY ALERT

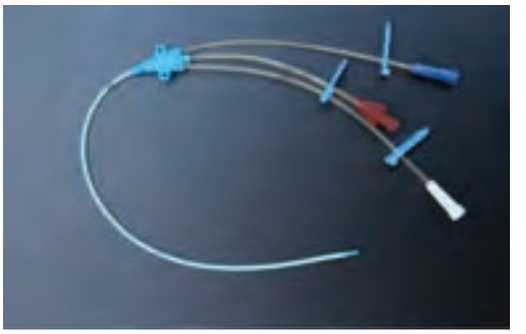
- Misconception: If the catheter end is blue "it's venous" and if the end is red "its arterial" – ***NOT TRUE!***
- The starting point for all central lines may differ, but they end up (for the most part) in the same place (SVC or IVC)
- Some will be heparinized. Withdraw 10 mL (adult) or 3 mL (pediatric) of blood prior to use to avoid inadvertent heparin boluses.



http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/gastroenterology/principles-of-nutrition-support/images/figure-2.jpg

Triple lumen central line

- This one is placed in the internal jugular, but longer version may be found in the subclavian vein
- The distal end lives in the SVC (superior vena cava) like all central lines



Dialysis tunnel catheter

- Inserted into the internal jugular and tunneled under the skin (in the chest) for long-term use in dialysis. You may find the same catheter (not tunneled) for temporary use but for us all will be the same
- The distal end lives in the SVC (superior vena cava) like all central lines

PICC line (peripherally inserted central catheter)

- Placed in the upper arm and used for in home antibiotics, etc.
- The distal end lives in the SVC (superior vena cava) like all central lines

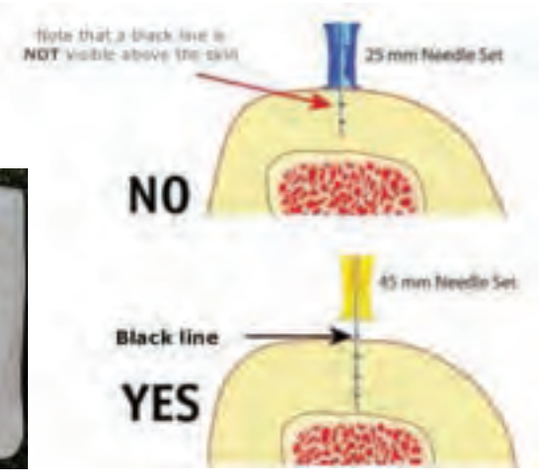
Port

- Port placement is usually in the anterior upper chest but may be in the arm
- The distal end lives in the SVC (superior vena cava) like all central lines
- ***NO EMS USE***

CT17 EZIO NEEDLE SIZE AND INSERTION SITES

1. Needle size selection:

With tip of needle just touching bone, ensure a black line is visible above skin PRIOR to drilling.



2. Insertion Sites:

ADULT

Proximal Tibia

Proximal Humerus

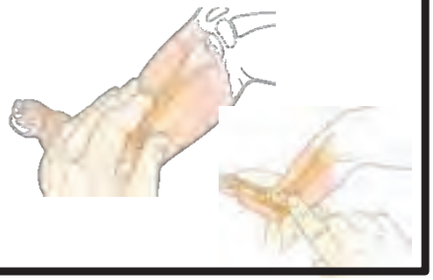
Distal Tibia

PEDIATRIC

Proximal Tibia

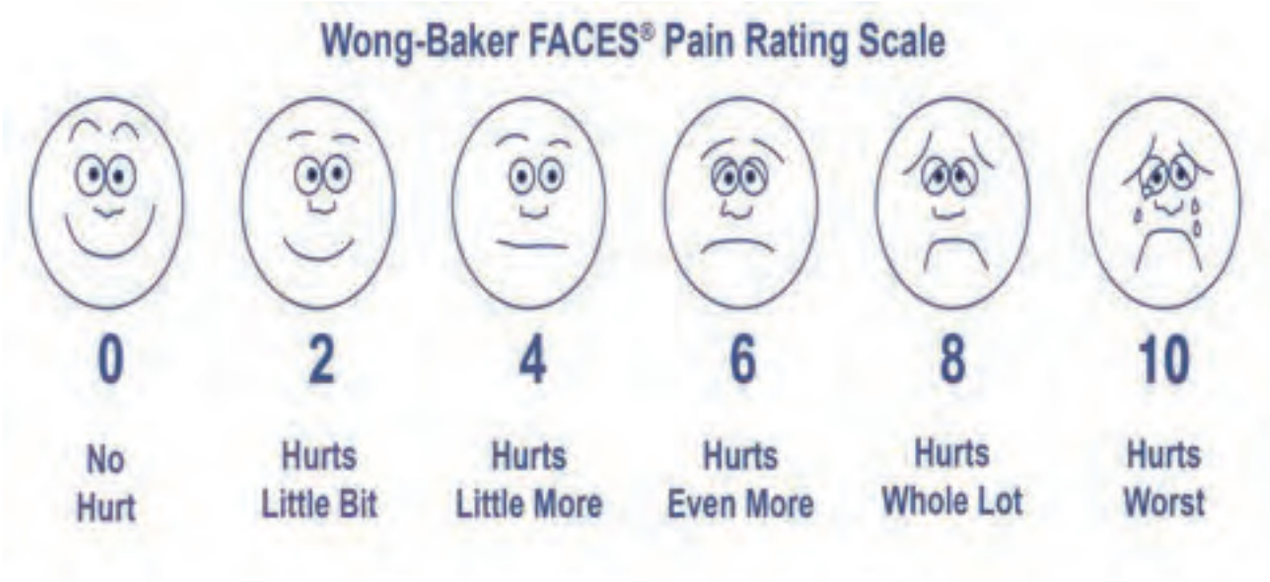
Distal Femur

Distal Tibia



Intentionally
Left Blank

CT18 FACES PAIN SCALE



Instructions for Usage

Explain to the person that each face represents a person who has no pain (hurt), or some, or a lot of pain.

Face 0 doesn't hurt at all. Face 2 hurts just a little bit. Face 4 hurts a little bit more. Face 6 hurts even more. Face 8 hurt a whole lot. Face 10 hurts as much as you can imagine, although you don't have to be crying to have this worst pain.

Ask the person to choose the face that best depicts the pain they are experiencing.

Intentionally
Left Blank

CT19 APGAR SCORE

	0 Points	1 Point	2 Points	Total Points
Activity (muscle tone)	Absent	Arms and Legs Flexed	Active Movement	
Pulse	Absent	Below 100 BPM	Over 100 BPM	
Grimace (reflex irritability)	Flaccid	Some Flexion of Extremities	Active Motion (sneeze, cough, pull away)	
Appearance (skin color)	Blue, Pale	Body Pink, Extremities Blue	Completely Pink	
Respiration	Absent	Slow, Irregular	Vigorous Cry	
		Severely Depressed 0 - 3		
		Moderately Depressed 4 - 6		
		Excellent Condition 7 - 10		

Intentionally
Left Blank

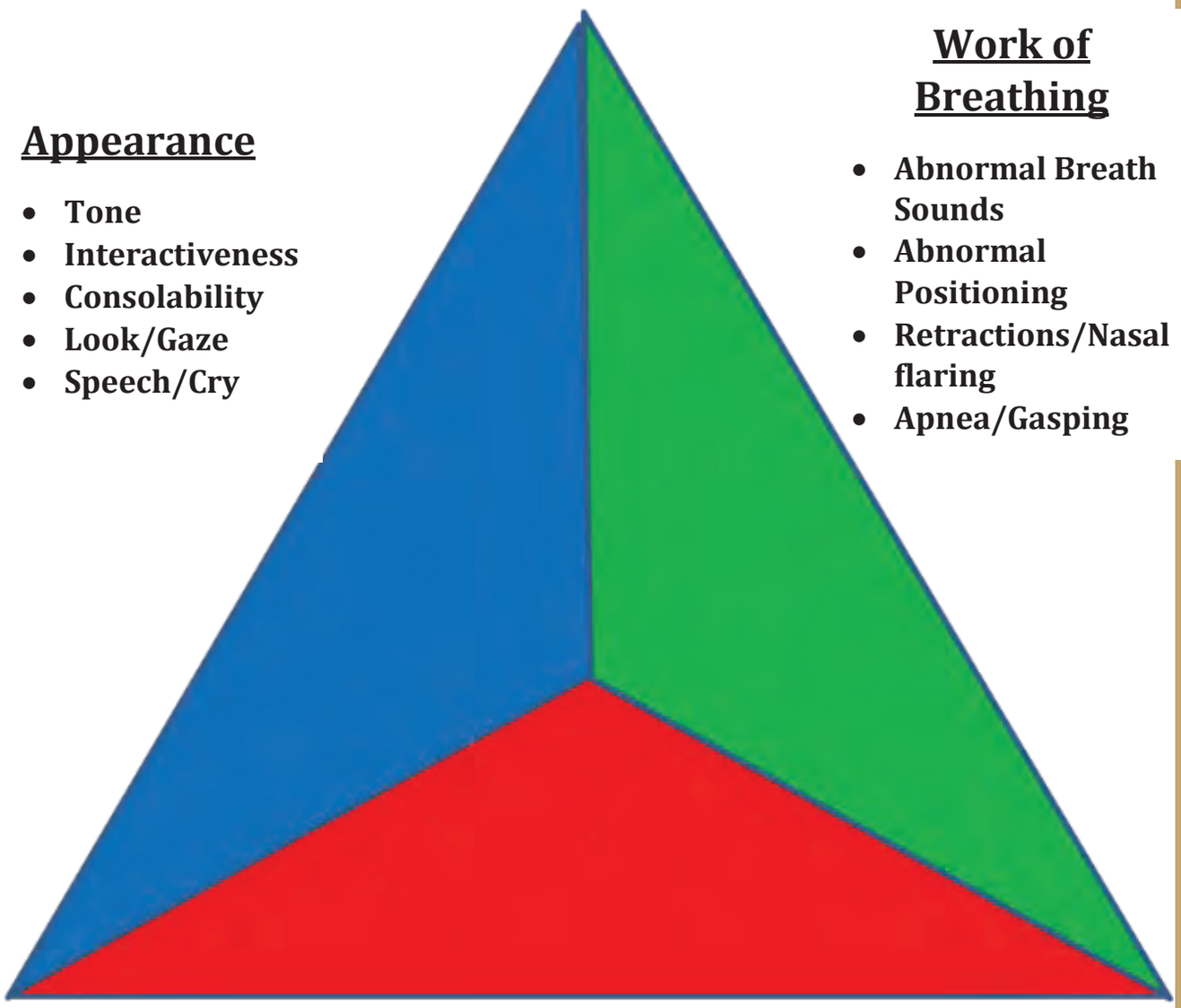
CT20 PEDIATRIC ASSESSMENT TRIANGLE

Appearance

- **Tone**
- **Interactiveness**
- **Consolability**
- **Look/Gaze**
- **Speech/Cry**

Work of Breathing

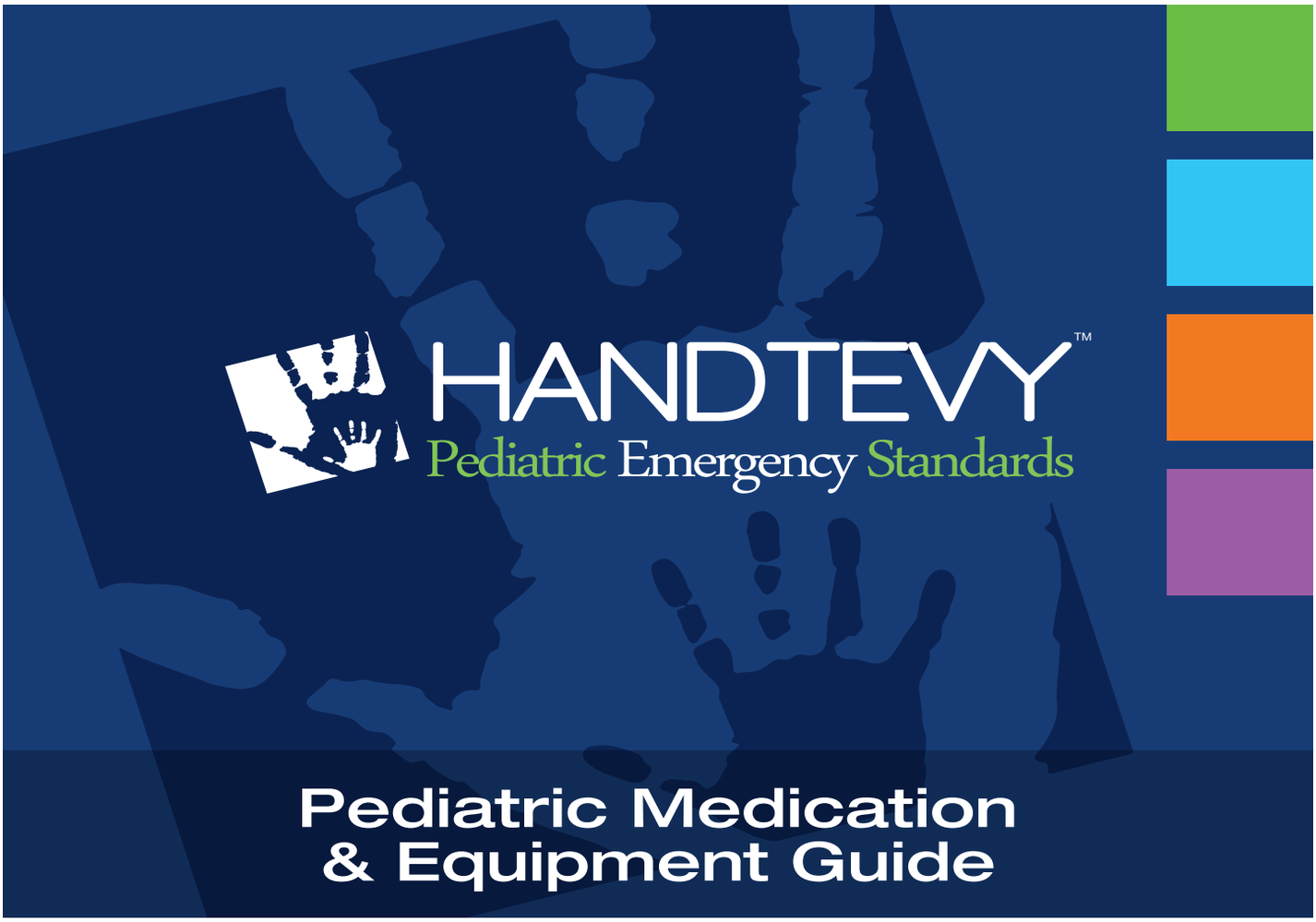
- **Abnormal Breath Sounds**
- **Abnormal Positioning**
- **Retractions/Nasal flaring**
- **Apnea/Gasping**



Circulation to the Skin

- **Pallor**
- **Mottling**
- **Cyanosis**

Intentionally
Left Blank



PINELLAS COUNTY EMS

Pinellas County
EMS & FIRE
ADMINISTRATION

GENERAL INFORMATION

From the Office of the Medical Director - Pinellas County EMS

1. All medications and fluids listed in this guidebook that can be administered intravenously (IV), can also be administered via the intraosseous (IO) route.

2. Always confirm the compatibility of medications and fluids prior to infusion together.

3. Always infuse medications and fluids in a manner consistent with standard practice.

4. All intranasal (IN) medication volumes in this book include an additional 0.1 mL of medication to account for the dead space in the atomizer.

From the Manufacturer of the Handtevy Pediatric Bag

The information in this book is customized for Pinellas County EMS. It is the responsibility of Pinellas County EMS to ensure the accuracy of all drug concentrations, drug dosages and equipment sizes on a continual basis. Pediatric Emergency Standards, Inc. recommends prompt revision and replacement of this book if the Department has made any modifications.

For inquires, please contact:
Pediatric Emergency Standards, Inc.
Office: 866.867.3192
Fax: 954.653.3792
Email: info@Handtevy.com

HANDTEVY™
Pediatric Emergency Standards

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

PREMIE

PINELLAS COUNTY EMS				2 KG IDEAL WEIGHT	
DRUG	**CONC**	**VOL**	**RT**	**DOSE/KG**	**AMOUNT**
Adenosine [1st Dose]	3 mg/mL	0.07 mL	IV	0.1 mg/kg	0.2 mg
Adenosine [2nd Dose]	3 mg/mL	0.13 mL	IV	0.2 mg/kg	0.4 mg
Albuterol	2.5 mg/3 mL	1.5 mL	NEB	Dose =	1.25 mg
Amiodarone (Arrest Dose)	50 mg/mL	0.2 mL	IV	5 mg/kg	10 mg
Atropine	0.1 mg/mL	1 mL	IV	Dose =	0.1 mg
Calcium Chloride	100 mg/mL	0.4 mL	IV	20 mg/kg	40 mg
Dextrose 10% in Water	10 g/100 mL	10 mL	IV	0.5 g/kg	1 g
Diazepam IV	5 mg/mL	0.04 mL	IV	0.1 mg/kg	0.2 mg
Diazepam PR	5 mg/mL	0.2 mL	PR	0.5 mg/kg	1 mg
Diphenhydramine	50 mg/mL	0.04 mL	IV/IM	1 mg/kg	2 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	0 gtt/min	IV	Titrate to BP: Max 0 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.02 mL	IM	0.01 mg/kg	0.02 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	0.2 mL	IV	0.01 mg/kg	0.02 mg
Fentanyl Intranasal	50 mcg/mL	0.16 mL	IN	1.5 mcg/kg	3 mcg
Fentanyl IV	50 mcg/mL	0.04 mL	IV	1 mcg/kg	2 mcg
Glucagon	1 mg/mL	0.5 mL	IV/IM	Dose =	0.5 mg
Glucose (oral)	15 g/pouch	N/A	PO	Not indicated	
Ipratropium Bromide	0.5 mg/2.5 mL	1.25 mL	NEB	Dose =	0.25 mg
Magnesium Sulfate	40 mg/mL	2.5 mL	IV	50 mg/kg	100 mg
Methylprednisolone	125 mg/2 mL	0.06 mL	IV	2 mg/kg	4 mg
Midazolam Intranasal	5 mg/mL	0.18 mL	IN	0.2 mg/kg	0.4 mg
Midazolam IV/IM	5 mg/mL	0.04 mL	IV/IM	0.1 mg/kg	0.2 mg
Morphine	4 mg/mL	0.05 mL	IV	0.1 mg/kg	0.2 mg
Naloxone	1 mg/mL	0.2 mL	IV/IM	0.1 mg/kg	0.2 mg
Naloxone Intranasal	1 mg/mL	1 mL	IN	Dose =	1 mg
Ondansetron IV	2 mg/mL	N/A	IV	Not indicated	
Ondansetron ODT	4 mg/tab	N/A	PO	Not Indicated	
Sodium Bicarb 4.2%	(Dilute 8.4% 1:1 NS)	4 mL	IV	1 mEq/kg	2 mEq
Sodium Chloride Bolus	0.9%	20 mL	IV	10 mL/kg	20 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	4	8	10	20
Cardioversion	0.5 → 1 → 2 → 2	1	2	4	4

ET TUBE	DISTANCE AT LIP
2.5 Uncuffed	7 - 9.5 cm

VITALS		SBP	55 - 90	HR	120 - 170	RR	40 - 70

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

NB

PINELLAS COUNTY EMS				4 KG IDEAL WEIGHT	
DRUG	**CONC**	**VOL**	**RT**	**DOSE/KG**	**AMOUNT**
Adenosine [1st Dose]	3 mg/mL	0.13 mL	IV	0.1 mg/kg	0.4 mg
Adenosine [2nd Dose]	3 mg/mL	0.27 mL	IV	0.2 mg/kg	0.8 mg
Albuterol	2.5 mg/3 mL	1.5 mL	NEB	Dose =	1.25 mg
Amiodarone (Arrest Dose)	50 mg/mL	0.4 mL	IV	5 mg/kg	20 mg
Atropine	0.1 mg/mL	1 mL	IV	Dose =	0.1 mg
Calcium Chloride	100 mg/mL	0.8 mL	IV	20 mg/kg	80 mg
Dextrose 10% in Water	10 g/100 mL	20 mL	IV	0.5 g/kg	2 g
Diazepam IV	5 mg/mL	0.08 mL	IV	0.1 mg/kg	0.4 mg
Diazepam PR	5 mg/mL	0.4 mL	PR	0.5 mg/kg	2 mg
Diphenhydramine	50 mg/mL	0.08 mL	IV/IM	1 mg/kg	4 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	1 gtt/min	IV	Titrate to BP: Max 4 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.04 mL	IM	0.01 mg/kg	0.04 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	0.4 mL	IV	0.01 mg/kg	0.04 mg
Fentanyl Intranasal	50 mcg/mL	0.22 mL	IN	1.5 mcg/kg	6 mcg
Fentanyl IV	50 mcg/mL	0.08 mL	IV	1 mcg/kg	4 mcg
Glucagon	1 mg/mL	0.5 mL	IV/IM	Dose =	0.5 mg
Glucose (oral)	15 g/pouch	N/A	PO	Not indicated	
Ipratropium Bromide	0.5 mg/2.5 mL	1.25 mL	NEB	Dose =	0.25 mg
Magnesium Sulfate	40 mg/mL	5 mL	IV	50 mg/kg	200 mg
Methylprednisolone	125 mg/2 mL	0.13 mL	IV	2 mg/kg	8 mg
Midazolam Intranasal	5 mg/mL	0.26 mL	IN	0.2 mg/kg	0.8 mg
Midazolam IV/IM	5 mg/mL	0.08 mL	IV/IM	0.1 mg/kg	0.4 mg
Morphine	4 mg/mL	0.1 mL	IV	0.1 mg/kg	0.4 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	0.1 mg/kg	0.4 mg
Naloxone Intranasal	1 mg/mL	1 mL	IN	Dose =	1 mg
Ondansetron IV	2 mg/mL	1 mL	IV	Dose =	2 mg
Ondansetron ODT	4 mg/tab	N/A	PO	Not Indicated	
Sodium Bicarb 4.2%	(Dilute 8.4% 1:1 NS)	8 mL	IV	1 mEq/kg	4 mEq
Sodium Chloride Bolus	0.9%	40 mL	IV	10 mL/kg	40 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	8	15	20	50
Cardioversion	0.5 → 1 → 2 → 2	2	4	8	8

ET TUBE	DISTANCE AT LIP
2.5 Uncuffed / 3.0 Cuffed	3 KG: 9-9.5 cm 4 KG: 9.5-10 cm 5 KG: 10-10.5 cm

VITALS	SBP	60 - 100	HR	100 - 160	RR	30 - 60

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

4MO

PINELLAS COUNTY EMS				6 KG IDEAL WEIGHT	
DRUG	**CONC**	**VOL**	**RT**	**DOSE/KG**	**AMOUNT**
Adenosine [1st Dose]	3 mg/mL	0.2 mL	IV	0.1 mg/kg	0.6 mg
Adenosine [2nd Dose]	3 mg/mL	0.4 mL	IV	0.2 mg/kg	1.2 mg
Albuterol	2.5 mg/3 mL	1.5 mL	NEB	Dose =	1.25 mg
Amiodarone (Arrest Dose)	50 mg/mL	0.6 mL	IV	5 mg/kg	30 mg
Atropine	0.1 mg/mL	1.2 mL	IV	0.02 mg/kg	0.12 mg
Calcium Chloride	100 mg/mL	1.2 mL	IV	20 mg/kg	120 mg
Dextrose 10% in Water	10 g/100 mL	30 mL	IV	0.5 g/kg	3 g
Diazepam IV	5 mg/mL	0.12 mL	IV	0.1 mg/kg	0.6 mg
Diazepam PR	5 mg/mL	0.6 mL	PR	0.5 mg/kg	3 mg
Diphenhydramine	50 mg/mL	0.12 mL	IV/IM	1 mg/kg	6 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	1 gtt/min	IV	Titrate to BP: Max 4 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.06 mL	IM	0.01 mg/kg	0.06 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	0.6 mL	IV	0.01 mg/kg	0.06 mg
Fentanyl Intranasal	50 mcg/mL	0.28 mL	IN	1.5 mcg/kg	9 mcg
Fentanyl IV	50 mcg/mL	0.12 mL	IV	1 mcg/kg	6 mcg
Glucagon	1 mg/mL	0.5 mL	IV/IM	Dose =	0.5 mg
Glucose (oral)	15 g/pouch	N/A	PO	Not indicated	
Ipratropium Bromide	0.5 mg/2.5 mL	1.25 mL	NEB	Dose =	0.25 mg
Magnesium Sulfate	40 mg/mL	7.5 mL	IV	50 mg/kg	300 mg
Methylprednisolone	125 mg/2 mL	0.19 mL	IV	2 mg/kg	12 mg
Midazolam Intranasal	5 mg/mL	0.34 mL	IN	0.2 mg/kg	1.2 mg
Midazolam IV/IM	5 mg/mL	0.12 mL	IV/IM	0.1 mg/kg	0.6 mg
Morphine	4 mg/mL	0.15 mL	IV	0.1 mg/kg	0.6 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	1 mL	IN	Dose =	1 mg
Ondansetron IV	2 mg/mL	1 mL	IV	Dose =	2 mg
Ondansetron ODT	4 mg/tab	N/A	PO	Not Indicated	
Sodium Bicarb 4.2%	(Dilute 8.4% 1:1 NS)	12 mL	IV	1 mEq/kg	6 mEq
Sodium Chloride Bolus	0.9%	120 mL	IV	20 mL/kg	120 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	10	20	30	70
Cardioversion	0.5 → 1 → 2 → 2	3	6	10	10

ET TUBE	DISTANCE AT LIP
3.0 Cuffed	10.5 - 11 cm

VITALS	SBP	70 - 100	HR	105 - 160	RR	30 - 60

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

6MO

PINELLAS COUNTY EMS				8 KG IDEAL WEIGHT	
DRUG	CONC	VOL	RT	DOSE/KG	AMOUNT
Adenosine [1st Dose]	3 mg/mL	0.27 mL	IV	0.1 mg/kg	0.8 mg
Adenosine [2nd Dose]	3 mg/mL	0.53 mL	IV	0.2 mg/kg	1.6 mg
Albuterol	2.5 mg/3 mL	1.5 mL	NEB	Dose =	1.25 mg
Amiodarone (Arrest Dose)	50 mg/mL	0.8 mL	IV	5 mg/kg	40 mg
Atropine	0.1 mg/mL	1.6 mL	IV	0.02 mg/kg	0.16 mg
Calcium Chloride	100 mg/mL	1.6 mL	IV	20 mg/kg	160 mg
Dextrose 10% in Water	10 g/100 mL	40 mL	IV	0.5 g/kg	4 g
Diazepam IV	5 mg/mL	0.16 mL	IV	0.1 mg/kg	0.8 mg
Diazepam PR	5 mg/mL	0.8 mL	PR	0.5 mg/kg	4 mg
Diphenhydramine	50 mg/mL	0.16 mL	IV/IM	1 mg/kg	8 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	2 gtt/min	IV	Titrate to BP: Max 8 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.08 mL	IM	0.01 mg/kg	0.08 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	0.8 mL	IV	0.01 mg/kg	0.08 mg
Fentanyl Intranasal	50 mcg/mL	0.34 mL	IN	1.5 mcg/kg	12 mcg
Fentanyl IV	50 mcg/mL	0.16 mL	IV	1 mcg/kg	8 mcg
Glucagon	1 mg/mL	0.5 mL	IV/IM	Dose =	0.5 mg
Glucose (oral)	15 g/pouch	N/A	PO	Not indicated	
Ipratropium Bromide	0.5 mg/2.5 mL	1.25 mL	NEB	Dose =	0.25 mg
Magnesium Sulfate	40 mg/mL	10 mL	IV	50 mg/kg	400 mg
Methylprednisolone	125 mg/2 mL	0.26 mL	IV	2 mg/kg	16 mg
Midazolam Intranasal	5 mg/mL	0.42 mL	IN	0.2 mg/kg	1.6 mg
Midazolam IV/IM	5 mg/mL	0.16 mL	IV/IM	0.1 mg/kg	0.8 mg
Morphine	4 mg/mL	0.2 mL	IV	0.1 mg/kg	0.8 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	1 mL	IN	Dose =	1 mg
Ondansetron IV	2 mg/mL	1 mL	IV	Dose =	2 mg
Ondansetron ODT	4 mg/tab	1/2 tab	PO	Dose =	2 mg
Sodium Bicarb 4.2%	(Dilute 8.4% 1:1 NS)	16 mL	IV	1 mEq/kg	8 mEq
Sodium Chloride Bolus	0.9%	160 mL	IV	20 mL/kg	160 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	15	30	50	70
Cardioversion	0.5 → 1 → 2 → 2	4	8	15	15

ET TUBE	DISTANCE AT LIP
3.0 Cuffed	10.5 - 11 cm

VITALS	SBP	70 - 100	HR	110 - 160	RR	24 - 38

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

1YR

PINELLAS COUNTY EMS				10 KG IDEAL WEIGHT	
DRUG	CONC	VOL	RT	DOSE/KG	AMOUNT
Adenosine [1st Dose]	3 mg/mL	0.33 mL	IV	0.1 mg/kg	1 mg
Adenosine [2nd Dose]	3 mg/mL	0.67 mL	IV	0.2 mg/kg	2 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	1 mL	IV	5 mg/kg	50 mg
Atropine	0.1 mg/mL	2 mL	IV	0.02 mg/kg	0.2 mg
Calcium Chloride	100 mg/mL	2 mL	IV	20 mg/kg	200 mg
Dextrose 10% in Water	10 g/100 mL	50 mL	IV	0.5 g/kg	5 g
Diazepam IV	5 mg/mL	0.2 mL	IV	0.1 mg/kg	1 mg
Diazepam PR	5 mg/mL	1 mL	PR	0.5 mg/kg	5 mg
Diphenhydramine	50 mg/mL	0.2 mL	IV/IM	1 mg/kg	10 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	2 gtt/min	IV	Titrate to BP: Max 8 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.1 mL	IM	0.01 mg/kg	0.1 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	1 mL	IV	0.01 mg/kg	0.1 mg
Fentanyl Intranasal	50 mcg/mL	0.4 mL	IN	1.5 mcg/kg	15 mcg
Fentanyl IV	50 mcg/mL	0.2 mL	IV	1 mcg/kg	10 mcg
Glucagon	1 mg/mL	0.5 mL	IV/IM	Dose =	0.5 mg
Glucose (oral)	15 g/pouch	N/A	PO	Not indicated	
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	12.5 mL	IV	50 mg/kg	500 mg
Methylprednisolone	125 mg/2 mL	0.32 mL	IV	2 mg/kg	20 mg
Midazolam Intranasal	5 mg/mL	0.5 mL	IN	0.2 mg/kg	2 mg
Midazolam IV/IM	5 mg/mL	0.2 mL	IV/IM	0.1 mg/kg	1 mg
Morphine	4 mg/mL	0.25 mL	IV	0.1 mg/kg	1 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	1 mL	IV	Dose =	2 mg
Ondansetron ODT	4 mg/tab	1/2 tab	PO	Dose =	2 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	10 mL	IV	1 mEq/kg	10 mEq
Sodium Chloride Bolus	0.9%	200 mL	IV	20 mL/kg	200 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	20	50	70	100
Cardioversion	0.5 → 1 → 2 → 2	5	10	20	20

ET TUBE	DISTANCE AT LIP
3.5 Cuffed	11 - 12 cm

VITALS		SBP	75 - 105	HR	90 - 150	RR	22 - 30

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

2YR

PINELLAS COUNTY EMS — 12 KG IDEAL WEIGHT

DRUG	CONC	VOL	RT	DOSE/KG	AMOUNT
Adenosine [1st Dose]	3 mg/mL	0.4 mL	IV	0.1 mg/kg	1.2 mg
Adenosine [2nd Dose]	3 mg/mL	0.8 mL	IV	0.2 mg/kg	2.4 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	1.2 mL	IV	5 mg/kg	60 mg
Atropine	0.1 mg/mL	2.4 mL	IV	0.02 mg/kg	0.24 mg
Calcium Chloride	100 mg/mL	2.4 mL	IV	20 mg/kg	240 mg
Dextrose 10% in Water	10 g/100 mL	60 mL	IV	0.5 g/kg	6 g
Diazepam IV	5 mg/mL	0.24 mL	IV	0.1 mg/kg	1.2 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	0.24 mL	IV/IM	1 mg/kg	12 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	2 gtt/min	IV	Titrate to BP: Max 8 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.12 mL	IM	0.01 mg/kg	0.12 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	1.2 mL	IV	0.01 mg/kg	0.12 mg
Fentanyl Intranasal	50 mcg/mL	0.46 mL	IN	1.5 mcg/kg	18 mcg
Fentanyl IV	50 mcg/mL	0.24 mL	IV	1 mcg/kg	12 mcg
Glucagon	1 mg/mL	0.5 mL	IV/IM	Dose =	0.5 mg
Glucose (oral)	15 g/pouch	N/A	PO	Not indicated	
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	15 mL	IV	50 mg/kg	600 mg
Methylprednisolone	125 mg/2 mL	0.38 mL	IV	2 mg/kg	24 mg
Midazolam Intranasal	5 mg/mL	0.58 mL	IN	0.2 mg/kg	2.4 mg
Midazolam IV/IM	5 mg/mL	0.24 mL	IV/IM	0.1 mg/kg	1.2 mg
Morphine	4 mg/mL	0.3 mL	IV	0.1 mg/kg	1.2 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	1 mL	IV	Dose =	2 mg
Ondansetron ODT	4 mg/tab	1/2 tab	PO	Dose =	2 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	12 mL	IV	1 mEq/kg	12 mEq
Sodium Chloride Bolus	0.9%	240 mL	IV	20 mL/kg	240 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	20	50	70	120
Cardioversion	0.5 → 1 → 2 → 2	6	10	20	20

ET TUBE	DISTANCE AT LIP
4.0 Cuffed	13.5 cm

VITALS	SBP	75 - 110	HR	85 - 140	RR	22 - 30

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

3YR

PINELLAS COUNTY EMS — 15 KG IDEAL WEIGHT

DRUG	CONC	VOL	RT	DOSE/KG	AMOUNT
Adenosine [1st Dose]	3 mg/mL	0.5 mL	IV	0.1 mg/kg	1.5 mg
Adenosine [2nd Dose]	3 mg/mL	1 mL	IV	0.2 mg/kg	3 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	1.5 mL	IV	5 mg/kg	75 mg
Atropine	0.1 mg/mL	3 mL	IV	0.02 mg/kg	0.3 mg
Calcium Chloride	100 mg/mL	3 mL	IV	20 mg/kg	300 mg
Dextrose 10% in Water	10 g/100 mL	75 mL	IV	0.5 g/kg	7.5 g
Diazepam IV	5 mg/mL	0.3 mL	IV	0.1 mg/kg	1.5 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	0.3 mL	IV/IM	1 mg/kg	15 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	3 gtt/min	IV	Titrate to BP: Max 12 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.15 mL	IM	0.01 mg/kg	0.15 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	1.5 mL	IV	0.01 mg/kg	0.15 mg
Fentanyl Intranasal	50 mcg/mL	0.55 mL	IN	1.5 mcg/kg	22.5 mcg
Fentanyl IV	50 mcg/mL	0.3 mL	IV	1 mcg/kg	15 mcg
Glucagon	1 mg/mL	0.5 mL	IV/IM	Dose =	0.5 mg
Glucose (oral)	15 g/pouch	1 pouch	PO	Dose =	15 g
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	18.8 mL	IV	50 mg/kg	750 mg
Methylprednisolone	125 mg/2 mL	0.48 mL	IV	2 mg/kg	30 mg
Midazolam Intranasal	5 mg/mL	0.7 mL	IN	0.2 mg/kg	3 mg
Midazolam IV/IM	5 mg/mL	0.3 mL	IV/IM	0.1 mg/kg	1.5 mg
Morphine	4 mg/mL	0.38 mL	IV	0.1 mg/kg	1.5 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	1 mL	IV	Dose =	2 mg
Ondansetron ODT	4 mg/tab	1/2 tab	PO	Dose =	2 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	15 mL	IV	1 mEq/kg	15 mEq
Sodium Chloride Bolus	0.9%	300 mL	IV	20 mL/kg	300 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	30	70	100	150
Cardioversion	0.5 → 1 → 2 → 2	8	15	30	30

ET TUBE	DISTANCE AT LIP
4.5 Cuffed	14 - 15 cm

VITALS	SBP	76 - 115	HR	85 - 140	RR	22 - 30

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

4YR

PINELLAS COUNTY EMS — 17 KG IDEAL WEIGHT

DRUG	CONC	VOL	RT	DOSE/KG	AMOUNT
Adenosine [1st Dose]	3 mg/mL	0.57 mL	IV	0.1 mg/kg	1.7 mg
Adenosine [2nd Dose]	3 mg/mL	1.1 mL	IV	0.2 mg/kg	3.4 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	1.7 mL	IV	5 mg/kg	85 mg
Atropine	0.1 mg/mL	3.4 mL	IV	0.02 mg/kg	0.34 mg
Calcium Chloride	100 mg/mL	3.4 mL	IV	20 mg/kg	340 mg
Dextrose 10% in Water	10 g/100 mL	85 mL	IV	0.5 g/kg	8.5 g
Diazepam IV	5 mg/mL	0.34 mL	IV	0.1 mg/kg	1.7 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	0.34 mL	IV/IM	1 mg/kg	17 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	3 gtt/min	IV	Titrate to BP: Max 12 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.17 mL	IM	0.01 mg/kg	0.17 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	1.7 mL	IV	0.01 mg/kg	0.17 mg
Fentanyl Intranasal	50 mcg/mL	0.61 mL	IN	1.5 mcg/kg	25.5 mcg
Fentanyl IV	50 mcg/mL	0.34 mL	IV	1 mcg/kg	17 mcg
Glucagon	1 mg/mL	0.5 mL	IV/IM	Dose =	0.5 mg
Glucose (oral)	15 g/pouch	1 pouch	PO	Dose =	15 g
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	21.3 mL	IV	50 mg/kg	850 mg
Methylprednisolone	125 mg/2 mL	0.54 mL	IV	2 mg/kg	34 mg
Midazolam Intranasal	5 mg/mL	0.78 mL	IN	0.2 mg/kg	3.4 mg
Midazolam IV/IM	5 mg/mL	0.34 mL	IV/IM	0.1 mg/kg	1.7 mg
Morphine	4 mg/mL	0.43 mL	IV	0.1 mg/kg	1.7 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	2 mL	IV	Dose =	4 mg
Ondansetron ODT	4 mg/tab	1 tab	PO	Dose =	4 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	17 mL	IV	1 mEq/kg	17 mEq
Sodium Chloride Bolus	0.9%	340 mL	IV	20 mL/kg	340 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	30	70	100	150
Cardioversion	0.5 → 1 → 2 → 2	9	15	30	30

ET TUBE	DISTANCE AT LIP
4.5 Cuffed	14 - 15 cm

VITALS	SBP	78 - 115	HR	75 - 120	RR	22 - 26

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

5YR

PINELLAS COUNTY EMS				20 KG IDEAL WEIGHT	
DRUG	CONC	VOL	RT	DOSE/KG	AMOUNT
Adenosine [1st Dose]	3 mg/mL	0.67 mL	IV	0.1 mg/kg	2 mg
Adenosine [2nd Dose]	3 mg/mL	1.3 mL	IV	0.2 mg/kg	4 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	2 mL	IV	5 mg/kg	100 mg
Atropine	0.1 mg/mL	4 mL	IV	0.02 mg/kg	0.4 mg
Calcium Chloride	100 mg/mL	4 mL	IV	20 mg/kg	400 mg
Dextrose 10% in Water	10 g/100 mL	100 mL	IV	0.5 g/kg	10 g
Diazepam IV	5 mg/mL	0.4 mL	IV	0.1 mg/kg	2 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	0.4 mL	IV/IM	1 mg/kg	20 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	4 gtt/min	IV	Titrate to BP: Max 16 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.2 mL	IM	0.01 mg/kg	0.2 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	2 mL	IV	0.01 mg/kg	0.2 mg
Fentanyl Intranasal	50 mcg/mL	0.7 mL	IN	1.5 mcg/kg	30 mcg
Fentanyl IV	50 mcg/mL	0.4 mL	IV	1 mcg/kg	20 mcg
Glucagon	1 mg/mL	1 mL	IV/IM	Dose =	1 mg
Glucose (oral)	15 g/pouch	1 pouch	PO	Dose =	15 g
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	25 mL	IV	50 mg/kg	1 g
Methylprednisolone	125 mg/2 mL	0.64 mL	IV	2 mg/kg	40 mg
Midazolam Intranasal	5 mg/mL	0.9 mL	IN	0.2 mg/kg	4 mg
Midazolam IV/IM	5 mg/mL	0.4 mL	IV/IM	0.1 mg/kg	2 mg
Morphine	4 mg/mL	0.5 mL	IV	0.1 mg/kg	2 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	2 mL	IV	Dose =	4 mg
Ondansetron ODT	4 mg/tab	1 tab	PO	Dose =	4 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	20 mL	IV	1 mEq/kg	20 mEq
Sodium Chloride Bolus	0.9%	400 mL	IV	20 mL/kg	400 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	50	70	120	150
Cardioversion	0.5 → 1 → 2 → 2	10	20	50	50

ET TUBE	DISTANCE AT LIP
5.0 Cuffed	16.5 cm

VITALS	SBP	80 - 115	HR	70 - 115	RR	20 - 24

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

6YR

PINELLAS COUNTY EMS				22 KG IDEAL WEIGHT	
DRUG	CONC	VOL	RT	DOSE/KG	AMOUNT
Adenosine [1st Dose]	3 mg/mL	0.73 mL	IV	0.1 mg/kg	2.2 mg
Adenosine [2nd Dose]	3 mg/mL	1.5 mL	IV	0.2 mg/kg	4.4 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	2.2 mL	IV	5 mg/kg	110 mg
Atropine	0.1 mg/mL	4.4 mL	IV	0.02 mg/kg	0.44 mg
Calcium Chloride	100 mg/mL	4.4 mL	IV	20 mg/kg	440 mg
Dextrose 10% in Water	10 g/100 mL	110 mL	IV	0.5 g/kg	11 g
Diazepam IV	5 mg/mL	0.44 mL	IV	0.1 mg/kg	2.2 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	0.44 mL	IV/IM	1 mg/kg	22 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	4 gtt/min	IV	Titrate to BP: Max 16 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.22 mL	IM	0.01 mg/kg	0.22 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	2.2 mL	IV	0.01 mg/kg	0.22 mg
Fentanyl Intranasal	50 mcg/mL	0.76 mL	IN	1.5 mcg/kg	33 mcg
Fentanyl IV	50 mcg/mL	0.44 mL	IV	1 mcg/kg	22 mcg
Glucagon	1 mg/mL	1 mL	IV/IM	Dose =	1 mg
Glucose (oral)	15 g/pouch	1 pouch	PO	Dose =	15 g
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	27.5 mL	IV	50 mg/kg	1.1 g
Methylprednisolone	125 mg/2 mL	0.7 mL	IV	2 mg/kg	44 mg
Midazolam Intranasal	5 mg/mL	0.98 mL	IN	0.2 mg/kg	4.4 mg
Midazolam IV/IM	5 mg/mL	0.44 mL	IV/IM	0.1 mg/kg	2.2 mg
Morphine	4 mg/mL	0.55 mL	IV	0.1 mg/kg	2.2 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	2 mL	IV	Dose =	4 mg
Ondansetron ODT	4 mg/tab	1 tab	PO	Dose =	4 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	22 mL	IV	1 mEq/kg	22 mEq
Sodium Chloride Bolus	0.9%	440 mL	IV	20 mL/kg	440 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	50	100	120	150
Cardioversion	0.5 → 1 → 2 → 2	10	20	50	50

ET TUBE	DISTANCE AT LIP
5.0 Cuffed	16.5 cm

VITALS	SBP	82 - 120	HR	70 - 115	RR	20 - 24

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

7YR

PINELLAS COUNTY EMS				25 KG IDEAL WEIGHT	
DRUG	**CONC**	**VOL**	**RT**	**DOSE/KG**	**AMOUNT**
Adenosine [1st Dose]	3 mg/mL	0.83 mL	IV	0.1 mg/kg	2.5 mg
Adenosine [2nd Dose]	3 mg/mL	1.7 mL	IV	0.2 mg/kg	5 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	2.5 mL	IV	5 mg/kg	125 mg
Atropine	0.1 mg/mL	5 mL	IV	0.02 mg/kg	0.5 mg
Calcium Chloride	100 mg/mL	5 mL	IV	20 mg/kg	500 mg
Dextrose 10% in Water	10 g/100 mL	125 mL	IV	0.5 g/kg	12.5 g
Diazepam IV	5 mg/mL	0.5 mL	IV	0.1 mg/kg	2.5 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	0.5 mL	IV/IM	1 mg/kg	25 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	5 gtt/min	IV	Titrate to BP: Max 20 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.25 mL	IM	0.01 mg/kg	0.25 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	2.5 mL	IV	0.01 mg/kg	0.25 mg
Fentanyl Intranasal	50 mcg/mL	0.85 mL	IN	1.5 mcg/kg	37.5 mcg
Fentanyl IV	50 mcg/mL	0.5 mL	IV	1 mcg/kg	25 mcg
Glucagon	1 mg/mL	1 mL	IV/IM	Dose =	1 mg
Glucose (oral)	15 g/pouch	1 pouch	PO	Dose =	15 g
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	31.3 mL	IV	50 mg/kg	1.25 g
Methylprednisolone	125 mg/2 mL	0.8 mL	IV	2 mg/kg	50 mg
Midazolam Intranasal	5 mg/mL	1.1 mL	IN	0.2 mg/kg	5 mg
Midazolam IV/IM	5 mg/mL	0.5 mL	IV/IM	0.1 mg/kg	2.5 mg
Morphine	4 mg/mL	0.63 mL	IV	0.1 mg/kg	2.5 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	2 mL	IV	Dose =	4 mg
Ondansetron ODT	4 mg/tab	1 tab	PO	Dose =	4 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	25 mL	IV	1 mEq/kg	25 mEq
Sodium Chloride Bolus	0.9%	500 mL	IV	20 mL/kg	500 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	50	100	150	150
Cardioversion	0.5 → 1 → 2 → 2	15	20	50	50

ET TUBE	DISTANCE AT LIP
6.0 Cuffed	17 - 18 cm

VITALS		SBP	84 - 120	HR	70 - 110	RR	16 - 22

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

8YR

PINELLAS COUNTY EMS				27 KG IDEAL WEIGHT	
DRUG	**CONC**	**VOL**	**RT**	**DOSE/KG**	**AMOUNT**
Adenosine [1st Dose]	3 mg/mL	0.9 mL	IV	0.1 mg/kg	2.7 mg
Adenosine [2nd Dose]	3 mg/mL	1.8 mL	IV	0.2 mg/kg	5.4 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	2.7 mL	IV	5 mg/kg	135 mg
Atropine	0.1 mg/mL	5 mL	IV	Dose =	0.5 mg
Calcium Chloride	100 mg/mL	5.4 mL	IV	20 mg/kg	540 mg
Dextrose 10% in Water	10 g/100 mL	135 mL	IV	0.5 g/kg	13.5 g
Diazepam IV	5 mg/mL	0.54 mL	IV	0.1 mg/kg	2.7 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	0.54 mL	IV/IM	1 mg/kg	27 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	5 gtt/min	IV	Titrate to BP: Max 20 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.27 mL	IM	0.01 mg/kg	0.27 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	2.7 mL	IV	0.01 mg/kg	0.27 mg
Fentanyl Intranasal	50 mcg/mL	0.91 mL	IN	1.5 mcg/kg	40.5 mcg
Fentanyl IV	50 mcg/mL	0.54 mL	IV	1 mcg/kg	27 mcg
Glucagon	1 mg/mL	1 mL	IV/IM	Dose =	1 mg
Glucose (oral)	15 g/pouch	1 pouch	PO	Dose =	15 g
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	33.8 mL	IV	50 mg/kg	1.35 g
Methylprednisolone	125 mg/2 mL	0.86 mL	IV	2 mg/kg	54 mg
Midazolam Intranasal	5 mg/mL	1.2 mL	IN	0.2 mg/kg	5.4 mg
Midazolam IV/IM	5 mg/mL	0.54 mL	IV/IM	0.1 mg/kg	2.7 mg
Morphine	4 mg/mL	0.68 mL	IV	0.1 mg/kg	2.7 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	2 mL	IV	Dose =	4 mg
Ondansetron ODT	4 mg/tab	1 tab	PO	Dose =	4 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	27 mL	IV	1 mEq/kg	27 mEq
Sodium Chloride Bolus	0.9%	540 mL	IV	20 mL/kg	540 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	50	100	150	150
Cardioversion	0.5 → 1 → 2 → 2	15	30	50	50

ET TUBE	DISTANCE AT LIP
6.0 Cuffed	17 - 18 cm

VITALS	SBP	86 - 120	HR	70 - 110	RR	16 - 22

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

9YR

PINELLAS COUNTY EMS				30 KG IDEAL WEIGHT	
DRUG	CONC	VOL	RT	DOSE/KG	AMOUNT
Adenosine [1st Dose]	3 mg/mL	1 mL	IV	0.1 mg/kg	3 mg
Adenosine [2nd Dose]	3 mg/mL	2 mL	IV	0.2 mg/kg	6 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	3 mL	IV	5 mg/kg	150 mg
Atropine	0.1 mg/mL	5 mL	IV	Dose =	0.5 mg
Calcium Chloride	100 mg/mL	6 mL	IV	20 mg/kg	600 mg
Dextrose 10% in Water	10 g/100 mL	150 mL	IV	0.5 g/kg	15 g
Diazepam IV	5 mg/mL	0.6 mL	IV	0.1 mg/kg	3 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	0.6 mL	IV/IM	1 mg/kg	30 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	6 gtt/min	IV	Titrate to BP: Max 24 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.3 mL	IM	0.01 mg/kg	0.3 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	3 mL	IV	0.01 mg/kg	0.3 mg
Fentanyl Intranasal	50 mcg/mL	1 mL	IN	1.5 mcg/kg	45 mcg
Fentanyl IV	50 mcg/mL	0.6 mL	IV	1 mcg/kg	30 mcg
Glucagon	1 mg/mL	1 mL	IV/IM	Dose =	1 mg
Glucose (oral)	15 g/pouch	1 pouch	PO	Dose =	15 g
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	37.5 mL	IV	50 mg/kg	1.5 g
Methylprednisolone	125 mg/2 mL	0.96 mL	IV	2 mg/kg	60 mg
Midazolam Intranasal	5 mg/mL	1.3 mL	IN	0.2 mg/kg	6 mg
Midazolam IV/IM	5 mg/mL	0.6 mL	IV/IM	0.1 mg/kg	3 mg
Morphine	4 mg/mL	0.75 mL	IV	0.1 mg/kg	3 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	2 mL	IV	Dose =	4 mg
Ondansetron ODT	4 mg/tab	1 tab	PO	Dose =	4 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	30 mL	IV	1 mEq/kg	30 mEq
Sodium Chloride Bolus	0.9%	600 mL	IV	20 mL/kg	600 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	70	120	150	150
Cardioversion	0.5 → 1 → 2 → 2	15	30	70	70

ET TUBE	DISTANCE AT LIP
6.5 Cuffed	18.5 - 19.5 cm

VITALS	SBP	88 - 120	HR	65 - 105	RR	16 - 22

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

10YR

PINELLAS COUNTY EMS				35 KG IDEAL WEIGHT	
DRUG	**CONC**	**VOL**	**RT**	**DOSE/KG**	**AMOUNT**
Adenosine [1st Dose]	3 mg/mL	1.2 mL	IV	0.1 mg/kg	3.5 mg
Adenosine [2nd Dose]	3 mg/mL	2.3 mL	IV	0.2 mg/kg	7 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	3.5 mL	IV	5 mg/kg	175 mg
Atropine	0.1 mg/mL	5 mL	IV	Dose =	0.5 mg
Calcium Chloride	100 mg/mL	7 mL	IV	20 mg/kg	700 mg
Dextrose 10% in Water	10 g/100 mL	175 mL	IV	0.5 g/kg	17.5 g
Diazepam IV	5 mg/mL	0.7 mL	IV	0.1 mg/kg	3.5 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	0.7 mL	IV/IM	1 mg/kg	35 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	7 gtt/min	IV	Titrate to BP: Max 28 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.3 mL	IM	Dose =	0.3 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	3.5 mL	IV	0.01 mg/kg	0.35 mg
Fentanyl Intranasal	50 mcg/mL	1.2 mL	IN	1.5 mcg/kg	52.5 mcg
Fentanyl IV	50 mcg/mL	0.7 mL	IV	1 mcg/kg	35 mcg
Glucagon	1 mg/mL	1 mL	IV/IM	Dose =	1 mg
Glucose (oral)	15 g/pouch	1 pouch	PO	Dose =	15 g
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	43.8 mL	IV	50 mg/kg	1.75 g
Methylprednisolone	125 mg/2 mL	1.1 mL	IV	2 mg/kg	70 mg
Midazolam Intranasal	5 mg/mL	1.5 mL	IN	0.2 mg/kg	7 mg
Midazolam IV/IM	5 mg/mL	0.7 mL	IV/IM	0.1 mg/kg	3.5 mg
Morphine	4 mg/mL	0.88 mL	IV	0.1 mg/kg	3.5 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	2 mL	IV	Dose =	4 mg
Ondansetron ODT	4 mg/tab	1 tab	PO	Dose =	4 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	35 mL	IV	1 mEq/kg	35 mEq
Sodium Chloride Bolus	0.9%	700 mL	IV	20 mL/kg	700 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	70	150	150	150
Cardioversion	0.5 → 1 → 2 → 2	20	30	70	70

ET TUBE	DISTANCE AT LIP
6.5 Cuffed	18.5 - 19.5 cm

VITALS	SBP	90 - 120	HR	60 - 100	RR	16 - 22

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

11YR

PINELLAS COUNTY EMS				40 KG IDEAL WEIGHT	
DRUG	CONC	VOL	RT	DOSE/KG	AMOUNT
Adenosine [1st Dose]	3 mg/mL	1.3 mL	IV	0.1 mg/kg	4 mg
Adenosine [2nd Dose]	3 mg/mL	2.7 mL	IV	0.2 mg/kg	8 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	4 mL	IV	5 mg/kg	200 mg
Atropine	0.1 mg/mL	5 mL	IV	Dose =	0.5 mg
Calcium Chloride	100 mg/mL	8 mL	IV	20 mg/kg	800 mg
Dextrose 10% in Water	10 g/100 mL	200 mL	IV	0.5 g/kg	20 g
Diazepam IV	5 mg/mL	0.8 mL	IV	0.1 mg/kg	4 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	0.8 mL	IV/IM	1 mg/kg	40 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	8 gtt/min	IV	Titrate to BP: Max 32 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.3 mL	IM	Dose =	0.3 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	4 mL	IV	0.01 mg/kg	0.4 mg
Fentanyl Intranasal	50 mcg/mL	1.3 mL	IN	1.5 mcg/kg	60 mcg
Fentanyl IV	50 mcg/mL	0.8 mL	IV	1 mcg/kg	40 mcg
Glucagon	1 mg/mL	1 mL	IV/IM	Dose =	1 mg
Glucose (oral)	15 g/pouch	1 pouch	PO	Dose =	15 g
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	50 mL	IV	50 mg/kg	2 g
Methylprednisolone	125 mg/2 mL	1.3 mL	IV	2 mg/kg	80 mg
Midazolam Intranasal	5 mg/mL	1.7 mL	IN	0.2 mg/kg	8 mg
Midazolam IV/IM	5 mg/mL	0.8 mL	IV/IM	0.1 mg/kg	4 mg
Morphine	4 mg/mL	1 mL	IV	0.1 mg/kg	4 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	2 mL	IV	Dose =	4 mg
Ondansetron ODT	4 mg/tab	1 tab	PO	Dose =	4 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	40 mL	IV	1 mEq/kg	40 mEq
Sodium Chloride Bolus	0.9%	800 mL	IV	20 mL/kg	800 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	70	150	150	150
Cardioversion	0.5 → 1 → 2 → 2	20	50	70	70

ET TUBE	DISTANCE AT LIP
7.0 Cuffed	20 - 21 cm

VITALS	SBP	90 - 120	HR	60 - 100	RR	16 - 22

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

12YR

PINELLAS COUNTY EMS				50 KG IDEAL WEIGHT	
DRUG	CONC	VOL	RT	DOSE/KG	AMOUNT
Adenosine [1st Dose]	3 mg/mL	1.7 mL	IV	0.1 mg/kg	5 mg
Adenosine [2nd Dose]	3 mg/mL	3.3 mL	IV	0.2 mg/kg	10 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	5 mL	IV	5 mg/kg	250 mg
Atropine	0.1 mg/mL	5 mL	IV	Dose =	0.5 mg
Calcium Chloride	100 mg/mL	10 mL	IV	20 mg/kg	1 g
Dextrose 10% in Water	10 g/100 mL	250 mL	IV	0.5 g/kg	25 g
Diazepam IV	5 mg/mL	1 mL	IV	0.1 mg/kg	5 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	1 mL	IV/IM	1 mg/kg	50 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	9 gtt/min	IV	Titrate to BP: Max 36 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.3 mL	IM	Dose =	0.3 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	5 mL	IV	0.01 mg/kg	0.5 mg
Fentanyl Intranasal	50 mcg/mL	1.6 mL	IN	1.5 mcg/kg	75 mcg
Fentanyl IV	50 mcg/mL	1 mL	IV	1 mcg/kg	50 mcg
Glucagon	1 mg/mL	1 mL	IV/IM	Dose =	1 mg
Glucose (oral)	15 g/pouch	1 pouch	PO	Dose =	15 g
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	50 mL	IV	Dose =	2 g
Methylprednisolone	125 mg/2 mL	1.6 mL	IV	2 mg/kg	100 mg
Midazolam Intranasal	5 mg/mL	2 mL	IN	0.2 mg/kg	10 mg
Midazolam IV/IM	5 mg/mL	1 mL	IV/IM	0.1 mg/kg	5 mg
Morphine	4 mg/mL	1 mL	IV	Dose =	4 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	2 mL	IV	Dose =	4 mg
Ondansetron ODT	4 mg/tab	1 tab	PO	Dose =	4 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	50 mL	IV	1 mEq/kg	50 mEq
Sodium Chloride Bolus	0.9%	1000 mL	IV	20 mL/kg	1000 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	100	150	150	150
Cardioversion	0.5 → 1 → 2 → 2	20	50	100	100

ET TUBE	DISTANCE AT LIP
7.0 Cuffed	20 - 21 cm

VITALS	SBP	90 - 120	HR	60 - 100	RR	16 - 22

Option 1 -USE ACTUAL AGE (IF STANDARD SIZED CHILD)
Option 2 -ESTIMATE AGE USING HANDTEVY LENGTH BASED TAPE (HEAD TO HEEL)

13YR

PINELLAS COUNTY EMS				60 KG IDEAL WEIGHT	
DRUG	**CONC**	**VOL**	**RT**	**DOSE/KG**	**AMOUNT**
Adenosine [1st Dose]	3 mg/mL	2 mL	IV	0.1 mg/kg	6 mg
Adenosine [2nd Dose]	3 mg/mL	4 mL	IV	0.2 mg/kg	12 mg
Albuterol	2.5 mg/3 mL	3 mL	NEB	Dose =	2.5 mg
Amiodarone (Arrest Dose)	50 mg/mL	6 mL	IV	5 mg/kg	300 mg
Atropine	0.1 mg/mL	5 mL	IV	Dose =	0.5 mg
Calcium Chloride	100 mg/mL	10 mL	IV	Dose =	1 g
Dextrose 10% in Water	10 g/100 mL	250 mL	IV	Dose =	25 g
Diazepam IV	5 mg/mL	1 mL	IV	Dose =	5 mg
Diazepam PR	5 mg/mL	1 mL	PR	Dose =	5 mg
Diphenhydramine	50 mg/mL	1 mL	IV/IM	Dose =	50 mg
Dopamine	400 mg/250 mL (1600 mcg/mL)	11 gtt/min	IV	Titrate to BP: Max 44 gtt/min	
Epinephrine 1:1,000 IM	1 mg/mL	0.3 mL	IM	Dose =	0.3 mg
Epinephrine 1:10,000 IV	0.1 mg/mL	6 mL	IV	0.01 mg/kg	0.6 mg
Fentanyl Intranasal	50 mcg/mL	1.9 mL	IN	1.5 mcg/kg	90 mcg
Fentanyl IV	50 mcg/mL	1 mL	IV	Dose =	50 mcg
Glucagon	1 mg/mL	1 mL	IV/IM	Dose =	1 mg
Glucose (oral)	15 g/pouch	1 pouch	PO	Dose =	15 g
Ipratropium Bromide	0.5 mg/2.5 mL	2.5 mL	NEB	Dose =	0.5 mg
Magnesium Sulfate	40 mg/mL	50 mL	IV	Dose =	2 g
Methylprednisolone	125 mg/2 mL	1.9 mL	IV	2 mg/kg	120 mg
Midazolam Intranasal	5 mg/mL	2 mL	IN	Dose =	10 mg
Midazolam IV/IM	5 mg/mL	1 mL	IV/IM	Dose =	5 mg
Morphine	4 mg/mL	1 mL	IV	Dose =	4 mg
Naloxone	1 mg/mL	0.4 mL	IV/IM	Dose =	0.4 mg
Naloxone Intranasal	1 mg/mL	2 mL	IN	Dose =	2 mg
Ondansetron IV	2 mg/mL	2 mL	IV	Dose =	4 mg
Ondansetron ODT	4 mg/tab	1 tab	PO	Dose =	4 mg
Sodium Bicarb 8.4%	50 mEq/50 mL	50 mL	IV	Dose =	50 mEq
Sodium Chloride Bolus	0.9%	1000 mL	IV	Dose =	1000 mL

PHILIPS MRx	JOULES/KG	1ST	2ND	3RD	4TH
Defibrillation	2 → 4 → 6 → 10	120	150	150	150
Cardioversion	0.5 → 1 → 2 → 2	30	70	120	120

ET TUBE	DISTANCE AT LIP
7.0 Cuffed	20 - 21 cm

VITALS	SBP	90 - 120	HR	60 - 100	RR	16 - 22

WEAPONS OF MASS DESTRUCTION (WMD) TREATMENT GUIDE

Call Poison Control 800-222-1222		NB	4MO	6 MO	1 YR	3 YR	5 YR	7 YR	9 YR	10 YR	≥11 YR	
ANTIDOTE	**POISONING**	4 KG	6 KG	8 KG	10 KG	15 KG	20 KG	25 KG	30 KG	35 KG	≥40 KG	**NOTES**
Atropine *0.4 mg/mL*	Organophosphates Carbamates Nerve Agents	0.5 mL	0.75 mL	1 mL	1.3 mL	1.9 mL	2.5 mL	3.1 mL	3.8 mL	4.4 mL	5 mL	*Verify conc.* IV/IO bolus May repeat prn
AtroPen® Auto-injector	Same as Atropine Indication	N/A	0.25 mg	0.5 mg	0.5 mg	0.5 mg	1 mg	1 mg	1 mg	1 mg	2 mg	IM only
Calcium Chloride 10% slow IV bolus	Systemic Hydrofluoric Acid Systemic Fluoride Poison	0.8 mL	1.2 mL	1.6 mL	2 mL	3 mL	4mL	5 mL	6 mL	7 mL	10 mL	Repeat doses may be required
Calcium Gluconate 10% slow IV bolus	Systemic Hydrofluoric Acid Systemic Fluoride Poison	0.8 mL	1.2 mL	1.6 mL	2 mL	3 mL	4mL	5 mL	6 mL	7 mL	10 mL	Repeat doses may be required
Calcium Gluconate Gel	Hydrofluoric Acid Skin Burn	Apply topically using gel or solution										Apply topically 2.5%-10%
DuoDote™ Auto-injector (Atropine + 2-PAM)	Organophosphates Nerve Agents	N/A	N/A	N/A	N/A	N/A	N/A	N/A	YES	YES	YES	9 years and over
Methylene Blue	Methemoglobin Forming Compounds	0.4 mL	0.6 mL	0.8 mL	1 mL	1.5 mL	2 mL	2.5 mL	3 mL	3.5 mL	5 mL	IV/IO slow (5 min)
Pralidoxime (2-PAM)	Organophosphates Nerve Agents	2 mL	3 mL	4 mL	5 mL	7.5 mL	10 mL	12.5 mL	15 mL	17.5 mL	20 mL	IV/IO over 10 min then continuous @5-10 mg/kg/hr
Sodium Nitrite	Cyanide / Nitriles Hydrogen Sulfide	0.8 mL	1.2 mL	1.6 mL	2 mL	3 mL	4 mL	5 mL	6 mL	7 mL	8 mL *(max 10 mL)*	IV/IO over 5 min 3% solution
Sodium Thiosulfate	Cyanide Nitriles	5 mL	8 mL	10 mL	12 mL	18 mL	24 mL	30 mL	36mL	42 mL	50 mL *(max)*	Infuse IV/IO over 10-20 min 25% solution

The WMD Treatment Guide above is NOT Department specific. Dosing is based on standard national protocols. Follow local protocols in all situations and consider calling Poison Control for further information. Call Medical Control when applicable. Cyanokit dosing information is displayed on the next page of this book.

GLASGOW COMA SCALE

Clinical Parameter	Pediatric GCS (Age 2 and Under)	GCS (Age 3 and Over)	Score
Eye Opening	Spontaneous	Spontaneous	4
	To sound	To command	3
	To pain	To pain	2
	None	None	1
Verbal	Age appropriate	Oriented	5
	Cries, irritable	Confused, disoriented	4
	Cries to pain	Inappropriate words	3
	Moans to pain	Incomprehensible sounds	2
	None	None	1
Motor	Spontaneous movement (obeys verbal)	Obeys commands	6
	Withdraws to touch (localizes pain)	Localizes pain	5
	Withdraws to pain	Withdraws	4
	Abnormal flexion to pain (decorticate)	Abnormal flexion to pain	3
	Abnormal extension to pain	Abnormal extension to	2
	None	None	1

A score of 13 or higher correlates with mild brain injury; a score of 9 to 12 correlates with moderate injury; a score of 8 or less represents severe brain injury. Pediatric GCS was validated in 2 years of age or younger.

CYANOKIT ADMINISTRATION

PREPARATION INSTRUCTIONS

1. Add 200 ml NS or D5W to 5 g vial
2. Rock/Rotate (60 seconds)
3. Remove desired vol. w/ syringe
4. Reinsert into an empty NS or D5W bag
5. Attach supplied tubing (20 drops/mL)

NB	4MO	6 MO	1 YR	3 YR	5 YR	7 YR	9 YR	10 YR	11 YR - ADULT
4 KG	6 KG	8 KG	10 KG	15 KG	20 KG	25 KG	30 KG	35 KG	≥ 40 KG
AMOUNT TO REMOVE FROM VIAL (USE 50 ml SYRINGE)									Use vented tubing in Cyanokit for ≥ 11 YR
11 ml	17 ml	22 ml	28 ml	42 ml	56 ml	70 ml	84 ml	98 ml	Administer directly from vial over 15 minutes
AMOUNT TO GIVE THE PATIENT (DROPS/MINUTE)									
15 drops /min	23 drops /min	30 drops /min	37 drops /min	56 drops /min	75 drops /min	93 drops /min	112 drops /min	130 drops /min	260 drops/min

Hydroxycobalamin (Cyanokit) is an antidote indicated for suspected cyanide and for smoke inhalation with severe respiratory distress or arrest. Follow your protocol's specific administration instructions.

GENERAL INFORMATION

Age can be used to determine a child's weight accurately only in children of average size. The Handtevy Length Based Tape should be used in children of short or tall stature or with chronic illness.

The information in this book is customized for PINELLAS COUNTY EMS. It is the responsibility of PINELLAS COUNTY EMS to ensure the accuracy of all drug concentrations, drug dosages and equipment sizes on a continual basis. Pediatric Emergency Standards, Inc. recommends prompt revision and replacement of this book if the Department has made any modifications.

Provider's experience and training should be the final determinant of all clinical treatment decisions.

HANDTEVY™
Pediatric Emergency Standards

For inquires, please contact:
Pediatric Emergency Standards, Inc.
Office: 866.867.3192
Fax: 954.653.3792
Email: Info@Handtevy.com

Visit us at www.Handtevy.com for more information

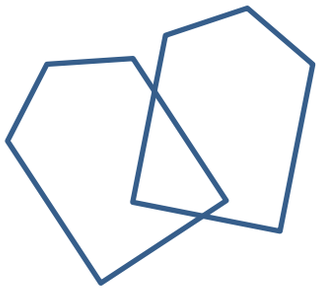
CT22 EMS COGNITIVE EVALUATION

Administer and document the EMS Cognitive Evaluation as indicated

Minimum Passing Score = 23

Maximum Score = 29

Question or Task	Points
1. What is the Year? Season? Month? Day of Week? Patient's Birthday?	5
2. Where are we? Street? City? State? Country?	5
3. The evaluator will name three objects. Repeat the name of the three objects three times. Ask the patient to repeat the name of the three objects after 3 seconds	3
4. Begin with the number 100 and ask the patient to count backwards by five for at least five numbers (e.g. 100, 95, 90, 85, 80)	5
5. Ask the patient to repeat the names of the three objects from Question #3	3
6. Show the patient a pen and a watch. Ask the patient to name them.	2
7. Ask the patient to repeat "no ifs ands or buts"	1
8. Ask the patient to follow a three stage command (e.g. "take this paper in your right hand, hold it and then place it on the floor/ground")	2
9. Ask the patient to read and do the following: "RAISE YOUR RIGHT HAND"	1
10. Ask the patient to write any complete sentence	1
11. Ask the patient to copy the design below:	1



Total Score _____

Intentionally
Left Blank

CT23 REHAB TRACKING TOOL

REHAB GROUP – CHECK IN/OUT SHEET

Department/Agency Name:	Incident Number:	Date:

Name/Assignment	Times	Disposition
First: ______ Last: ______ Unit Assignment: ______	Time In: ______ Time Out: ______	☐ Released From Rehab ☐ Referred To Medical Medical Evaluation Completed on Entry ☐ Yes ☐ No Medical Evaluation Completed on Exit ☐ Yes ☐ No
First: ______ Last: ______ Unit Assignment: ______	Time In: ______ Time Out: ______	☐ Released From Rehab ☐ Referred To Medical Medical Evaluation Completed on Entry ☐ Yes ☐ No Medical Evaluation Completed on Exit ☐ Yes ☐ No
First: ______ Last: ______ Unit Assignment: ______	Time In: ______ Time Out: ______	☐ Released From Rehab ☐ Referred To Medical Medical Evaluation Completed on Entry ☐ Yes ☐ No Medical Evaluation Completed on Exit ☐ Yes ☐ No
First: ______ Last: ______ Unit Assignment: ______	Time In: ______ Time Out: ______	☐ Released From Rehab ☐ Referred To Medical Medical Evaluation Completed on Entry ☐ Yes ☐ No Medical Evaluation Completed on Exit ☐ Yes ☐ No

Return form to Agency Representative or Incident Command
One Agency per form

Fire Department 600 Series SOP 600-12-A
Rehab Group - Check In/Out Sheet

Page 1 of 1
Sept 2018

Intentionally
Left Blank

Sunstar PARAMEDICS

INTERFACILITY TRANSPORT REQUEST PROCEDURE

CALL: 727-582-2001

Sending Facility – Be prepared to provide the following information	
Facility Name	Patient location – Unit name, Room and Bed

State Level of Urgency		
 **EMERENCY** Lights and Sirens	**AS SOON AS POSSIBLE** Non-critical: Pt. can wait for next available ambulance	**SCHEDULED/ROUTINE** Non-critical: Specific pick-up time requested

Additional Information Necessary					
1.	Patient's name, age and social security number	**2.**	Diagnosis & reason for transport	**3.**	Adjuncts necessary for transport
4.	Isolation or Safety Precautions	**5.**	Sending Physician Name	**6.**	Destination facility name, unit, room/bed
7.	Receiving Physician Name	**8.**	Transport Coordinator/Primary RN name and direct telephone number		

TRANSPORT OPTIONS*		
EMS System Transport Options	Critical Care Transport Team (Critical Care RN, Paramedic and EMT)	
	Critical Care Paramedic Ambulance (Critical Care Paramedic and EMT)	
	ALS Ambulance (Paramedic and EMT)	
	BLS Ambulance (2 – EMT's)	
Air Medical Transport	Bayflite: 800-223-4494	AeroMed: 800-247-4472
Specialized (Pediatric and NICU transfers)	Johns Hopkins All Childrens Hospital Lifeline Team: 855-261-0220 or 727-767-7337	
Wheelchair/Stretcher Van		

* If patient care exceeds scope of an ALS Ambulance, Critical Care Transport will be dispatched. The Critical Care RN will call for pt. report to then determine the most appropriate EMS System Transport option

PATIENT MONITORING AND MANAGEMENT CAPABILITIES						
	Airway	**Breathing**	**Circulation (Cardiac)**	**Disability & Drugs**	**Exam**	**Notes**
Mental Health Transport (MHT)	NONE	NONE	NONE	No risk of violence or need for restraints (must be able to ambulate without assistance)	Must be medically cleared by MD/DO, ARNP or PA-C	Staffed with non-medical personnel
Basic Life Support (BLS)	Basic Monitoring & Simple Suctioning Uncomplicated trach monitoring	Basic Monitoring & O2 (stable flow)	Basic AED	NONE (Peripheral or Central IVs must be capped/not in use)	Triage by Call Taker EMT verifies on arrival	NONE
Advanced Life Support (ALS)	Endotracheal Intubation Complex or continuous suctioning	Advanced monitoring (SpO_2 /$EtCO_2$) and Oxygen (titration) and Ventilatory assistance	Continuous cardiac monitoring (transfers to monitored beds, recent ACS, arrhythmia, or another cardiac event)	Standard EMS Medications IV Fluids (NS, LR, D10W only) without pump Seizure Precautions (< 24 hrs or high risk) Pain Management Restraints (Physical and/or Chemical)	Triage by Call Taker Paramedic verifies on arrival	Hospital RN may accompany if no CCP/CCT available
Critical Care Paramedic (CCP)	Same capabilities as ALS Ambulance	Stable Vent (no settings changes ≥ 24 hrs) Stable Chest Tube (> 48 hrs old)	Non-monitored arterial sheaths	Advanced/Pump Requiring Medications and Infusions (1 channel max) [e.g. Peds IVF, IVF with K+, antibiotics, TPN, PPI's, H2 blockers, anticoagulants, vasopressors]	Triage by CCT RN to meet CCP Criteria	Emergency STEMI/STROKE Transfers with: • Stable Airway • Stable BP (>90/<180) • No arrhythmia • 1 infusion max
Critical Care (CCT)	RSI with Video Laryngoscopy Recent/Complicated Trach	Vent Management Chest Tube Management	Invasive Monitoring (Art Line, Swan-Ganz, CVP, ICP etc.) Cardiac Adjuncts (Transvenous Pacer, Balloon Pump, LVAD, BIVAD) Fetal Monitoring/tocolysis	Advanced Medications (6 channels max) Blood Products	Triage by CCT RN to meet CCT Criteria	Any patient with high risk of acute deterioration during transport High Risk OB Infants < 28 days or 5 Kgs

CT25 PATIENT/HOSPITAL STATUS DEFINITIONS

PATIENT STATUS	
RED **"Critical/Unstable"**	requiring immediate intervention to preserve life and/or limb or prevent serious disability, including but not limited to the following patients: • *"STEMI ALERT"* • *"STROKE ALERT"* • *"SEPSIS ALERT"* • *"TRAUMA ALERT"*
YELLOW **"Serious"**	potential for loss of life and/or limb or risk of serious disability if care is not received in a timely manner
GREEN **"Non-urgent"**	requiring care in a reasonable amount of time, but will likely not suffer adverse effects from a limited delay in definitive care
BLACK **"Obviously Dead"**	triaged as an unsalvageable/expectant patient, or having traumatic injuries incompatible with life

HOSPITAL STATUS			
Go to http://hs.sunstarems.com for real time hospital status and specialty capabilities			
OPEN	Normal operating condition with the availability of all usual specialty referral service		
CLOSED	An internal disaster has occurred or inability to provide care for any incoming 9-1-1 ambulance transports		
EMS BYPASS	The EMS System, with the approval of the OLMC Physician, has initiated temporary closure of a hospital to all 911/EMS ambulance transports in accordance with the Patient Wait Time/Hospital Bed Delay Protocol		
HOSPITAL DIVERT	Hospital has requested the diversion of all incoming 911/EMS ambulance transports. Status shall be for a minimum of one (1) hour		
SPECIALTY DIVERT	Hospital is OPEN except for the inability to provide one or more usual specialty referral service capabilities as follows:		
	• Percutaneous Coronary Intervention (PCI) • Primary or Comprehensive Stroke Center	• Pediatric (less than 15 years old) Psychiatric / Baker Act • Adult Psychiatric / Baker Act	• Adult Trauma Center • Pediatric Trauma Center • Burn Center • Pediatric/Neonatal • Obstetrics

Intentionally
Left Blank