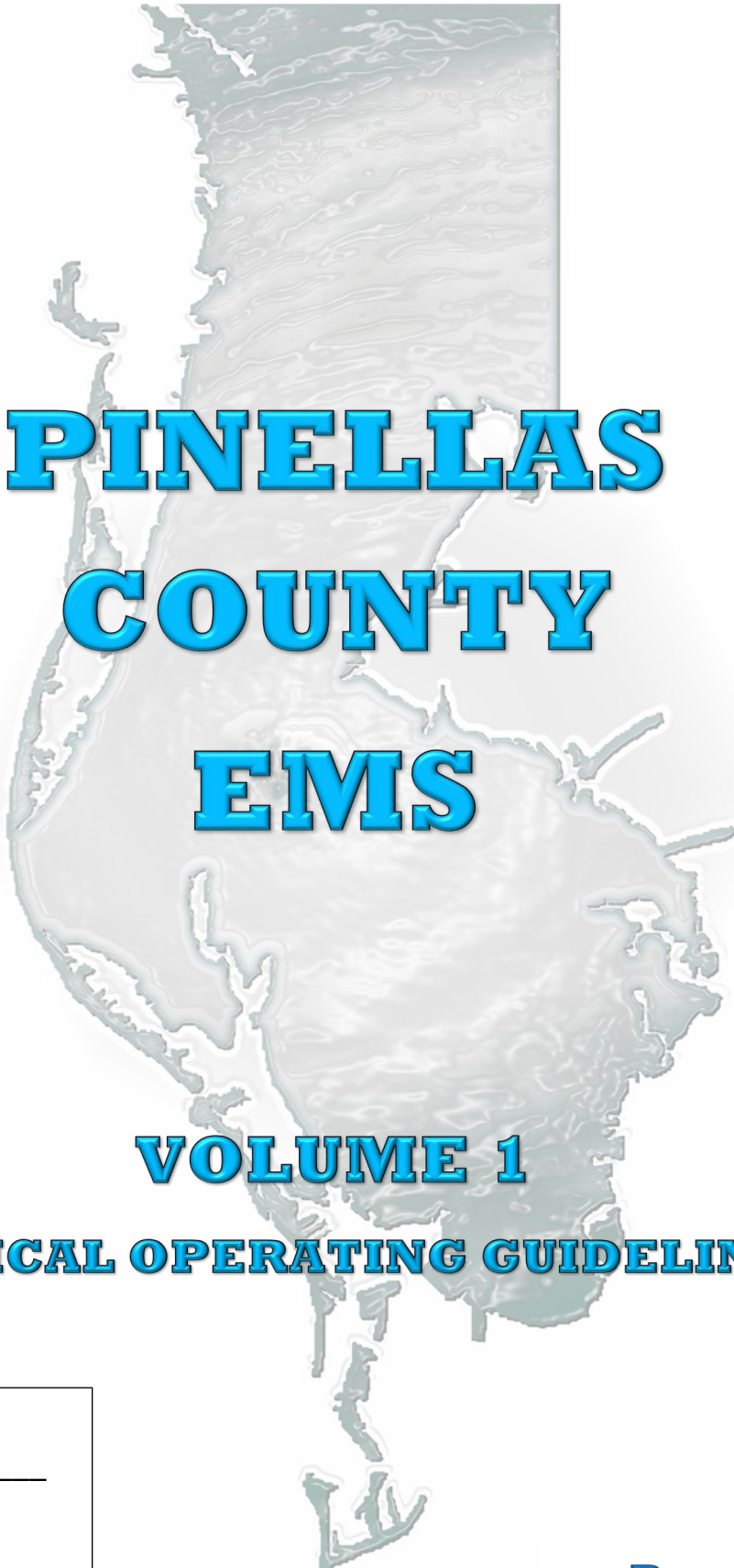


MEDICAL OPERATIONS MANUAL



PINELLAS COUNTY EMS

VOLUME 1 CLINICAL OPERATING GUIDELINES

Issued To:

EMS ID:

Rev. 2024.3

CRISIS RESOURCES

988 Suicide and Crisis Lifeline - **DIAL 988** or <https://988lifeline.org/talk-to-someone-now/> offers free, confidential crisis counseling 24/7/365 – and you don't have to be in crisis to call or text

Crisis Text Line also offers free 24/7 mental health support. **Text "SCRUBS" to 741741 for help**

NAMI HelpLine can be reached Monday through Friday, 10 a.m. - 10 p.m., ET.
Call 1-800-950-NAMI (6264), text "HelpLine" to 62640 or email us at helpline@nami.org

Code Green Campaign - <https://www.codegreencampaign.org/>

Responder Strong - <https://responderstrong.org/> We all struggle at times. If you are experiencing any crisis - work-related, substance use, depression, romantic, financial or any other - reach out by **texting "BADGE" to 741741**

American Addiction Centers or **888-300-3332**: Provides first responders and their families with a toll-free, confidential phone line for immediate assistance with issues like substance abuse, stress, relationship problems, work-related concerns, and virtually anything disrupting a member's work life and overall wellness.

IAFF Recovery Center - <https://www.iaffrecoverycenter.com/>

Last To Ask - <https://www.lasttoask.com/>

Hero Helpline - **DIAL 211** or <https://211tampabay.org/programs/hero-helpline/>

All Clear Foundation - <https://allclearfoundation.org/about/>

Fire Strong - <https://www.firestrong.org/>

REVISION HISTORY LOG

Revision Date	Section	Protocol	Revision
240110	Clinical Standards	CS22.7	<ul style="list-style-type: none"> Multiple equipment updates
		CS22.15	<ul style="list-style-type: none"> Multiple equipment updates
	Clinical Tools	CT24	<ul style="list-style-type: none"> "Paramedics" removed from Sunstar Logo Addition of the following language "For Unusual Circumstances or Response Time Concerns Please Call Back and Ask to be Conferenced with the Sunstar AOD"
240501	Clinical Standards	CS7	Additional of a new section "Standby Encounter Log" for "Standby" events
		CS10	Situations - Criteria #2 - Changed "A medication, treatment, or transport error or patient injury (e.g., more than superficial lacerations/skin tears/contusions) has occurred" to "A medication, treatment, or transport error or significant patient injury (e.g., more than superficial lacerations/skin tears/contusions) has occurred"
		CS12	<ul style="list-style-type: none"> BLS/ALS Section re-titled "Procedure" Clarifying information added regarding a BLS Transport Unit (911 or interfacility transport) obtaining a refusal
		CS21	Errata
		CS22.7	Multiple updates to the inventory due to ongoing challenges with pharmaceuticals and medical supplies
		CS22.8	Addition of 2 - 16g IV Catheters for needle decompression
		CS22.9	All Philips MRx related information removed from protocol
		CS22.13	Revised Ballistic Gear Vest Medical Supply Inventory
		CS22.14	<ul style="list-style-type: none"> Addition of PCEMS HIPAA Notice of Privacy Forms for all transport capable units Update to the current version of the State of Florida EMS Communications Plan - Vol. 2

REVISION HISTORY LOG (cont.)

Revision Date	Section	Protocol	Revision
240501	Clinical Standards (cont.)	CS22.15	<ul style="list-style-type: none"> Multiple updates to the inventory due to ongoing challenges with pharmaceuticals and medical supplies Addition of rated faceshields to all transport capable units Addition of Venturi Trach Mask to Sunstar BLS interfacility van ambulances and Sunstar BLS 911 ambulances
	Airway	A3	Addition of guidance regarding the use of the Venturi Trach Mask setup during patient care
	Cardiac	C1	All Philips MRx related information removed from protocol
		C5	<ul style="list-style-type: none"> Revised joule settings for synchronized cardioversion and unsynchronized defibrillation All Philips MRx related information removed from protocol
	Trauma	T1	Page 2 Major Head Injury present - Target SBP changed from 100 - 110 mmHg to 110 mmHg
	Pediatrics	P15	Revised Acetaminophen Weight Based Dosing Table due to a change in IV Flow Controller device
	Clinical Procedure	CP9	All Philips MRx related information removed from protocol
		CP11	
		CP13	
		CP14	
		CP23	Images updated to reflect proper stretcher strapping
		CP33	New procedure for use of the device
	Formulary	F1	Errata
Clinical Tool	CT6	Errata	
	CT7	Information updated regarding injection port on the 1000 mL bag of 0.9% Sodium Chloride	
	CT10	Errata	

REVISION HISTORY LOG (cont.)

Revision Date	Section	Protocol	Revision
240501	Clinical Tool (cont.)	CT12	Additional of Local EMS Medical Director Trauma Alert Criteria - Active bleeding requiring a tourniquet or wound packing with continuous pressure **
		CT13	Additional of Local EMS Medical Director Trauma Alert Criteria - Active bleeding requiring a tourniquet or wound packing with continuous pressure **
240703	Revision History Log	N/A	2023 information removed
	Partners In Service Page	N/A	ARFF Logo updated
	Table of Contents	N/A	Title of Protocol CS22.1 revised
			New CS Protocol CS23 added
	Clinical Standards	CS22.1	Title of Protocol changed to reflect the inclusion of Marine
		CS23	New Clinical Standard describing appropriate medical equipment deployment and establishing clinical expectations when operating/providing medical support in usual environments including marine, aeronautical (non-air-ambulance), and austere/remote settings.
	Cardiac	C1	The following step was inserted into any protocol as a standard action to be completed as part of treatment on any call in which there is a suspicion that a person may have an opioid use disorder or opioid overdose. Clinicians are reminded to offer: <ul style="list-style-type: none"> Perform Leave Behind Narcan Procedure as indicated (Ref. CP29)
		C4	
	Medical	M12	
	Pediatrics	P3	
P6			
P9			
Clinical Tool	CT15		

FOREWORD

This document, at its core, represents the delegation of physician medical practice to a group of trusted Clinicians. It is designed to be an enabling rather than restrictive document. It is crafted to provide guidance in the treatment of common clinical presentations rather than the myriad of unusual cases we may encounter. In essence this document provides a framework for the care we provide.

Each treatment protocol is formatted in color-coded boxes representing applicability and goals of care, BLS, ALS, and OLMC level treatments as well as clinical pearls for optimizing care. The components of these boxes are generally bulleted rather than numbered to allow the clinician to tailor their care but should generally be followed in order. Occasionally, flowcharts are used to illustrate stepwise decision and treatment algorithms. Additional boxes for quality measures (often measured via FirstPass) and references will continue to be added and updated.

Clinicians are expected to have a thorough working knowledge of the material contained in this manual as a condition of credentialing. Clinicians shall consult the On-Line Medical Control Physician when faced with a situation where further clinical guidance or clarification is required and when required in protocol. In the absence of specific guidance, Clinicians who cultivate a strong foundation of medical knowledge, operate within the framework of this manual, use critical thinking skills, apply the principles of Crew Resource Management, and advocate for their patients will always be supported.

Thank you for the technically excellent and timely treatment you deliver, the personal care and compassion provided to every patient, and the sacrifices you make to be ready and able to respond to them no matter the hour or circumstance. You have risen to unprecedented challenges during the last two years and as we move forward, we pause to recognize and appreciate all you have done and continue to do for our community.

Dr. Angus M. Jameson



Angus M. Jameson MD MPH FAEMS FACEP
EMS Medical Director
Pinellas County

AUTHORIZATION

These protocols are granted under the authority of Chapter 401 of the Florida Statutes and 64J-1.004 of the Florida Administrative Code.

The EMS Medical Director for the following agencies under the umbrella of Pinellas County Emergency Medical Services shall be the only one authorized to make changes to these protocols.

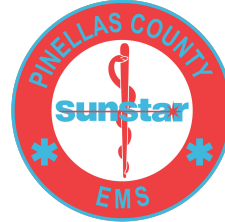
Provider Name	License Number
City of Clearwater	ALS5204
City of Dunedin	ALS5229
City of Gulfport	ALS5207
City of Largo	ALS5210
City of Madeira Beach	ALS5212
City of Oldsmar	ALS5230
City of Pinellas Park	ALS5214
City of Safety Harbor	ALS5215
City of Seminole	ALS5228
City of South Pasadena	ALS5217
City of St. Pete Beach	ALS5218
City of St. Petersburg	ALS5219
City of Tarpon Springs	ALS5221
City of Treasure Island	ALS5222
East Lake Tarpon Special Fire Control District	ALS5205
Lealman Special Fire Control District	ALS5211
Palm Harbor Special Fire Control District	ALS5213
Pinellas County EMS DBA Sunstar	ALS5220
Pinellas Suncoast Special Fire Rescue District	ALS5208

Effective Date: January 4, 2023

Dr. Angus M. Jameson



Angus M. Jameson MD MPH FAEMS FACEP
EMS Medical Director



PARTNERS

IN SERVICE



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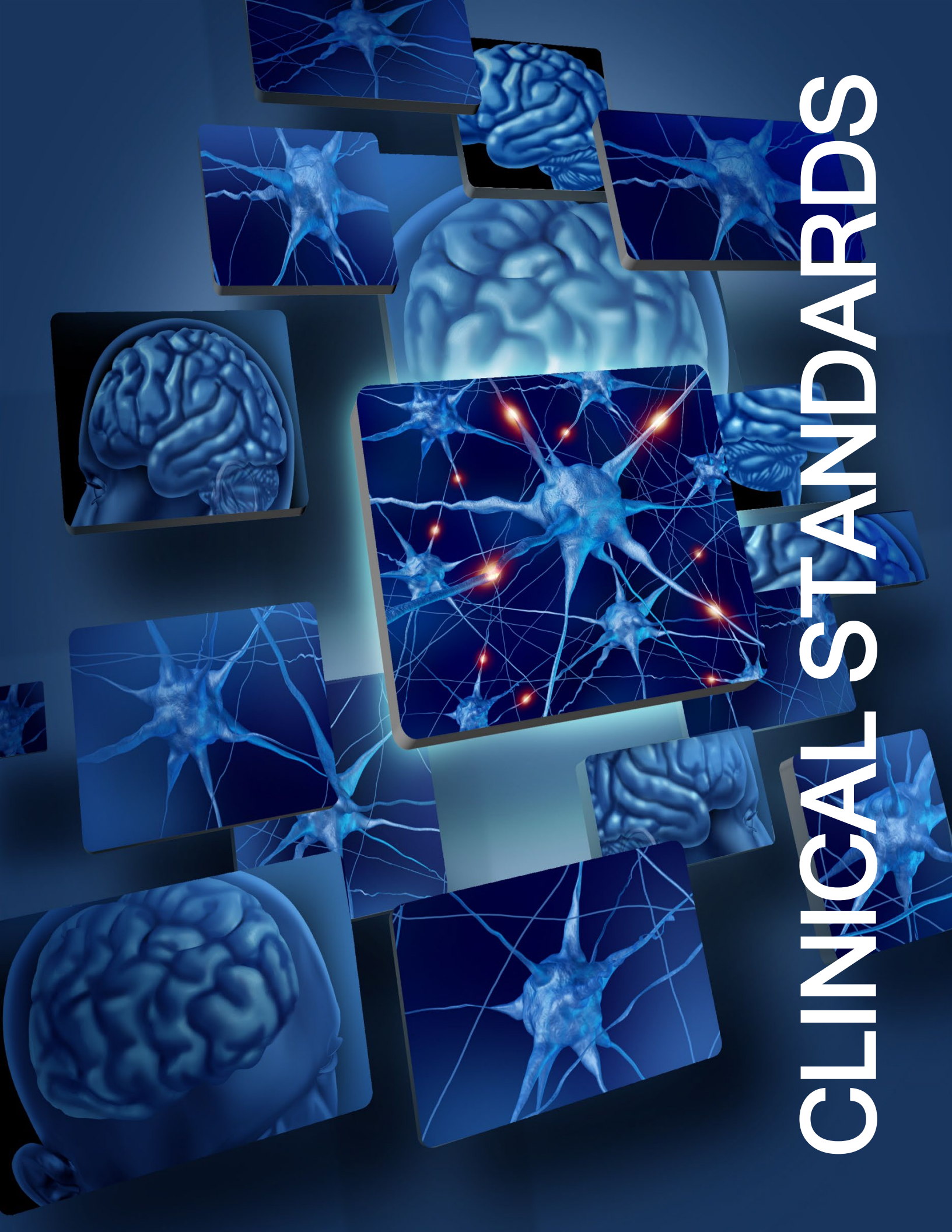
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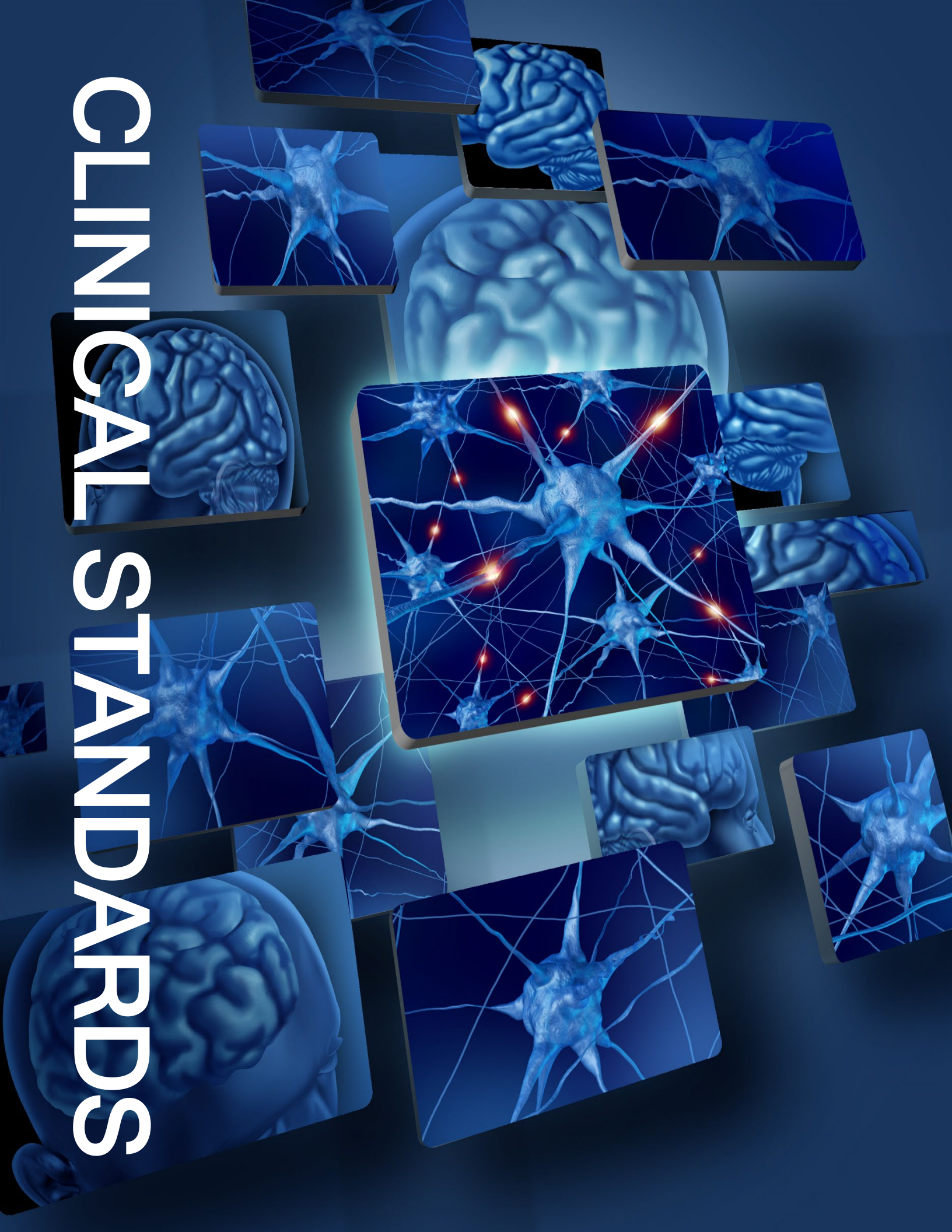
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CLINICAL STANDARDS

CLINICAL STANDARDS



CS1 DEFINITION OF A PATIENT

Universal Definition of a Patient:

Any individual who has themselves requested, or have had requested on their behalf, medical assistance from the Pinellas County EMS System shall be considered a patient.

Additionally, an individual 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 individual must be considered a patient.

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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. (2022). 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

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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 **SAFETY ALERT** 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

CS3 PATIENT SAFETY

- Know and use the “8 Rights to Patient Drug Administration”:
 - Right patient
 - Right medication
 - Right dose
 - Right time
 - Right route
 - Right documentation
 - Right reason
 - Right response
- Perform Intervention and Medication Administration Cross-Check (I-MACC) prior to any procedure or administration of a medication (Ref. CT1)
- 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 (Ref. CS9, CS10)
- 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**” (Ref. CS4, CS12)

References:

- <https://www.youtube.com/watch?v=AJOu2Pmj59s>

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 “ <i>STEMI ALERT</i> ”, “ <i>STROKE ALERT</i> ”, “ <i>SEPSIS ALERT</i> ” and “ <i>TRAUMA ALERT</i> ” 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. May be appropriate for transport to a Free Standing Emergency Department (FSED)(see additional criteria below)
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

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

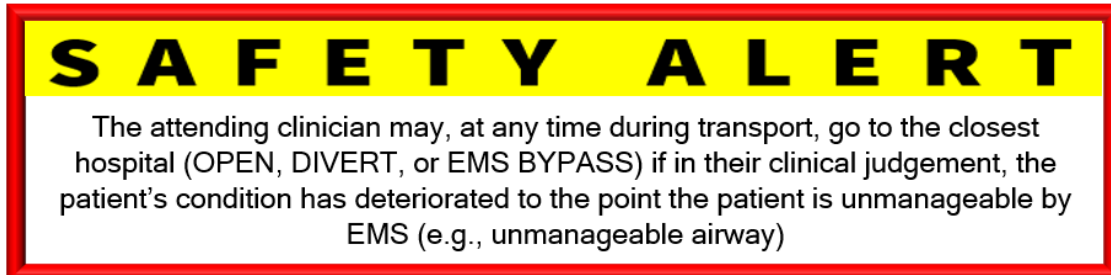
ADULT (specific)	PEDIATRIC (specific)	ADULT & PEDIATRIC
Percutaneous Coronary Intervention (PCI)	Pediatric/Neonatal	Obstetrics
Primary or Comprehensive Stroke Center	Pediatric Trauma Center (15 years old and younger)	
Adult Trauma Center (16 years old and older)	Pediatric (17 years old and younger) Psychiatric/Baker Act	Burn Center
Adult Psychiatric/Baker Act		

CS4 - HOSPITAL DESTINATION POLICY

POLICIES

Hospital Destination:

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”



CS4 - HOSPITAL DESTINATION POLICY

- 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
 - A Category **RED** patient 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
 - A Category **YELLOW** patient 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
 - A Category **GREEN** patient may be transported to an OPEN hospital (e.g., hospital ER or hospital ER with a specialty referral service, or Freestanding ED if criteria below met) 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
 - The definition of a pediatric patient is someone who “has not yet reached their “18th birthday” for the purposes of selecting a hospital destination for general pediatrics and specialty services
 - 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)

CS4 - HOSPITAL DESTINATION POLICY

Hospital Destination (cont.):

- 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
- Pediatric Hospital Destination Exception - **TRAUMA**
 - Per Florida trauma triage protocols, a patient who has not yet reached their 16th birthday will be considered pediatric and should therefore be transported to a pediatric trauma center. (Ref. 64J.2)
- Pediatric Hospital Destination Exception - **PREGNANCY**
 - A patient who would otherwise go to a pediatric specific hospital but is pregnant or recently (less than six weeks) postpartum should be transported to an adult hospital with OB services
- 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 (FSED):

Freestanding Emergency Departments (FSEDs) provide all services of a standard hospital emergency department but do not provide trauma or other specialty referral services. Typically, FSEDs are affiliated with a hospital. It is important to note that patients who require admission after evaluation in a FSED 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 (FSED) Transport Criteria

Severity **GREEN** patients may be transported to a FSED 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

CS4 - HOSPITAL DESTINATION POLICY

Hospital Status Change:

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 727-582-2003 (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 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 Policy. This is necessary to ensure the highest quality care for our patients, as well as to maintain the availability of ambulance resources to respond to the next patient

EMS BYPASS will be activated in the following manner:

Time	Condition	Actions
Zero (0) Minutes	Arrival at Hospital	None
	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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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

CS4 - HOSPITAL DESTINATION POLICY

System Status Management (SSM):

- 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.

References:

- Herscovici DM, Boggs KM, Sullivan AF, Camargo CA Jr. What is a Freestanding Emergency Department? Definitions Differ Across Major United States Data Sources. West J Emerg Med. 2020 Apr 16;21(3):660-664. doi: 10.5811/westjem.2020.3.46001. PMID: 32421516; PMCID: PMC7234700.

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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:

Exception	Description
SEVERITY RED PATIENT	Reference Protocol CS4
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	Situations in which an EMS Emergency declaration or declared disaster has been made

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

CS5 - TRANSPORT RESOURCE UTILIZATION

CS5 TRANSPORT RESOURCE UTILIZATION

Air Transport:

- The following exceptions allow for the use of Air Medical Transport (helicopter ambulance) resources for SEVERITY **RED** PATIENTS:

Condition	Description
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
Scene Conditions	extended extrication, heavy machinery extrication, technical rescue, remote location exists and in the judgement of the attending EMT, Paramedic or Incident Commander, would make transport by helicopter ambulance faster than transport by ground ambulance
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

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.
4. Communications Center personnel and field clinicians shall refer to Protocol CT24 Interfacility Transport Levels of Care Protocol 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. CT24)
 - 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
5. 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.

CS6 INTERFACILITY TRANSFER

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

Multi-Agency Transport:

When providing transportation in conjunction with non-PCEMS personnel (e.g., Hospital RN or other staff, flight crews, etc.) in a PCEMS system vehicle:

1. Interfacility transport augmented by non-system hospital medical personnel (e.g., hospital RN riding to manage drips, perfusionist, etc. to expedite transport of a critical patient):
 - A fully staffed ambulance is required
 - Hospital staff has primary responsibility for adjuncts outside PCEMS protocols (e.g., infusion pumps, ECMO, etc.)
 - System certified professionals retain shared responsibility for all other aspects of patient care
 - A full PCEMS ePCR is to be completed.
2. When an ambulance is utilized as a means of conveyance by non-system medical transport personnel (e.g., ground transport of flight crew, critical care team, etc.):
 - A fully staffed ambulance is required
 - Critical Care/Air Medical Team assumes primary responsibility for patient care
 - PCEMS personnel will participate in care of the patient to the level of their certification and within PCEMS scope, as needed
 - A full PCEMS ePCR is to be completed
3. Consult OLMC when needed for guidance or clarification

CS7 PATIENT CARE REPORT & TRANSFER OF CARE

This standard defines the requirements for completing the Pinellas County EMS Patient Care Report (electronic Patient Care Reporting System [ePCR] or paper form) 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

CS7 PATIENT CARE REPORT & TRANSFER OF CARE

- 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 Transport Unit

- When patient care is transferred from one Unit to another Unit (e.g., ALS First Responder to Transport Unit), 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 - Transport Unit to Hospital

- When patient care is transferred from the Transport Unit 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

CS7 PATIENT CARE REPORT & TRANSFER OF CARE

- 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

Special Events

The "Standby Encounter Log" worksheet (in the electronic ePCR or paper version if ePCR not available) may be completed on "Standby" incidents such as concerts, sporting events, and other mass gatherings. Basic demographic information and the type of assistance provided to each individual should be documented in this log. A signature is not required.

This "Standby Encounter Log" is to be used at Special Event Standby's only and may not be used on 911 calls or interfacility transfers. The log is only for documenting basic "First Aid" assistance including bandaids, ice packs, oral hydration, cooling, rest, etc. It may not be used if any medications were administered or dispensed, any interventions were performed, a refusal is needed, or the individual otherwise becomes a patient in which case a full ePCR is required.



CS7 PATIENT CARE REPORT & TRANSFER OF CARE

The screenshot displays the ELITE FIELD software interface. At the top, there is a search bar labeled "Find field..." and a toolbar with buttons for "Save", "Post", "Print", "PDF", "CAD", "EKG", "Transfer", and "Close". Below the toolbar, the "Quick Buttons" section is active, showing a list of buttons: "Clear Dispositions", "Add Patient To Incident", "Cancelled Enroute", "Cancelled on Scene", "Refused Transport", "No Patient Found", "Obvious Death", "Standby Event", "Interfacility Transport", "Critical Care Transport", and "Organ/Team Transport". On the right side, there is a vertical toolbar with icons for "Mileage", "Timeline", "Situations", "Power Tools", "CPR Meter", "STED-# Alert", "Stroke", "Spinal", "Cognitive", "Standby", "Titration", and "All". At the bottom, the status bar shows "No Patient Name Entered", a validation count of "56", a "Menu" icon, and a "Status: In Progress" dropdown menu.

CS8 MANDATORY STATE OF FLORIDA REPORTING REQUIREMENTS

Florida Statutes contain mandatory reporting requirements that are applicable to **ALL** field clinicians. Compliance with the mandatory reporting requirements is not met by another professional entity making the report on your behalf (e.g., law enforcement or the hospital)

CS8 - MANDATORY STATE OF FLORIDA REPORTING REQUIREMENTS

Mandatory Reporting Requirement	Reference	Reporting Mechanism
<p>Report of initial treatment of burn injuries</p> <ul style="list-style-type: none"> second-degree or third-degree burn injuries affecting ten (10) percent or more of the surface area of his or her body 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 	<p>§ 877.155, Fla. Stat</p>	<ul style="list-style-type: none"> Fully document the situation and observations in the patient care report Request a response by the Pinellas County Sheriff's Office through dispatch
<ul style="list-style-type: none"> Required reports of child abuse, abandonment, or neglect, sexual abuse of a child, and juvenile sexual abuse; required reports of death; reports involving a child who has exhibited inappropriate sexual behavior Surrendered newborn infants 	<p>§ 39.201, Fla. Stat.</p>	<ul style="list-style-type: none"> Fully document the situation and observations in the Patient Care Report Notify the Florida Department of Children and Families <ul style="list-style-type: none"> 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
<p>Mandatory reporting of abuse, neglect, or exploitation of vulnerable adults; mandatory reports of death.</p>	<p>§ 415.1034, Fla. Stat.</p>	<ul style="list-style-type: none"> Notify the appropriate Law Enforcement agency Notify receiving hospital personnel

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CS9 NARRATIVE DOCUMENTATION

<u>S</u> SUBJECTIVE	What were you told?
<u>O</u> BJECTIVE	What did you find? What did you see?
<u>A</u> SSESSMENT	What did you think?
<u>P</u> LAN	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*****

- 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 it was present.
- Use correct spelling - utilize the tablet on-board spell check and/or dictionary

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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 MUST be made in the following circumstances:**

1. Any time medical advice is needed

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 Critical Care Team scene response
	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

SITUATIONS	A protocol specifically requires OLMC consultation
	A medication, treatment, or transport error or “significant patient injury” (e.g., more than superficial lacerations/skin tears/contusions) 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 leave one Emergency Department or hospital property to go to another, except where formal interfacility transfer arrangements have been made by the transferring physician
	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 refuses because of receiving information about their potential financial obligations

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

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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

CS11 SPECIAL PATIENT PROTOCOL

CS11 - SPECIAL PATIENT PROTOCOL

 Pinellas County EMS Office of the Medical Director	
SPECIAL PATIENT PROTOCOL IDENTIFICATION CARD	
PATIENT INFORMATION	PROTOCOL
Name: _____ DOB: xxxx xx, xxxx	<p>1. If suspected adrenal crisis (vomiting, diarrhea, dehydration, hypoglycemia, shock) IMMEDIATELY administer 100mg (2mL) of Solu-Cortef IM.</p> <p>2. Implement ALS care.</p> <p>3. Contact OLMC and prepare for transport.</p> <p>Over for Notes/Drug Information →</p>
Address: _____	
<u>MEDICAL HX:</u> _____	
<u>MEDS:</u> _____	
Allergies: _____	
School: _____	
Emergency Contacts: _____	
Medical Team: _____	

 Pinellas County EMS Office of the Medical Director	
Expires: October 1, 2020	
SPECIAL PATIENT PROTOCOL IDENTIFICATION CARD	
NOTES:	DRUG INFORMATION:
<p>1. This patient suffers from a potentially life-threatening disorder, Congenital Adrenal Hyperplasia. This is a form of adrenal insufficiency.</p> <p>2. Symptoms of an acute episode are vomiting, diarrhea, hypoglycemia and shock.</p> <p>3. This patient requires emergent administration of specialty drug not in our formulary to reverse her symptoms. The patient carries this drug on her person.</p> <p>4. This patient MUST be transported following our administration of her self-carried medication.</p>	<p>1. <u>DOSE</u>: 100mg Solu-Cortef.</p> <p>2. <u>PACKAGING</u>: 100mg in 2ml Act-O-Vial (similar appearance to Solu-Medrol).</p> <p>3. <u>WARNINGS AND PRECAUTIONS</u>: Administer only in monitored setting equipped to manage reactions.</p> <p>4. <u>COMMON REACTIONS</u>: Elevated BP, diaphoresis, edema.</p>

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

Procedure:

- Evaluate all patients 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 (Ref. CT22) 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 all or part 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

CS12 REFUSAL OF CARE

Procedure (cont.):

- Attempt to ensure the patient is left in a safe location

OLMC:

- Contact OLMC if:
 - After passing the EMS Cognitive Evaluation (Ref. CT22), 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*"
 - A BLS Interfacility or BLS 911 unit would like to take a refusal (e.g., to determine if the BLS unit can handle the refusal or if an ALS response necessary)
 - 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 greater than 300 characters
- Free Text "*Decisional Capacity*" present

References:

- Pinellas County EMS Medical Quality Management Plan - Medical Operations Manual Volume 2 Protocol AD18

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

Core Principles:

- Promote patient safety
- Establish controls related to ordering, receiving, dispensing, administering, and documenting controlled substances
- Define monitoring processes that provide early detection of medication control irregularities
- Follow federal and state controlled substance laws and regulations, in addition to any Pinellas County Emergency Medical Services and local agency policies and procedures

It is recognized that specific emphasis on security is warranted given current trends in opioid abuse.

S A F E T Y A L E R T

ANY/ALL Deviations from this protocol must be immediately reported to the EMS Medical Director or Designee via cell phone/text regardless of the agency controlled substance coordinator being notified

Any possession, access, or use of PCEMS Controlled Substances except in accordance with this protocol (all sections) may be reported to law enforcement and may constitute grounds for revocation of certification

Definitions:

Accountability in the Workplace: the responsibility of an employee to complete their assigned tasks, to perform the duties required by their job, and to be present for their proper shifts to fulfill or further the goals of the organization.

Administer: the direct application of a controlled substance to the body of a patient by an individual practitioner (or, in his presence, by his authorized agent), whether such application be by injection, ingestion, or any other means.

Administration: the obtaining and giving of a single dose of medicinal drugs by a legally authorized person to a patient for her or his consumption.

Ambulance Controlled Substance Technician (ACS-T): A Vehicle Supply Technician of the current ambulance contractor, identified by the ambulance CS-C and authorized by the EMS Medical Director or designee to engage in the transfer of custody of CSs.

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

Definitions (cont.):

Ambulance Controlled Substance Handler (ACS-H): an individual, as designated by the Chief Operating Officer or designee of the ambulance contractor, who possesses written authorization from the EMS Medical Director or designee to possess and transport CSs in the Pinellas County EMS System for the sole purpose of replacing expired or damaged medications and resupply of used medications.

Approve - to give formal or official sanction.

Audit Trail: A record showing who has accessed an information technology application and what operations the user performed during a given period

Authorize: to endorse, empower, justify, or permit by or as if by some recognized or proper authority (such as custom, evidence, personal right, or regulating power); to invest especially with legal authority

Blind Count: A physical inventory taken by personnel who perform a hands-on count of inventory without access to the quantities currently shown on electronic or other inventory systems. Blind counts are used to assess the integrity of automated inventory systems

Broken Chain of Custody: any period, regardless of duration, when one or more CS(s) or CS box containing one or more CS(s), or its assigned key, is not under direct custody of the individual who is documented to have custody at that time. Broken Chain of Custody

- includes but is not limited to:
 - leaving a CS box behind on the scene of an incident
 - loss or misplacement of an electronic key
 - loss or misplacement of a compartment key (if a part of security CS13.1)
 - but does not include:
 - reasonable accommodation for operational specific activities while remaining in compliance with CS13.1 such as
 - shopping
 - physicals
 - CME attendance
 - Accompanying a patient to the hospital via ambulance
-

Certified Professional: means the one (1) individual, as defined in the then current PCEMS Rules and Regulations, including excluding Wheelchair Transport Driver and Mental Health Transport Driver

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

Definitions (cont.):

Chain of Custody: the sequential documentation or trail that accounts for the sequence of custody, transfer, and disposition of CS(s) and associated components (i.e., CS box, CS key, lanyard, etc.).

Container: A container for pharmaceutical use is an article which holds or is intended to contain and protect a drug and is or may be in direct contact with it. The closure is a part of the container. The container and its closure must not interact physically or chemically with the substance within in any way that would alter its quality.

Control Number: any distinctive text, images, or symbols, such as a distinctive combination of letters and numbers approved for assignment by the EMS Medical Director or designee to each individual CS pharmaceutical container.

Controlled Substance (CS): any substance, listed in:

- The United States Controlled Substance Act (CSA), current version *or*
 - Title 21 United States Code part 1300-end *or*
 - Chapter 499 and Chapter 893, Florida Statutes *or*
 - Identified by the EMS Medical Director to have characteristics that make it a potential risk to public safety, abuse, dependence, or diversion
-

Controlled Substance Act (CSA): Establishes a unified legal framework to regulate certain drugs that are deemed to pose a risk of abuse and dependence.

Controlled Substance Box: a specific transportable brand and style (i.e., watertight, color, size) authorized by the EMS Medical Director or designee and provided by PCEMS. The box incorporates specific anti-diversion design features as well as custom labeling and an integrated electronic lock for the containment and transport of CSs.

NOTE: The transportable lock boxes are not considered secure by themselves

Controlled Substance Repository: a specific fixed, semi-permanent mounted, brand and style strong cabinet authorized by the EMS Medical Director or designee and provided by PCEMS. The repository incorporates specific anti-diversion design features as well as custom labeling and an integrated electronic lock for the expressed purpose of secure containment of CSs.

Controlled Substance Card - A fillable card containing a control number, approved by the EMS Medical Director or designee for issuance to each individual pharmaceutical container. The card provides space for documenting specific mandated data elements.

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

Definitions (cont.):

Controlled Substance Central Receiving (CS-CR) - Location determined, authorized, and established by the Pinellas County EMS System Director and EMS Medical Director

Controlled Substance Central Receiving Coordinator (CS-CRC): Primary individual, as designated by the Chief Operating Officer of the ambulance contractor or designee, who possesses written authorization from the EMS Medical Director, to handle procurement, distribution, scheduling destruction of and records management/retention of CSs at CS-CR.

Controlled Substance Central Receiving Handler (CS-CRH): Secondary individual(s), as designated by the Chief Operating Officer of the ambulance contractor or designee, who possesses written authorization from the EMS Medical Director, to handle procurement, distribution, scheduling destruction of and records management/retention of CSs at CS-CR.

Controlled Substance Compliance Coordinator (CS-CC): An employee of Pinellas County EMS Administration, assigned by the Director of Pinellas County EMS Administration and authorized by the EMS Medical Director or designee, as a liaison between the EMS Medical Director and all first responder agencies and the ambulance contractor.

Controlled Substance Coordinator (CS-C): the EMS Coordinator, as designated by each individual first responder agency Fire Chief or the Chief Operating Officer of the ambulance contractor, who is a certified professional and possesses written authorization from the EMS Medical Director or designee to possess and transport CSs in the Pinellas County EMS System for the purpose of replacing expired or damaged medications, resupply of used medications and other related duties as described within this protocol.

Controlled Substance Handler (CS-H): an individual, who is a certified professional, identified by the agency CS-C who possesses written authorization from the EMS Medical Director or designee to possess and transport CSs in the Pinellas County EMS System for the purpose of replacing expired or damaged medications, resupply of used medications and other related duties as described within this protocol.

Controlled Substance Incident Report (CS-IR): a written or electronic document used to communicate information to other people and to document unusual or significant occurrences. It is extremely important for the content of the CS-IR ***to reflect clear, detailed information in a factual, unbiased manner to avoid passing along opinions and judgements.***

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

Definitions (cont.):

Controlled Substance Logbook: A written document authorized by the EMS Medical Director or designee and provided by PCEMS to record the chain of custody of CSs. Utilized during periods of downtime of the established electronic inventory management system, out of county disaster deployments, etc.

Controlled Substance Waste: Waste may include products expiring, products prepared for administration but not administered to the patient (e.g., when no longer indicated, physician discontinues or a patient refuses administration), and drug product remaining after a partial dose is removed from its packaged container. Waste may also include overflow in vials.

Custody: The care, possession, and control of an item. The retention, inspection, guarding, maintenance, or security of an item within the immediate care and control of the person to whom it is committed.

DEA: U.S. Drug Enforcement Agency - Primarily responsible for enforcing the CSA's registration provisions and works with the Criminal Division of the Department of Justice to enforce the Act's trafficking provisions.

DEA Form 106: Form mandated by the DEA to be completed upon discovery, of any thefts or significant losses of CSs and submitted to the FDA for such theft or loss

Deliver: the term refers to the actual, constructive, or attempted transfer of a CS or a listed chemical, whether there exists an agency relationship or not

Distribute: the term means to deliver (other than by administering or dispensing) a CS or a listed chemical.

Drug Diversion: The term includes any unaccountable loss, theft, use for unintended purposes, or tampering of a drug. For purposes of these guidelines, drug diversion is a medical and legal concept involving the transfer of any legally prescribed drug from the individual for whom it was prescribed to another person for any illicit use, including any deviation that removes a prescription drug from its intended path from the manufacturer to the intended patient

Electronic Key: A type of key designed to provide a time-stamped access record every time it meets an electronic lock resulting in full visibility of all access attempts, whether successful or not. The brand and type are authorized by the EMS Medical Director and provided by PCEMS.

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

Definitions (cont.):

Electronic Lock: A type of lock designed to provide a time-stamped access record every time it meets an electronic key resulting in full visibility of all access attempts, whether successful or not. The brand and type are authorized by the EMS Medical Director and provided by PCEMS.

Employee of a Registrant: Subject to direct oversight by the registrant; required, as a condition of employment, to follow the registrant’s procedures and guidelines pertaining to the handling of CSs and required to render services at the registrant’s registered location.

FDA: U.S. Food and Drug Administration; Responsible for enforcing the FD & C Act.

Federal Food, Drug and Cosmetic Act (FD&C Act): All pharmaceutical drugs are subject to the FD&C Act. Amongst other things, prohibits the “introduction or delivery for introduction into interstate commerce of any drug that is adulterated or misbranded. The FD&C Act provides that a drug is deemed to be adulterated if, among other things, it “consists in whole or in part of any filthy, putrid, or decomposed substance,” “it has been prepared, packed, or held under insanitary conditions,” its container is made of “any poisonous or deleterious substance,” or its strength, quality, or purity is not as represented

Immediately - At once; instantly; without any intervening time or space

Inventory - Stocks in finished form of a CS manufactured or otherwise acquired by a registrant, whether in bulk, commercial containers, or contained in pharmaceutical preparations in the possession of the registrant

Inventory Management System: The process by which CSs are tracked throughout the entire supply chain, from purchasing to handling to end disposition. This process is documented using an electronic web-based system or written logbook authorized by the EMS Medical Director and provided by PCEMS.

Locked Vehicle Compartment: a locked, permanently, and substantially constructed compartment or area of a vehicle, that has been designated as the secure storage area for the CS lock box. Even though the Federal regulations do not specifically define construction, the intent of the law is that CSs must be adequately safeguarded. The general security requirements set forth in the Code of Federal Regulations (CFR) require all registrants (i.e. EMS Medical Director) to provide effective physical security controls and operating procedures to guard against theft and diversion of CSs.

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN

OPERATIONAL

Definitions (cont.):

Non-retrievable: for the purpose of destruction, the condition or state to which a CS must be rendered following a process that permanently alters that CSs physical or chemical condition or state through irreversible means and thereby renders the CS unavailable and unusable for all practical purposes. The process to achieve a non-retrievable condition or state may be unique to a substance's chemical or physical properties. A CS is considered "non-retrievable" when it cannot be transformed to a physical or chemical condition or state as a CS or CS analogue. The purpose of destruction is to render the CS(s) to a non-retrievable state and thus prevent diversion of any such substance to illicit purposes.

On-Site: located on or at the physical premises of the registrant's registered location.

PCEMS: Pinellas County EMS and Fire Administration

PCEMS Identification Number: a unique number issued by PCEMS to each Certified Professional that serves as identification for the individual upon entry into the system

Pharmaceutical Disposal System - Liquid: A system that makes liquid pharmaceutical products non-retrievable.

Physical Inspection: the process of handling and visually examining something with the naked eye.

PSTrax: The then current electronic inventory management system.

Significant Loss: the standard of theft has not been met, but it is clear that a CS cannot be accounted for, even after reasonable efforts have been taken to find it, and that loss is "Significant." For purposes of this policy, "Significant" means that either (a) the quantity lost is greater than one Purchased Unit or (b) there is a pattern of losses associated with a particular employee(s).

Specialty Unit: Specialty unit(s) identified by an agency which may be activated or upgraded to ALS status, including issuance of CSs, authorized by the EMS Medical Director or designee. Examples include special event units and medical tents.

Stryker Cactus PharmaLock: The then current liquid pharmaceutical disposal system.

Tamper Evident Bag/Container: A tamper-evident package, according to the regulations of the Food and Drug Administration "is one having one or more indicators or barriers to entry which, if breached or missing, can reasonably be expected to provide visible evidence to consumers that tampering has occurred." In addition, the indicator or barrier must be "distinctive by design," which means the tamper-evident feature is designed from material not readily available to the public. Therefore, it can't be easily duplicated.

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

Definitions (cont.):

Theft: generic term for all crimes in which a person intentionally takes personal property of another without permission or consent and with the intent to convert it to the taker's use (including the potential sale).

Transfer of Custody: a real-time, face-to-face transaction whereby the off-going certified professional, ACST or a CS-C/CS-H relinquishes custody of each individual CS container, the CS box, CS electronic key and vehicle compartment key (if applicable) to the on-coming certified professional, ACST or a CS-C/CS-H and that individual accepts custody of each individual CS container, the CS box, electronic key and vehicle compartment key (if applicable). This transaction must not be precalculated or pre-signed and must include a physical inspection by both individuals. Once the physical inspection is complete then appropriate documentation (inventory management system or logbook) must take place.

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN

OPERATIONAL

CS13.1 SECURITY, INVENTORY & HANDLING

1. Security

- Operational CS Box:
 - Must be in the custody of the Certified Professional or secured in the locked vehicle compartment of the EMS Authority authorized ALS/Supervisor vehicle with the Certified Professional retaining sole custody/accountability of the electronic key
 - Must remain locked except:
 - During transfer of custody
 - When deemed necessary as a part of patient care during an incident
 - When expired, damaged, or recalled containers are being replaced
 - At the time re-supply is received
 - During any audit/physical inspection per this protocol, at the request of law enforcement or at the request of the EMS Medical Director or designee
- Electronic Key
 - Must be in the custody of the same Certified Professional/ACST with custody of the CS box unless a life safety/hazardous environment necessitates a *temporary* emergency change in custody.
- Pin Numbers/Passwords -
 - Protect passwords and PIN numbers from inadvertent disclosure
 - Must not be shared
 - Immediately change when compromised
 - Immediate notification must be made to the EMS Medical Director or designee and the agency EMS CS-C anytime a pin or password is compromised and/or there is suspicious activity associated with an individual(s) password(s) or pin(s)
- Individual CS container -
 - Must remain in the tamper evident bag/container until it is to be prepared for administration to a patient
- CS Repository:
 - Door(s) must remain closed and locked except:
 - During transfer of custody
 - When expired, damaged, or recalled containers are being replaced
 - At the time re-supply is received
 - During any audit/physical inspection per this protocol, at the request of law enforcement or at the request of the EMS Medical Director or designee
- CSs must not, *under any circumstances*:
 - Be in the custody of an off-duty individual
 - Be stored or transported in a privately-owned vehicle
 - Including, but not limited to Administrative, Operational, Spare, Special Event, Disaster Deployment, etc.

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN

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2. Inventory

- CS Box:
 - The current authorized inventory of CSs is reflected in the Pinellas County EMS Medical Operations Manual Volume 1 Protocol CS22.7 or then current Medical Control Directive
 - Each cs box is to contain a laminated PCEMS content protection shield. The shield is placed on inside the box top of all contents to provide protection from contact with the box lock.
- CS Repository:
 - As authorized by the EMS Medical Director (Registrant)
 - To ensure the highest level of security, these par levels are not published

3. Equipment Operation, Labeling/Identification, Handling & Maintenance

- Operation:
 - Electronic Key:
 - General:
 - Insert the key straight and firmly into the lock, not at an angle
 - Wait for a solid light on the key indicating the key is authorized to open the lock prior to attempting to turn the key away from the home position.
 - Attempts to turn the key should only be made if the light is on. You may hear or feel a click, depending on background noise.
 - Turn ¼ turn clockwise to open the lock. The key will remain in the lock until the lock is returned to the secured home position.
 - If a lock does not respond immediately to an authorized key, try holding it in the lock for up to twenty seconds to see if the lock will open.
 - If a key sirens or flashes an unauthorized pattern during contact with a lock, it is not authorized to open that lock. Attempt to update the key through the syncing process. If it does not resolve the issue, contact your agency CS-C.
 - Low Battery - key will emit a warning reflected by a beep that sounds once every eight seconds for a period of one minute.
 - Charging:
 - Power is provided by a rechargeable lithium-ion battery
 - May be charged using the PCEMS supplied micro USB cable through:
 - USB port on a computer
 - USB port on a portable power pack
 - USB capable wall outlet or AC adapter with USB port
 - The key cannot be overcharged
 - Battery voltage
 1. Recorded internally by the key daily
 2. Reflected on the sync app during the process of syncing the key
 3. Should be maintained above 4.00

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN

OPERATIONAL

- Syncing:
 - Syncing is required to ensure permissions are maintained, firmware updates are received, and data is extracted from the key for storage

SYNC Schedule (required minimums)	
Operational (ALS First Responder & Ambulance including ACSTs)	Once every twenty-four (24) hours
All others	Once every seven (7) days

- Electronic Lock - CS Box
- Electronic Lock - Repository
 - General:
 - Accessing the repository involves a combination of key permission and a separate control handle for operation of the door.
 - Insert the key straight and firmly into the lock, not at an angle
 - Wait for a solid light on the key indicating the key has authorized to activate the lock.
 - While holding the key in position, turn the repository handle. No rotation of the key is required. You may hear or feel a click, depending on background noise.
 - Turn the repository handle ¼ turn clockwise to open the door. The key can now be removed from the lock.
- Labeling/Identification:
 - Electronic key:
 - Each electronic key is connected to a PCEMS issued specific key lanyard as a function of identification, daily operational use, tracking and accountability

Lanyard Color	Color Represents
	Fire Rescue - Operational
	Ambulance - Operational
	Administrative - CSC, CSH, CSCRC, CSCRH and PCSO Tactical EMS
	TRAINING ONLY
	CCT - Operational
	ACST - Operational

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

- CS box:
 - A serialized unique security label is affixed to each CS box as a function of identification, daily operational use, tracking and accountability

CS Box Color	Label Color	Color Represents
BLACK		Fire Rescue
BLACK		Ambulance
BLACK		Administrative
YELLOW		TRAINING ONLY
BLACK		CCT

- A separate gold “PEMS IF FOUND” label is affixed to each CS box to assist with identification and return of a box
 - Individual agency identification (name/Unit ID) - may be applied to the box and/or key with non-permanent labeling (i.e., Brother tape label).
- CS Repository:
 - Labeling must be authorized by the EMS Medical Director and approved by the EMS System Director for any CS Repository.



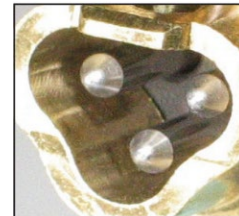
NO other labeling, alterations or permanent markings may be added or made to a key, CS Box or Repository



- Routine Cleaning/Disinfection:
 - Electronic Key:

Electronic Key Cleaning/Disinfecting Instructions:

1. Remove foreign material like lint or dirt with a toothpick or paperclip.
2. Use the small side of the stainless-steel brush, place on a contact pin, and twist until pin is bright and shiny. Repeat the process on the other two pins.
3. Use a non-sterile 4” x 4” piece of gauze with a small amount of alcohol to thoroughly remove contaminates and debris from the pins, typically 10-20 seconds.
4. Replace the swab if it becomes dirty.
5. Test to verify reliable electrical.



Clean Pins



**DO NOT use cleaners or other liquids when cleaning a Cyberkey
DO NOT use sprays or lubricants when cleaning a CyberLock
DO NOT use petroleum-based products or WD-40.**



- Lanyard - Electronic Key:
 - Key lanyards are not able to be cleaned - replace as needed.
 - Contact your EMS Coordinator for a replacement

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- Charging Cable - Electronic Key:
 - Performed **ONLY** when unplugged from power source
 - Utilize alcohol on a towel to wipe down
 - **DO NOT** use any other chemicals or disinfectants
- Electronic Lock
 - Dirt or residue may accumulate on the face of a CyberLock which may result in intermittent performance.
 - Indicates cleaning is necessary:
 - Electronic key light does not turn on
 - Electronic key light comes on, but the electronic lock solenoid does not fire
 - Electronic lock solenoid does not hold open after firing

Electronic Lock Cleaning/Disinfecting Instructions:

1. Use stainless steel brush to scrub the nose and contact points in small circular motions for 10-20 seconds.
2. Rub the face using a piece of non-sterile 4"x4" gauze with a small amount of alcohol for 10-20 seconds.
3. Replace the gauze pad as it becomes dirty.
4. Allow to air dry.
5. When finished, the lock face should be clean
6. Test with a clean key (if able) to verify reliable electrical contact.
7. If these procedures fail to provide satisfactory results, notify your EMS Coordinator



Dirty Lock



Clean Lock



Never scrape the contacts with a sharp tool; this may cause damage
When cleaning a CyberLock, DO NOT use sprays or lubricants
Do not use petroleum-based products or WD-40



- CS Box:
 - Utilize alcohol on a towel to wipe down the entire box, interior and exterior.
- CS Repository:
 - Clean per manufacturer's instructions



DO NOT use any other chemicals or disinfectants without prior approval



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4. Damage/Failure/Inoperative - Electronic Key/Electronic Lock/CS Box/Micro USB Cable/Lanyard/Content Protection Shield/Cyberlink Sync Application

Item	Issue	Actions to Be Taken
Electronic key	<ul style="list-style-type: none"> Case cracked - separated Damaged - corroded pins 	<ol style="list-style-type: none"> Immediate notification to the agency CS-C for replacement Incident Report required
Electronic Lock	<ul style="list-style-type: none"> Intermittent connection with key Inability to access the CS box Inability to secure the CS box 	<ol style="list-style-type: none"> Clean key tip and lock face as per protocol Sync key and reattempt If unresolved, immediately notify the agency CS-C to facilitate replacement of the CS box Incident Report Required
Micro USB Sync/Charge Cable	<ul style="list-style-type: none"> Damaged Lost Inoperative 	<ol style="list-style-type: none"> Immediate notification to the agency CS-C Incident Report Required
CS Box	<ul style="list-style-type: none"> Cracked box Broken box hasp 	<ol style="list-style-type: none"> Immediate notification to the agency CS-C for replacement Incident Report Required
Lanyard	<ul style="list-style-type: none"> Worn - Broken - Contaminated 	<ol style="list-style-type: none"> Obtain replacement from agency CS-C
Content Protection Shield	<ul style="list-style-type: none"> Worn - Damaged - Lost - Contaminated 	<ol style="list-style-type: none"> Obtain replacement from agency CS-C
Cyberlink Sync Application	<ul style="list-style-type: none"> Inability to sync assigned Cyberkey as per protocol 	<ol style="list-style-type: none"> Immediate notification to the agency CS-C <p>Note - screen shot, or images of any errors noted will assist with resolution</p>

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

CS13.2 CHAIN OF CUSTODY

The PCEMS CS Inventory Management System must be utilized to document any change in status. The PCEMS ePCR must be utilized to document every individual administration of a CS to a patient

- Chain of Custody Transfer Procedure
 - a. The certified professional or ACST with current custody/accountability and the certified professional or ACST accepting the chain of custody/accountability physically meet face to face.
 - b. The CS inventory is verified, and a physical inspection of each CS container is to be completed as follows:

Container (e.g., vial/prefilled syringe)	CS Card	Tamper Evident Bag	Drug Liquid	Electronic Key	Electronic Lock	CS Box
No visible cracks in the vial or syringe barrel	Present	No visual evidence of disruption	Discoloration	Key Top intact (if applicable)	No visible corrosion	Information on the Exterior ID Label is clearly legible
Labeled expiration has not passed	Clear of any indication of use	Tamper evident seal is intact - no visual word displayed	Missing volume within the container	Key Tip Pins are not recessed (all should be protruding the same distance)	Lock moves freely	No appearance of tampering
Intact exterior drug product packaging (e.g. vial cap loose or separated,)	N/A	No moisture present	No visible liquid present in the bag	No visible corrosion on the Key Tip Pins	N/A	Box hinges fully functional
Labeling is without evidence of disruption	N/A	N/A	Appearance of excess volume	Syncing	N/A	Box latches (2) fully functional

- c. If any discrepancies are noted, refer to CS13.4 or CS13.5
- d. The Chain of Custody/Accountability Transfer must be documented in the PCEMS CS Inventory Management System immediately upon completion of the transfer

Until this Chain of Custody Transfer is fully executed and documented, the individual with current custody & accountability is deemed to still have custody & accountability and on-duty with the responsibility to respond to calls dispatched. Completion of this procedure must in no way delay the response of a dispatched unit. It is recognized that this requirement may cause a certified professional to be obligated to respond to a late call.



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CS13.3 MEDICATION ADMINISTRATION, WASTE AND DOCUMENTATION

1. Medication Administration
 - CSs must only be administered by an on-duty PCEMS Certified Professional for the provision of patient care and with strict adherence to the current PCEMS Medical Operations Manual (all volumes) or current Medical Control Directives.
 - For patient safety and ease of documentation, whenever possible, the PCEMS Certified Professional with custody of the CSs should administer all doses of the medication during the provision of patient care.

2. CS Waste
 - All liquid pharmaceutical waste must be disposed of in the then current PCEMS defined pharmaceutical disposal system

3. Documentation of the following events:
 - Transfer of Custody (see CS13.2) -
 - Primary - Inventory Management System (electronic)
 - Secondary (downtime) - CS Logbook (hardcopy)
 - Medication Administration - No Waste
 - ePCR - Intervention entry
 - ePCR - Signature for zero waste
 - CS Card (hardcopy)
 - Primary - Inventory Management System (electronic)
 - Secondary (downtime) - CS Logbook (hardcopy)
 - Medication Administration - Partial Waste
 - ePCR - Intervention entry
 - ePCR - Signature for partial waste
 - CS Card (hardcopy)
 - Primary - Inventory Management System (electronic)
 - Secondary (downtime) - CS Logbook (hardcopy)
 - Full Waste - No Medication Administration
 - ePCR - Intervention entry
 - ePCR - Signature for full waste
 - CS Card (hardcopy)
 - Primary - Inventory Management System (electronic)
 - Secondary (downtime) - CS Logbook (hardcopy)
 - Incident Report
 - Notification to agency CS-C

NOTE: Anytime a CS is removed from the tamper evident bag the corresponding controlled substance card (hardcopy) must be completed and submitted to the respective agency CS-C/CS-H

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

CS13.4 DAMAGED OR EXPIRED CS CONTAINER

1. Damaged

- Upon occurrence of damage or discovery of any part of a CS(s) container, tamper resistant bag and/or container having an appearance of damage, and *tampering or diversion is not suspected*, the following actions must occur:
 - a. The CS container must be immediately secured in a Pinellas County EMS Medication Bag or other tamper evident bag (e.g., evidence) without additional handling.
 - b. Maintain in the CS box or repository until transfer of custody occurs with the agency CS Coordinator or Handler
 - c. Immediate notification of the event/findings, upon discovery, must be made to the appropriate supervisor per individual agency operating procedures.
 - d. A CS Incident Report must be completed by the Certified Professional or ACST discovering the damage, detailing the damage and the events surrounding the damaged unit(s).
 - e. Custody of the damaged container and CS Incident Report must be delivered and transferred to the CS-CRC or CS-CRH at the CS Central Supply to be properly secured until a review is completed by the CS Compliance Coordinator and the EMS Medical Director or designee as soon as practical.

2. Expired

- Expiration dates must be managed in accordance with Protocol AD14
- Replacement of an expired controlled substance container must be managed in accordance with Section 13.2 of this protocol

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

CS13.5 SUSPECTED THEFT, TAMPERING, DIVERSION, MISSING OR BROKEN CHAIN OF CUSTODY

The following actions must be taken immediately upon identification of suspected theft, tampering, diversion or missing CS box, CS repository, electronic key and/or CSs:

- Field Unit Initial Actions
 1. Unit with personnel immediately placed out of service and must remain at the location where the event was first discovered until released by law enforcement (if involved) and the EMS Medical Director or designee
 2. Physical human contact with the unit, CS box and contents must be extremely limited until released
- Ambulance Hub Initial Actions
 1. The CS repository is to be immediately secured (if involved in the incident).
 2. No further physical human contact with the CS repository, CS box and/or contents is to occur.
 3. All personnel involved must remain at the location where the event was first discovered until released by law enforcement (if involved) and the EMS Medical Director or designee
 4. Limited transfer of custody may be approved by the EMS Medical Director or Designee to maintain operations
- **REQUIRED MANDATORY IMMEDIATE NOTIFICATIONS:**
 - Agency CS Coordinator
 - CS Compliance Coordinator
 - EMS Medical Director or Designee (via cell phone, office phone, text, through dispatch)
 - Law Enforcement
 - Obtain case number, name, and contact number for investigating officer - include in incident report

NOTE: for isolated broken chain of custody occurrence - law enforcement involvement will be determined by the agency EMS Controlled Substance Coordinator in consult with the EMS Medical Director or designee

- Required Documentation
 - Incident report - individual from all personnel involved
 - Inventory Management System
- Resupply
 - Handled with the approval of the EMS Medical Director or designee
 - Coordinated between the agency EMS CS Coordinator, PCEMS Controlled Substance Compliance Coordinator and the Controlled Substance Central Receiving Coordinator or handler

CS13 CONTROLLED SUBSTANCE MANAGEMENT PLAN OPERATIONAL

CS13.6 ELECTRONIC INVENTORY MANAGEMENT SYSTEM DOWNTIME PROCEDURES

In the event you are unable to access the inventory management system:

1. Immediately notify you agency supervisor
2. Immediately implement the CS logbook (paper).
 - Perform and document an inventory of the contents of your current CS box
 - All changes in status, whether a transfer of custody, administration or any other change will be documented in the paper logbook in addition to the paper drug cards until the electronic inventory management system is able to be accessed
 - Continue normal CS management practices until notified to switch back to the electronic management system.

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CS14 INVOLUNTARY TRANSPORT

S A F E T Y A L E R T

A fundamental principle in EMS is “crew and patient safety”

Law enforcement should be summoned to all involuntary transport situations for protection of the crew and the patient

This protocol describes the options available for the involuntary care and transport of a patient. There are three legal provisions for EMS to provide care for a patient 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 or refusal poses a real and present threat of substantial harm to his or her well-being; and it is not apparent that such harm may be avoided through the help of willing family members or friends 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)

CS14 INVOLUNTARY TRANSPORT

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 Behavioral Emergency
- For interfacility transports refer to Protocol CS6 Interfacility Transfer

CS15 DECEASED/OBVIOUS DEATH/WITHHOLDING RESUSCITATION



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. CS16)
 - 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:

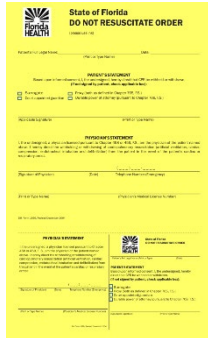
- Attempt resuscitation for **EVERY** patient unless both criteria are met:
 - 1.** Found pulseless and apneic
AND
 - 2.** Any of the following criteria are present:
 - Signs of irreversible death (e.g., decomposition)
 - Injuries incompatible with life (e.g., decapitation, incineration, or hemi-corpectomy)
 - Other **massive** blunt or penetrating trauma with initial rhythm Asystole or PEA less than 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 greater than 10 minutes or circumstances/locations of incident precludes rapid removal to a hospital (e.g., entrapment, inability to rapidly extricate, remote location)

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CS16 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 cardiopulmonary 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.

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 patient and/or family 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.

CS16 HONORING DNRO/MOLST/POLST

- Method #2 (cont.)
 - 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.

CS16 HONORING DNRO/MOLST/POLST

- 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

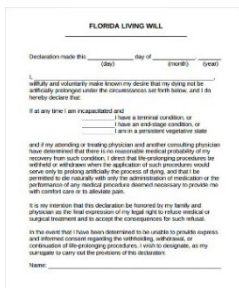
The patient identification device is a miniature version of the State of Florida Do Not Resuscitate Order Form #1896 and is incorporated by reference as part of the DNRO form.

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 it 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. 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.

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

CS16 HONORING DNRO/MOLST/POLST

Living Will:



FLORIDA LIVING WILL

Declaration made this _____ day of _____ (month) _____ (year)

I hereby and voluntarily make known my desire that the following be performed or not performed under the circumstances set forth below, and I do hereby declare that:

If at any time I am incapacitated and _____ I have a terminal condition, or _____ I have an end-stage condition, or _____ I am in a permanent vegetative state

and if my attending or treating physician and another consulting physician have determined that there is no reasonable medical probability of my recovery from such condition, I direct that life-prolonging procedures be withheld or withdrawn when the application of such procedures would serve only to prolong artificially the process of dying, and that I be permitted to die naturally with only the administration of medications or the performance of any medical procedure deemed necessary to provide me with comfort care or to alleviate pain.

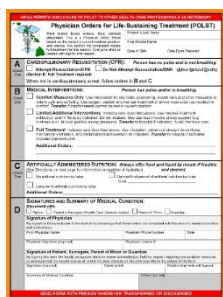
It is my intention that this declaration be honored by my family and physician and the their cooperation or refusal to follow medical or surgical treatment and to accept the consequences for such refusal.

In the event that I have been determined to be unable to provide express and informed consent regarding the withholding, withdrawal, or discontinuation of life-prolonging procedures, this declaration, as my surrogate to carry out the provisions of this declaration.

Name: _____

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)



Physician Orders for Life Sustaining Treatment (POLST)

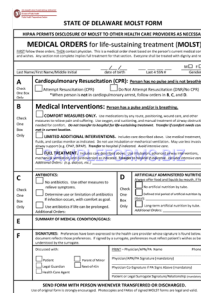
Section A: Current Appropriate Resuscitation (CPR) - Please have a conversation with your doctor about your wishes regarding CPR. Do you want to receive CPR? Yes No

Section B: Medical Interventions - About how you want to be treated. Do you want to receive medical interventions? Yes No

Section C: Artificially Assisted Nutrition - Always only used on a patient who is unable to eat or drink. Do you want to receive artificial nutrition? Yes No

Section D: Social Limits and Burden of Medical Complexities - Do you want to receive medical care that is burdensome? Yes No

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.



STATE OF DELAWARE MOLST FORM

DELAWARE'S POLICY OF MOLST TO OTHER HEALTH CARE PROVIDERS IS MANDATORY

MEDICAL ORDERS for life-sustaining treatment (MOLST)

Section A: Current Appropriate Resuscitation (CPR) - Do you want to receive CPR? Yes No

Section B: Medical Interventions - Do you want to receive medical interventions? Yes No

Section C: Artificially Assisted Nutrition - Do you want to receive artificial nutrition? Yes No

Section D: Social Limits and Burden of Medical Complexities - Do you want to receive medical care that is burdensome? Yes No

References:

- <http://polst.org/>
- <https://www.floridahealth.gov/about/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 - HONORING DNRO/MOLST/POLST

CS17 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

CS17 BLOOD SPECIMEN COLLECTION

CS17 - BLOOD SPECIMEN COLLECTION

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. (2022)) - 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.

CS17 BLOOD SPECIMEN COLLECTION

- 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. (2022) 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. (2022) 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.

CS17 BLOOD SPECIMEN COLLECTION

Pinellas County EMS Blood Sample Consent Form

Date	MM/DD/YY	Agency ID		Incident		FD Unit #		Amb Unit #		
Patient	Last Name					First Name			Initial	Revision 06/01/2008
EMS Clinician Drawing Sample	Name					ID #				
Law Enforcement Officer Requesting Sample	Name					ID #				
Reason for Blood Sample Request by Law Enforcement										
<input type="checkbox"/> Suspicion of Driving Under the Influence (DUI) <input type="checkbox"/> Criminal Investigation <input type="checkbox"/> Motor Vehicle Crash Involving a Fatality or a Potentially Fatal Injury <input type="checkbox"/> Other Investigation <input type="checkbox"/> Motor Vehicle Crash NOT Involving a Fatality or a Potentially Fatal Injury <input type="checkbox"/> Infectious Disease Testing <input type="checkbox"/> Other Reason: _____ Comments: _____										
Address or Location Where Blood Sample Was Taken										
Street: _____ City: _____ State: _____ ZIP: _____										
Other Information: _____										
Patient Consent Section										
I, _____ hereby consent to the request by, _____										
Print Patient Name Law Enforcement Agency										
for the Pinellas County EMS System Clinician to draw a blood sample for the purpose(s) indicated above. I understand that this blood sample may be analyzed pursuant to an on-going Law Enforcement Investigation.										
_____ : <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.										
EMS Clinician Validation Section										
I, _____ hereby certify that I have drawn a blood sample as requested by Law Enforcement										
EMS Clinician Name										
from the above named patient, and that alcohol has not been applied or used in any way during this procedure.										
_____ : <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.										
Law Enforcement Validation Section										
I, _____ hereby certify that I have witnessed the drawing of a blood sample from the										
Law Enforcement Officer										
named person by the above named EMS Clinician and that the blood sample tubes were appropriately labeled and sealed in the evidence container.										
_____ : <input type="checkbox"/> A.M. <input type="checkbox"/> P.M.										
Law Enforcement - Signature										
Date and Time of Day										

WHITE - EMS Original Copy

YELLOW - Law Enforcement Copy

PINK - Patient Copy

EMS Blood Sample/060108

CS17 - BLOOD SPECIMEN COLLECTION

CS18 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 employ this method rapidly and effectively
- 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 officer 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
 - 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
 - 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 greater than thirty (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

CS18 APPROACH TO MASS CASUALTY INCIDENTS (MCI)

PEARLS:

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

CS19 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 (Ref. CP16/CP18)

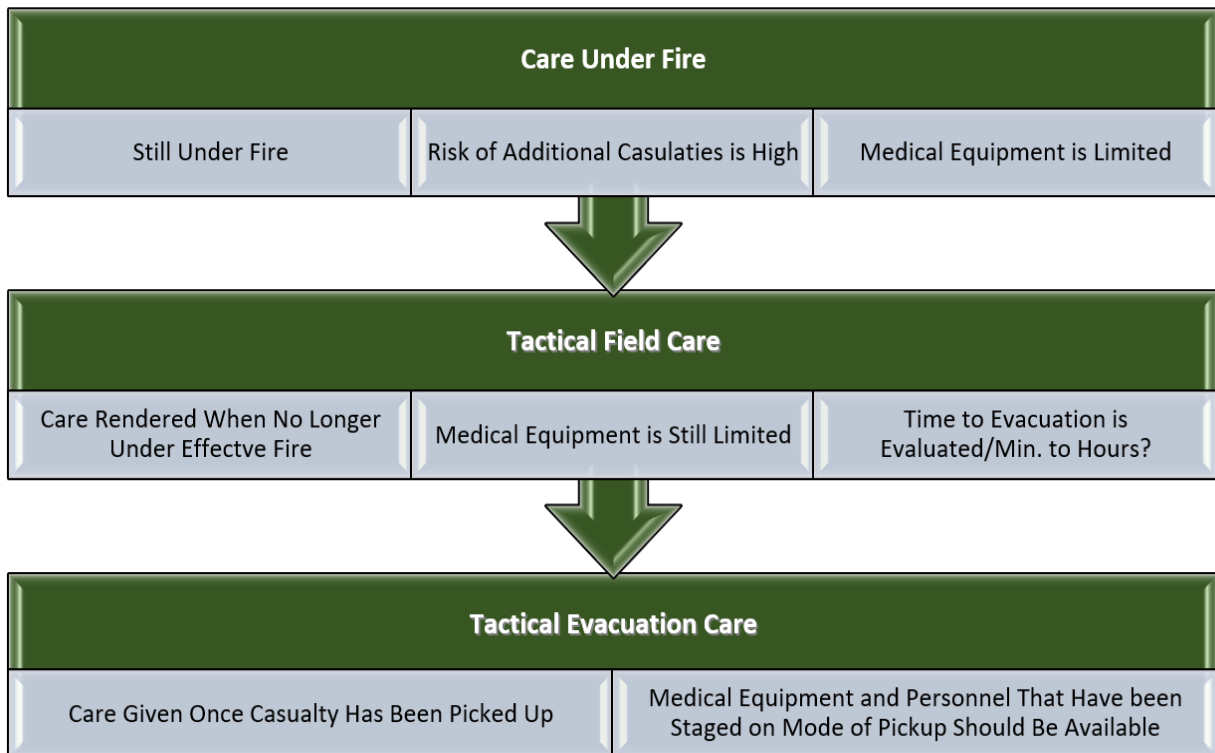
CS19 MED OPS - INCIDENTS WITH ONGOING THREATS

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 (Ref. CP16/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.



CS20 INFECTIOUS DISEASE/PANDEMIC

CS20.1 UNIVERSAL COVID19 GUIDANCE

Purpose - To provide an overview of how to stay safe and minimize exposure to COVID-19 through recommendations, processes, use of personal protective equipment (PPE), decontamination, and disposal of medical waste.

OFF DUTY

- Follow CDC/DOH guidance in your personal life to protect yourself and your family
- Stay healthy by eating well, getting enough sleep, washing your hands, etc.
- If you or your family become sick - report this to your supervisor **PRIOR to coming to work**

START OF SHIFT

- Follow your agency's screening process
- Ensure you are starting with a clean environment - decontaminate the station, response vehicle, patient compartment & stretcher (if applicable), medical equipment and bags, etc.
- Keep your personal food/gear away from the patient compartment or areas that could potentially be contaminated
- Ensure you have an adequate supply of and proper PPE and disinfectants
- Use proper PPE (Ref. CS20.2)
- Use proper disinfectants - Follow the **COVID-19 Disinfectant List** (included) guidelines to ensure the correct disinfectant and process is used. Ensure wet time guideline is met

RESPONSE / ON SCENE CARE / TRANSPORT

- Universal masking of all patients
 - All patients (age greater than 2 years as tolerated) will have a procedure/surgical mask applied.
 - Reference CS20.5 COVID19 Clinical Care for the use of supplemental oxygen
- Utilize baseline PPE for all patients (Ref. CS20.2)
 - Nitrile gloves and surgical mask (minimum Level 2) **OR** N95 respirator
- Utilize full PPE (Ref. CS20.2) for Respiratory Isolation Precautions (RIP) note, Patient with Suspected or Confirmed COVID-19, Patient in Cardiac Arrest, Active Airway Assistance and/or Aerosol Generating Procedures (e.g., suction, high flow oxygen, nebulizer, CPAP, BVM ventilation, airway placement) regardless of suspicion for COVID-19
 - Head:
 - N95 Respirator or Half face elastomeric respirator with P100 Cartridge Filters & goggles **OR**

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RESPONSE / ON SCENE CARE / TRANSPORT (cont.)

- Full-face elastomeric respirator with P100 Cartridge Filters and splash shields
 - Hands: Single Use Nitrile Gloves
 - Body: Gown or Single use coverall (e.g., Dupont Tychem)
- If COVID-19 not suspected, follow standard treatment protocols.
- If COVID-19 suspected use the Approach To Suspected COVID-19 Patient (Ref. CS20.4) protocol to minimize risk
- Provide care according to the current Pandemic Condition level (**GREEN**, **YELLOW**, **RED**, **BLACK**) and provide EARLY hospital notification
- “If you see something say something”
 - If you see someone without proper PPE or inappropriate actions say something for their safety and yours.
- Report to your chain of command any issues at healthcare facilities, hospitals, other agencies, etc.

AT HOSPITAL / AFTER THE CALL

- Ensure your unit is decontaminated per the **COVID-19 Disinfectant List** (included) guidelines.
- Ensure we follow each hospital’s infection control policies with courtesy (i.e., limiting access in the hospital, wearing a surgical mask, etc.)
- Ensure waste is properly disposed of (e.g., yellow bag for items that are retained for decon vs. a red bag for permanent disposal).
- Decontaminate your full face or half face elastomeric respirator and goggles, as applicable.
- Discard your N95 respirator, as applicable.
- Ensure proper documentation in **ePCR** of what isolation precautions were taken, PPE use per clinician, and final field impression if COVID-19 is suspected or confirmed.

IN BETWEEN CALLS / END OF SHIFT

- Have extra uniforms available and change your uniform to reduce contamination in the station, your response vehicle and personal vehicle.
- Ensure you have fully decontaminated before eating, drinking, smoking, touching your eyes/face, etc.

BE SAFE

- Please keep up the diligence of using proper PPE and disinfection practices to keep yourself, coworkers, work environment, and your family safe.

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COVID-19 Disinfectant List

	Primary	Wet Time	Secondary	Wet Time	Other/Specific Notes
Hands (bare)	Soap and Water	20 secs.	Hand Sanitizing Gel or Wipe	20 secs.	Hand Sanitizer - min. 60% Alcohol
Goggles (reusable)	Bleach (wipe or solution - 0.55% concentration)	1 min.	N/A	N/A	<i>MUST</i> rinse in clean water after application of bleach then air dry
Full Face Elastomeric Respirator (any brand)					
Half Face Elastomeric Respirator (any brand)					
Splash/Spark Cover (wipe exterior surface only)					
Gown (single use)	SINGLE USE ONLY	N/A	N/A	N/A	<i>DO NOT ATTEMPT TO DISINFECT</i>
Statpack Response Bags	Hydrogen Peroxide (wipe or solution minimum 1.4% concentration)	1 min.	Commercial Extractor	Normal Cycle	
Major Trauma Bag	Hydrogen Peroxide (wipe or solution minimum 1.4% concentration)	1 min.	Commercial Extractor	Normal Cycle	
Glucometer	Hydrogen Peroxide (wipe or solution minimum 1.4% concentration)	1 min.	Isopropyl Alcohol (minimum 60%)	30 secs.	
BP Cuff (Nylon)					
Stethoscope					
Trauma Shears	Isopropyl Alcohol (minimum 60%)	30 secs.	N/A	N/A	Dispose of when unable to properly decontaminate
Bandage Shears					
Stretcher (in its entirety)	Per manufacturer instructions		Per manufacturer instructions		
Panasonic CF20	Isopropyl Alcohol (minimum 60%)	1 min.	Hydrogen Peroxide (wipe or solution minimum 1.4% concentration)	30 secs.	
Panasonic CF20 LED Stylus					
Stryker LP15 Cardiac Monitor/Defibrillator					
Stryker LP15 Cardiac Monitor/Defibrillator - All Cables					
Surface Go3	Isopropyl Alcohol (minimum 60% but not more than 70%)	1 min.	N/A	N/A	<i>DO NOT utilize any other product for disinfection</i>
Motorola Portable Radios (all models)	Isopropyl Alcohol (minimum 60%)	30 secs.	N/A	N/A	
Vehicle - Cab Interior (hard surfaces)	Isopropyl Alcohol (minimum 60%)	30 secs.	N/A	N/A	
Vehicle - Patient Compartment	Per agency specific instructions	N/A	Per agency specific instructions	N/A	
General Hard Surfaces (when not noted above)	Hydrogen Peroxide (wipe or solution minimum 1.4% concentration)	1 min.	Isopropyl Alcohol (minimum 60%)	30 secs.	

CS20.1 - UNIVERSAL COVID19 GUIDANCE

UNIVERSAL PRECAUTIONS

Patient:

- Universal masking of all patients
 - ***ALL patients (age greater than 2 years old as tolerated) will have a procedure/surgical mask applied***

EMS Clinicians – Baseline PPE:

- Head:
 - Surgical Mask (minimum Level 2) **OR**
 - N95 Respirator
- Hands: Single Use Nitrile Gloves

*A clinician who is unvaccinated or “High Risk” is encouraged to use a N95 respirator as baseline PPE

COVID-19 FULL PPE

Patient:

- Universal masking of all patients
 - All patients (age greater than 2 years old as tolerated) will have a procedure/surgical mask applied

EMS Clinician – FULL PPE:

- Head:
 - N95 Respirator & Goggles **OR**
 - Half-face elastomeric respirator with P100 Cartridge Filters & Goggles **OR**
 - Full-face elastomeric respirator with P100 Cartridge Filters and Splash Shields
- Hands: Single Use Nitrile Gloves
- Body:
 - Gown **OR**
 - Single use coverall (i.e., Dupont Tychem)

CS20 INFECTIOUS DISEASE/PANDEMIC

CS20.3 COVID19 RESPONSE PLAN & DISPATCH ACTIONS

Pinellas County COVID-19 Unified Command has determined the following response configuration plan:

1. Pinellas County standard response configurations remain in place
2. Additional COVID-19 Special Rescue (SR) units may be added to the system
3. It is expected that agency Command Staff may implement "Condition 2" and/or "Condition 4" at their discretion
4. "Condition 5" is not to be used for pandemic response because transport units need to be managed centrally
5. Pandemic Condition Level (Green/Yellow/Red/Black) will be determined by the COVID-19 Unified Command and displayed on the Hospital Status Board (Ref. <https://hs.sunstarems.com/>)
6. Additional response configuration changes will be made as needed by the COVID-19 Unified Command

Dispatch Caller Screening:

1. Call takers (Regional 911 & Sunstar Communications) shall implement revised screening procedures which supersede all prior directives in the following manner:
 - On all Fire/EMS calls, ask: "Do you or anyone there have or think you have COVID?" if "yes" document RIP speed note and return to PDI.
 - On medical calls, ask "Do you or anyone there have flu like symptoms such as difficulty breathing, wheezing, fever, cough, or sore throat?" if "yes" document RIP speed note and return to PDI.
 - If "no" ask, "Have you or the patient had close contact with anyone with COVID within the last week?" if "yes" document RIP speed note and return to PDI.
2. For any "yes" answer, the call taker shall place the standard influenza speed note in the call:

"\$Respiratory isolation precautions!"

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3. System personnel shall be alerted and implement the appropriate level of PPE *prior to entering the space or making patient contact.*

Notes:

- Any suspicion of COVID19 on a fire or trauma call ask questions above.
- "Close contact" means within 6 feet for more than 15 minutes without PPE

Condition 2 Medical (2M)

1. During COVID-19, the EMS system is encountering frequent and lengthy Hospital Bed Delays
2. In the event of significant and sustained Hospital Bed Delays, EMS & Fire Administration may authorize "Condition 2 Medical" which will be enacted by 911 Dispatch following their SOP which includes notifications to the field and Sunstar
3. When the EMS system is experiencing a low number of ambulances available due to Hospital Bed Delays - EMS will deploy a CONDITION 2 MEDICAL Plan during High Activity to clear ambulances from hospitals
 - EMS Medical Communications will notify all hospitals via a Hospital Emergency Notification System (HENS) page. Prior to CONDITION 2 MEDICAL, EMS will communicate with Hospital Administrators
 - EMS will show countywide hospital status as CONDITION 2 MEDICAL
 - EMS will utilize system status management (SSM) tools to distribute patients as equitably as possible however reserves the right to transport all patients to the CLOSEST Hospital if the situation escalates
4. Refer to the EMS-Hospital Plan for the actions taken by Fire/EMS personnel and Hospital personnel during transfer of patient care at the Hospital
5. If the EMS system increases to Condition 3 Medical, the Condition 2M EMS-Hospital Plan will remain in force

Condition 3 Medical (3M)

1. During COVID-19, the EMS system is seeing sudden spikes in demand for EMS services especially transports by ambulance.
2. In the event of a significant and sustained system demand, EMS & Fire Administration may authorize "Condition 3 Medical" which will be enacted by 911 Dispatch following their SOP to immediately add transport capacity to the EMS system.

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3. During “Condition 3 Medical”, when a Rescue Unit is assigned to an EMS call, it will provide treatment and transport. Additional assistance may be requested by the Rescue Unit as needed to assist. A transport by a Rescue Unit will be to the closest most appropriate facility. Trauma / Sepsis / Stroke / STEMI Alerts, Pediatrics, Veterans, Baker Act must be transported to the appropriate specialty hospital per the Hospital Destination Policy (Ref. CS4).
4. When an ALS Engine, Truck, Squad or Medic Unit is assigned to an EMS call, a Sunstar Unit will be dispatched and handle the transport. ALS First Responder Units should refrain from calling for a Rescue Unit unless Sunstar Units are unavailable per Dispatch.
5. During Condition 3M, it is not necessary to call Medical Control for Fire Rescue transports contained in the Transport Resource Utilization (Ref. CS5) protocol.

CS20 INFECTIOUS DISEASE/PANDEMIC

CS20.4 APPROACH TO SUSPECTED COVID19 PATIENT

GOAL - MINIMIZE UNPROTECTED EXPOSURES

- Use the “Isolation Precautions Taken” intervention in ePCR to document what PPE was utilized
- Enter the number of personnel who donned PPE in the intervention qualifier
- Document what PPE was employed by each clinician in the Crew section

SUSPECT COVID-19 with **any** of the following patient symptoms regardless of dispatch notes, travel, or contact history:

- Fever or Chills (not required)
- Flu-like symptoms/body aches
- New loss of taste or smell
- Upper respiratory (congestion, sore throat, headache)
- Lower respiratory (cough or respiratory difficulty)
- Fatigue
- Gastrointestinal (GI) (nausea, vomiting, diarrhea)
- Patient with current laboratory confirmed COVID19 diagnosis

PROTECT YOURSELF:

- **Limit the number of clinicians approaching a suspected COVID-19 patient.**
- **If making patient contact, don FULL PPE** anytime you suspect COVID-19 *regardless* of dispatch information (Refer to the PPE placard)
 - N95 Respirator + goggles **OR**
 - Half face elastomeric respirator with P100 Cartridge Filters + goggles **OR**
 - Full-face elastomeric respirator with P100 Cartridge Filters (and splash shields)
 - Gown or single use coverall (e.g., Dupont Tychem)

PROTECT FAMILY MEMBERS:

“RIDERS” ARE PERMITTED in the ambulance with the following **REQUIREMENT**:

- Any rider should wear a surgical mask

CS20.4 - APPROACH TO SUSPECTED COVID19 PATIENT

CS20 INFECTIOUS DISEASE/PANDEMIC

CS20.5 COVID19 CLINICAL CARE

Documentation:

Any patient who meets screening criteria shall have the words “*Suspected COVID-19*” or “*Confirmed COVID-19*” documented in the ePCR to ensure activation of the surveillance triggers.

Protective Actions:

Take the following Protective Measures when caring for ALL suspected COVID-19 Patients:

GOAL	PROTECTIVE ACTIONS	
Protect Yourself	Minimize personal items carried and do not bring/store personal items in the patient care compartment	Don all appropriate PPE prior to making patient contact and limit number of clinicians involved in patient care <i>(Refer to PPE placard - Ref. CS20.2)</i>
Minimize spread of viral particles from patient	Place surgical mask on a patient (over nasal cannula or non-rebreather mask as needed) <i>(Refer to PPE placard - Ref. CS20.2)</i>	Wrap patient in yellow disposable blanket
Use distancing / shielding / air flow	Move non-essential personnel away from aerosol generating procedures and place barriers over or between interventions and personnel. Perform outside if possible.	Use exhaust fan in ambulance patient compartment Use A/C in non-recirculating mode in ambulance cab

CS20.5 - COVID19 CLINICAL CARE

Clinical PEARLS:

1. A patient with COVID-19 may present with significant hypoxia (SpO2 in the 80's) without air hunger or altered mental status. This is referred to as “Happy Hypoxia.” Fatigue and mental status decline should guide airway intervention to a greater degree than SpO2 or respiratory rate.
2. Intubation should be the last resort in a suspected COVID-19 patient.
3. Best practices are changing rapidly as we learn more about this disease. Clinicians must stay up-to-date with changes for their own protection and to provide optimal care.
4. During Condition **GREEN**, suspected COVID-19 patients should be given the best prehospital care possible following the placard on Page 4. Other patients should be treated as per normal protocols.

CS20 INFECTIOUS DISEASE/PANDEMIC

Clinical PEARLS (cont.)

5. Crisis/Disaster Standards of Care are dictated by risk/benefit ratio and availability of resources. Condition **YELLOW** warrants risk management, while Conditions **RED** and **BLACK** warrant alterations.
6. CURRENT CONDITION will be displayed on the Hospital Status Screen.

ADULT		PANDEMIC CONDITION GREEN COVID-19 SPECIFIC CLINICAL CARE and PROVIDER RISK MANAGEMENT GUIDANCE	
General	Protocol	COVID-19 Alteration	
Approach to hypoxia and airway management	Multiple	<ul style="list-style-type: none"> • A patient with COVID-19 should have advanced airways placed only as a last resort • All reasonable efforts to achieve adequate oxygenation and ventilation (i.e., supplemental O2, patient self-positioning to prone, CPAP, etc.) should be undertaken prior to placing an advanced airway • Hypoxia (SpO2 80-90%) may be tolerated while attempting these interventions 	
Viral Filter	CP1/CP5	<ul style="list-style-type: none"> • Place viral filter between King Airway/ET Tube/Face Mask and EtCO2 filterline set 	
Aerosol Generating Procedures	Protocol	COVID-19 Management Strategies (USE FULL PPE + PROTECTIVE ACTIONS!)	
Supplemental Oxygen	U1	Apply Supplemental Oxygen as needed	
Albuterol nebulizer Ipratropium nebulizer	A2/P2	If patient has metered dose inhaler (MDI), may use instead of nebulizer (2 puffs every 3 minutes to max of 10 puffs - replace surgical mask prior to exhalation)	
CPAP	CP6	Ensure proper PPE	
BVM	CP1	HIGH RISK - USE CAUTION MOVE ASAP TO A KING AIRWAY	
Extraglottic/King Airway Insertion	CP1	HIGH RISK - USE CAUTION Administer facilitation medications per CP1.4 if needed	
Endotracheal Intubation	CP1	HIGH RISK - USE CAUTION Preference for King Airway for clinician safety Ensure cuff is inflated PRIOR to ventilating	
Surgical Cricothyrotomy	CP2	HIGH RISK - USE CAUTION	

CS20.5 - COVID19 CLINICAL CARE

CS20 INFECTIOUS DISEASE/PANDEMIC

CS20.5 - COVID19 CLINICAL CARE

PEDIATRIC		PANDEMIC CONDITION GREEN COVID-19 SPECIFIC CLINICAL CARE and PROVIDER RISK MANAGEMENT GUIDANCE	
General	Protocol	COVID-19 Alteration	
Approach to hypoxia and airway management	Multiple	<ul style="list-style-type: none"> • A patient with COVID-19 should have advanced airways placed only as a last resort • All reasonable efforts to achieve adequate oxygenation and ventilation (i.e., supplemental O2, patient self-positioning to prone, CPAP, etc.) should be undertaken prior to placing an advanced airway • Hypoxia (SpO2 80-90%) may be tolerated while attempting these interventions 	
Viral Filter	CP3/CP5	<ul style="list-style-type: none"> • Place viral filter between King Airway/ET Tube/Face Mask and EtCO2 filterline set 	
Aerosol Generating Procedures	Protocol	COVID-19 Management Strategies (USE FULL PPE + PROTECTIVE ACTIONS!)	
Supplemental Oxygen	U1	Apply supplemental oxygen as needed	
Albuterol nebulizer Ipratropium nebulizer	P2	If patient has metered dose inhaler (MDI), may use instead of nebulizer (2 puffs every 3 minutes to max of 10 puffs - replace surgical mask prior to exhalation)	
CPAP	CP6	Ensure proper PPE	
BVM	CP3	HIGH RISK - USE CAUTION	
Endotracheal Intubation	CP3	HIGH RISK - USE CAUTION Ensure cuff is inflated PRIOR to ventilating	
Surgical Cricothyrotomy/ Needle Cricothyrotomy	CP2/CP4	HIGH RISK - USE CAUTION	

CS20 INFECTIOUS DISEASE/PANDEMIC

ADULT	PANDEMIC CONDITION YELLOW COVID-19 SPECIFIC CLINICAL CARE and PROVIDER RISK MANAGEMENT GUIDANCE	
General	Protocol	COVID-19 Alteration
Destination	CS4	Closest Appropriate Hospital (System Status Management)
Fluid Resuscitation Goals	M9	<ul style="list-style-type: none"> Limit intravenous fluid administration to an initial 500 mL bolus Early norepinephrine as needed
Viral Filter	CP1/CP5	Place viral filter between King Airway/ET Tube/Face Mask and EtCO2 filterline set
Aerosol Generating Procedures	Protocol	COVID-19 Management Strategies (USE FULL PPE + PROTECTIVE ACTIONS!)
Supplemental Oxygen	U1	Permissive hypoxia – Goal SpO2 > 85% (if able to tolerate w/o severe distress or AMS) ↓ Nasal cannula (max 6 LPM) or non-rebreather mask under procedure/surgical mask
Albuterol nebulizer Ipratropium nebulizer	A2	HIGH RISK - USE ALTERNATIVE If patient has metered dose inhaler (MDI), may use instead of nebulizer (2 puffs every 3 minutes to max of 10 puffs - replace surgical mask prior to exhalation) ↓ 0.3 mg epinephrine (1 mg/mL concentration) intramuscular if in extremis
Suction	U1	HIGH RISK - MINIMIZE USE
CPAP	CP6	HIGH RISK - MINIMIZE USE
BVM	CP1	HIGH RISK - MINIMIZE USE MOVE ASAP TO A KING AIRWAY
Extraglottic/King Airway Insertion	CP1	HIGH RISK - USE EXTREME CAUTION <ul style="list-style-type: none"> Administer facilitation medications per CP1.4 if needed Ensure seated well PRIOR to ventilating
Endotracheal Intubation	CP1	HIGH RISK - AVOID IF POSSIBLE <ul style="list-style-type: none"> Preference for King Airway for clinician safety Ensure cuff is inflated PRIOR to ventilating
Surgical Cricothyrotomy	CP2	HIGH RISK - USE EXTREME CAUTION
CPR	C1/CP9/ T2/CT3	HIGH RISK - EXTREME CAUTION Consider early OLMC consultation for cessation of efforts IN SUSPECTED COVID-19 PATIENTS

CS20.5 - COVID19 CLINICAL CARE

CS20 INFECTIOUS DISEASE/PANDEMIC

CS20.5 - COVID19 CLINICAL CARE

PEDIATRIC	PANDEMIC CONDITION YELLOW COVID-19 SPECIFIC CLINICAL CARE and PROVIDER RISK MANAGEMENT GUIDANCE	
General	Protocol	COVID-19 Alteration
Destination	CS4	Closest Appropriate Hospital (System Status Management)
Fluid Resuscitation Goals	P18	<ul style="list-style-type: none"> • Limit fluids to initial 10 mL/kg • Early epinephrine drip infusion as needed
Viral Filter	CP3/CP5	Place viral filter between King Airway/ET Tube/Face Mask and EtCO2 filterline set
Aerosol Generating Procedures	Protocol	COVID-19 Management Strategies (USE FULL PPE + PROTECTIVE ACTIONS!)
Supplemental Oxygen	U1	Permissive hypoxia – Goal SpO2 > 85% (if able to tolerate w/o severe distress or AMS) ↓ Nasal cannula (max 6 LPM) or non-rebreather mask under procedure/surgical mask
Albuterol nebulizer Ipratropium nebulizer	P2	HIGH RISK - USE ALTERNATIVE If patient has MDI, USE IT + BRING IT TO THE ER (2 puffs every 3 minutes to max of 10 puffs - replace procedure/surgical mask prior to exhalation) ↓ Epinephrine (1 mg/mL concentration) intramuscular if in extremis (dose per PCEMS Handtevy Medication & Equipment Guidebook)
Suction	U1	HIGH RISK - MINIMIZE USE
BVM	CP3	HIGH RISK - MINIMIZE USE
Endotracheal Intubation	CP3	HIGH RISK - AVOID IF POSSIBLE Ensure cuff is inflated PRIOR to ventilating
Surgical Cricothyrotomy/ Needle Cricothyrotomy	CP2/CP4	HIGH RISK - USE EXTREME CAUTION
CPR	P3/CP9/T2/CT4	HIGH RISK - EXTREME CAUTION Consider OLMC consultation for cessation of efforts IN A SUSPECTED COVID-19 PATIENT

CS20 INFECTIOUS DISEASE/PANDEMIC

ADULT	PANDEMIC CONDITION RED STANDARD OF CARE ALTERATIONS FOR A COVID-19 PATIENT	
General	Protocol	COVID-19 STANDARD OF CARE CHANGES
Destination	CS4	Closest Appropriate Hospital (System Status Management)
FirstPass Quality Measures	Multiple	Suspended - Reviewers may use "MCI/Disaster" reason in Overall Exception box
Fluid Resuscitation Goals	M9	Limit fluids to initial 500 mL bolus Early norepinephrine as needed
Viral Filter	CP1/CP5	Place viral filter between King Airway/ET Tube/Face Mask and EtCO2 filterline set
Aerosol Generating Procedures	Protocol	COVID-19 STANDARD OF CARE CHANGES (USE PROTECTIVE ACTIONS!)
Supplemental Oxygen	U1	Permissive hypoxia to SpO2 85% (if able to tolerate w/o severe distress or AMS) ↓ Nasal Cannula (max 6 LPM) or non-rebreather mask under procedure/surgical mask
Albuterol nebulizer Ipratropium nebulizer	A2	NOT INDICATED - DO NOT PERFORM ↓ If patient has metered dose inhaler (MDI), USE IT + BRING IT TO THE ER, (2 puffs every 3 minutes to max of 10 puffs - replace procedure/surgical mask prior to exhalation) ↓ 0.3 mg epinephrine (1 mg/mL concentration) intramuscular if in extremis
Suction	U1	AVOID IF POSSIBLE
CPAP	CP8	NOT INDICATED - DO NOT PERFORM
BVM	CP1	AVOID IF POSSIBLE - MOVE ASAP TO KING AIRWAY
Extraglottic/King Airway Insertion	CP1	USE EXTREME CAUTION FULL PPE AND PROTECTIVE MEASURES Administer facilitation medications per CP1.4 if needed Ensure seated well PRIOR to ventilating
Endotracheal Intubation	CP1	NOT INDICATED - DO NOT PERFORM
Surgical Cricothyrotomy	CP2	NOT INDICATED - DO NOT PERFORM
CPR	C1/CP9/ T2/CT3	Attempt resuscitation only if initial rhythm (prior to EMS compressions) V-fib or bystander CPR in progress, and consider early cessation if no ROSC after 3 shocks and 3 epinephrine (0.1 mg/mL concentration)

CS20.5 - COVID19 CLINICAL CARE

CS20 INFECTIOUS DISEASE/PANDEMIC

CS20.5 - COVID19 CLINICAL CARE

PEDIATRIC	PANDEMIC CONDITION RED STANDARD OF CARE ALTERATIONS FOR A COVID-19 PATIENT	
General	Protocol	COVID-19 STANDARD OF CARE CHANGES
Destination	CS4	Closest Appropriate Hospital (System Status Management)
FirstPass Quality Measures	Multiple	Suspended - Reviewers may use "MCI/Disaster" reason in Overall Exception box
Fluid Resuscitation Goals	P18	Limit fluids to initial 10 mL/kg bolus Early norepinephrine as needed
Viral Filter	CP3/CP5	Place viral filter between King Airway/ET Tube/Face Mask and EtCO2 filterline set
Aerosol Generating Procedure	Protocol	COVID-19 STANDARD OF CARE CHANGES (USE PROTECTIVE ACTIONS!)
Supplemental Oxygen	U1	Permissive hypoxia to SpO2 85% (if able to tolerate w/o severe distress or AMS) ↓ Nasal cannula (max 6 LPM) or non-rebreather mask under procedure/surgical mask
Albuterol nebulizer Ipratropium nebulizer	P2	NOT INDICATED - DO NOT PERFORM ↓ If patient has a metered dose inhaler (MDI), USE IT + BRING IT TO THE ER, (2 puffs every 3 minutes to max of 10 puffs--replace procedure/surgical mask prior to exhalation) ↓ Epinephrine (1 mg/mL concentration) intramuscular if in extremis (dose per PCEMS Handtevy Medication & Equipment Guidebook)
Suction	U1	AVOID IF POSSIBLE
BVM	CP3	AVOID IF POSSIBLE
Endotracheal Intubation	CP3	HIGH RISK - USE EXTREME CAUTION Ensure cuff is inflated PRIOR to ventilating
Surgical Cricothyrotomy/ Needle Cricothyrotomy	CP2/CP4	HIGH RISK - USE EXTREME CAUTION
CPR	P3/CP9/T2/CT4	HIGH RISK - EXTREME CAUTION Consider OLMC consultation for cessation of efforts IN A SUSPECTED COVID-19 PATIENT

CS20 INFECTIOUS DISEASE/PANDEMIC

ADULT	PANDEMIC CONDITION BLACK STANDARD OF CARE ALTERATIONS FOR COVID-19 PATIENTS	
	NOTE: Condition BLACK will likely require alteration of standard of care for all patients/assumption that all EMS patients are COVID-19 patients	
General	Protocol	COVID-19 STANDARD OF CARE CHANGES
Destination	CS4	Closest Hospital or Approved Alternate Destination
Fluid Resuscitation Goals	M9	Limit fluids to initial 500 mL bolus Early norepinephrine as needed
Aerosol Generating Procedures	Protocol	COVID-19 STANDARD OF CARE CHANGES (USE PROTECTIVE ACTIONS!)
Supplemental Oxygen	U1	Permissive hypoxia to SpO2 85% (if able to tolerate w/o severe distress or AMS) ↓ Nasal cannula (max 6 LPM) or non-rebreather mask under procedure/surgical mask
Albuterol nebulizer Ipratropium nebulizer	A2	NOT INDICATED - DO NOT PERFORM ↓ If patient has MDI, USE IT + BRING IT TO THE ER, (2 puffs every 3 minutes to max of 10 puffs--replace procedure/surgical mask prior to exhalation) ↓ 0.3 mg epinephrine (1 mg/mL concentration) intramuscular if in extremis ↓ A2 OLMC options may be performed without consultation
Suction	U1	AVOID IF POSSIBLE
CPAP	CP8	NOT INDICATED - DO NOT PERFORM
BVM	CP1/CP3	NOT INDICATED - DO NOT PERFORM
Extraglottic/King Airway Insertion	CP1/CP3	NOT INDICATED - DO NOT PERFORM
Endotracheal Intubation	CP1/CP3	NOT INDICATED - DO NOT PERFORM
CPR	C1/CP9/ CT3	NOT INDICATED - DO NOT PERFORM

CS20.5 - COVID19 CLINICAL CARE

CS20 INFECTIOUS DISEASE/PANDEMIC

CS20.5 - COVID19 CLINICAL CARE

PEDIATRIC		PANDEMIC CONDITION BLACK STANDARD OF CARE ALTERATIONS FOR COVID-19 PATIENTS
NOTE: Condition BLACK will likely require alteration of standard of care for all patients/assumption that all EMS patients are COVID-19 patients		
General	Protocol	COVID-19 STANDARD OF CARE CHANGES
Destination	CS4	Closest Hospital or Approved Alternate Destination
Fluid Resuscitation Goals	P18	Limit fluids to initial 10 mL/kg bolus Early norepinephrine as needed
ETCO2 Monitoring	CP3/CP5	Place viral filter between King Airway/ET Tube/Face Mask and EtCO2 filterline set
Aerosol Generating Procedures	Protocol	COVID-19 STANDARD OF CARE CHANGES (USE PROTECTIVE ACTIONS!)
Supplemental Oxygen	U1	Permissive hypoxia to SpO2 85% (if able to tolerate w/o severe distress or AMS) ↓ Nasal cannula (max 6 LPM) or non-rebreather mask under procedure/surgical mask
Albuterol nebulizer Ipratropium nebulizer	P2	NOT INDICATED - DO NOT PERFORM ↓ If patient has MDI, USE IT + BRING IT TO THE ER, (2 puffs every 3 minutes to max of 10 puffs--replace procedure/surgical mask prior to exhalation) ↓ Epinephrine (1 mg/mL concentration) intramuscular if in extremis (dose per PCEMS Handtevy Medication & Equipment Guidebook) ↓ P2 OLMC options may be performed without consultation
Suction	U1	AVOID IF POSSIBLE
BVM	CP3	AVOID IF POSSIBLE
Endotracheal Intubation	CP3	HIGH RISK - USE EXTREME CAUTION Place filter between ET Tube and EtCO2 filterline set Ensure cuff is inflated PRIOR to ventilating
Needle Cricothyrotomy	CP4	HIGH RISK - USE EXTREME CAUTION

CS20 INFECTIOUS DISEASE/PANDEMIC

CS20.6 COVID-19 EMS-Hospital Plan

Objective: Streamline the transfer of patient care during COVID-19 Spike in cases

911 Patient - Transfer of Patient Care - Emergency Room
<ul style="list-style-type: none">• During CONDITION 1 - NORMAL OPERATIONS, EMS will absorb Hospital Bed Delays to the extent possible to assist with ensuring the normally high level of service• Transfer of a suspected/confirmed COVID-19 Patient:<ul style="list-style-type: none">○ EMS will provide early notification (min.10 mins) via the Hospital Radio to alert hospital staff○ Upon arrival at hospital, may discontinue aerosol treatment and CPAP temporarily if needed while transitioning to an appropriate care area○ Hospital staff will not delay placement of a patient for COVID-19 testing nor must the testing be performed in the EMS unit• Notes:<ul style="list-style-type: none">○ EMS will not remain inside the ambulance waiting with a patient for greater than 15 minutes - there must be a preset pathway for transfer of patient care
CONDITION 2 MEDICAL PLAN
<ul style="list-style-type: none">• When EMS is experiencing a low number of Ambulances available due to hospital bed delays - EMS will deploy a CONDITION 2 MEDICAL during high activity to clear Ambulances from hospitals<ul style="list-style-type: none">○ EMS Medical Communications will notify all hospitals via a Hospital Emergency Notification System (HENS) page○ Prior to CONDITION 2 MEDICAL, EMS will communicate with hospital administrators○ EMS will show countywide hospital status as CONDITION 2 MEDICAL○ EMS will utilize System Status Management (SSM) tools to distribute patients as equitably as possible however reserves the right to transport all patients to the CLOSEST Hospital if the situation escalates• EMS at <u>15 minutes</u> will find placement for any Severity Green and/or Yellow patient (e.g., waiting room, triage nurse, wheelchair, ER stretcher, or disaster stretcher deployed by EMS to a hospital).<ul style="list-style-type: none">○ EMS will follow any guidance from hospital staff (e.g., please bring this patient to the waiting room)• EMS will use a triage tag to indicate the patient severity and a complete printed Patient Care Report (PCR) will be left with the patient that will have the history of present illness, assessment, and treatment documentation<ul style="list-style-type: none">○ If any hospital staff need to speak with the Paramedic, please call Medical Communications at 727-582-2003.○ They will contact the Paramedic to call when they are available

CS20.6 - COVID19 EMS HOSPITAL PLAN

CS20 INFECTIOUS DISEASE/PANDEMIC

CONDITION 2 MEDICAL PLAN (cont.)

- EMS will continue care for a **Severity Red** patient including any “Alert” (Sepsis/STEMI/Stroke/Trauma) patient until transfer of care can be completed - not to exceed 30 minutes
 - EMS Crews will consult with Online Medical Control if there is a delay transferring care of a critical patient
- An attempt will be made to provide a verbal report to Hospital Staff
 - If a verbal report cannot be made, the Paramedic will relay via radio to the hospital a standard “radio report” indicating that EMS is responding to the next 911 patient
 - If the Hospital does not answer the radio, a report will be given on the radio channel which is recorded by Pinellas County 911
- The ambulance or rescue unit will expedite their “return to service” to respond to the next mission
- Leaving a patient at a hospital is not patient abandonment per EMTALA
 - A hospital is responsible for a patient as soon as EMS arrives at the facility
- This plan will remain in effect if CONDITION 3 MEDICAL for fire rescue transport is enacted
- When the situation has resolved, EMS will return to CONDITION 1 - NORMAL OPERATIONS

COVID-19 ALF/Nursing Home Transfers

- All Hospitals can receive a COVID-19 patient
- The 911 protocol will be used for 911 and less than five non-emergency transports from an ALF/nursing home
- For greater than five interfacility transports from an ALF/nursing home, EMS notify DOH and will attempt to coordinate with the facility.
 - EMS will coordinate with Hospitals for “direct admissions” to avoid overwhelming one Hospital or Hospital System

Current Hospital Status – <http://hs.sunstarems.com/>

CS20 INFECTIOUS DISEASE/PANDEMIC

CS20.7 STAY AT HOME CARE FOR COVID19

For use in shared medical decision making with confirmed or suspected COVID-19 patients to determine which patients are appropriate for home care versus transport to hospital



Assess for presence of INCLUSION criteria (MUST have ALL)

- Respiratory rate: 8-22/minute
- O2 saturation greater than 94% on room air (fingertip)
- Heart rate less than 110
- Systolic blood pressure greater than 100
- GCS 15
- Has decisional capacity
- Age 13-50
- Able to care for self and has appropriate support system in place
- Has a functional cell or home phone (available for Department of Health to contact them)



2. Assess for presence of EXCLUSION criteria (CANNOT have any)

- Chest pain (other than mild with cough) or ANY suspicion of ACS or CHF
- Respiratory distress or shortness of breath at rest or with mild activity
- Cyanosis or Diaphoresis
- Syncope or Altered Mental Status
- Toxic/Shock Appearance
- Any High-Risk Condition including: Pregnancy, Diabetes, Cardiovascular or pulmonary disease, and Immune compromise (HIV, Chemotherapy, etc.)
- Paramedic intuition that patient requires transport



<u>Home Care Decision*</u>	<u>Transport Decision</u>
<ul style="list-style-type: none"><input type="checkbox"/> Provide DOH/EMS follow up information card<input type="checkbox"/> Document "COVID-19 Home Care" in disposition field and close call with dispatch as "COVID-19 Home Care" <p>*If the patient meets non-transport criteria but is insisting on transport to the hospital, contact OLMC for further guidance.</p>	<p>If the patient does not meet ALL inclusion criteria or meets ANY exclusion criteria - assess, treat, and transport to hospital following all current protocols and Medical Control Directives</p>

To prevent contamination of equipment, verbal consent will be taken by one clinician and witnessed by another (2nd medic/EMT in PPE or standing at a safe distance and listening). Clinician will add a signature "Crew Signing-Stay at Home" and the 2nd Clinician will witness

CS20.7 - STAY AT HOME CARE FOR COVID19

CS20 INFECTIOUS DISEASE/PANDEMIC

CS20.8 INSTRUCTIONS FOR STAY AT HOME FOR COVID19

CS20.8 - INSTRUCTIONS FOR STAY AT HOME FOR COVID19

Signs and Symptoms





Patients with COVID-19 symptoms are likely safe to recover at home if they meet **ALL** the following conditions:

<input type="checkbox"/> Is between 13-50 years of age	<input type="checkbox"/> Oxygen saturation is greater than 94% on room air. (fingertip measurement if available)
<input type="checkbox"/> Can care for self and has appropriate support system in place at home	<input type="checkbox"/> Pulse Rate is less than 110/minute
<input type="checkbox"/> Has functional cell or home phone (able to call for help and be contacted by the Department of Health)	<input type="checkbox"/> Systolic Blood Pressure is greater than 100
	<input type="checkbox"/> Respiratory Rate is between 8-22/minute



While you are recovering at home, you should self-monitor your symptoms and condition regularly.

1. Take care of yourself at home if you are mildly ill and low risk
2. Call your family doctor for advice
3. Use telehealth whenever possible to minimize exposures
4. Call before going to your doctor's office or an urgent care facility to get instructions on how to minimize exposures when you arrive
5. Contact the Department of Health (see contact numbers next page)

How to Protect Yourself and Others

<ul style="list-style-type: none"> • Stay HOME, Stay SAFE, Save a LIFE  	<ul style="list-style-type: none"> • Use a separate room and bath room for sick household members (if possible). 
<ul style="list-style-type: none"> • Practice social distancing  • Avoid sharing personal items like utensils, food, and drinks.  	<ul style="list-style-type: none"> • Wash hands often with soap and water (preferred) or use an alcohol-based hand sanitizer with at least 60% alcohol if soap and water are unavailable 
<ul style="list-style-type: none"> • Clean the sick room and bathroom to avoid unnecessary contact with the sick person  	<ul style="list-style-type: none"> • Provide your sick household member with clean, disposable facemasks to wear at home, if available, to help prevent spreading COVID-19 to others

CS20 INFECTIOUS DISEASE/PANDEMIC

	<p>Call 911 or go to the Hospital Emergency Department if your condition gets worse, you have an emergency, or you develop any of the following warning signs*</p>	
<ul style="list-style-type: none"> • Difficulty breathing or shortness of breath • Persistent pain or pressure in the chest 	<ul style="list-style-type: none"> • New confusion or inability to arouse • Bluish lips or face 	

Resources

Consider Tele-Health if you need help

<p>Advent Health eCare https://www.adventhealth.com/coronavirus-resource-hub</p>	<p>Veterans Administration - VA Telehealth Services https://telehealth.va.gov/</p>
<p>BayCare Anywhere www.baycareanywhere.org</p>	<p>Florida Department of Health https://floridahealthcovid19.gov/ Call 866-779-6121</p>
<p>BayCare COVID-19 Testing Centers - MUST BE PRESCREENED https://baycare.org/coronavirus/covid-19-testing-centers</p>	<p>HCA Hospitals—COVID-19 Information Line 833-582-1972</p>

For more information, please call or visit:

<p>Florida Department of Health COVID-19 Hotline: (866) 779-6121 Website: https://floridahealthcovid19.gov/ Email: COVID-19@flhealth.gov</p>	<p>Centers for Disease Control and Prevention: Website: https://www.cdc.gov/</p>
<p>Pinellas County Health Department DOH-Pinellas Epidemiology: (727) 824-6932</p>	
<p>Pinellas County Health Department Locations</p>	
<p>Clearwater Health Department 310 N. Myrtle Ave. Clearwater, FL 33755 727-469-5800</p>	<p>St. Petersburg Health Department 205 Dr. Martin Luther King Jr. St. N. St. Petersburg, FL 33701 727-824-6900</p>
<p>Mid-County Health Department 8751 Ulmerton Rd. Largo, FL 33771 727-524-4410</p>	<p>Tarpon Springs Health Department 301 S. Disston Ave. Tarpon Springs, FL 34689 727-942-5457</p>

CS20.8 - INSTRUCTIONS FOR STAY AT HOME FOR COVID19

CS20.9 Monkeypox for EMS Providers

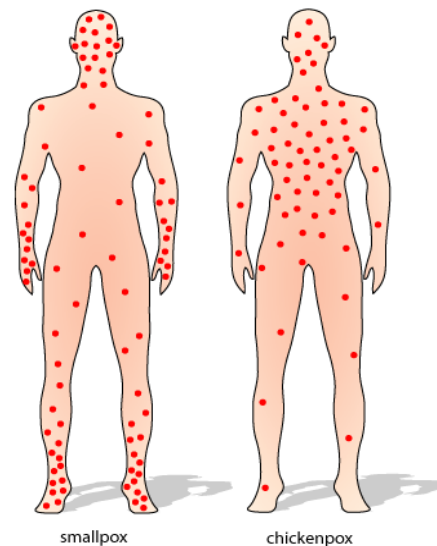
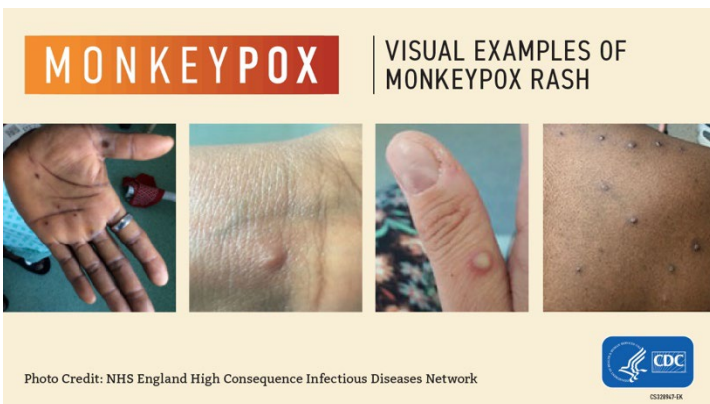
Monkeypox is a rare disease caused by a virus that occurs mostly in central and western Africa. However, monkeypox infections also occur in other parts of the world. The monkeypox virus can be transmitted from animals to humans. These animals include different African rodents and monkeys. Once a person becomes infected with the monkeypox virus they can pass it to other people. Monkeypox is not a very contagious disease, and the risk of contracting monkeypox is generally low. Recently there has been an increase in human monkeypox infections in different parts of the world, including Pinellas County

Symptoms and Transmission

- Monkeypox typically begins with flu-like symptoms (e.g., fever, chills, headache, tiredness, muscle aches) and swelling of the lymph nodes and progresses to a rash on the face and body. Duration of illness is usually 2 to 4 weeks.
- Person-to-person transmission occurs through exposure to large respiratory droplets, which can be projected as far as 6 feet. It can also be transmitted by way of exposure to mucous membranes (eyes, nose, mouth), direct contact with body fluids or lesions, and indirect contact with lesions, such as through contaminated clothing or linens. A patient is considered infectious 5 days prior to rash onset until crusting of skin lesions.



CS20.9 - MONKEYPOX



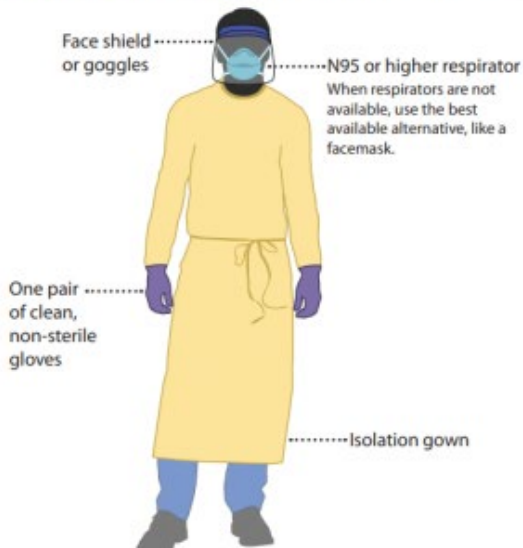
CS20 INFECTIOUS DISEASE/PANDEMIC

Protection and Management

- EMS personnel should strictly adhere to standard, contact, and airborne precautions similar to COVID-19. This includes a fit-tested N-95/ P-100 respirator, gown, gloves, and eye protection
- Apply a surgical mask to the patient if tolerated and consider covering the patient with an impervious sheet if rash is present.
- Exercise caution when performing aerosol-generating procedures. Only perform these procedures if medically necessary and cannot be postponed.
- Inform the receiving facility, as soon as possible, that you suspect a patient may be infected with Monkeypox, so that space is made available to properly isolate the patient on arrival and that receiving healthcare personnel are in appropriate PPE.
- Clean and disinfect all surfaces of the ambulance and equipment with an EPA-registered hospital grade disinfectant such as hydrogen peroxide. Reference CT 26
- Monkeypox contaminated waste must be disposed in a red biohazard bag.

COVID-19 Personal Protective Equipment (PPE) for Healthcare Personnel

Preferred PPE – Use N95 or Higher Respirator



Acceptable Alternative PPE – Use Facemask



[cdc.gov/COVID19](https://www.cdc.gov/COVID19)

CS20.9 - MONKEYPOX

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CS21 ALTERNATE STANDARDS OF CARE

1. Prior to Arrival of Hazardous Weather

- Normal standards of care should be maintained for as long as practical and safe prior to arrival of hazardous weather conditions
- Units may be tasked to transport patients to non-hospital destinations
- A patient care record (may be abbreviated, paper is acceptable) should be completed on all patient encounters
- System Status Management (SSM) for hospital destination may be put into effect
- OLMC will be available for case-by-case consults for required alterations in normal care

2. During Hazardous Weather/Disaster Operations

a) **Altered Standards of Care:** Storm units responding during hazardous weather may provide care as able, but focus should be on **primary stabilization and evacuation**. Refer to the “Warm Zone” in Protocol CS18 for appropriate standards of care during hazardous conditions (see below for summary):

- Warm Zone Standards of Care Summary:
 - Triage assessment using standard START Triage may be attempted
 - Cardiac arrest patients may not be considered candidates for resuscitation efforts based on available resources
 - Care in this situation should be focused on control of external hemorrhage, management of penetrating chest trauma and pneumothorax, and basic airway maneuvers
 - Other limited ALS interventions may be possible dependent on level of hazard and available resources but are not required

b) Transportation and documentation:

- All patients including “Alerts” (Trauma, STEMI, Stroke, Sepsis) will be transported to the closest open facility unless a specialty facility is readily available nearby.
- First Responders are not required to ride in.
- **Alternate non-ambulance vehicles may be used to transport patients as needed.**
- Disaster/Special event logs may be used for documentation if PCRs are not available.

c) Emergency Medical Dispatch/Pre-Arrival Instructions:

- During periods of excessive call volume or when storm units are not able to respond, Regional 911 may transfer calls requiring extended pre-arrival instructions, cardiac arrests, or other selected high priority calls may to Sunstar Communications for completion of EMD/PAI’s.
- Sunstar Communications may patch callers to the OLMC Physician for cessation of resuscitation efforts or other special circumstances as needed.

CS21 ALTERNATE STANDARDS OF CARE

d) OLMC:

- OLMC Physicians will be available for consults for as long as communications remain operational.
- **If unable to contact OLMC, clinicians should use their best judgment in caring for their patients and are authorized to perform all interventions (including OLMC orders, cessation of efforts, and refusals) during disaster operations**

3. During Recovery Efforts Post Storm

- a) Return to normal standards of care should occur as soon as possible
- b) Timeframe will depend upon extent of disaster and resource availability and may be variable by agency, geographic location, etc.

CS22 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. Medical Operations Manual Vol. 2 Protocol AD15). Where equipment has local configuration options, those are established separately in administrative protocol (Ref. Medical Operations Manual Vol. 2 Protocols AD16, AD16.1, AD16.2)

Standardization of Equipment

All front-line units shall only utilize PCEMS issued standardized medical bags and inventories, including but not limited to medical equipment, medical supplies, medications, monitors, defibrillators, or any other medical device or equipment, etc. to promote patient safety. Established standardized inventories are not to be altered (add, delete, revise) without the approval of the EMS Medical Director or designee.

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

CS22 STANDARDIZED RESPONSE GEAR INVENTORY

Required Equipment by Unit Type

	BLS VAN Ambulance	BLS 911 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 Operational Airway Bag	✓	✓		✓		
ALS Airway Bag			✓		✓	✓
Trauma Bag			✓		✓	✓
Medical Bag			✓		✓	✓
Handtevy Bag			✓		✓	✓
Major Trauma Bag				✓	✓	✓
AED	✓	✓				
Cardiac Monitor - Defibrillator			✓		✓	✓
Suction	✓	✓	✓	✓	✓	✓
PPE	✓	✓	✓	✓	✓	✓
Documentation	✓	✓	✓	✓	✓	✓
Supplies	✓	✓	✓	✓	✓	✓

CS22 - STANDARDIZED RESPONSE GEAR INVENTORY

CS22.1 BLS RESPONSE BAG - LIFEGUARD SUPERVISOR & MARINE RESPONSE

Bag			
StatPack Custom Breather - Orange			
Exterior Main - Lid Net			
Item Name	PKG/UOM	Qty Rqd	Specific Notes
Emesis Bag		4	
Exterior Main - Interior			
Shears, Trauma		1	Located in Elastic Loop
Shears, Bandage		1	Located in Elastic Loop
Stethoscope, Adult/Pediatric		1	Sprague style
Penlight		1	Located in Elastic Loop
Exterior Main - Interior Net			
Blood Pressure Cuff, Infant		1	Manual, Cuff labeling reflects "CHILD"
Blood Pressure Cuff, Child		1	Manual, Cuff labeling reflects "SMALL ADULT"
Blood Pressure Cuff, Adult		1	Manual
Pulse Oximeter, Fingertip		1	With lanyard, rubber boot, soft case, and Pelican 1010 case
Pelican 1010 Case		1	Used for storage of Fingertip Pulse Oximeter
Left Exterior Pocket - Interior Left Net			
Combat Application Tourniquet (CAT)		2	Orange
Emergency Trauma Dressing (ETD) 4"		1	
Left Exterior Pocket - Interior Right Net			
Water for Irrigation, 250 mL	BTL	2	Single patient use, sterile
1" Band-Aid		20	Stored in two-part clear plastic box
2" Band-Aid		10	Stored in two-part clear plastic box
Storage Box, Clear Plastic, Two-Part		2	
Left Exterior Pocket - Interior Zipper Pocket			
ABD Pad, 5" x 9"		4	Sterile
Multi-Trauma Dressing, 10" x 30"		2	Sterile
Tape, Self-Adherent, 1"		2	Single patient Use
Tape, Silk, 1"		2	Single patient Use
Right Exterior Pocket - Interior Left Net			
Heat Pack		2	
Right Exterior Pocket - Interior Right Net			
Cold Pack		2	
Right Exterior Pocket - Zippered Pocket			
Bandage, Elastic, 4"		2	
Splint, Moldable Padded Aluminum		2	
Interior Main - Lid - Upper Elastic Net Pocket			
Sharps Container, Individual		1	Single patient use
Interior Main - Lid - Lower Elastic Net Pocket			
Nasal Cannula, Adult		1	
Mask, Non-Rebreather, Adult		1	
Mask, Non-Rebreather, Infant		1	
Mask, Non-Rebreather, Pediatric		1	
Nasal Cannula, Pediatric		1	

CS22.1 BLS RESPONSE BAG - LIFEGUARD SUPERVISOR & MARINE RESPONSE

Interior Main			
Item Name	PKG/UOM	Qty Rqd	Specific Notes
Oxygen Cylinder Bracket, Portable, M6		1	
Oxygen Cylinder, "PCEMS" M6		1	Minimum 1000 psi
Oxygen Regulator, Portable, Compact w/ 2, 4, 6, 8, 10-, 15-, 20- and 25-liter flow settings		1	Precision Compact - RED gauge bumper - Must be flow tested monthly - Gasket must be replaced monthly
BVM Module			StatPack - See separate inventory
PEDIATRIC Module			StatPack - See separate inventory
Trauma #1			Free-Free Container - See separate inventory
Trauma #2			Free-Free Container - See separate inventory
Internal Main - BVM Module			
BVM Resuscitator, Adult or Small Adult		1	With adult mask and filter
Interior Main - BVM Module - Lid Zipper Pocket			
OPA 80mm, 90mm, 100mm, 110mm	Each Size	1	
NPA 22Fr, 24Fr, 26Fr, 28Fr, 30Fr	Each Size	1	
Lubricating Jelly	Unit Pack	5	
Internal Main - PEDIATRIC Module			
BVM Resuscitator, Pediatric		1	With child, infant and neonate masks and filter
Bulb Syringe		1	
Handtevy Length Based Tape		1	
Handtevy Pediatric Medication and Equipment Guide, PCEMS Specific		1	
Interior Main - PEDIATRIC Module - Lid Zipper Pocket			
OPA 40mm, 50mm, 60mm, 80mm	Each Size	1	
NPA 12Fr, 14Fr, 16Fr, 18Fr, 20Fr	Each Size	1	
Lubricating Jelly	Unit Pack	5	
Internal Main - TRAUMA #1			
Gauze, 4"x 4"	2 per pack	5	Sterile
Gauze, Roll, 4"		2	Sterile
Arm Sling, Small Adult/Pediatric		1	
Arm Sling, Adult		1	
Free-Free Clear Storage Container		1	Used for storage of all items in Trauma #1
Internal Main - TRAUMA #2			
Gauze, 4"x4"	*	stack	Non-sterile, enough to fill the storage container *
Free-Free Clear Storage Container		1	Used for storage of all items in Trauma #2

CS22.2 BLS RESPONSE BAG - LIFEGUARD TOWER

Bag			
StatPack Golden Hour - Orange			
Main - Lid - Exterior Zipper			
Item Name	PKG/UOM	Qty Rqd	Specific Notes
Shears, Trauma		1	
Emesis Bag		1	
ABD Pad, 5"x 9"		1	Sterile
Multi-Trauma Dressing, 10"x 30"		1	Sterile
Main - Lid - Interior Zipper Pocket			
Cold Pack		2	
Heat Pack		2	
Moldable Aluminum Splint		1	
Main - Interior - Upper Large Zippered Lid			
Oxygen Cylinder Bracket, Portable, M6		1	
Oxygen Cylinder, "PCEMS", M6		1	Minimum 1000 psi
Oxygen Regulator, Portable, Compact w/ 2, 4, 6, 8, 10, 15, 20 and 25 liter flow settings		1	Precision Compact - RED gauge bumper - Must be flow tested monthly - Gasket must be replaced monthly
Stethoscope, Adult/Pediatric		1	Sprague style
Blood Pressure Cuff, Adult		1	Manual
Unmarked Module			StatPack - See separate inventory
Main - Interior - Lower Small Zippered Access Panel - Inside Elastic Net			
Mask, Non-Rebreather, Adult		1	
Nasal Cannula, Adult		1	
Internal Main - Unmarked Module			
BVM Resuscitator, Adult or Small Adult		1	With adult mask and filter
Internal Main - Unmarked Module - Lid Zipper Pocket			
Mask, Bag Valve, Infant		1	
Mask, Bag Valve, Child		1	
OPA 40mm, 50mm, 60mm, 80mm, 90mm, 100mm, 110mm	Each Size	1	
Left Exterior Pocket - Interior Zipper Pocket			
Gauze, 4"x 4"	2 per pack	15	Sterile
Tape, Self-Adherent, 1"		2	Single patient Use
Tape, Silk, 1"		2	Single patient Use
Left Exterior Pocket - Interior Left Net			
Bandage, Elastic, 4"		1	
Gauze, Roll, 4"		3	Sterile
Left Exterior Pocket - Interior Right Net			
Bandage, Adhesive, 1" (Band-Aid)		20	Stored in two-part clear plastic box
Bandage, Adhesive, 2" (Band-Aid)		10	Stored in two-part clear plastic box
Storage Box, Clear Plastic, Two-Part		2	
Right Exterior Pocket - Interior Zipper Pocket			
Hand Sanitizing Wipe		10	
Respirator, N95, Regular and Small	Each Size	2	(Authorized brand) - stored in clear zipper vinyl pouch
Mask, Surgical		4	(Authorized brand) - stored in clear zipper vinyl pouch
Small Biohazard Waste Bag		1	
Vinyl Pouch, Zipper Closure, Clear		2	One for storage of the N95 Respirator and one for storage of the surgical masks

CS21.2 LIFEGUARD TOWER BLS RESPONSE BAG

CS22.2 BLS RESPONSE BAG - LIFEGUARD TOWER

Right Exterior Pocket - Interior Left Net			
Item Name	PKG/UOM	Qty Rqd	Specific Notes
Tourniquet (Combat Application Tourniquet - CAT)		2	Orange
Emergency Trauma Dressing (ETD), 4"		2	
Right Exterior Pocket - Interior Right Net			
Water for Irrigation, 250 mL	BTL	2	Single patient use, sterile

CS21.2 LIFEGUARD TOWER BLS RESPONSE BAG

CS22.3 BLS RESPONSE BAG - ADMINISTRATIVE

Bag			
StatPack Golden Hour - Orange			
Main - Lid - Exterior Zipper			
Item Name	PKG /UOM	Qty Rqd	Specific Notes
Shears, Trauma		2	
Emesis Bag		2	
Multi-Trauma Dressing, 10" x 30"		1	Sterile
Gloves, Surgical, Size 7.5	Pair	1	Sterile
Gloves, Surgical, Size 8.5	Pair	1	Sterile
Main - Lid - Interior Zipper Pocket			
Cold Pack		1	
Splint, Moldable Padded Aluminum		1	
ABD Pad, 5" x 9"		1	Sterile
Main - Interior			
Oxygen Cylinder Bracket, Portable, M6		1	
Oxygen Cylinder, "PCEMS", M6		1	Minimum 1000 psi
Oxygen Regulator, Portable, Compact w/ 2, 4, 6, 8, 10, 15, 20 and 25 liter flow settings		1	Precision Compact - RED gauge bumper - Must be flow tested monthly - Gasket must be replaced monthly
BVM Module	Statpack - See separate inventory		
Mask, Non-Rebreather, Adult		1	
Blood Pressure Cuff, Adult		1	Manual
Stethoscope, Adult/Pediatric		1	Sprague style
Internal Main - BVM Module			
BVM Resuscitator, Adult or Small Adult		1	With adult mask and filter
Mask, Bag Valve, Infant		1	
Mask, Bag Valve, Child		1	
Interior Main - BVM Module - Lid Zipper Pocket			
OPA 40mm, 50mm, 60mm, 80mm, 90mm, 100mm, 110mm	Each Size	1	
Main - Interior - Lower Access - Interior Left Elastic Net			
Nasal Cannula, Adult		1	
Main - Interior - Lower Access - Interior Right Elastic Net			
<i>RESERVED FOR FUTURE USE</i>			
Left Exterior Pocket - Interior Zipper Pocket			
Hand Sanitizing Wipe		5	
Respirator, N95, Regular and Small	each	2	(Authorized brand) - stored in clear zipper vinyl pouch
Biohazard Waste Bag, Small		1	
Left Exterior Pocket - Interior Left Net			
Tape, Silk, 1"		3	Single patient use
Tape, Silk, 3"		1	Single patient use
Left Exterior Pocket - Interior Right Net			
Bandage, Elastic, 4"		1	
Gauze, Roll, 4"		2	Sterile
Right Exterior Pocket - Interior Zipper Pocket			
Chest Seal, Hyfin Compact Vent	2 - Pack	1	
Tourniquet (Combat Application Tourniquet - CAT)		2	Orange
Right Exterior Pocket - Interior Left Net			
Emergency Trauma Dressing (ETD), 4"		2	

CS22.3 - BLS RESPONSE BAG - ADMINISTRATIVE

CS22.3 BLS RESPONSE BAG - ADMINISTRATIVE

Right Exterior Pocket - Interior Right Net			
Item Name	Pkg /UOM	Qty Rqd	Specific Notes
4"x 4" Gauze	2 per pack	5	Sterile
Non-Adherent Dressing, 3" x 4"		10	Sterile
Bandage, Adhesive, 1" (Band-Aid)		10	In clear plastic storage box
Bandage, Adhesive, 2" (Band-Aid)		10	In clear plastic storage box
Storage Box, Clear Plastic, Two-Part		2	For storage of each size of Adhesive Bandage

CS22.3 - BLS RESPONSE BAG - ADMINISTRATIVE

CS22.4 BLS RESPONSE BAG - OPERATIONAL

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

Bag			
StatPack Custom Breather - Orange			
Exterior Main - Lid Net			
Item Name	PKG/UOM	Qty Rqd	Specific Notes
Emesis Bag		4	
Exterior Main - Interior			
Shears, Trauma		1	
Stethoscope, Adult/Pediatric		1	Sprague style
Penlight		1	
Shears, Bandage		1	
Exterior Main - Interior Net			
Blood Pressure Cuff, Infant		1	Manual, labeled "CHILD"
Blood Pressure Cuff, Child		1	Manual, labeled "SMALL ADULT"
Blood Pressure Cuff, Adult		1	Manual
Blood Pressure Cuff, Large Adult		1	Manual
Pulse Oximeter, Fingertip		1	With lanyard, rubber boot, soft case, and Pelican 1010 case
Pelican 1010 Case		1	Used for storage of Fingertip Pulse Oximeter
Left Exterior Pocket - Interior Left Net			
Tourniquet (Combat Application Tourniquet - CAT)		2	Orange
Chest Seal, Hyfin Compact Vent	2 - pack	1	
Left Exterior Pocket - Interior Right Net			
Emergency Trauma Dressing (ETD), 4"		2	
Tape, Silk, 3"	RL	1	Single Patient Use
Left Exterior Pocket - Interior Zipper Pocket			
ABD Pad, 5" x 9"		4	Sterile
Tape, Self-Adherent, 1"	RL	1	Single patient use
Tape, Silk, 1"	RL	3	Single patient use
Multi-Trauma Dressings, 10" x 30"		2	Sterile
Right Exterior Pocket - Interior Left Net			
Mask, Non-Rebreather, Infant		1	
Mask, Non-Rebreather, Pediatric		1	
Nasal Cannula, Pediatric		1	
Right Exterior Pocket - Interior Right Net			
Nasal Cannula, Adult		2	
Mask, Non-Rebreather, Adult		1	
Right Exterior Pocket - Zippered Pocket			
Respirator, N95, Regular and Small	Each Size	2	(Authorized brand) - stored in clear zipper vinyl pouch
Mask, Surgical		2	(Authorized brand) - stored in clear zipper vinyl pouch
Vinyl Pouch, Zipper Closure, Clear		2	One for storage of the N95 respirators and one for storage of the surgical masks
Biohazard Waste Bag, Small		2	
Hand Sanitizing Wipe		10	brand may vary
Interior Main - Lid - Right Zipper Pocket			
Splint, Moldable Padded Aluminum		1	
Interior Main - Lid - Left Zipper Pocket			
OB Kit		1	

CS22.4 - BLS RESPONSE BAG - OPERATIONAL

CS22.4 BLS RESPONSE BAG - OPERATIONAL

CS22.4 - BLS RESPONSE BAG - OPERATIONAL

Interior Main			
Item Name	PKG/UOM	Qty Rqd	Specific Notes
Oxygen Cylinder Bracket, Portable, M6		1	
Oxygen Cylinder, "PCEMS", M6		1	Minimum 1000 psi
Oxygen Regulator, Portable, Compact w/ 2, 4, 6, 8, 10, 15, 20 and 25 liter flow settings		1	Precision Compact - RED gauge bumper - Must be flow tested monthly - Gasket must be replaced monthly
Handtevy Pediatric Medication and Equipment Guide, PCEMS Specific		1	
BVM module			StatPack - See separate inventory
PEDIATRIC module			StatPack - See separate inventory
UNMARKED module			StatPack - See separate inventory
Trauma #1			Free-Free Container - See separate inventory
Trauma #2			Free-Free Container - See separate inventory
Internal Main - BVM Module			
BVM Resuscitator, Adult or Small Adult		1	with adult mask and filter
Interior Main - BVM Module - Lid Zipper Pocket			
OPA 80mm, 90mm, 100mm, 110mm	Each Size	1	
NPA 22Fr, 24Fr, 26Fr, 28Fr, 30Fr	Each Size	1	
Lubricating Jelly	Unit Pack	5	
Internal Main - PEDIATRIC Module			
BVM Resuscitator, Pediatric		1	with child, infant and neonate masks and filter
Bulb Syringe		1	
Handtevy Length Based Tape		1	
Interior Main - PEDIATRIC Module - Lid Zipper Pocket			
OPA 40mm, 50mm, 60mm, 80mm	Each Size	1	
NPA 12Fr, 14Fr, 16Fr, 18Fr, 20Fr	Each Size	1	
Lubricating Jelly	Unit Pack	5	
Internal Main - UNMARKED Module			
Water for Irrigation, 250 mL	BTL	2	Single patient use, sterile
Ring Cutter with Spare Blade		1	
Glucose Gel, 15g		2	In plastic container
Storage Box, Clear Plastic, Two-Part		1	For storage of the Glucose Gel
Narcan Nasal Kit (4 mg each)	2 per pack	1	
Glucometer Kit			See separate inventory
Internal Main - Glucometer Kit			
Glucometer (Bayer Contour)		1	Requires incident report for loss or incident report with malfunctioning device for replacement - Must have routine calibration per manufacturer guidelines with associated documentation in Log Book per AHCA
Glucometer Test Strips	BTL	1	Strips MUST be kept in original bottle - DO NOT mix strips from different bottles - MUST retain bottom of external packaging for initial and monthly quality control testing info
Lancets		5	
Alcohol Prep Pads		10	
Internal Main - UNMARKED Module - Lid Zipper Pocket			
Sharps Container, Individual		1	Single patient use
Bandage, Adhesive, 1" (Band-Aid)		5	in plastic hard case
Bandage, Adhesive, 2" (Band-Aid)		5	in plastic hard case
Alcohol Prep Pads		4	in plastic hard case
Storage Box, Clear Plastic, Two-Part		2	For storage of the adhesive bandages and the alcohol prep pads

CS22.4 BLS RESPONSE BAG - OPERATIONAL

Internal Main - TRAUMA #1			
Item Name	PKG/UOM	Qty Rqd	Specific Notes
Non-Adherent Dressing, 3" x 4"		10	Sterile
Gauze, 4"x 4"	2 per pack	5	
Bandage, Elastic, 4"		2	
Gauze, 4"x 4"	*	Stack	Non-sterile, enough to fill the storage container*
Free-Free Clear Storage Container		1	Used for storage of the non-sterile 4 x 4
Gauze, Roll, 4"		2	
Internal Main - TRAUMA #2			
Heat Pack		1	
Cold Pack		1	
Arm Sling, Small Adult/Pediatric		1	
Arm Sling, Adult		1	

CS22.4 - BLS RESPONSE BAG - OPERATIONAL

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CS22.5 ALS AIRWAY RESPONSE BAG

(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-1 F.A.C.)

Bag			
StatPack Custom Breather - Green			
Left Exterior Pocket - Interior Left & Right Net			
Item Name	PKG/UOM	Qty Rqd	Specific Notes
Nasal Cannula, Adult		4	two per net
Left Exterior Pocket - Zipper Pocket			
Mask, Non-Rebreather, Adult		2	
Right Exterior Pocket - Interior Left Net			
Mask, Bag Valve, Infant		1	
Mask, Bag Valve, Child		1	
Right Exterior Pocket - Interior Right Net			
Mask, Aerosol, Adult		1	
Right Exterior Pocket - Center			
Nebulizer Setup		2	
Right Exterior Pocket - Zipper Pocket			
Biohazard Waste Bag, Small, RED		2	
Biohazard Waste Bag, Large, RED		1	
Hand Sanitizing Wipe		10	
Respirator, N95, Regular and Small	Each Size	2	(Authorized brand) - stored in clear zipper vinyl pouch
Mask, Surgical		3	(Authorized brand) - stored in clear zipper vinyl pouch
Vinyl Pouch, Zipper Closure, Clear		2	One for storage of the N95 respirators and one for storage of the surgical masks
Exterior Main - Inside of Lid			
Emesis Bag		4	
Penlight		2	
Exterior Main - Interior			
Stethoscope, Adult/Pediatric		1	Sprague style
Blood Pressure Cuff, Manual , Adult		1	
Blood Pressure Cuff, Manual , Large Adult		1	
Blood Pressure Cuff, Non-invasive , XLarge Adult		1	For use with the Stryker LP15
Shears, Trauma		1	
Interior Main - Lid - Left Zipper Pocket			
Orogastric Tube, 18Fr		2	
Syringe, 60 mL, Catheter Tip		2	
Interior Main - Lid - Right Zipper Pocket			
King LTS-D Airway, Size 3		1	
King LTS-D Airway, Size 4		1	
King LTS-D Airway, Size 5		1	
Syringe, 60 mL, Luer-Lock Tip		2	
Tube Holder, Adult		1	
Interior Main			
Oxygen Cylinder, "PCEMS", M6		1	Minimum 1000 psi
Oxygen Cylinder Bracket, Portable, M6		1	
Oxygen Regulator, Portable, Compact w/ 2, 4, 6, 8, 10, 15, 20 and 25-liter flow settings		1	<i>Gauge Bumper - RED = Fire GREEN = Ambulance</i>
BVM Module			StatPack - See separate inventory
CPAP Module			StatPack - See separate inventory
Intubation Module			StatPack - See separate inventory

CS22.5 - ALS AIRWAY RESPONSE BAG

CS22.5 ALS AIRWAY RESPONSE BAG

CS22.5 - ALS AIRWAY RESPONSE BAG

BVM Module - Interior Main			
Item Name	Pkg/UOM	Qty Rqd	Specific Notes
BVM Resuscitator, Adult or Small Adult		1	with adult mask and filter
EtCO2 Filterline Set, Adult/Pediatric		2	
BVM Module - Lid Interior Zipper Pocket			
OPA 80mm, 90mm, 100mm, 110mm	Each size	1	
NPA 22Fr, 24Fr, 26Fr, 28Fr, 30Fr	Each size	1	
Lubricating Jelly	Unit Pack	5	

CPAP Module - Interior Main			
CPAP Setup, Adult		1	
CPAP Setup, Small Adult/Pediatric		1	
CPAP Module - Lid Interior Zipper Pocket			
Tee Adapter		2	
Superset with Mask Elbow Adapter		2	

Intubation Module - Lid Interior			
Laryngoscope Handle, Medium		1	Single patient use, sterile & disposable
Syringe, 10 mL Luer-Lock Tip		2	
Lubricating Jelly	Unit Pack	3	
Laryngoscope Blade, Mac "3"		1	Single patient use, sterile & disposable
Laryngoscope Blade, Mac "4"		1	Single patient use, sterile & disposable
Intubation Module - Center Interior			
Tube Holder, Adult		1	≥ 6.5mm
ET Tube, 6.0mm		1	Cuffed with stylet
ET Tube, 7.0mm		1	Cuffed with stylet
ET Tube, 7.5mm		1	Cuffed with stylet
ET Tube, 8.0mm		1	Cuffed with stylet
ET Tube, 8.5mm		1	Cuffed with stylet
Intubation Module - Secondary Pocket - Interior			
Magill Forceps, Adult		1	
Laryngoscope Handle, Penlight		1	Single patient use, sterile & disposable
Syringe, 10 mL, Luer-Lock Tip		2	
Lubricating Jelly	Unit Pack	3	
Laryngoscope Blade, Miller "3"		1	Single patient use, sterile & disposable
Laryngoscope Blade, Miller "4"		1	Single patient use, sterile & disposable
Intubation Module - Secondary Pocket - Lid - Interior			
Pocket Bougie		1	
Scalpel, #10		2	Safety
Forceps, Kelly Curved		2	Single patient use, sterile & disposable

CS22.6 TRAUMA RESPONSE BAG

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

Bag			
StatPack G3 Perfusion - Red			
Top Exterior Pocket - Center			
Item Name	PKG/UOM	Qty Rqd	Specific Notes
Stethoscope, Adult/Pediatric		1	Sprague style
Blood Pressure Cuff, Adult		1	Manual
Top Exterior Pocket - Zipper Lid Pocket			
Shears, Trauma		1	
Shears, Bandage		1	
Ring Cutter		1	
Tweezers		1	
Penlight		1	
Right Exterior Pocket - Interior Left & Right Nets			
Emergency Trauma Dressing (ETD), 4"		2	
Tourniquet (Combat Application Tourniquet - CAT)		2	Orange
Decompression Needle, 10g, 3.25" <i>(DECOMPRESSION ONLY) ALS ONLY Procedure</i>		2	
Right Exterior Pocket - Zipper Pocket			
Chest Seal, Hyfin Compact Vent	2 - pack	1	
Combat Gauze		2	One for One - Requires Incident Number or Expired Item for Replacement
Left Exterior Pocket - Interior Left Net			
Arm Sling, Adult		2	
Arm Sling, Small Adult/Pediatric		2	
Left Exterior Pocket - Interior Right Net			
Bandage, Adhesive, 1" (Band-Aid)		10	In clear plastic storage box
Bandage, Adhesive, 2" (Band-Aid)		10	In clear plastic storage box
Storage Box, Clear Plastic, Two-Part		1	
Left Exterior Pocket - Zipper Pocket			
Bandage, Triangular		2	
Splint, Moldable Padded Aluminum		2	
Top Main Interior Pocket - Left Side			
Bandage, Elastic, 4"		4	
Gauze, Roll, 4"		6	Sterile
Top Main Interior Pocket - Right Side			
Gauze, 4" x 4"	2 per pack	25	Sterile
Non-Adherent Dressing, 3" x 4"		25	Sterile
Top Main Interior Pocket - Zipper Lid			
Biohazard Waste Bag, Small		2	
Biohazard Waste Bag, Large		1	
Middle Main Interior Pocket - Left Side			
Multi-Trauma Dressing, 10" x 30"		4	Sterile
ABD Pad, 5" x 9"		4	Sterile
Middle Main Interior Pocket - Right Side			
Gauze, 4" x 4"	*		Enough to fill the storage container* - non-sterile

CS22.6 - TRAUMA RESPONSE BAG

CS22.6 TRAUMA RESPONSE BAG

Lower Main Interior Pocket - Left Side			
Item Name	PKG/UOM	Qty Rqd	Specific Notes
Water for Irrigation, 250 mL	BTL	4	Single patient use, sterile
Lower Main Interior Pocket - Right Side			
Heat Pack	1	1	
Cold Pack	3	3	
Lower/Center Main Interior Pocket - Zippered Lid			
Tape, Silk, 1"	RL	2	Single patient use
Tape, Silk, 3"	RL	1	Single patient use
Tape, Self-adherent, 1"	RL	2	Single patient use

CS22.6 - TRAUMA RESPONSE BAG

CS22.7 ALS MEDICAL RESPONSE BAG

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

Bag			
StatPack G3+ Perfusion - Blue			
Top Exterior Pocket - Center - Glucometer Kit			
Item Name	PKG/UOM	Qty Rgd	Specific Notes
Dextrose 10% in Water, 250 mL	Pre-mixed Bag	1	horizontal
Top Exterior Pocket - Interior Left Net			
Glucometer (Bayer Contour)		1	
Glucometer Test Strips (Bayer Contour)	BTL	1	Strips MUST be kept in original bottle - DO NOT mix strips from different bottles - MUST retain bottom of external packaging for initial and monthly quality control testing info
Lancets		10	Single patient use
Bandage, Adhesive, 1" (Band-Aid®)	Individual	10	
Alcohol Prep Pads	Individual	10	
Top Exterior Pocket - Interior Right Net			
Glucose Gel, 15g	Pack	2	Strawberry or Orange Flavored
Storage Box, Clear Plastic, Two-Part		1	Holds the Glucose Gel Packs
Glucagon (Glucagen)		1	One for One Replacement - Requires Incident Number of Use, Expired Item for Replacement, or Incident Report for all other situations
Top Exterior Pocket - Lid Interior Zippered Pocket			
Narcan Nasal Spray Device, 4 mg	Nasal Spray	2	
Storage Box, Opaque Plastic, Two-Part	2 Piece	1	Holds 2 - Narcan Nasal Spray Devices
Naloxone, 1 mg/mL, 2 mL	PFS	3	3 Boxes stored in the Two-Part Opaque Plastic Storage Box, 3 - Individual Blister Packs (no storage box) or a combination of both - All box format is to be stored in the plastic storage box
Storage Box, Opaque Plastic, Two-Part	2 Piece	1	Holds 3 - Naloxone Prefilled Syringes in the Box format
Left Exterior Pocket - Center (between black elastic net pockets)			
IV Start Kit		3	
Left Exterior Pocket - Interior Left Net			
Tourniquet (loose) - IV start		3	ORANGE - Non-trauma style tourniquet
Gauze, 4" x 4"	2 per pack	10	Sterile
Tape, Silk, 1"	RL	2	Single patient use
Tape, Self-Adherent, 1"	RL	3	Single patient use - color may vary
Left Exterior Pocket - Interior Right Net			
0.9% Sodium Chloride, 10 mL	PFS	3	
IV Catheter, 16g		2	Safety
IV Catheter, 18g		4	Safety
IV Catheter, 20g		4	Safety
IV Catheter, 22g		4	Safety
Gauze, Roll, 4"		1	Sterile
Left Exterior Pocket - Interior Zippered Pocket			
0.9% Sodium Chloride, 1000 mL	Pre-mixed Bag	1	
IV Administration Set, 20 gtt (macro)		2	
Right Exterior Pocket - Center			
EZIO Driver, w/ Trigger Guard		1	Replace <i>ONLY</i> per manufacturer's instructions - Daily Testing is NOT recommended
Right Exterior Pocket - Interior Left Net			
Pressure Infusion Bag, 1000 mL		1	
EZIO Needle Set, 45 mm		2	One for One Replacement - Requires Incident Number of Use, Expired Item for Replacement, or Incident Report for all other situations
EZIO Stabilizer		1	

CS22.7 ALS MEDICAL RESPONSE BAG

Right Exterior Pocket - Interior Right Net			
Item Name	PKG/UOM	Qty Rgd	Specific Notes
0.9% Sodium Chloride, 10 mL	PFS	3	
EZIO Needle Set, 25 mm		2	One for One Replacement - Requires Incident Number of Use, Expired Item for Replacement, or Incident Report for all other situations
EZIO Stabilizer		1	
Right Exterior Pocket - Zippered Pocket			
0.9% Sodium Chloride, 1000 mL	Pre-mixed Bag	1	
IV Administration Set, 20 gtt (macro)		1	
Top Center Interior Pocket			
Ketorolac, 30 mg/mL, 1 mL	PFS	2	If prefilled syringe format unavailable reference KETOROLAC VIAL KIT (see Page 3)
25g x 1" Hypodermic Needle		2	Safety Needle without syringe (Retractable)
Storage Box, Clear Plastic, Two-Part	2 Piece	1	Holds the Ketorolac and Hypodermic Needles
Acetaminophen, 10 mg/mL, 100 mL	Pre-mixed Bag	1	
Controlled Substance Box - Complete	Seahorse SE120 BLACK - Reference separate inventory		
Controlled Substance Box			
Seahorse 120 Black with Cyberlock (CL-C5N)			
Controlled Substance Content Shield (PCEMS)		1	
Etomidate, 2 mg/mL, 20 mL	Vial	2	
Midazolam, 5 mg/mL, 1 mL	Vial or PFS	4	
Fentanyl 50 mcg/mL, 1 mL, or 2 mL	2 mL Vial or PFS or 1 mL PFS	4	Max total combined amount per box - 400 mcg (space dependent)
Top Center Interior Pocket - Lid Zippered Pocket			
Mucosal Atomization Device (MAD)		2	Utilized for administration of Midazolam and Fentanyl intranasally ONLY
Lower Center Interior Pocket - Upper Level			
Calcium Chloride, 100 mg/mL, 10 mL	PFS	2	
Atropine Sulfate, 0.1 mg/mL, 10 mL	PFS	2	
Sodium Bicarbonate, 1 mEq/mL, 50 mL	PFS	2	If prefilled syringe format unavailable reference SODIUM BICARBONATE KIT
Epinephrine, 0.1 mg/mL, 10 mL	PFS	6	If unavailable reference EPINEPHRINE 1 MG/ML - 1 ML VIAL KIT
Lidocaine, 20 mg/mL, 5 mL	PFS	2	If prefilled syringe format unavailable reference LIDOCAINE VIAL KIT
Adenosine Kit #1*	PFS	1	*1 - 6 mg/2 mL prefilled syringe or vial & 3 Way Stopcock
Adenosine Kit #2**	PFS	1	**2 - 6 mg/2 mL prefilled syringes or vials
Storage Box, Opaque Plastic, Two-Part	2 Piece	2	Used for Adenosine Kit #1 and Adenosine Kit #2
Storage Box, Opaque Plastic, Two-Part	2 Piece	12	Used for the protection of each medication in the prefilled syringe packaging format (PFS)
Lower Center Interior Pocket - Lower Level			
Medication Kit	Flambeau Multi-Compartment - See separate inventory		
Syringe Kit	Flambeau Multi-Compartment - See separate inventory		
Infusion Kit	Flambeau Open Core - See separate inventory		
Sodium Bicarbonate Kit (ONLY if prefilled syringe format unavailable)	Flambeau Open Core - See separate inventory		
Lower Center Interior Pocket - Lid Zippered Pocket			
Shears, Trauma		1	
Sharps Container, Individual		2	Single patient use
Biohazard Waste Bag, Small (RED)		2	
Biohazard Waste Bag, Large (RED)		1	

CS22.7 ALS MEDICAL RESPONSE BAG

Sodium Bicarbonate Kit (Flambeau 6734TE (T4000) Open Core Box)			
Item Name	PKG/UOM	Qty Rgd	Specific Notes
Sodium Bicarbonate 1 mEq/mL - 50 mL	Vial	2	
Syringe, 60 mL, Luer-Lock Tip		2	
Syringe, 20 mL, Luer-Lock Tip		2	
Syringe, 10 mL, Luer-Lock Tip		2	
Needle, 18g x 1.5" Blunt Fill with Filter		2	For drawing medications from vials ONLY

Epinephrine Vial Kit (Each kit in two-part storage box, clear plastic)			
Epinephrine, 1 mg/mL, 1 mL	Vial	1	
0.9% Sodium Chloride, 10 mL	PFS	1	
Needle, 18g x 1.5" Blunt Fill with Filter		1	For drawing medications from vials ONLY
Storage Box, Clear Plastic, Two-Part	2 Piece	1	Holds the Epinephrine, Blunt Fill Needles & 0.9% Sodium Chloride Syringes

Lidocaine Vial Kit (Each kit in two-part storage box, clear plastic)			
Lidocaine, 20 mg/mL, 5 mL	Vial	1	
Needle, 18g x 1.5" Blunt Fill with Filter		1	For drawing medications from vials ONLY
Syringe, 10 mL, Luer-Lock Tip		1	
Storage Box, Clear Plastic, Two-Part	2 Piece	1	Holds the Lidocaine, Blunt Fill Needles & 10 mL Syringe

Ketorolac Vial Kit (Each kit in two-part storage box, clear plastic)			
Ketorolac, 30 mg/mL, 1 mL	Vial	2	
25g x 1" Hypodermic Needle		2	Safety Needle without syringe (Retractable)
Syringe, 1 mL, Luer-Lock Tip		2	
Storage Box, Clear Plastic, Two-Part	2 Piece	1	Holds the Ketorolac, Hypodermic Needles & 1 mL Syringes

Medication Kit (Flambeau 6747TE (T4007) Multi-Compartment Box)			
Ondansetron, 4 mg	Unit Dose ODT	2	
Ondansetron, 2 mg/mL, 2 mL	PFS or vial	2	
Diphenhydramine, 50 mg/mL, 1 mL	PFS or vial	2	
Epinephrine, 1 mg/mL, 1 mL	Vial	2	
Amiodarone, 50 mg/mL, 3 mL	Vial	3	
Methylprednisolone Sodium Succinate, 125 mg/2 mL	Vial	2	
Nitroglycerin Aerosol Spray, 0.4 mg/spray	BTL	1	Replace per manufacturer's instructions
Spoon, Aspirin administration		3	Individually wrapped
Aspirin, Baby, 81 mg	BTL	1	
Ipratropium Bromide, 0.5 mg/2.5 mL	Unit Dose	2	
Albuterol Sulfate, 2.5 mg/3 mL	Unit Dose	4	
Diltiazem, 5 mg/mL, 5 mL	Vial	1	<i>Date deployed</i> _____ MAX OF 30 DAYS OUT OF REFRIGERATION
Norepinephrine, 1 mg/mL, 4 mL	Vial	1	

CS22.7 ALS MEDICAL RESPONSE BAG

Syringe Kit (Flambeau 6747TE (T4007) Multi-Compartment Box)			
Syringe, 1 mL with 25g x 1" Needle or 25g x 1" Hypodermic Needle		3	Safety syringe (Retractable) with needle or Safety Needle without syringe (Retractable)
Syringe, 3 mL with 25g x 1 1/2" Needle or 25g x 1 1/2" Hypodermic Needle		3	Safety syringe (Retractable) with needle or Safety Needle without syringe (Retractable)
Syringe, 3 mL, Luer-Lock Tip		2	
Syringe, 1 mL, Luer-Lock Tip		2	
Alcohol Prep Pads	Individual	10	
3-Way Stopcock		2	
Needle, 18 g x 1.5" Blunt Fill with Filter		2	For drawing medications from vials ONLY

Infusion Kit (Flambeau 6734TE (T4000) Open Core Box)			
Medication "ADD" Label, "PCEMS" Specific		4	
IV Administration Set with Flow Controller (20 gtt/mL)		1	
Dextrose 5% in Water, 100 mL	Pre-mixed Bag	1	
Magnesium Sulfate, 2 g/50 mL	Pre-mixed Bag	2	

CS22.8 ALS HANDTEVY PEDIATRIC RESPONSE BAG

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

Bag				
Handtevy (branded)				
Lid - Exterior (x-small zipper pocket)				
Item Name	Pkg Type	Qty Rqd	Specific Notes	
Handtevy Length Based Tape		1		
Lid - Exterior (small zipper pocket)				
Mask, Aerosol, Pediatric		1		
Mask, Non-Rebreather, Infant		1		
EtCO2 Cannula, Pediatric		2		
Nasal Cannula, Pediatric		1		
Mask, Non-Rebreather, Pediatric		1		
Shears, Trauma		1		
Lid - Exterior (large zipper pocket)				
OB Kit (4 - Umbilical cord clamps, 1 - Umbilical cord scissors, 2 - Under pads 23" x 36", 3 - Cotton receiving blankets, 1 - Infant cap, 1 - Patient ID armband/card [pair])		1		
Bulb Syringe		2		
Syringe, 60 mL, Catheter Tip		1		
Gloves, Surgical, Size 6.5	Pair	1	Sterile	
Gloves, Surgical, Size 7.5	Pair	1	Sterile	
Gloves, Surgical, Size 8.5	Pair	1	Sterile	
Lid - Interior				
Gauze, Roll, 4"	Pocket #1	RL	1	
Tape, Non-Adherent, 1"	Pocket #2	RL	1	Single patient use
Tape, Silk, 1"	Pocket #3	RL	1	Single patient use
Gauze, Roll, 4"	Pocket #4	RL	1	
Laryngoscope Handle, Penlight	Pocket #5		1	Single patient use, sterile & disposable
Neo/Infant EtCO2 Filterline Set			2	
Infant SpO2 Sensor	Pocket #6	EA	2	Single patient use & disposable
Pediatric SpO2 Sensor		EA	2	Single patient use & disposable
3-Way Stopcock		EA	1	
Magill Forceps, Pediatric	Pocket #7		1	Single patient use
Needle Cricothyrotomy Kit (1 - 3.0 ET Tube, 1 - 14g Safety Catheter, 1 - 10 mL syringe)	Pocket #7	Kit	2	
IV Catheter, 16g	Pocket #7	EA	2	Use for Needle Decompression per Protocol CP7
Main Bag - Interior Bottom				
JumpSTART Triage/FACES Reference			2	Laminated
Main Bag - Interior Left to Right				
Stethoscope, Adult/Pediatric			1	Sprague style
Tube Holder, Pediatric			2	
BVM Resuscitator, Pediatric			1	with child, infant and neonate masks and filter
Blood Pressure Cuff, Manual , Infant			1	Manual, Cuff labeling reflects "CHILD"
Blood Pressure Cuff, Manual , Child			1	Manual, Cuff labeling reflects "SMALL ADULT"
Blood Pressure Cuff, Non-invasive , Child			1	For use with the Stryker LP15

CS22.8 ALS HANDTEVY PEDIATRIC RESPONSE BAG

Main Bag - Interior Left to Right (cont.)			
Item Name	PKG/ UOM	Qty Rqd	Specific Notes
Splint, Moldable Padded Aluminum		1	located between edge of bag and the individual patient care pouches
Handtevy EMS Medication/Equipment Guidebook - PCEMS Specific Revision 1.1 05/2015		1	located between edge of bag and the individual patient care pouches - If hardcopy unavailable - electronic version is available on each tablet
Stryker LP15, Pediatric Quik-Combo RTS Multi-function Pads, (Weight < 15 kg [33 lbs.])	PR	2	
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	Qty Rqd	Care Pouch
ET Tube, 2.5mm		1	Uncuffed - No stylet
ET Tube, 3.0mm		1	Cuffed with stylet
Laryngoscope Blade, Miller "0"		1	Single patient use, sterile & disposable
Laryngoscope Blade, Miller "1"		1	Single patient use, sterile & disposable
OPA, 40mm		1	
OPA, 50mm		1	
NPA, 12Fr		1	
NPA, 14Fr		1	
Suction Catheter, 6Fr		1	
Suction Catheter, 8Fr		1	
IV Catheter, 22g		1	
IV Catheter, 24g		1	
Orogastric Tube, 6Fr		1	
Syringe, 3 mL, Luer-Lock Tip		1	
Lubricating Jelly	Unit Pack	3	

1-Year-Old Patient Care Pouch			
ET Tube, 3.5mm		1	Cuffed with stylet
Laryngoscope Blade, Miller "1"		1	Single patient use, sterile & disposable
OPA, 60mm		1	
NPA, 16Fr		1	
NPA, 18Fr		1	
Suction Catheter, 10Fr		1	
IV Catheter, 20g		1	
IV Catheter, 22g		1	
IV Catheter, 24g		1	
Orogastric Tube, 6Fr		1	
Syringe, 3 mL, Luer-Lock Tip		1	
Lubricating Jelly	Unit Pack	3	

CS22.8 ALS HANDTEVY PEDIATRIC RESPONSE BAG

2-Year-Old Patient Care Pouch			
Item Name	PKG/ UOM	Qty Rqd	Specific Notes
ET Tube, 4.0mm		1	Cuffed with stylet
Laryngoscope Blade, Miller "2"		1	Single patient use, sterile & disposable
OPA, 60mm		1	
NPA, 20Fr		1	
Suction Catheter, 10Fr		1	
IV Catheter, 18g		1	
IV Catheter, 20g		1	
IV Catheter, 22g		1	
Orogastric Tube, 6Fr		1	
Syringe, 3 mL, Luer-Lock Tip		1	
Lubricating Jelly	Unit Pack	3	

3 - 4-Year-Old Patient Care Pouch			
ET Tube, 4.5mm		1	Cuffed with stylet
Laryngoscope Blade, Miller "2"		1	Single patient use, sterile & disposable
OPA, 60mm		1	
NPA, 22Fr		1	
Suction Catheter, 10Fr		1	
IV Catheter, 18g		1	
IV Catheter, 20g		1	
IV Catheter, 22g		1	
Orogastric Tube, 12Fr		1	
Syringe, 3 mL, Luer-Lock Tip		1	
Lubricating Jelly	Unit Pack	3	

5 - 6-Year-Old Patient Care Pouch			
ET Tube, 5.0mm		1	Cuffed with stylet
Laryngoscope Blade, Miller "2"		1	Single patient use, sterile & disposable
Laryngoscope Blade, Mac "2"		1	Single patient use, sterile & disposable
OPA, 60mm		1	
OPA, 80mm		1	
NPA, 24Fr		1	
Suction Catheter, 10Fr		1	
IV Catheter, 18g		1	
IV Catheter, 20g		1	
Orogastric Tube, 12Fr		1	
Syringe, 3 mL, Luer-Lock Tip		1	
Lubricating Jelly	Unit Pack	3	

CS22.8 ALS HANDTEVY PEDIATRIC RESPONSE BAG

7 - 8-Year-Old Patient Care Pouch			
Item Name	PKG/ UOM	Qty Rqd	Specific Notes
ET Tube, 5.5mm		1	Cuffed with stylet
ET Tube, 6.0mm		1	Cuffed with stylet
Laryngoscope Blade, Miller "2"		1	Single patient use, sterile & disposable
Laryngoscope Blade, Mac "2"		1	Single patient use, sterile & disposable
OPA, 80mm		1	
NPA, 26Fr		1	
Suction Catheter, 10Fr		1	
IV Catheter, 18g		1	
IV Catheter, 20g		1	
Orogastric Tube, 18Fr		1	
Syringe, 3 mL, Luer-Lock Tip		1	
Lubricating Jelly	Unit Pack	3	

9 - 13-Year-Old Patient Care Pouch			
ET Tube, 6.0mm		1	Cuffed with stylet
ET Tube, 7.0mm		1	Cuffed with stylet
Laryngoscope Blade, Miller "3"		1	Single patient use, sterile & disposable
Laryngoscope Blade, Mac "3"		1	Single patient use, sterile & disposable
OPA, 80mm		1	
NPA, 26Fr		1	
Suction Catheter, 10Fr		1	
Suction Catheter, 12Fr		1	
IV Catheter, 18g		1	
IV Catheter, 20g		1	
Orogastric Tube, 18Fr		1	
Syringe, 3 mL, Luer-Lock Tip		1	
Syringe, 10 mL, Luer-Lock Tip		1	
Lubricating Jelly	Unit Pack	3	

CS22.9 STRYKER LP15 CARDIAC MONITOR/DEFIBRILLATOR (ALS)

CASE			
Stryker LP15 Case - Side (left & right), Rear Back & Rear Top Pockets with Shoulder Strap			
All cables labeled with matching device serial number -			
RED Label = Fire BLUE Label = Ambulance			

Device - FRONT (inventory looking at the device screen)				
Item Name	Pkg/UOM	Qty Rgd	Specific Notes	
Printer Paper 100 mm	RL	1	In printer	
Gas Meter, Single Gas, CO (in operation 24/7)		1	Meter in netted pouch with Pinellas County Asset Tag clipped to the left should strap hook built into the LP15	
LEFT External Pouch (outside pocket)				
Stryker LP15 Modem (wired connection to LP15)		1	CAUTION - THE MODEM MUST STAY IN THIS LOCATION - NOTHING ELSE IS TO BE STORED WITH IT	
LEFT Internal Pouch (inside pocket - top to bottom)				
All cables labeled with matching device specific serial number	Main SpO2 Trunk Cable with Adult SpO2 Reusable Sensor Preconnected	EA	1	Main Trunk Cable pre-connected to the device - (always unless utilizing a pediatric or infant disposable SpO2 sensor)
	Main Monitoring Trunk Cable with integrated Limb Leads (with 12 lead adapter cable connection cover in place when 12 lead adapter cable is not being used)		1	Pre-connected to the device
LEFT Internal Net Pouch - Zipper Lid				
Labeled with matching device specific serial number	Chest Lead Wire Set		1	
RIGHT External Pouch (outside pocket)				
EtCO2 Nasal Cannula, Adult			2	
Trauma Shears		PR	1	
RIGHT External Pouch (interior left net)				
Quik Combo Redi-Pak Multi-Function Hands Free Electrodes (one set preconnected to LP15 Therapy Cable)			2 sets	Designed for patients weighing 15 kg (33 lb) or more
RIGHT External Pouch (interior)				
Labeled with matching device specific serial number	Quik Combo Cable -		1	preconnected to the device and coiled for storage in the center of the pouch
RIGHT External Pouch (interior right net)				
CPR Meter (wireless)			1	Asset # _____
CPR Meter Adhesive Pads		*Max of 3 (individual pads)	*	In protective bag - 1 pre-attached to CPR Meter
Adult/Pediatric EtCO2 filter line set			2	
Device - REAR (inventory looking at the rear of the device)				
Stryker LP15 Lithium Battery - Installed in device battery well			1	Asset # _____
Stryker LP15 Lithium Battery - Installed in device battery well			1	Asset # _____
REAR External Pouch				
70% Isopropyl Alcohol Wipes		Pack (30)	1	Utilized for routine cleaning and disinfection of all LP15 parts & cables
Blood Pressure Cuff, Non-invasive, Adult			1	Reusable - Pre-connected to the hose
Blood Pressure Hose, Non-invasive - Preconnected to the device and coiled in the pouch with the NBP cuff			1	

CS22.9 STRYKER LP15 CARDIAC MONITOR/DEFIBRILLATOR (ALS)

Device - REAR (inventory looking at the rear of the device - cont.)			
REAR Top Pouch			
Item Name	Pkg/UOM	Qty Rgd	Specific Notes
Printer Paper	RL	1	
Prep Razor	EA	2	Safety
ECG Monitoring Electrodes	*	20	* Current PCEMS authorized brand/model. Packaging may vary

CS22.10 PHILIPS FR3 AUTOMATED EXTERNAL DEFIBRILLATOR (AED)

Serial # _____ Asset Tag # _____

Device			
Item Name	PKG/UOM	Qty Rgd	Specific Notes
Pelican 1400 Orange Waterproof Hard Case		1	PCEMS assets assigned to marine units/shelter support
Philips FR3 AED System (soft) Case or Philips FR3 AED Hard Case		1	Non-marine units
Philips FR3 AED - Pad Sentry Insert		1	
Philips FR3 AED - CPR Meter Cradle		1	Non-marine units
Philips FR3 AED - Lithium Battery		1	Serial # _____
Device - Interior			
Philips FR3 AED - Infant/Child Key		1	
Philips FR3 AED - 3 Lead Cable & Zipper Case	each	1	
ECG Electrodes (individual)		10	Current PCEMS authorized brand/model
Razor, Prep		2	Safety
Multi-Function Hands Free Therapy Pads, Adult/Pediatric	Philips Heart Smart III ONLY	1	REQUIRED to be removed from the packaging and inserted into the pad sentry and plugged into the device - Required for device to perform its daily check - If pad set is absent or expired, the daily test will fail

CS22.10 - PHILIPS FR3 AUTOMATED EXTERNAL DEFIBRILLATOR (AED)

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CS22.11 MAJOR TRAUMA BAG*

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

Main Bag			
5.11 Bailout Bag - Black			
External 3 Front Pockets			
Item Name	PKG/UOM	Qty Rgd	Specific Notes
Tourniquet (Combat Application Tourniquet - CAT)		6	Orange, 2 per pocket
Right External Pocket			
Combat Gauze		2	One for One - Requires Incident Number or Expired Item for Replacement
ABD Pad, 5" x 9"		4	Sterile
Left External Pocket			
Webbing, 1"	10 ft. length	1	
Main Pocket			
Emergency Trauma Dressing (ETD), 4"		4	Sterile
Multi-Trauma Dressing, 10" x 30"		4	Sterile
Tape, Silk, 3"	RL	1	
Shears, Trauma		2	
Chest Seal, Hyfin Compact Vent	2 - pack	2	

CS22.11 MAJOR TRAUMA BAG

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CS22.12 SSCOR III SUCTION UNIT*

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

Serial # _____

Device			
Item Name	Pkg /UOM	Qty Rgd	Specific Notes
Shoulder Pouch			See separate inventory
Battery - Sealed Lead Acid Lot # _____		1	REQUIRED TO BE ON CONSTANT CHARGE - BATTERY RUN TEST REQUIRED TO BE COMPLETED ON THE FIRST OF EACH MONTH
Suction Canister Set (canister, lid, suction tubing, vacuum tubing)		1	CHANGE ALL TUBING (SUCTION AND VACUUM) AND THE CANISTER AFTER EACH USE REGARDLESS OF ANY VISIBLE CONTENTS
HI-D Big Stick Suction Tip		1	pre-attached to suction tubing
Shoulder Pouch			
HI-D Big Stick Suction Tip		1	
Suction Catheter, 14Fr		2	
Suction Catheter, 18Fr		2	
Gloves, Surgical, Size 6.5	Pair	1	Sterile
Gloves, Surgical, Size 7.5	Pair	1	Sterile
Gloves, Surgical, Size 8.5	Pair	1	Sterile
Pediatric Immobilizer Suction Adapter		2	Vacuum splint

CS22.12 SSCOR III SUCTION UNIT

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CS22.13 PCEMS PERSONAL PROTECTIVE EQUIPMENT (PPE)

CS22.13.1 PPE Respirator, Full-Face (Issued to ALL individual clinicians)

Pinellas County EMS Storage Bag			
Item Name	Pkg/UOM	Qty Rqd	Specific Notes
Pinellas County EMS Mask Kit Bag <small>(optional for individual use)</small>		N/A	
Safety Goggles	pair	1	
Full Face Respirator - Moldex 9000 Series		1	appropriate fitted size per clinician
Protective Bag - Moldex 9000 Series Full Face Respirator		1	
Filter Splash Cover Moldex 7999 - in place on filters during continual use	pair	2	RE-USE - DO NOT DISCARD
P100 Filter Disk Moldex 7940	pair	2	replace every 30 days once removed from manufacturer packaging

CS22.13.2 PPE Suit Kit (ALS & BLS) - ID # _____

Pinellas County EMS Storage Bag			
Item Name	Pkg/UOM	Qty Rqd	Specific Notes
Main Interior Pocket			
Pinellas County EMS Suit Kit Bag		1	
XXL Tychem suit		2	
XXXL Tychem suit		2	
XXXXL Tychem suit		2	
Faceshield		2	
Side Pocket Interior			
Boot Covers - Universal Size	pairs	6	
End Pocket Interior			
Chem Tape	roll	1	

CS22.13 PCEMS PERSONAL PROTECTIVE EQUIPMENT (PPE)

CS22.13.3 Ballistic Vest Kit (ALS & BLS) - ID # _____

Pinellas County Ballistic Gear Storage Bag			
Item Name	Pkg/UOM	Qty Rqd	Specific Notes
Kit Bag, BLACK		1	
Batlskin Viper A3 Helmet		1	
Rescue Task Force Vest (Level III) MK-II with Side Armor and "Rescue" name patch		1	
Large Patient Mover		1	In rear vest back compartment
Vest - Front and Rear Rifle Plates (Level III)	each	1	
Vest Utility Pouch #1 - LEFT (looking at the vest)		1	
Shears, Trauma		1	Vest Utility Pouch #1 - LEFT (looking at the vest)
Chest Seal, Hyfin Compact Vent	2-pack	1	Vest Utility Pouch #1 - LEFT (looking at the vest)
Emergency Trauma Dressing (ETD), 4"	Vacuum sealed	1	Vest Utility Pouch #1 - LEFT (looking at the vest)
Hemostatic Gauze - WOUNDCLOT (3" x 39")		1	Vest Utility Pouch #1 - LEFT (looking at the vest)
Vest Tourniquet Pouch - CENTER (looking at vest)		1	
Tourniquet (Combat Application Tourniquet - CAT)	Out of packaging	2	Vest Tourniquet Pouch - CENTER (looking at vest)
Vest Utility Pouch #2 - RIGHT (looking at the vest)		1	



CS22.14 REQUIRED DOCUMENTATION/FORMS

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

Paper Format			
Item Name	PKG/UOM	Qty Rqd	Specific Notes
Blood Alcohol Testing Consent form		2	
PCEMS Patient Care Record/EMS Cognitive Evaluation form		3	
PCEMS Patient Care Record Supplemental/Supplemental Refusal form		3	
PCEMS HIPAA Notice of Privacy form		10	Transport Capable Units ONLY!!
Electronic Format - ID # _____			
Microsoft Surface GO3 <i>OR</i> Panasonic Toughbook CF20 with ePCR software		1	primary patient care documentation
PCEMS Computer Stylus <i>(Ensure compatibility - CF20 or Surface GO3)</i>		2	
EMS Communication Plan - Volume II - April 2023 (paper or electronic) -		1	Transport Capable Units ONLY!!
Miscellaneous			
Bag, Patient Chain of Custody <i>(e.g., medications, personal belongings)</i>		3	
Licensing			
FL Department of Health ALS and/or BLS vehicle permit sticker <i>(visible on windshield)</i>		1	
Medical Operations Manual - Current Version <i>(on same hardware used for ePCR - PCEMS Office of the Medical Director website)</i>		1	

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CS22.15 VEHICLE SUPPLEMENTAL EQUIPMENT & MEDICAL SUPPLIES

face(This protocol reflects medical supplies, equipment and medications required in compliance with 64J-1 F.A.C.)

Equipment & Medical Supplies - Patient Care Action Area								
Item Name	PKG/ UOM	Ambulance			Fire			Specific Notes
		ALS	BLS - 911	BLS - VAN	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper, or Engine	BLS Engine, Squad, Truck, Pumper, Utility	
Stethoscope, Adult/Pediatric		1	1	1	1	-	-	Sprague style
Blood Pressure Cuff, Manual , Infant		1	1	1	1	-	-	Cuff labeling reflects "CHILD"
Blood Pressure Cuff, Manual , Child		1	1	1	1	-	-	Cuff labeling reflects "SMALL ADULT"
Blood Pressure Cuff, Manual , Adult		1	1	1	1	-	-	
Blood Pressure Cuff, Manual , Large Adult		1	1	1	1	-	-	
Blood Pressure Cuff, Non- invasive , Child		1	1	-	1	-	-	For use with the Stryker LP15
Blood Pressure Cuff, Non- invasive , XLarge Adult		1	1	-	1	-	-	For use with the Stryker LP15
Glucometer (Bayer Contour)	EA	1	1	1	-	-	-	
Glucometer Test Strips (Bayer Contour)	BTL	1	1	1	-	-	-	retain bottom of external packaging for quality control testing
Disinfectant Wipe, Alcohol	PK/30	2	2	2	1	-	-	70% isopropyl alcohol/30% DI Water

Equipment & Medical Supplies - Reserve								
Oxygen Cylinder, "PCEMS", M6		1	1	1	1	1	-	Spare - minimum 1000 psi
Oxygen Cylinder, "D"		1	1	1	1	1	-	Spare - minimum 1000 psi
Oxygen Cylinder, Onboard		1	1	1	1	-	-	Aluminum or Steel "M" - minimum 500 psi
Oxygen Regulator - Onboard Oxygen		1	1	1	1	-	-	
Oxygen Flowmeter with Hose Barb Adapter (Xmas Tree), Onboard Oxygen		2	2	1	2	-	-	min. 2, 4, 6, 8, 10, 15, 20, 25L flow settings and DISS Port
Nasal Cannula, Adult		8	4	4	-	-	-	
Mask, Non-Rebreather, Adult		4	2	2	-	-	-	
Mask, Aerosol Mask, Adult		2	-	-	-	-	-	
Mask, Trach, Venturi with Diluters, Adult		2	2	2	2	-	-	
Nebulizer Setup		4	-	-	-	-	-	
King LTS-D Airway, Size 3		1	-	-	-	-	-	
King LTS-D Airway, Size 4		1	-	-	-	-	-	
King LTS-D Airway, Size 5		1	-	-	-	-	-	
Syringe, 60 mL, Luer-Lock Tip		3a dult	-	-	-	-	-	

CS22.15 VEHICLE SUPPLEMENTAL EQUIPMENT & MEDICAL SUPPLIES

Equipment & Medical Supplies - Reserve (cont.)								
Item Name	PKG/ UOM	Ambulance			Fire			Specific Notes
		ALS	BLS - 911	BLS - VAN	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper, or Engine	BLS Engine, Squad, Truck, Pumper, Utility	
Tube Holder, Adult		2	-	-	-	-	-	
BVM Resuscitator, Adult or Small Adult		2	1	1	1	1	-	With adult mask and filter
BVM Resuscitator, Pediatric		1	1	1	1	1	-	With child, infant and neonate masks and filter
OPA 80mm, 90mm, 100mm, 110mm	Each Size	2	1	1	-	-	-	
EtCO2 Filterline Set, Adult/Pediatric		3	-	-	1	1	-	
EtCO2 Nasal Cannula, Adult		10	-	-	-	-	-	
CPAP Setup, Adult		1	-	-	1	1	-	
CPAP Setup, Small Adult/Pediatric		1	-	-	-	-	-	
Superset with Mask Elbow Adapter		1	-	-	-	-	-	
Tee Adapter		1	-	-	-	-	-	
Laryngoscope Handle, Medium		1	-	-	-	-	-	Single patient use, sterile & disposable
Suction Canister Set <small>(canister, lid, suction tubing, vacuum tubing)</small>		2	1	1	1	1	-	CHANGE ALL TUBING (SUCTION AND VACUUM) AND THE CANISTER AFTER EACH USE REGARDLESS OF ANY VISIBLE CONTENTS
HI-D "The Big Stick" Suction Tip		2	-	-	-	-	-	
Laryngoscope Blade, Mac "3"		1	-	-	-	-	-	Single patient use, sterile & disposable
Laryngoscope Blade, Miller "4"		1	-	-	-	-	-	Single patient use, sterile & disposable
Laryngoscope Blade, Mac "4"		1	-	-	-	-	-	Single patient use, sterile & disposable
ET tube, 6.0mm		1	-	-	-	-	-	Cuffed with stylet
ET tube, 7.0mm		1	-	-	-	-	-	Cuffed with stylet
ET tube, 7.5mm		1	-	-	-	-	-	Cuffed with stylet
ET tube, 8.0mm		1	-	-	-	-	-	Cuffed with stylet
ET tube, 8.5mm		1	-	-	-	-	-	Cuffed with stylet
Bougie, Pocket		2	-	-	-	-	-	Single use
Bandage, Elastic, 4"		-	2	2	-	-	-	
Cold Pack		3	3	3	-	-	-	
Heat Pack		2	2	2	-	-	-	
1" Band-Aids		10	10	10	-	-	-	
2" Band-Aids		10	10	10	-	-	-	
1" Silk Tape		2	2	2	-	-	-	Single use
3" Silk Tape		2	2	2	-	-	-	Single use

CS22.15 VEHICLE SUPPLEMENTAL EQUIPMENT & MEDICAL SUPPLIES

Equipment & Medical Supplies - Reserve (cont.)								
Item Name	PKG/ UOM	Ambulance			Fire			Specific Notes
		ALS	BLS - 911	BLS - VAN	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper, or Engine	BLS Engine, Squad, Truck, Pumper, Utility	
1" Self-Adherent Tape		2	2	2	-	-	-	Single use
4" Roll Gauze, Sterile		2	2	2	-	-	-	Sterile
Multi-Trauma Dressing, 10" x 30"		2	2	2	-	-	-	Sterile
Splint, Moldable Padded Aluminum		2	2	2	2	2	-	
C-Collar, AMBU Perfit Ace		2	2	1	2	2	-	
C-Collar, AMBU Mini Perfit Ace		2	2	1	2	2	-	
Arm Sling, Adult		1	1	1	-	-	-	
Arm Sling, Small Adult/Pediatric		1	1	1	-	-	-	
IV Administration Set, 20 gtt (macro)		10	-	-	-	-	-	
IV Start Kit		12	-	-	-	-	-	
IV Catheter, 16g		2	-	-	-	-	-	
IV Catheter, 18g		10	-	-	-	-	-	
IV Catheter, 20g		12	-	-	-	-	-	
IV Catheter, 22g		4	-	-	-	-	-	
IV Administration Set with Flow Controller (20 gtt/mL)		1	-	-	1	-	-	
25g x 1" Needle		3	-	-	-	-	-	Safety (Retractable) with or without syringe
25g x 1 ½" Needle		3	-	-	-	-	-	Safety (Retractable) with or without syringe
Syringe, 20 mL, Luer-Lock Tip		2	-	-	-	-	-	
Syringe, 10 mL, Luer-Lock Tip		2	-	-	-	-	-	
Syringe, 3 mL, Luer-Lock Tip		5	-	-	-	-	-	
Syringe, 1 mL, Luer-Lock Tip		5	-	-	-	-	-	
3-way Stopcock		2	-	-	-	-	-	
Needle, 18g x 1.5" Blunt Fill with Filter		8	-	-	-	-	-	For drawing medications from vials ONLY
Naloxone, 1 mg/mL, 2 mL	PFS	6	-	-	-	-	-	
Narcan Nasal Spray Device, 4 mg	Nasal Spray	4	-	-	-	-	-	
Mucosal Atomization Device (MAD)		2	-	-	-	-	-	
Ketorolac Kit (2 - 30 mg/mL - 1 mL)	PFS or Vial	1	-	-	-	-	-	Reference CS22.15 for Kit Contents

CS22.15 VEHICLE SUPPLEMENTAL EQUIPMENT & MEDICAL SUPPLIES

Equipment & Medical Supplies - Reserve (cont.)								
Item Name	PKG/ UOM	Ambulance			Fire			
		ALS	BLS - 911	BLS - VAN	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper, or Engine	BLS Engine, Squad, Truck, Pumper, Utility	
Acetaminophen 10 mg/mL - 100 mL	Pre-mixed Bag	2	-	-	-	-	-	
Dextrose 10% in Water 250 mL	Pre-mixed Bag	2	-	-	-	-	-	
0.9% Sodium Chloride, 1000 mL	Pre-mixed Bag	5	-	-	-	-	-	
0.9% Sodium Chloride, 10 mL	PFS	10	-	-	-	-	-	
Sodium Bicarbonate 1 mEq/mL 50 mL	PFS or Vial	2	-	-	-	-	-	
Epinephrine 0.1 mg/mL 10 mL OR Epinephrine 1 mg/mL - 1 mL vial kit if PFS unavailable	PFS or Vial Kit	5	-	-	-	-	-	
Ondansetron 4 mg	Unit Dose ODT	2	-	-	-	-	-	
Ondansetron 2 mg/mL - 2 mL	PFS or Vial	2	-	-	-	-	-	
Diphenhydramine 50 mg/mL - 1 mL	PFS or Vial	2	-	-	-	-	-	
Epinephrine 1 mg/mL - 1 mL	Vial	2	-	-	-	-	-	
Adenosine 3 mg/mL - 2 mL	PFS or Vial	2	-	-	-	-	-	
Storage Box, Clear Plastic, Two-Part		1	-	-	-	-	-	Used for protection of Adenosine PFS
Methylprednisolone Sodium Succinate 125 mg/2 mL	Vial	1	-	-	-	-	-	
Nitroglycerin Aerosol Spray 0.4 mg/spray	BTL	1	-	-	-	-	-	
Aspirin, Baby, 81 mg	BTL	1	-	-	-	-	-	Chewable tablet - unit dose
Spoon - Aspirin Administration		6	-	-	-	-	-	Individually Wrapped
Ipratropium Bromide 0.5 mg/2.5 mL	Unit Dose	2	-	-	-	-	-	
Albuterol Sulfate 2.5 mg/3 mL	Unit Dose	4	-	-	-	-	-	
Diltiazem 5 mg/mL - 5 mL	Vial	1	-	-	-	-	-	Good for 30 days out of refrigeration
Norepinephrine 1 mg/mL - 4 mL	Vial	1	-	-	-	-	-	
Storage Box, Opaque Plastic, Two-Part	2-Part	4	-	-	-	-	-	For protection of the Nasal Naloxone

CS22.15 VEHICLE SUPPLEMENTAL EQUIPMENT & MEDICAL SUPPLIES

Equipment & Medical Supplies - Reserve (cont.)								
Item Name	PKG/ UOM	Ambulance			Fire			Specific Notes
		ALS	BLS - 911	BLS - VAN	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper, or Engine	BLS Engine, Squad, Truck, Pumper, Utility	
ECG Monitoring Electrodes		*	-	-	-	-	-	*100 total electrodes - packaging may vary
Alcohol Prep Pads	Ea	50	10	10	-	-	-	
Blood Specimen Draw Kit	Bx	2	-	-	2	2	-	
OB Birthing Kit	Ea	1	1	1	1	1	-	
Head Immobilizer	Set	2	1	1	1	1	-	
Patient Mover		2	2	1	1	1	-	
Restraint, Disposable	Pair	2	2	-	2	2	-	Single patient use
Restraint, Reusable, Poly Style, Wrist	Pair	2	-	-	2	-	-	Reusable - NOT AN EXCHANGE ITEM
Restraint, Reusable, Poly Style, Ankle	Pair	2	-	-	2	-	-	Reusable - NOT AN EXCHANGE ITEM
Restraint Belt, Reusable, Poly Style	Individual	4	-	-	4	-	-	Reusable - NOT AN EXCHANGE ITEM - Used with wrist and ankle restraints
Restraint, Reusable, Protective Liner - Wrist	Pair	3	-	-	3	-	-	For use with Poly Style Restraints - Liner is single patient use
Restraint, Reusable, Protective Liner - Ankle	Pair	3	-	-	3	-	-	For use with Poly Style Restraints - Liner is single patient use
Triage Tag - FL Specific Version	Pack	1	1	1	1	1	-	Rev. 5/12 (50 tags/pack)
Triage Ribbon Dispenser System (Fire ONLY!!!)		-	-	-	2	2	-	Complete with tape - green, red, yellow, black, magenta
Tamper Evident Security Bag		5	5	5	-	-	-	For securing patient valuables/medications
Patient Belongings Bag		5	5	5	-	-	-	Ambulance ONLY Specific Item
Emesis Bag		4	-	-	-	-	-	
Bed Pan		2	2	2	2	-	-	
Urinal		2	2	2	2	-	-	
Infectious Linen Bag (YELLOW)		3	3	3	3	3	-	
Biohazard Waste Plastic Bag, Small (RED)		4	4	4	-	-	-	
Biohazard Waste Plastic Bag, Large (RED)		4	4	4	-	-	-	
Biohazard Waste Bag Impervious Container		1	1	1	1	1	-	
Sharps Container, Individual		2	2	2	3	3	-	Single Use
Sharps Disposal Container, Wall Mount with Key		1	1	1	1	1	-	Vehicle

CS22.15 VEHICLE SUPPLEMENTAL EQUIPMENT & MEDICAL SUPPLIES

Equipment & Medical Supplies - Reserve (cont.)								
Item Name	PKG/ UOM	Ambulance			Fire			Specific Notes
		ALS	BLS - 911	BLS - VAN	ALS Transport Capable Rescue	ALS Medic Unit, Squad, Truck, Pumper, or Engine	BLS Engine, Squad, Truck, Pumper, Utility	
Hand Sanitizing Wipe, Alcohol, Individual		50	50	50	25	25	25	Single use
Disinfectant Wipe, Alcohol	PK/30	2	2	2	2	2	2	70% isopropyl alcohol/30% DI Water
Hydrogen Peroxide Cleaner - Disinfectant	Spray Bottle	1	1	1	1	1	-	
Wipe, General Cleaning	BX	1	1	1	1	1	-	Disposable, single use
Nitrile Gloves, Non-sterile	PR	Multiple Pairs						Appropriate size
Faceshield, Rated	EA	4	4	4	4	-	-	Honeywell Faceshield
Primary Stretcher with appropriate patient belts per manufacturer	EA	1	1	1	1	-	-	(NOT AN EXCHANGE ITEM)
Sheet, Stretcher		10	10	10	5	-	-	
Pillow		2	2	2	2	-	-	Single use, disposable
Pillowcase		10	10	10	5	-	-	Single use, disposable
Blanket - Cotton for Warmth		4	4	2	4	4	-	Single Use, disposable
Blanket - Yellow		2	2	2	2	2	-	Single Use, disposable - Patient Rain Cover
Pedi-Mate PLUS Pediatric Restraint Device		1	1	1	1	-	-	(NOT AN EXCHANGE ITEM)
NeoMate Pediatric Restraint Device		1	1	1	1	-	-	(NOT AN EXCHANGE ITEM)
Vacuum Splint		1	1	1	1	1	-	Complete with RED Bag
Long Spine Board with Four Straps		2	1	1	1	1	-	
Scoop Stretcher		1	1	1	1	-	-	(NOT AN EXCHANGE ITEM)
Stair Chair		1	1	1	-	-	-	(NOT AN EXCHANGE ITEM)
Patient Slider		2	1	1	-	-	-	(NOT AN EXCHANGE ITEM)
Sager Splint		1	1	1	1	1	-	
Child Car Seat		1	1	-	1	-	-	Check Expiration Date (NOT AN EXCHANGE ITEM)
Cactus Pharmlock Controlled Substance Waste System		1	1	-	1	-	-	Includes bracket set complete and incorporated Cyberlock - MUST be mounted securely in the vehicle
Cactus Pharmlock Controlled Substance Waste System Cartridge (secured in the bracket)		1	1	-	1	-	-	Holds a maximum of 3 liters of fluid - MUST be replaced 90 days from the date the cartridge is unsealed for use

CS22.16 PCEMS REQUIRED VEHICLE MECHANICAL & OPERATIONAL READINESS

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

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

Vehicle		
Item Name	Qty Rqd	Specific Notes
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)		

CS22.16 - PCEMS REQUIRED VEH. MECH./OPER. READINESS

CS23 MED OPS - Unusual/Austere Environments

Purpose:

The purpose of this Clinical Standard is to describe the appropriate and authorized clinical standards for operations in unusual/austere environments including Small Boat/Marine Operations, Aeronautical Operations, and Operations in Austere or Remote Environments as may be required from time to time. This protocol **DOES NOT** supersede existing special teams' protocols (e.g., Critical Care, Hazmat, Tactical, Technical Rescue) when performing standard team operations.

Background:

Although medical priorities remain the same as in general EMS, some environments require modifications to protocol, training, and approach to address the following challenges:

- Limitations to ingress, egress, and patient transport modalities due to a special operations environments such as marine, aeronautical, special event, or austere/remote locations
- Limitations to equipment, assessment, and treatment options due to environmental or operational constraints

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

Definitions:

Marine Operations - means operations while onboard light marine units (e.g., jet ski), small boats (e.g., open boats such inflatable boats, Jon boats, center console boats), or large boats (e.g., boats with enclosed cabin space capable of keeping medical equipment dry)

Aeronautical Operations - means operations while onboard rotor and fixed wing aircraft not primarily equipped for patient transport. This includes civilian, law enforcement, and certain military aircraft, but excludes air ambulances

Austere/Remote Environment Operations - means operations under conditions that limit ability to get personnel and equipment to the patient, impair the ability to effectively utilize medical resources, or delay or prevent removal of a patient to standard EMS care and/or definitive care. Examples include islands without road access, areas cut off by flooding, or when a man-made or natural disaster has otherwise compromised infrastructure.

CS23 MED OPS - Unusual/Austere Environments

Special Operations Medical Gear Guide	Environment						
	Marine			Aeronautical			Austere
	Light Marine - Jet ski	Small Boats	Large Boats	Light Aircraft	Heavy Aircraft		
First Aid Supplies	✔					As Practicable	
BLS Lifeguard - Marine Bag		✔	✔	✔			
Other System Approved Bags		✔	✔	✔	✔		
Full ALS Gear			✔		✔		

Clinical Standards for Unusual Operations/Austere Environments

- **Assessment and Care:**
 - Clinicians shall perform patient assessment and care to the fullest extent possible given available resources and environmental limitations.
 - Focus should be on initial stabilization measures as practicable, followed by access to standard EMS resources, and finally removal to definitive care.

- **Refusals:**
 - Certified Paramedics may take a refusal without completing a full ALS Assessment (ECG, EtCO₂, etc.) but retain responsibility for this decision and should arrange for full ALS assessment if any doubt exists as to the need for additional information to inform risk/benefit discussion.
 - Certified EMTs may take a refusal with OLMC consultation (Ref. CS12).

- **OLMC:**
 - May use non-standard means (e.g., cellphone, marine radio, aircraft radio, satellite communications) in addition to standard system radio to contact OLMC.
 - If unable to contact OLMC, clinicians should use their best judgment in caring for a patient and are authorized to perform all interventions (including OLMC orders, cessation of efforts, and refusals)

- **Special Consideration (e.g., patient in cardiac arrest):** consideration may be given to time/distance to definitive care as part of decision making around cessation or withholding of resuscitative efforts (Ref. CS15)

- **Transport/Destination:** May require use of non-permitted or non-standard vehicles and devices for patient transfer. Every reasonable effort should be made to ensure safe packaging, restraint, and movement of the patient.



UNIVERSAL



UNIVERSAL

U1 UNIVERSAL APPROACH TO PATIENT CARE

GOALS OF CARE	
ADULT and PEDIATRIC	<ul style="list-style-type: none"> • 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
<p>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</p>
<ul style="list-style-type: none"> • General Considerations: <ul style="list-style-type: none"> ○ 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. CS18) • Pediatric Specific Considerations: <ul style="list-style-type: none"> ○ Utilize the Pediatric Assessment Triangle (PAT) (Ref. CT20) ○ Clinical treatment protocols, medication dosing, and equipment sizing: <ul style="list-style-type: none"> ▪ 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 general treatment protocol selection, medication dosing and equipment sizing ▪ 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- ○ If a pediatric specific protocol does not exist, implement the appropriate adult protocol • Patient Assessment: <ul style="list-style-type: none"> ○ Perform full assessment (history, exam, diagnostic testing) appropriate to a patient’s condition and/or complaint ○ Obtain baseline and repeat vital signs: <ul style="list-style-type: none"> ▪ Minimum two sets (including at least SBP, HR, RR, GCS, and Pain Scale if GCS 15) at least five (5) minutes apart. ▪ Assess and document vital signs before and after each administration of a controlled substance/sedating medication

U1 - UNIVERSAL APPROACH TO PATIENT CARE

U1 UNIVERSAL APPROACH TO PATIENT CARE

BLS (cont.)

- Recommended additional/ongoing vital sign frequency by patient severity category in minutes:

RED	YELLOW	GREEN
5	10	15

- Determine presence of any indwelling medical devices or external medical equipment (Ref. CP25, CP26, CT16)
- **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
- **Transport:**
 - Ensure safe and appropriate transport (Ref. CP24):
 - 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)

U1 UNIVERSAL APPROACH TO PATIENT CARE

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)
 - 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
 - Cardiac Monitor/Defibrillator & CPR Feedback Sensor:
 - Stryker LP15 - If the patient weighs less than 15 kg (33 lbs.) use Pediatric Quik-Combo Multi-function Pads
 - CPR Feedback Sensor (QCPR or CPRMeter2) - If patient is less than 8 years old or less than 25kg (55 lbs.) **DO NOT USE**
 - 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

S A F E T Y A L E R T

RESPONDER SAFETY IS PARAMOUNT

- Always maintain situational awareness
- Consider need for enhanced PPE (e.g., eye protection, N95, ballistic gear, etc.)
- It is NOT considered patient abandonment to back out of a dangerous scene
- Utilize the principles of Stress First Aid to support your fellow responders

IF YOU SEE SOMETHING, SAY SOMETHING

U1 UNIVERSAL APPROACH TO PATIENT CARE

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

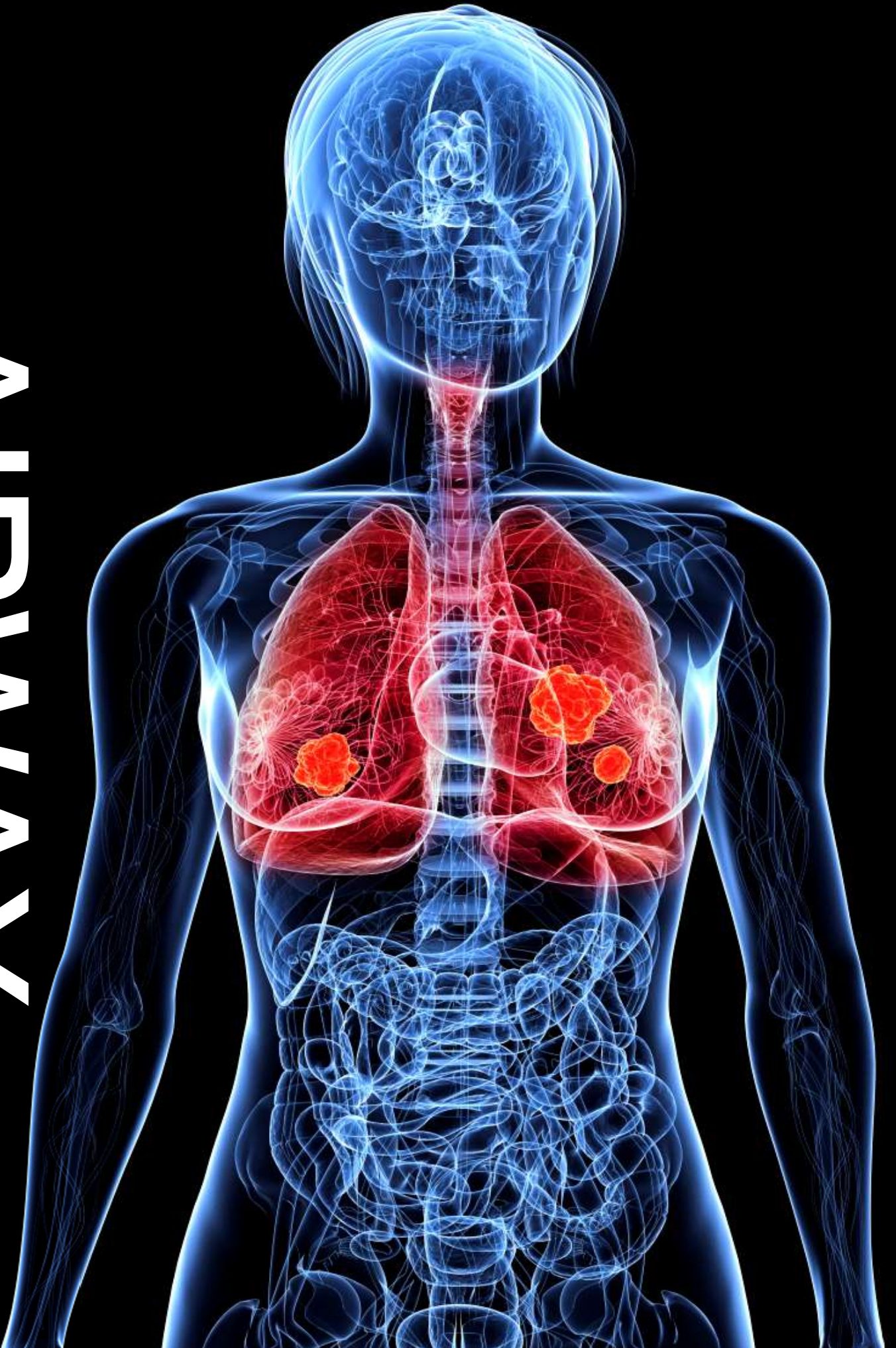
REFERENCES

- Pinellas County EMS Medical Quality Management Plan, Medical Operations Manual, Vol. 2, Protocol AD18
- <https://nasemso.org/projects/model-ems-clinical-guidelines/>



AIRWAY

AIRWAY



A1 FOREIGN BODY AIRWAY OBSTRUCTION

ADULT ONLY (Ped. 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. CP9.1, CT3)
 - 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

A1 - FOREIGN BODY AIRWAY OBSTRUCTION

A1 FOREIGN BODY AIRWAY OBSTRUCTION

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

- Pending

REFERENCES

- <https://naseaso.org/projects/model-ems-clinical-guidelines/>
- <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 <i>(Ped. Ref. P2)</i>	GOALS OF CARE
	Recognize and treat obstructive respiratory pathophysiology in an aggressive and safe manner

BLS
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • Bronchodilator aerosol therapy: <ul style="list-style-type: none"> ○ Albuterol 2.5 mg mixed with ipratropium 0.5 mg. May repeat x 1 <i>followed by</i> ○ 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). • <u><i>Asthma Patients Only</i></u> <div style="border: 2px solid red; padding: 5px; text-align: center; margin: 10px 0;"> <p style="margin: 0;">S A F E T Y A L E R T</p> <p style="margin: 0; font-size: small;">USE CAUTION WITH EPINEPHRINE IN A PATIENT 35 YEARS OF AGE OR OLDER OR WHO HAS A HISTORY OF CARDIAC DISEASE</p> </div> <ul style="list-style-type: none"> ○ If patient does not improve or is in extremis at patient contact: <ul style="list-style-type: none"> - 0.3 mg epinephrine (1 mg/mL concentration) intramuscular in the mid-antrolateral thigh, may repeat once in 3 - 5 minutes, if needed ○ Consider epinephrine drip infusion if no improvement (OLMC Required - Ref. CT7) <ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • Additional doses of intramuscular epinephrine (1 mg/mL concentration) • Epinephrine drip infusion (Ref. CT7) • Magnesium sulfate 2 grams intravenous over 10 minutes (recommended only for a patient in severe distress after exhausting all other available interventions without improvement)

A2 - ASTHMA/CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

A2 ASTHMA/CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

A2 - ASTHMA/CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

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

- Bilateral lung sounds documented at least twice (min 5 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 less than 14 prior to application)
- Both nitroglycerin and albuterol not administered to same patient
- Epinephrine administered if age greater than 35 (tracking only)

REFERENCES

- <https://nasemso.org/projects/model-ems-clinical-guidelines/>
- Pinellas County EMS Medical Quality Management Plan - Medical Operations Manual Vol. 2 Protocol AD18

A3 TRACHEOSTOMY EMERGENCIES

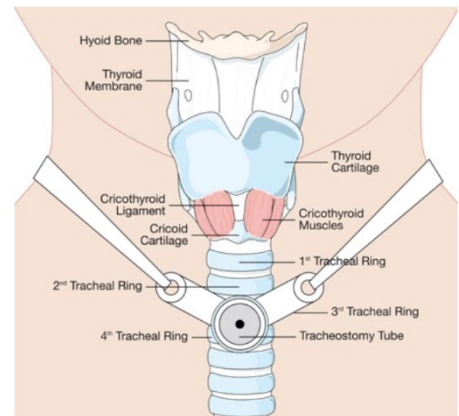
ADULT and PEDIATRIC	GOALS OF CARE
	Recognize and mitigate tracheostomy tube obstruction, displacement, or another malfunction

BLS

- Administer supplemental oxygen via trach mask as needed (Ref. CP33)
- 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 (Ref. CP1.1, CP3.1)
- Encourage coughing to attempt to clear a tracheostomy tube obstruction
- Have suction readily available

ALS

1. 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
2. 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!
3. 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.
4. If unable to insert an endotracheal tube, ventilate with bag-valve-mask (BVM) over stoma or over patient's mouth while covering the stoma
5. 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

A3 TRACHEOSTOMY EMERGENCIES

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://nasmso.org/projects/model-ems-clinical-guidelines/>
- <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

S A F E T Y A L E R T

RESPONDER SAFETY IS PARAMOUNT

- 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 (Ref. CP1, CP3)
- 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 dysrhythmias (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**

A4 - CARBON MONOXIDE (CO) EXPOSURE/TOXICITY

A4 CARBON MONOXIDE (CO) EXPOSURE/TOXICITY

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasemso.org/projects/model-ems-clinical-guidelines/>
- 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

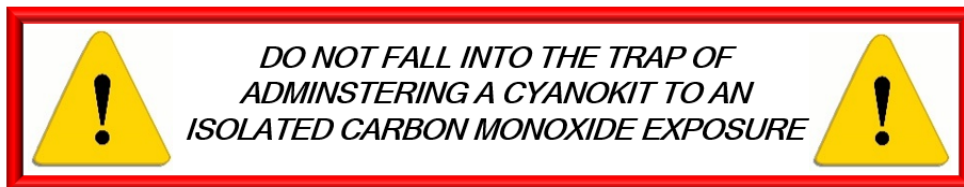
BLS

- 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 oxygen minimum 15L 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)
 - Cyanokit
 - Adult - 5 grams (1 kit) intravenous/intraosseous over 15 minutes
 - Pediatric (10 years of age and younger) - Per PCEMS Handtevy Medication and Equipment Guidebook intravenous/intraosseous
 - **Use a dedicated vascular site for Cyanokit administration**



- 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

A5 - CYANIDE POISONING - SMOKE INHALATION

A5 CYANIDE POISONING - SMOKE INHALATION

PEARLS

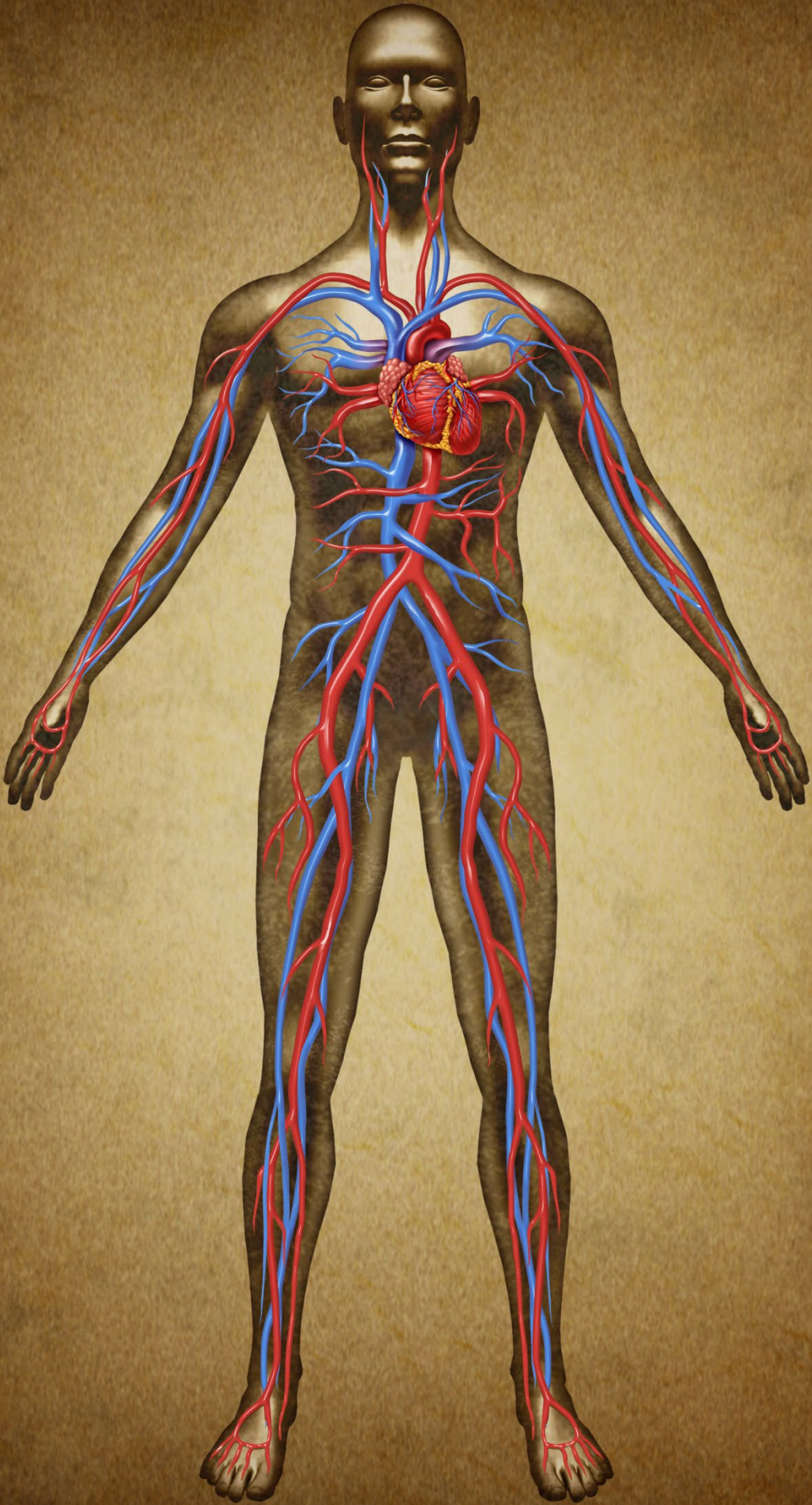
- Cyanide is a product of the combustion of materials commonly found in household furnishings and should be **strongly** considered in all symptomatic patients with significant smoke exposure (e.g., rescued civilians or firefighters)
- It is important to remember that exposure to Cyanide and Carbon Monoxide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

QUALITY MEASURES

- Pending

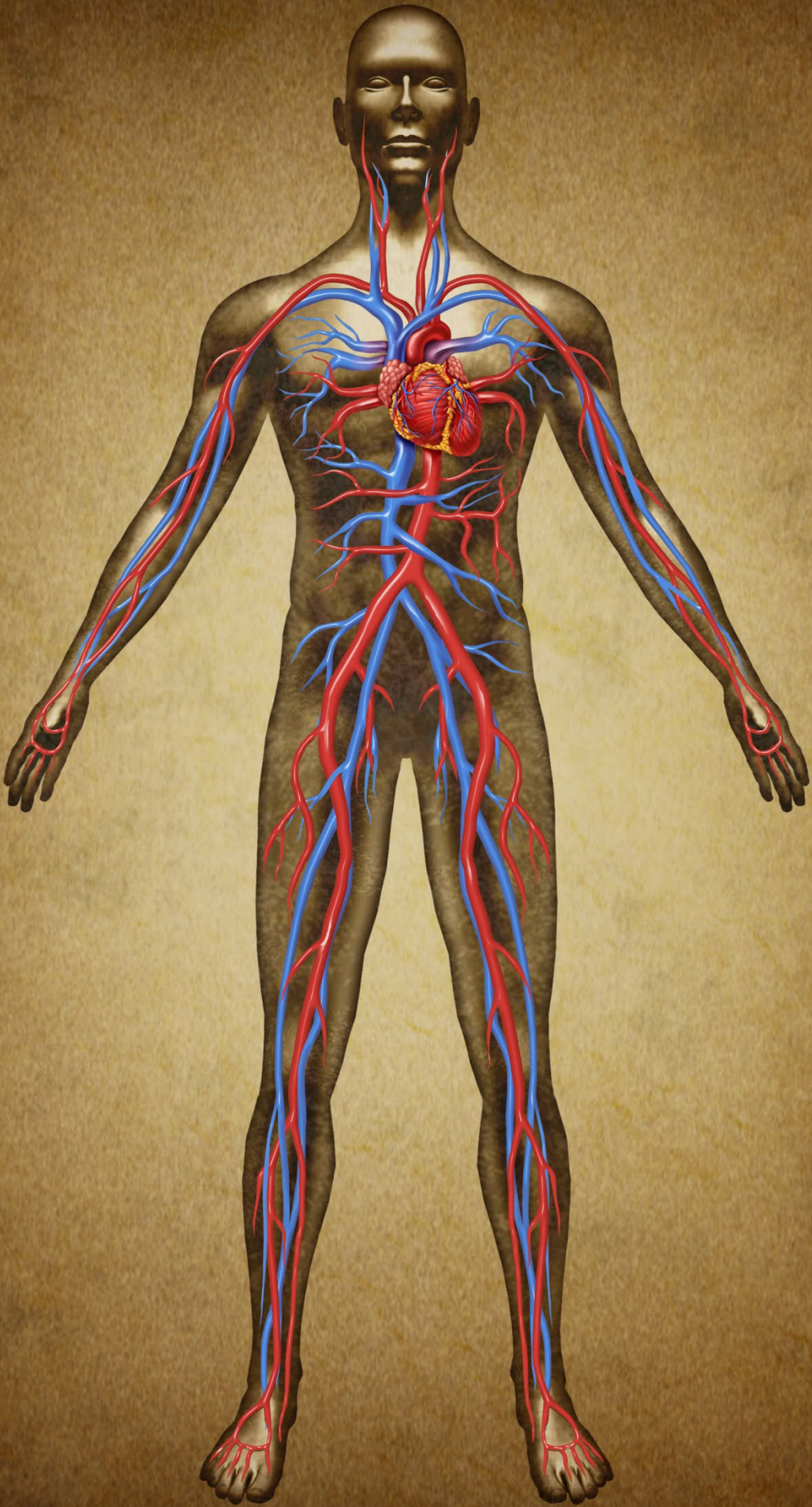
REFERENCES

- <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
- <https://cyanokit.com/about-cyanide-poisoning>
- <https://nasmso.org/projects/model-ems-clinical-guidelines/>
- Pinellas County EMS Handtevy Medication and Equipment Guidebook
- <https://publications.aap.org/pediatrics/article-abstract/68/1/5/50729/Multiple-Cases-of-Cyanide-Poisoning-by-Apricot?redirectedFrom=fulltext>



CARDIAC

CARDIAC



C1 MEDICAL CARDIAC ARREST

ADULT ONLY (Ped. 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, CT3)
- Immediately initiate rhythm assessment when AED/defibrillator available and shock, if indicated (Ref. CP10, CP11)
- Continue Compression Performance Resuscitation and reassess rhythm every two (2) minutes and defibrillate when indicated
- Document any bystander (non-911 responder) interventions (e.g., CPR, rescue breathing, AED use) that occurred prior to arrival
- Document any occurrence of Return of Spontaneous Circulation (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. CP9.1, CT3)
- Perform manual defibrillation as indicated for ventricular fibrillation or pulseless ventricular tachycardia
 - Use energy settings as recommended by manufacturer (escalating 200j, 300j, 360j for Lifepak 15)
 - If patient remains in V-fib despite antiarrhythmic drug therapy and at least three (3) defibrillation attempts, perform vector change defibrillation (Ref. CP12, CT5)
- 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 suspected Torsade's de Pointes, administer magnesium sulfate 2 grams intravenous/intraosseous
- Monitor the progress of resuscitation using EtCO2 (Ref. CP5)

C1 MEDICAL CARDIAC ARREST

ALS (cont.)

- 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 every 3-5 min. as needed up to 6 mg (excluding previous intranasal doses)
 - Perform Leave Behind Narcan Procedure as indicated (Ref. CP29)
 - Suspected cyanide exposure - Cyanokit intravenous/intraosseous rapid intravenous push (Ref. CT9, A5)
 - Suspected tension pneumothorax - Perform needle thoracostomy (Ref. CP7)

OLMC

- Consult for unusual circumstances or other specific treatment requests (e.g., lidocaine intravenous/intraosseous - First dose 1.5 mg/kg, Second dose 0.75 mg/kg (maximum combined total of 3 mg/kg), additional naloxone, etc.)
- 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

- Early defibrillation of ventricular fibrillation and pulseless ventricular tachycardia is **CRITICAL**. Two (2) minutes of “priming CPR” is no longer recommended.
- Agonal gasps may be present in the first minutes after sudden cardiac arrest and should not delay initiation of aggressive resuscitation efforts including chest compressions.
- Reversible causes of cardiac arrest:

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

T's	Tension	Tamponade	Thrombosis (coronary/pulmonary)
	Pneumothorax	(cardiac)	
	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
- **NOTE: Double sequential defibrillation is not authorized in Pinellas County EMS**

C1 MEDICAL CARDIAC ARREST

QUALITY MEASURES

- Compressions initiated within 1 minute
- Extraglottic airway utilized
- EtCO2 monitored
- EtCO2 less than 35 if not transported
- OLMC contacted if not transported
- ROSC obtained (tracking only)

REFERENCES

- US Food and Drug Administration (FDA) and Institute for Safe Medication Practices (ISMP). *FDA and ISMP Lists of Look-Alike Drug Names with Recommended Tall Man Letters*. ISMP; 2023 <https://home.ecri.org/blogs/ismp-resources/look-alike-drug-names-with-recommended-tall-man-mixed-case-letters>
- <https://nasemso.org/projects/model-ems-clinical-guidelines/>
- <https://www.ahajournals.org/doi/10.1161/CIR.0000000000000916>
- Pinellas County EMS Medical Quality Management Plan - Medical Operations Manual Vol. 2 Protocol AD18
- 2018 JEMS “Variabilities in the Use of IV Epinephrine in the management of Cardiac Arrest Patients” <https://www.jems.com/patient-care/cardiac-resuscitation/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/>

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C2 POST MEDICAL CARDIAC ARREST

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

BLS
<ul style="list-style-type: none"> • Assess post-ROSC vital signs and mental status • Initiate compression performance resuscitation if pulses lost again (Ref. CP9) • Assist ventilations with BVM if needed -- Avoid Hyperventilation! (Ref. CP1) • Transport patient to a PCI capable facility (Ref. CS4)

ALS
<ul style="list-style-type: none"> • Assess cardiac rhythm and treat dysrhythmias as needed (Ref. C4, C5) • Obtain 12-Lead ECG and declare STEMI Alert, if indicated (Ref. C3) • Initiate and continue resuscitation for shock as follows: <ul style="list-style-type: none"> ○ If hypotensive (SBP less than 90 mmHg): <ul style="list-style-type: none"> ▪ INITIATE fluid bolus of 0.9% sodium chloride (utilizing pressure infuser if necessary for rapid infusion) ▪ If profound hypotension (SBP less than 80 mmHg) or need for immediate airway management/positive pressure ventilation, PREPARE push dose epinephrine (Ref. CT26) ○ If patient remains hypotensive (SBP less than 90 mmHg) after first 500 mL 0.9% sodium chloride bolus: <ul style="list-style-type: none"> ▪ CONTINUE infusion of 0.9% sodium chloride if no signs of overload ▪ INTIATE push dose epinephrine 10 mcg every 1-2 minutes (max 5 doses) to SBP greater than 90 mmHg as a bridge to allow time for additional fluids and if needed, norepinephrine initiation and titration ▪ Ensure adequate secondary vascular access site (minimum 18g peripheral catheter in antecubital, or intraosseous access) ▪ PREPARE norepinephrine infusion (Ref CT8) ○ If patient remains hypotensive after 1000 mL 0.9% sodium chloride or signs of volume overload: <ul style="list-style-type: none"> ▪ CONTINUE infusion of 0.9% sodium chloride, if appropriate, to 20 mL/kg (max 2000 mL) ▪ INITIATE norepinephrine drip at 1 mcg/min using secondary vascular access site ▪ Titrate every minute to SBP greater than 90 mmHg or max 10 mcg/min
<div style="border: 2px solid red; padding: 10px; margin: 10px auto; width: fit-content;"> <p style="text-align: center; background-color: yellow; margin: 0;">S A F E T Y A L E R T</p> <p style="text-align: center; margin: 5px 0;">If there is any concern that a vascular site is not patent</p> <p style="text-align: center; color: red; margin: 0;">DO NOT ADMINISTER NOREPINEPHRINE</p> </div>

C2 - POST MEDICAL CARDIAC ARREST

C2 POST MEDICAL CARDIAC ARREST

C2 - POST MEDICAL CARDIAC ARREST

ALS (cont.)

- 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
- Additional doses of push dose epinephrine
- 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://www.ahajournals.org/toc/circ/142/16_suppl_2
- <https://nasemso.org/projects/model-ems-clinical-guidelines/>

C3 SUSPECTED ACUTE CORONARY SYNDROME (ACS)

ADULT ONLY (Consult OLMC if suspected ACS in Ped)	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
- Assist with one dose of patient's own prescription nitroglycerin, if available and SBP greater than 120 mmHg

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/confirm receipt of ECG via radio (Ref CT6):

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		



Initiate **EMERGENCY Transport** and **Early Hospital Notification** for STEMI and PreACT STEMI Alerts -
Goal Less Than 10 Minute Scene Time

C3 - SUSPECTED ACUTE CORONARY SYNDROME (ACS)

C3 SUSPECTED ACUTE CORONARY SYNDROME (ACS)

C3 - SUSPECTED ACUTE CORONARY SYNDROME (ACS)

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:
 - Vascular access is preferred prior to the administration of nitrates due to the risk of hypotension (**NOTE:** Vascular 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

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

C3 SUSPECTED ACUTE CORONARY SYNDROME (ACS)

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>
- Pinellas County EMS Medical Quality Management Plan - Medical Operations Manual Vol. 2 Protocol AD18

C3 - SUSPECTED ACUTE CORONARY SYNDROME (ACS)

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C4 BRADYCARDIA

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

BLS

- Obtain baseline and repeat vital signs
- If the patient has evidence of dyspnea, apply supplemental oxygen
- Assist ventilations with bag-valve-mask (BVM) device and appropriate airway adjunct as needed (Ref. CP1)
- If patient remains symptomatic after assuring adequate oxygenation and ventilation as above, assess for other underlying causes:
 - Suspected hypoglycemia (Ref. M5)
 - If suspected opioid overdose (Ref. M12, CP29, CT15)

ALS

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

Stable - Asymptomatic	Stable - Symptomatic <small>(e.g., lightheadedness, weakness, nausea, palpitations, etc.)</small>	Unstable <small>(e.g., chest pain, altered mental status, shortness of breath, hypotension, etc.)</small>
Obtain 12 lead ECG to assess for ischemia or other abnormalities	SBP less than 90 mmHg. Infuse 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 1 mg intravenous/intraosseous bolus. Repeat every 3 - 5 mins. Maximum combined dose 3 mg	Initiate transcutaneous pacing (Ref. CP14) AND May give atropine 1 mg intravenous/intraosseous while preparing to pace, but DO NOT DELAY PACING!
Consider underlying causes	Obtain 12 lead ECG to assess for ischemia or other abnormalities	<ul style="list-style-type: none"> ○ Midazolam: <ul style="list-style-type: none"> ▪ First Dose: <ul style="list-style-type: none"> • 2.5 mg intravenous/intramuscular OR 5 mg intranasal (2.5 mg per nare) ▪ Second Dose (if required after 3 - 5 min): <ul style="list-style-type: none"> • 2.5 mg intravenous/intramuscular or 5 mg intranasal (2.5 mg per nare)

- If concern for opioid toxidrome - treat opioid toxidrome as needed (Ref. M12, CT15) and perform Leave Behind Narcan procedure (Ref. CP29)

C4 BRADYCARDIA

OLMC

- Norepinephrine drip infusion 1 - 10 mcg/min (Ref. CT8)
- **EPINEPH**rine drip infusion 2 - 5 mcg/min (Ref. CT7)
- Calcium chloride, 1 gram intravenous slow over at least 5 minutes for suspected calcium channel blocker overdose induced bradycardia
- Additional sedation
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- Clinically impactful bradycardias are generally at a rate of less than 50 bpm
- 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:

- 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.ahajournals.org/doi/10.1161/CIR.0000000000000916>
- <https://naseaso.org/projects/model-ems-clinical-guidelines/>
- https://www.ahajournals.org/toc/circ/142/16_suppl_2
- <https://www.ahajournals.org/doi/10.1161/CIR.0000000000000916>
- Pinellas County EMS Medical Quality Management Plan

C5 TACHYCARDIA (WIDE/NARROW)

ADULT ONLY (Ped. 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
- Assess cardiac rhythm and treat as follows:

UNSTABLE - WIDE/NARROW -						
(e.g., chest pain, altered mental status, shortness of breath, hypotension, etc.)						
If patient condition permits, pre-medicate with midazolam 2.5 mg - 5 mg via the intravenous, intraosseous, or intranasal route. May repeat one time in five (5) minutes, if needed						
	Joules					
Regular - Narrow or Wide	50j	100j	200j			Synchronized cardioversion
Irregular - Narrow		100j	200j			Synchronized cardioversion
Irregular - Wide or Polymorphic			200j	300j	360j	Unsynchronized defibrillation

STABLE - WIDE	
Regular - Monomorphic	Consult OLMC for antiarrhythmic choice
Irregular	Amiodarone 150 mg infusion over minimum of ten (10) minutes. Repeat once if tachycardia re-occurs
Irregular - Torsade's	Magnesium sulfate 2 grams intravenous over a minimum of ten (10) minutes

STABLE - NARROW	
Regular	1. Modified Valsalva Maneuver (Ref. CP30) 2. Adenosine 6 mg rapid intravenous push 3. Adenosine 12 mg rapid intravenous push 4. If no change, consult OLMC
Regular - History of atrial fibrillation	Diltiazem 0.25 mg/kg slow intravenous push Max single 25 mg dose
Irregular	Diltiazem 0.25 mg/kg slow intravenous push Max single 25 mg dose

C5 TACHYCARDIA (WIDE/NARROW)

OLMC

- Stable Wide Regular Monomorphic Tachycardia
 - Adenosine 6 mg rapid intravenous push
 - Adenosine 12 mg rapid intravenous push
 - Amiodarone 150 mg infusion over minimum of ten (10) minutes
- Additional sedation
- Withholding full dose of dilTIAZem if patient converts after partial dose
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

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
 - Stable wide monomorphic regular tachycardias may represent several different underlying rhythms making antiarrhythmic selection complicated

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

- 2023 Institute for Safe Medication Practices (ISMP) FDA and ISMP Lists of Look-Alike Drug Names with Recommended Tall Man (Mixed Case) Letters
- Posen A, Bursua A, Petzel R. Dosing Strategy Effectiveness of Diltiazem in Atrial Fibrillation With Rapid Ventricular Response. Ann Emerg Med. 2023 Mar;81(3):288-296. doi: 10.1016/j.annemergmed.2022.08.462. Epub 2022 Nov 17. PMID: 36402632.
- <https://www.ahajournals.org/doi/10.1161/CIR.0000000000000916>
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- <https://www.cprseattle.com/blog/slow-down-youre-going-too-fast-svt-and-the-modified-valsalva-maneuver>
- <https://nasemso.org/projects/model-ems-clinical-guidelines/>
- Pinellas County EMS Medical Quality Management Plan - Medical Operations Manual Vol. 2 Protocol AD18

C6 CARDIOGENIC SHOCK

ADULT ONLY (Consult OLMC if suspected cardiogenic shock in Ped.)	GOALS OF CARE Rapidly identify and aggressively treat cardiogenic shock
--	---

BLS
<ul style="list-style-type: none"> • Shock position as required

ALS
<ul style="list-style-type: none"> • Establish vascular access • Assess cardiac rhythm and treat dysrhythmias as needed (Ref. C4, C5) • Initiate and continue resuscitation for shock as follows: <ul style="list-style-type: none"> ○ If hypotensive (SBP less than 90 mmHg): <ul style="list-style-type: none"> ▪ INITIATE fluid bolus of 0.9% sodium chloride (utilizing pressure infuser if necessary for rapid infusion) ▪ If profound hypotension (SBP less than 80 mmHg) or need for immediate airway management/positive pressure ventilation, PREPARE push dose epinephrine (Ref. CT26) ○ If patient remains hypotensive (SBP less than 90 mmHg) after first 500 mL 0.9% sodium chloride bolus: <ul style="list-style-type: none"> ▪ CONTINUE infusion of 0.9% sodium chloride if no signs of overload ▪ INTIATE push dose epinephrine 10 mcg every 1-2 minutes (max 5 doses) to SBP greater than 90 mmHg as a bridge to allow time for additional fluids and if needed, norepinephrine initiation and titration ▪ Ensure adequate secondary vascular access site (minimum 18g peripheral catheter in antecubital, or intraosseous access) ▪ PREPARE norepinephrine infusion (Ref CT8) ○ If patient remains hypotensive after 1000 mL 0.9% sodium chloride or signs of volume overload: <ul style="list-style-type: none"> ▪ CONTINUE infusion of 0.9% sodium chloride, if appropriate, to 20 mL/kg (max 2000 mL) ▪ INITIATE norepinephrine drip at 1 mcg/min using secondary vascular access site ▪ Titrate every minute to SBP greater than 90 mmHg or max 10 mcg/min
<div style="border: 2px solid red; padding: 5px; margin: 0 auto; width: 80%;"> <p style="text-align: center; margin: 0;">S A F E T Y A L E R T</p> <p style="text-align: center; margin: 0;">If there is any concern that a vascular site is not patent</p> <p style="text-align: center; margin: 0;">DO NOT ADMINISTER NOREPINEPHRINE</p> </div>
<ul style="list-style-type: none"> • Obtain 12-lead ECG

OLMC
<ul style="list-style-type: none"> • Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
<ul style="list-style-type: none"> • Destination should be closest PCI facility

C6 - CARDIOGENIC SHOCK

C6 CARDIOGENIC SHOCK

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>

C7 CONGESTIVE HEART FAILURE (CHF)/PULMONARY EDEMA

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

BLS
<ul style="list-style-type: none"> • 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						
<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> ○ 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 <ul style="list-style-type: none"> ▪ Contraindications <ul style="list-style-type: none"> - SBP less than 90 mmHg (Ref. C6) - Recent use of erectile dysfunction medications: 						
<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td style="background-color: #f2f2f2;">Taken within 12 hours</td> <td>Stendra (avanafil)</td> </tr> <tr> <td style="background-color: #f2f2f2;">Taken within 24 hours</td> <td>Levitra (vardenafil), Staxyn (vardenafil), Viagra (sildenafil)</td> </tr> <tr> <td style="background-color: #f2f2f2;">Taken within 48 hours</td> <td>Cialis (tadalafil)</td> </tr> </table>	Taken within 12 hours	Stendra (avanafil)	Taken within 24 hours	Levitra (vardenafil), Staxyn (vardenafil), Viagra (sildenafil)	Taken within 48 hours	Cialis (tadalafil)
Taken within 12 hours	Stendra (avanafil)					
Taken within 24 hours	Levitra (vardenafil), Staxyn (vardenafil), Viagra (sildenafil)					
Taken within 48 hours	Cialis (tadalafil)					
<ul style="list-style-type: none"> • Initiate CPAP unless contraindicated (Ref. CP6) • Obtain 12-lead ECG 						

OLMC
<ul style="list-style-type: none"> • Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
<ul style="list-style-type: none"> • 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.)

C7 - CONGESTIVE HEART FAILURE (CHF)/PULMONARY EDEMA

C7 CONGESTIVE HEART FAILURE (CHF)/PULMONARY EDEMA

C7 - CONGESTIVE HEART FAILURE (CHF)/PULMONARY EDEMA

QUALITY MEASURES

- Bilateral lung sounds documented at least twice (min 5 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%)
- BP improved (if initial SBP greater than 140 was final less than 140)
- Nitroglycerin administered or documented contraindications (erectile dysfunction meds or SBP less than 90)
- CPAP not applied if contraindicated (SBP less than 90 mmHg or GCS less than 14 prior to application)
- Both nitroglycerin and albuterol not given to same patient
- If nitroglycerin administered, was first dose less than 5 min after at patient (Tracking only)

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>
- Pinellas County EMS Medical Quality Management Plan - Medical Operations Manual Vol. 2 Protocol AD18



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
<ul style="list-style-type: none"> • Assess vital signs including pain using the numeric scale or the Wong-Baker Faces scale (Ref. CT18) • Allow patient to assume position of comfort unless spinal precautions are required

ALS
<ul style="list-style-type: none"> • Establish vascular access • Obtain 12-Lead ECG if epigastric pain, concern for cardiac etiology, and prior to ondansetron if concern for possible prolonged QT. • If nauseated and/or vomiting, administer: <ul style="list-style-type: none"> ○ Antiemetic <p><i>NOTE: ondansetron is contraindicated in patients with congenital prolonged QT syndrome or known QTc > 500 milliseconds and should be used with caution in patients QT prolonging medications. Obtain ECG and initiate cardiac monitoring if any concern for prolonged QT risk.</i></p> <ul style="list-style-type: none"> ▪ 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 <ul style="list-style-type: none"> ▪ 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
<ul style="list-style-type: none"> • Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
<ul style="list-style-type: none"> • 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 but caution is advised as above.

M1 - ABDOMINAL PAIN/NAUSEA & VOMITING

M1 ABDOMINAL PAIN/NAUSEA & VOMITING

QUALITY MEASURES
<ul style="list-style-type: none">Pending

REFERENCES
<ul style="list-style-type: none">https://nasmso.org/projects/model-ems-clinical-guidelines/

M1 - ABDOMINAL PAIN/NAUSEA & VOMITING

M2 ALLERGIC REACTION & ANAPHYLAXIS

ADULT ONLY (Ped. 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 or any concern for anaphylaxis (two [2] or more organ systems affected, hemodynamic instability, etc.) immediately initiate:
 - 0.5 mg epinephrine (1 mg/mL concentration) intramuscular in the mid-anterolateral thigh, may repeat every 3 - 5 minutes as needed to max three (3) doses
 - Perform airway management as needed (Ref. CP1)
 - Administer 0.9% sodium chloride 500 mL, repeat to max 2000 mL or 20 mL/kg, if no evidence of pulmonary edema
- After stabilization with epinephrine or if only mild to moderate symptoms:
 - 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 (Ref. CP8.3)
- 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. CT7)
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- None

QUALITY MEASURES

- Pending

M2 - ALLERGIC REACTIONS & ANAPHYLAXIS

M2 ALLERGIC REACTION & ANAPHYLAXIS

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>

M3 BEHAVIORAL EMERGENCY

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

BLS
<ul style="list-style-type: none"> • 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) <ul style="list-style-type: none"> ○ Check and document distal pulse, motor, and sensation (PMS) before, immediately after, and every ten (10) minutes of any restrained limb ○ NEVER restrain a patient in the prone position <ul style="list-style-type: none"> ▪ <i>If patient presents in a prone position, immediately log roll the patient to a supine position for assessment</i> • Assess for and address underlying medical/traumatic conditions (e.g., diabetes, hypoxia, ETOH, narcotics, head injury, etc.)

ALS
<ul style="list-style-type: none"> • Establish vascular access, if able to do so safely • ADULTS ONLY: For an uncooperative and potentially violent patient who is not able to be verbally de-escalated or otherwise safely restrained: <ul style="list-style-type: none"> ○ Midazolam: <ul style="list-style-type: none"> ▪ 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 an actively violent patient who poses an IMMEDIATE threat to responders or themselves, who is not able to be verbally de-escalated or otherwise safely restrained: <div style="border: 2px solid red; padding: 5px; margin: 10px 0; text-align: center;"> <p style="margin: 0;">S A F E T Y A L E R T</p> <p style="margin: 0; font-size: small;">Use caution and consider a lower dose of Midazolam in a patient with evidence of alcohol or drug ingestion. Be prepared to provide active airway management when utilizing large doses of Midazolam</p> </div> <ul style="list-style-type: none"> ○ Midazolam: <ul style="list-style-type: none"> ▪ First 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 EtCO2 and SpO2, as well as cardiac rhythm any time chemical restraints are employed

M3 - BEHAVIORAL EMERGENCY

M3 BEHAVIORAL EMERGENCY

M3 - BEHAVIORAL EMERGENCY

ALS (cont.)

- 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 an adult patient
- 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 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://nasmso.org/projects/model-ems-clinical-guidelines/>
- <https://www.acep.org/globalassets/sites/acep/media/committee/cp-adultpsychiatricpatient-1.pdf>
- Pinellas County EMS Medical Quality Management Plan - Medical Operations Manual Vol. 2 Protocol AD18

M4 SUSPECTED CEREBRAL VASCULAR ACCIDENT (CVA)

ADULT ONLY	GOALS OF CARE
(Consult OLMC if suspected CVA in Ped)	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:
 - **EXACT** time of symptom onset or discovery (hh:mm)
 - Last **KNOWN** Normal Time (hh:mm) (may or may not be same as onset)
 - If symptoms were present upon awakening from sleep
 - Name and phone number of individual who witnessed event
 2. Perform FAST-ED Stroke Screening exam (Ref. CT10)
 3. Declare “STROKE ALERT” if:
 - Positive Stroke Screening Exam **AND**
 - Time interval less than 24 hrs
 - 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:
 - FAST-ED score greater than or equal to four (4) (Ref. CT10)
 - Suspected intracranial hemorrhage (ICH)
 - Any previous ICH, brain tumor, or cerebral aneurysm
 - Any head trauma, head or spine surgery, or stroke in last 3 months
 - Active internal bleeding or known bleeding disorder
 - Any anticoagulation other than aspirin
 5. Determine appropriate destination:
 - If no “complex stroke” upgrade criteria and Time Window less than 3.5 hrs. → Closest Stroke Center (Primary or Comprehensive)
 - 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 oxygen (avoid unnecessary oxygen in the stroke patient)
- If suspected intracranial hemorrhage:
 - Elevate head of bed 30 degrees
 - Reference T1 for further care/resuscitation goals

M4 - CEREBRAL VASCULAR ACCIDENT (CVA)

M4 SUSPECTED CEREBRAL VASCULAR ACCIDENT (CVA)

BLS (cont.)

- Determine capillary blood glucose, if available
- Provide ventilation assistance with BVM and airway adjunct, if needed (Ref. CP1.1)



Initiate EMERGENCY Transport and Early Hospital Notification to an Appropriate Stroke Receiving Facility - Goal Less Than 10 Minute Scene Time

ALS

- Establish vascular access - minimum 20g in right antecubital vein preferred to facilitate rapid imaging
- Perform airway management as needed (Ref. CP1)
- Determine capillary blood glucose level, to rule out hypoglycemia as cause of symptoms (Ref. M5)
- 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://nasemso.org/projects/model-ems-clinical-guidelines/>
- Guidelines for the Early Management of Patients With Acute Ischemic Stroke: 2019 Update to the 2018 Guidelines for the Early Management of Acute Ischemic Stroke: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association
<https://doi.org/10.1161/STR.0000000000000211>

M5 DIABETIC EMERGENCY

ADULT ONLY <small>(Ped. Ref. P11)</small>	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
 - If hypoglycemia (less than 60 mg/dL) or if symptomatic and able to protect their own airway, administer 15g 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
- Obtain a 12-lead ECG to assess for electrolyte abnormality
- 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 (dextrose 10% for Injection, 250 mL) 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 400 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

- Request for utilization of intraosseous route 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, Toujeo, Tresiba, Basaglar)

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasemso.org/projects/model-ems-clinical-guidelines/>

M5 - DIABETIC EMERGENCY

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M6 DROWNING/SUBMERSION

ADULT ONLY (Ped. 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 oxygen minimum 15L via non-rebreather mask
- Suction as needed
- Provide ventilation assistance using BVM and airway adjunct, if needed (Ref CP1.1)

ALS

- Obtain vascular access
- If bronchospasm:
 - Aerosol therapy (Ref. CP8)
 - Albuterol 2.5 mg and ipratropium 0.5 mg, may repeat x 1
 - Albuterol 2.5 mg, repeat as needed
- If rales, decreased SpO2, 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://nasmso.org/projects/model-ems-clinical-guidelines/>

M6 - DROWNING/SUBMERSION

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M7 COLD EMERGENCY

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

BLS
<ul style="list-style-type: none"> • 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 <div style="border: 2px solid red; padding: 5px; text-align: center; margin: 10px 0;"> <p style="margin: 0;">S A F E T Y A L E R T</p> <p style="margin: 0;">DO NOT allow a hot pack to have direct skin contact</p> </div> <ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • Establish vascular access • If hypotensive, tachycardic, or altered mental status: <ul style="list-style-type: none"> ○ 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
<ul style="list-style-type: none"> • Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • Pending

M7 - COLD EMERGENCY

M7 COLD EMERGENCY

REFERENCES
<ul style="list-style-type: none">https://nasmso.org/projects/model-ems-clinical-guidelines/

M7 - COLD EMERGENCY

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 Stroke suspected in an athlete (e.g., 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 (e.g., seizure control, arrhythmia, 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
- Obtain 12-Lead ECG if epigastric pain, concern for cardiac etiology, and prior to ondansetron if concern for possible prolonged QT.
- If nauseated and/or vomiting, administer:
 - Antiemetic

NOTE: ondansetron is contraindicated in patients with congenital prolonged QT syndrome or known QTc > 500 milliseconds and should be used with caution in patients QT prolonging medications. Obtain ECG and initiate cardiac monitoring if any concern for prolonged QT risk.

 - 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
- 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)
- Perform endotracheal intubation as needed (Ref. CP1.3)

M8 - HEAT EMERGENCY

M8 HEAT EMERGENCY

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 less than 101.5°F in an athlete suffering exertional heat stroke

QUALITY MEASURES

- Pending


REFERENCES

- <https://nasemso.org/projects/model-ems-clinical-guidelines/>
- 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](https://doi.org/10.1080/10903127.2017.1392666)
<https://www.tandfonline.com/doi/abs/10.1080/10903127.2017.1392666-?journalCode=ipec20>
- <https://www.naemsp-blog.com/emsmmed/2022/7/13/article-bites-41-consensus-statement-prehospital-care-of-exertional-heat-stroke>

M9 SUSPECTED SEPSIS

ADULT ONLY <i>(Ped. Ref. P18)</i>	GOALS OF CARE
	Early recognition and aggressive treatment of suspected sepsis

BLS
<ul style="list-style-type: none"> • Place in shock position if SBP less than 90 mmHg • Provide ventilatory assistance with BVM and airway adjunct, if needed (Ref. CP1.1) • Assess for and document suspicion/evidence of infection

ALS
<ul style="list-style-type: none"> • Evaluate for evidence of physiologic response to infection: <ul style="list-style-type: none"> ○ Sustained HR greater than 100 ○ Sustained RR greater than 20 AND EtCO₂ less than or equal to 25 mmHg <i>(Note: Presence of both constitutes one (1) criteria)</i> ○ SBP less than 90 mmHg or capillary refill greater than four (4) seconds or mottled skin ○ Acute decreased mental status/confusion or GCS less than or equal to 12 • If suspected infection AND two (2) or more physiologic criteria above, declare a “Sepsis Alert” <div style="text-align: center; margin: 10px 0;">  <div style="display: inline-block; vertical-align: middle; text-align: left; padding-left: 10px;"> <p style="margin: 0;">Initiate EMERGENCY Transport and Early Hospital Notification to an Appropriate Receiving Facility - Reference CS4 & CS5 <b style="color: red;">Goal Less Than 10 Minute Scene Time</p> </div> </div> <ul style="list-style-type: none"> • Rapidly establish vascular access to facilitate volume resuscitation • Initiate and continue resuscitation for shock as follows: <ul style="list-style-type: none"> ○ If hypotensive (SBP less than 90 mmHg): <ul style="list-style-type: none"> ▪ INITIATE fluid bolus of 0.9% sodium chloride (utilizing pressure infuser if necessary for rapid infusion) ▪ If profound hypotension (SBP less than 80 mmHg) or need for immediate airway management/positive pressure ventilation, PREPARE push dose epinephrine (Ref. CT26) ○ If patient remains hypotensive (SBP less than 90 mmHg) after first 500 mL 0.9% sodium chloride bolus: <ul style="list-style-type: none"> ▪ CONTINUE infusion of 0.9% sodium chloride if no signs of overload ▪ INTIATE push dose epinephrine 10 mcg every 1-2 minutes (max 5 doses) to SBP greater than 90 mmHg as a bridge to allow time for additional fluids and if needed, norepinephrine initiation and titration ▪ Ensure adequate secondary vascular access site (minimum 18g peripheral catheter in antecubital, or intraosseous access) ▪ PREPARE norepinephrine infusion (Ref. CT8) ○ If patient remains hypotensive after 1000 mL 0.9% sodium chloride or signs of volume overload: <ul style="list-style-type: none"> ▪ CONTINUE infusion of 0.9% sodium chloride, if appropriate, to 20 mL/kg (max 2000 mL)

M9 - SUSPECTED SEPSIS

M9 SUSPECTED SEPSIS

M9 - SUSPECTED SEPSIS

ALS (cont.)

- **INITIATE** norepinephrine drip at 1 mcg/min using secondary vascular access site
- Titrate every minute to SBP greater than 90 mmHg or max 10 mcg/min

SAFETY ALERT

If there is any concern that a vascular site is not patent

DO NOT ADMINISTER NOREPINEPHRINE

- 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)
- For patients in whom respiratory support is required, maintain respiratory compensation by targeting an EtCO₂ of 25 mmHg.

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

- Capillary blood glucose measured
- IV established and fluid administered
- At least 1000 mL administered if “Time with Patient” greater than or equal to 20 minutes
- 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
- *Sepsis Alert* declared
- Final SBP greater than or equal to 90 (Track/Trend only)
Note: “Time with patient” = “At Patient” to “At Destination”

M9 SUSPECTED SEPSIS

REFERENCES

- <http://www.cdc.gov/sepsis/clinicaltools/index.html>
- <https://www.acep.org/DART/>
- Critical Care Medicine: [November 2021 - Volume 49 - Issue 11 - p e1063-e1143](#)
doi: 10.1097/CCM.0000000000005337
- Pinellas County EMS Medical Quality Management Plan

M9 - SUSPECTED SEPSIS

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M10 PREECLAMPSIA/ECLAMPSIA


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

BLS

- Obtain baseline and repeat vital signs and assess mental status
- Provide supplemental oxygen regardless of dyspnea/hypoxia
- Obtain as complete a history as possible (see PEARLS)
- 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 (Ref. CS4)



Patients requiring obstetric and/or neonatal services (e.g., L&D, NICU, etc.) **MUST ENTER RECEIVING FACILITIES VIA THE EMERGENCY DEPARTMENT** and be assessed by facility staff prior to proceeding to any specialty care unit within the facility.

- If seizure (eclampsia):
 - Magnesium sulfate 4 g intravenous/intraosseous 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 (if unable to obtain vascular access. May repeat once in 5 - 10 minutes if seizure continues)

S A F E T Y A L E R T

Be prepared to provide active airway management when utilizing high doses of Midazolam

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

M10 - PREECLAMPSIA/ECLAMPSIA

M10 PREECLAMPSIA/ECLAMPSIA

M10 - PREECLAMPSIA/ECLAMPSIA

OLMC

- Consult OLMC for initiation of magnesium sulfate prior to a seizing patient 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://nasemso.org/projects/model-ems-clinical-guidelines/>
- Pinellas County EMS Medical Quality Management Plan

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:
 - Gravity
 - 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 (Ref. CP27)
- If in active labor, but not crowning, initiate rapid transport to closest obstetrical receiving hospital (Ref. CS4)



Patients requiring obstetric and/or neonatal services (e.g., L&D, NICU, etc.) **MUST ENTER RECEIVING FACILITIES VIA THE EMERGENCY DEPARTMENT** and be assessed by facility staff prior to proceeding to any specialty care unit within the facility.

Abnormal Presentation / Emergencies:

- **Prolapsed Umbilical Cord**
 - Elevate patient’s hips, place in shock (Trendelenburg) or knee-chest position 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



M11 OBSTETRICAL EMERGENCY

BLS (cont.)

- **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://nasemso.org/projects/model-ems-clinical-guidelines/>

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 oxygen
- Assist ventilations with bag-valve-mask (BVM) device and appropriate airway adjunct as needed (Ref. CP1, 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
 - For all suspected opioid ingestions or overdoses, perform the Leave Behind Naloxone Procedure (Ref. CP29)
- Consider behavioral/psychiatric issue, diabetic emergency, or seizure as alternate cause of symptoms (Ref. M3, M5, M14, P11, P16)
- Ensure early notification to receiving hospital 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)
- Obtain 12 lead ECG, if able, to assess for widened QRS, etc.
- Evaluate for toxidrome or withdrawal/medication reaction syndrome and treat as needed (Ref. CT15):
 - Sympathomimetic: supportive care, if agitated/violent (Ref. M3)
 - Opioid/sedative (not in cardiac arrest):
 - Narcan 4 mg prepackaged nasal spray if vascular access not yet established. May repeat one time after 3 minutes as needed **OR**
 - Naloxone 0.5 mg intravenous/intraosseous may repeat to maximum 6 mg as needed
 - Perform Leave Behind Naloxone Procedure (Ref. CP29)
 - Cholinergic:
 - Atropine 2 mg intravenous, 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)

ALS (cont. next page)

M12 POISONING & OVERDOSE

ALS (cont.)

- 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 intravenous
 - 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 with sterile water/0.9% sodium chloride
- 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 kit in suspected cholinergic (organophosphate/carbamate) poisoning
- 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://nasmso.org/projects/model-ems-clinical-guidelines/>
- Pinellas County EMS Medical Quality Management Plan
- <https://litfl.com/beta-blocker-toxicity/>
- <https://litfl.com/calcium-channel-blocker-toxicity/>

M13 ACUTE PAIN MANAGEMENT

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

BLS

- Obtain baseline and repeat vital signs including pain score (may use the Wong-Baker Faces scale for patients unable to provide a number) (Ref. CT18)
- For **MILD ACUTE PAIN** (pain score 1-3) implement BLS Pain Control Measures:
 - 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. T1)
- Refer to appropriate protocol for underlying cause

ALS

- Establish vascular access
- Monitor EtCO₂ and SpO₂
- For **MODERATE ACUTE PAIN** (Pain Scale 4-6):
 - Ensure Mild Acute Pain measures are implemented and, if available and not contraindicated, administer one non-opioid pain medication as follows:

Option A - KETOROLAC:

- If no active or recent bleeding risk (see PEARLS), renal disease, suspected ACS/active cardiac disease, pregnant or nursing mothers, recent NSAID use (less than 8 hrs.), or allergy, administer ketorolac:
 - 15 mg intravenous or intramuscular *once*
 - **DO NOT re-dose ketorolac**

OR

Option B - ACETAMINOPHEN:

- If contraindication to ketorolac present or ketorolac not available, and no history of liver disease (see PEARLS), recent (less than 6 hrs.) acetaminophen, concern for acetaminophen overdose, or allergy, administer acetaminophen:
 - Patient weight greater than 50 kg:
 - 1g intravenous infusion over 15 minutes *once*
 - Patient weight less than 50 kg:
 - 15 mg/kg intravenous infusion over 15 minutes *once*
 - **DO NOT re-dose acetaminophen**

M13 ACUTE PAIN MANAGEMENT

ALS (cont.)

- For **SEVERE ACUTE PAIN** (Pain Scale 7-10):
 - Ensure Mild and Moderate Acute Pain measures are implemented and if necessary (pain score remains greater than seven (7), administer fentanyl:
 - 1 mcg/kg intravenous or intraosseous to a maximum single dose of 100 mcg. May repeat every ten (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 five (5) minutes to a maximum combined total dose of 3 mcg/kg

S A F E T Y A L E R T

Respiratory Depression and Apnea Can Occur Without WARNING!!!

This is more frequent in the geriatric population. Clinicians should consider reducing their initial dose to 0.5 mcg/kg – **MAXIMUM** 50 mcg for an elderly or frail patient

- Obtain 12-Lead ECG if epigastric pain, concern for cardiac etiology, and prior to ondansetron if concern for possible prolonged QT.
- If nauseated and/or vomiting, administer:
 - Antiemetic
NOTE: ondansetron is contraindicated in patients with congenital prolonged QT syndrome or known QTc > 500 milliseconds and should be used with caution in patients QT prolonging medications. Obtain ECG and initiate cardiac monitoring if any concern for prolonged QT risk.
 - 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
- Refer to appropriate protocol for underlying cause

OLMC

- Consult OLMC Physician for questions on pain medicine contraindications, additional dosing, and as needed

M13 ACUTE PAIN MANAGEMENT

PEARLS

- The objective of pain management is not the complete removal of pain, but rather to make the pain tolerable
- **Ketorolac contraindications include but are not limited to:** any active or recent bleeding risk (including any recent or expected surgery, trauma, pregnancy, breastfeeding, GI bleeding, stroke/ICH, etc.) as well as suspected ACS/known history of cardiac disease, and renal disease, recent NSAID (less than 8 hrs.) use and allergy.
- **Acetaminophen contraindications include but are not limited to:** known or suspected liver disease (including history of cirrhosis, ascites or need for paracentesis, liver disease associated GI bleeding, autoimmune or genetic liver disease, visible or reported jaundice or icterus, concern for hepatic encephalopathy), recent (less than 6 hrs.) acetaminophen use, suspected acetaminophen overdose, and allergy.
- 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

- Complete set of vital signs 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

REFERENCES

- <https://naseemso.org/projects/model-ems-clinical-guidelines/>
- [MAD Nasal™ Intranasal Device | US | Teleflex](#)
- [Home - Wong-Baker FACES Foundation \(wongbakerfaces.org\)](http://wongbakerfaces.org)
- [New Safety Measures Announced for Opioid Analgesics, Prescription Opioid Cough Products, and Benzodiazepines | FDA](#)
- Pinellas County EMS Medical Quality Management Plan - Medical Operations Manual Vol. 2 Protocol AD18
- Lindbeck, Shah, Braithwaite, et al (2022): Evidence-Based Guidelines for Prehospital Pain Management: Recommendations, Prehospital Emergency Care, DOI: 10.1080/10903127.2021.2018073 <https://doi.org/10.1080/10903127.2021.2018073>

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M14 SEIZURE

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

BLS
<ul style="list-style-type: none"> • Obtain baseline and repeat vital signs and assess mental status • If seizing: <ul style="list-style-type: none"> ○ 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: <ul style="list-style-type: none"> ○ 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
<ul style="list-style-type: none"> • Initiate vascular access, if able to do so rapidly (if any delay, give first dose intranasal!) • If actively seizing: <ul style="list-style-type: none"> ○ Midazolam: <ul style="list-style-type: none"> ▪ First Dose: 2.5 mg intravenous/intramuscular <i>OR</i> 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) <ul style="list-style-type: none"> - Midazolam 2.5 mg intravenous/intraosseous, repeat every five (5) minutes to max 10 mg if seizure continues <i>or</i> - Midazolam 5 mg intranasal, repeat once in five (5) minutes if seizure continues
<div style="border: 2px solid red; padding: 5px;"> <p style="margin: 0;">S A F E T Y A L E R T</p> <p style="margin: 0;">SpO2 and EtCO2 Monitoring is MANDATORY after the administration of Midazolam</p> </div>
<ul style="list-style-type: none"> • Measure blood glucose level and treat as needed (Ref. M5) • Perform airway management as needed (Ref. CP1)

OLMC
<ul style="list-style-type: none"> • Additional Midazolam • Administration of medication for atypical seizures • Consult Online Medical Control Physician as needed or required (Ref. CS10)

M14 - SEIZURE

M14 SEIZURE

PEARLS

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

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

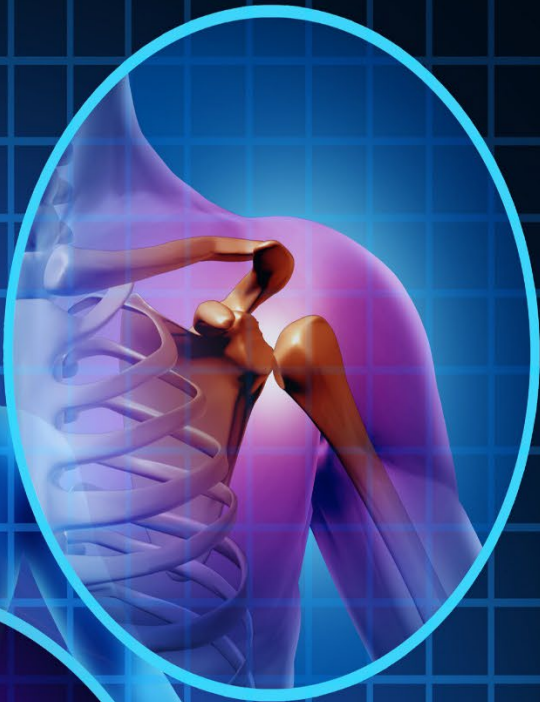
- http://www.teleflex.com/en/usa/productAreas/ems/documents/AN_ATM_MAD-Nasal-Usage_Guide_AI_2012-1528.pdf
- <https://naseaso.org/projects/model-ems-clinical-guidelines/>
- <http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm518110.htm>
- Pinellas County EMS Medical Quality Management Plan - Medical Operations Manual Vol. 2 Protocol AD18

M14 - SEIZURE



TRAUMA

TRAUMA



T1 GENERAL TRAUMA CARE


ADULT ONLY (Ped. Ref. P17 if age 15 or younger)	GOALS OF CARE
	Accurate assessment, appropriate stabilization, and rapid transport to definitive care

BLS

- Perform Primary Trauma Survey (**XABCDE**) and implement stabilizing treatments:

X	Control any major, exsanguinating, or life-threatening hemorrhage using direct pressure followed by appropriate device or procedure when indicated (Ref. CP16, CP18)
A	Airway management (BLS maneuvers and adjuncts) as needed and implement spinal precautions as indicated (Ref. CP1, CP15, CT11)
B	<ul style="list-style-type: none"> • Provide supplemental oxygen to ensure oxygen saturation as close to 100% as possible • Assist ventilations at 12-16 breaths per minute with bag-valve-mask (BVM) device and appropriate airway adjunct as needed (Ref. CP1)
C	Assess for and treat any ongoing circulation threats: <ul style="list-style-type: none"> ▪ Seal chest wounds (Ref. CP17) ▪ Re-assess and ensure hemorrhage control with direct pressure followed by appropriate device or procedure when indicated (Ref. CP16 [if older child/device fits], CP18)
D	Assess neurologic function
E	Expose patient as indicated to ensure no missed injuries or something smaller and protect from environment/ KEEP WARM

- Assess trauma transport criteria, declare "**Trauma Alert**" if indicated (Ref. CT12)



Initiate **EMERGENCY Transport** and **Early Hospital Notification** to an **Appropriate Receiving Facility** - Reference CS4 & CS5
Goal Less Than 10 Minute Scene Time

- Perform a complete head-to-toe physical assessment and implement additional appropriate stabilizing care:
 - Stabilize impaled objects in place - **DO NOT REMOVE**
 - Dress wounds - Moist for eviscerations, dry 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. Consider removal of tight clothing, jewelry, etc. distal to the injury
- Implement injury-specific additional BLS care as indicated (Ref. T2-T7)
- Repeat Primary Trauma Assessment (**XABCDE**) frequently during transport and implement any further needed treatments.

T1 GENERAL TRAUMA CARE

ALS

NOTE

Except in cases of delayed transport (e.g., entrapment), the only ALS interventions allowed prior to transport are:

CP1 Airway Management + CP7 Needle Thoracostomy

- 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 from head trauma - see PEARLS
- Establish vascular access and if hypotensive initiate fluid resuscitation with 0.9% sodium chloride in 500 mL increments to target systolic blood pressure (SBP) and maximum volume as indicated:
 - Major/Multi-System Trauma - Target SBP 80-90 mmHg; max volume 2000 mL
 - Major Head Injury present - Target SBP 110 mmHg; max volume 2000 mL
 - Burns without Major/Multi-System Trauma (Ref. T6)
- Implement appropriate pain management (Ref. M13)
- Assess patient for underlying or co-morbid medical conditions
- Repeat Primary Trauma Assessment (**XABCDE**) frequently during transport and implement any further needed treatments.
- Implement injury-specific additional ALS care as indicated (Ref. T3-T7)

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

- 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; Follow resuscitation guidelines above.



AVOID the H-Bombs of TBI!

Hypoxia, Hypotension, Hyperventilation/Hypocarbica

Even short periods of any of these will increase mortality!

T1 GENERAL TRAUMA CARE

PEARLS (cont.)

- In TBI consider using an extraglottic airway device to avoid apneic time associated with endotracheal intubation and be diligent to avoid hyperventilation.
- Only hyperventilate to EtCO₂ of 30-35 mmHg if evidence of active herniation develops (rapid decrease in LOC, seizure, new pupil defects, Cushing's reflex).
- Prevent hypothermia. A trauma patient who becomes hypothermic has an increased risk of mortality
- Refer to CS18 for alterations in standard of care during Major Incidents with Ongoing Threats (e.g., Active Assailant Response)

QUALITY MEASURES

- Scene Time less than 10 minutes (Sunstar) or *Trauma Alert* time less than 5 min (FD)
- Oxygen delivered
- IV Established
- *Trauma Alert* declared if indicated
- Spinal precautions employed (Track/Trend only)

REFERENCES

- NAEMT, Pre-hospital Trauma Life Support Committee. American College of Surgeons, Committee on Trauma. (2023). PHTLS: Prehospital Trauma Life Support (10th ed.) Burlington, MA: Jones & Bartlett Learning
- <https://naseaso.org/projects/model-ems-clinical-guidelines/>
- <https://www.youtube.com/watch?v=kmGdDxCGJQQ>


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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**) (Ref. T1, P17) 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 compression performance resuscitation (Ref. CP9, CT3, CT4)
 - 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. CT12, CT13)



Initiate **EMERGENCY** Transport and **Early Hospital Notification** to an **Appropriate Receiving Facility** - Reference CS4 & CS5

Goal Less Than 10 Minute Scene Time

- Notify Receiving Facility as soon as possible (Ref. CS4)

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**) (Ref. T1, P17) after treatments and frequently during transport

OLMC

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

T2 - TRAUMATIC CARDIAC ARREST

T2 TRAUMATIC CARDIAC ARREST

T2 - TRAUMATIC CARDIAC ARREST

PEARLS

- Resuscitation must be attempted in all cases unless the patient is confirmed pulseless and apneic on arrival (e.g., no signs of life) **and** meets the specific criteria listed in Protocol CS15 Deceased/Obvious Death/Withholding Resuscitation
- EMS Providers may elect to perform resuscitative efforts on a traumatic arrest patient for a variety of reasons, including scene safety concerns, even though the patient meets criteria for withholding resuscitative efforts
- ACLS care is secondary to addressing reversible causes in traumatic arrest
- A Traumatic Cardiac Arrest patient should not be transported to a freestanding ER (Ref. CS4).
- Refer to CS19 for alterations in standard of care during Major Incidents with Ongoing Threats (e.g. Active Shooter Response)

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasems.org/projects/model-ems-clinical-guidelines/>

T3 ELECTROCUTION/LIGHTNING STRIKE

ADULT and PEDIATRIC	GOALS OF CARE
	Rapidly assess and intervene to resuscitate a victim of electrocution and understand that this type of patient often survives 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 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 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. CT12, CT13, CT14, 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

T3 - ELECTROCUTION/LIGHTNING STRIKE

T3 ELECTROCUTION/LIGHTNING STRIKE

REFERENCES

- <http://nasmso.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](https://www.wemjournal.org/article/S1080-6032(14)00274-9/fulltext)

T3 - ELECTROCUTION/LIGHTNING STRIKE

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 removing 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

- <https://nasemso.org/projects/model-ems-clinical-guidelines/>

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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

S A F E T Y A L E R T

DO NOT allow a hot pack to have direct skin contact

- 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 intravenous 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

T5 - BITES/STINGS/ENVENOMATIONS

T5 BITES/STINGS/ENVENOMATION

PEARLS

- Stingray:
 - Consider adding soap or ammonia to hot water, if available
- Jellyfish/Man-o-War or Insect Stings:
 - Consider applying paste of baking soda or flour and water to wound site, if available
- Snakebites:
 - **DO NOT** apply a tourniquet or use cold pack
 - 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

- <https://nasemso.org/projects/model-ems-clinical-guidelines/>
- <https://dan.org/health-medicine/health-resource/dive-medical-reference-books/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. CS4, CT14):
 - 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 with 0.9% sodium chloride:
 - Adults: 20 mL/kg (maximum of 2000 mL)
 - 14-15 years old: 20 mL/kg (maximum of 1500 mL)
 - 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

T6 - BURNS

T6 BURNS

OLMC

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

PEARLS

- None

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasemso.org/projects/model-ems-clinical-guidelines/>
- NAEMT, Pre-hospital Trauma Life Support Committee. American College of Surgeons, Committee on Trauma. (2020). PHTLS: Prehospital Trauma Life Support (9th ed.) Burlington, MA: Jones & Bartlett Learning

T6 - BURNS

T7 BAROTRAUMA/DIVING INJURIES

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

BLS
<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> ○ 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
<ul style="list-style-type: none"> • Establish vascular 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: <ul style="list-style-type: none"> ○ 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) prior to ondansetron if concern for possible prolonged QT • If nauseated and/or vomiting, administer: <ul style="list-style-type: none"> ○ Antiemetic <p style="margin-left: 20px;"><i>NOTE: ondansetron is contraindicated in patients with congenital prolonged QT syndrome or known QTc > 500 milliseconds and should be used with caution in patients QT prolonging medications. Obtain ECG and initiate cardiac monitoring if any concern for prolonged QT risk.</i></p> <ul style="list-style-type: none"> ▪ 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

T7 - BAROTRAUMA/DIVING INJURIES

T7 BAROTRAUMA/DIVING INJURIES

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
 - Pneumothorax, Mediastinal Emphysema - pain, dyspnea, decreased or absent lung sounds. Breath holding on ascent, even for 6 - 10 feet may cause.
 - Ears - ruptured ear drum, vertigo, ringing in the ears (tinnitus), partial deafness, nausea/vomiting
- Decompression sickness
 - "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

- Pending

REFERENCES

- <https://nasemso.org/projects/model-ems-clinical-guidelines/>
- <https://dan.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)

P1 - PEDIATRIC FOREIGN BODY AIRWAY OBSTRUCTION

P1 PEDIATRIC FOREIGN BODY AIRWAY OBSTRUCTION

P1 - PEDIATRIC FOREIGN BODY AIRWAY OBSTRUCTION

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://nasmso.org/projects/model-ems-clinical-guidelines/>
- <https://health.ucdavis.edu/cppn/documents/classes/cpr/Steps-of-HCP-CPR-Handout.pdf>

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 five (5) minutes (Ref. CP22.1):
 - Adult auto-injector (0.3 mg) for patients 9 years of age 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. CT7)
- 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

P2 - PEDIATRIC ASTHMA

P2 PEDIATRIC ASTHMA

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 mmHg or GCS greater than 14 prior to application)
- Both nitroglycerin and albuterol not given to same patient

REFERENCES

- <https://nasems.org/projects/model-ems-clinical-guidelines/>
- 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 bag-valve-mask (BVM) device and appropriate airway adjunct (Ref. CP3.1)

S A F E T Y A L E R T	
<p style="color: red; margin: 0;">STRYKER LP15</p> <p style="margin: 0;">If the patient weighs less than 15 kg (33 lbs.) Use Pediatric Quik Combo Multi-function Pads</p>	<p style="color: red; margin: 0;">CPR Feedback Sensor - If the patient is less than 8 years old or less than 25 kgs. (55 lbs.)</p> <p style="color: red; margin: 0;">DO NOT USE</p>

- Establish Compression Performance Resuscitation and Pit Crew Model (Ref. CP9.2, CP9.3, CT4)
- Continue Compression Performance Resuscitation and reassess rhythm every two (2) minutes and defibrillate when indicated by AED/Monitor in AED Mode (Ref. CP10, CP11)
 - NOTE:** When ALS clinician available, perform rhythm interpretation and manual defibrillation as below
- 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 (Ref. CP9.2, CP9.3, CT4)
- Assess rhythm and defibrillate as indicated for ventricular fibrillation or pulseless ventricular tachycardia (escalate joules per Handtevy)
- Administer medications as indicated:
 - **EPINEPH**rine (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

ALS (cont. next page)

P3 PEDIATRIC MEDICAL CARDIAC ARREST

ALS (CONT.)

- 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
 - Perform Leave Behind Narcan Procedure as indicated (Ref. CP29)
 - 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 DRIVER) needle on children less than one (1) year of age

QUALITY MEASURES

- Pending

REFERENCES

- <https://www.ahajournals.org/doi/10.1161/CIR.0000000000000901>
- US Food and Drug Administration (FDA) and Institute for Safe Medication Practices (ISMP). FDA and ISMP Lists of Look-Alike Drug Names with Recommended Tall Man Letters. ISMP; 2023 <https://home.ecri.org/blogs/ismp-resources/look-alike-drug-names-with-recommended-tall-man-mixed-case-letters>

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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Assess cardiac rhythm and treat dysrhythmias as needed (Ref. P6, P7) Obtain 12-Lead ECG If SBP less than 90 mmHg: <ul style="list-style-type: none"> 0.9% sodium chloride bolus Epinephrine drip infusion - titrate to achieve SBP greater than 90 mmHg (Ref. CT7) 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
<ul style="list-style-type: none"> Additional doses of sedation/pain management Norepinephrine drip infusion 1 - 10 mcg/min (Ref. CT8) Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
<ul style="list-style-type: none"> Aggressive post cardiac care is essential to ensure continued perfusion of vital organs and to maximize outcomes

QUALITY MEASURES
<ul style="list-style-type: none"> Pending

REFERENCES
<ul style="list-style-type: none"> Pending

P4 - PEDIATRIC POST MEDICAL CARDIAC ARREST

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P5 NEONATAL RESUSCITATION

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

BLS
<ul style="list-style-type: none"> • 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 (Ref. CT20): <ul style="list-style-type: none"> ○ If normal: <ul style="list-style-type: none"> ▪ continue warming and drying, clear secretions and position airway as needed ▪ allow infant to stay with mother prior to transport ○ If abnormal: <ul style="list-style-type: none"> ▪ 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 one (1) and ten (10) minutes (Ref. CT19) • Transport to appropriate facility (Ref. CS4)

ALS
<ul style="list-style-type: none"> • Ensure BLS treatment as above • Assess and monitor cardiac rhythm, SpO₂, EtCO₂ • Continue resuscitation per algorithm (Ref. CP9.3): <ul style="list-style-type: none"> ○ 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
<ul style="list-style-type: none"> • Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
<ul style="list-style-type: none"> • None

QUALITY MEASURES
<ul style="list-style-type: none"> • Pending

P5 - NEONATAL RESUSCITATION

P5 NEONATAL RESUSCITATION

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>
- https://www.ahajournals.org/toc/circ/142/16_suppl_2
- Part 5: Neonatal Resuscitation: 2020 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care <https://doi.org/10.1161/CIR.0000000000000902>
- <https://publications.aap.org/aapnews/news/14604?autologincheck=redirected?nfToken=00000000-0000-0000-0000-000000000000>

P6 PEDIATRIC BRADYCARDIA

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

BLS

S A F E T Y A L E R T

Begin immediate cardiopulmonary resuscitation if heart rate less than 60 in any patient less than 1 year of age with evidence of poor perfusion

- 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
- Assist ventilations with bag-valve-mask (BVM) and appropriate airway adjunct as 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
 - Perform Leave Behind Narcan Procedure as indicated (Ref. CP29)
- If patient remains bradycardic after addressing above, initiate treatment as follows:
 - **EPINEPH**rine (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 a patient 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)

P6 PEDIATRIC BRADYCARDIA

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
- Consider additional reversible causes of bradycardia in a pediatric patient: Hypoxia, Hydrogen Ions (acidosis), Hypothermia, Hypoglycemia, Hypovolemia, Medications/toxins/poisons, and Electrolyte abnormality

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>

P7 PEDIATRIC TACHYCARDIA (WIDE/NARROW)

PEDIATRIC ONLY	GOALS OF CARE
	Identification and treatment of tachydysrhythmias

BLS
<ul style="list-style-type: none"> Shock position as required

ALS
<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Stable (narrow or wide rhythm) <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Vagal maneuvers Adenosine rapid intravenous push Adenosine rapid intravenous push Amiodarone drip infusion intravenous over 20 minutes Unstable (narrow or wide rhythm) <ul style="list-style-type: none"> May sedate with midazolam intravenous Synchronized cardioversion (Ref. CP13). May repeat until cardioversion is successful and rhythm corrects.

OLMC
<ul style="list-style-type: none"> Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
<ul style="list-style-type: none"> 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

P7 - PEDIATRIC TACHYCARDIA (WIDE/NARROW)

P7 PEDIATRIC TACHYCARDIA (WIDE/NARROW)

PEARLS (cont.)

- 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

If Midazolam given:

- 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://nasems.org/projects/model-ems-clinical-guidelines/>
- Pinellas County EMS Medical Quality Management Plan - Medical Operations Manual Vol. 2 Protocol AD18

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 or any concern for anaphylaxis (2 or more organ systems affected, hemodynamic instability, etc.) immediately initiate:
 - Epinephrine (1 mg/mL concentration) intramuscular in the mid-anterolateral thigh, may repeat every 3 - 5 minutes as needed to max 3 doses
 - Perform airway management as needed (Ref. CP1/CP3)
 - Administer 0.9% sodium chloride bolus, may repeat once
- After stabilization with epinephrine or if only mild to moderate symptoms:
 - Diphenhydramine intravenous or intramuscular
 - Methylprednisolone sodium succinate intravenous push (IVP)
 - Albuterol nebulized for wheezing/shortness of breath, may repeat once.
 - May administer via inline tee piece if assisting ventilations or active airway management

OLMC

- Additional doses of epinephrine intramuscular (1 mg/mL concentration)
- Epinephrine drip infusion 1 - 4 mcg/min (Ref. CT7)
- Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS

- None

P8 - PEDIATRIC ALLERGIC REACTION AND ANAPHYLAXIS

P8 PEDIATRIC ALLERGIC REACTION AND ANAPHYLAXIS

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>

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, as 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
 - Perform Leave Behind Narcan Procedure as indicated (Ref. CP29)
- 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

P9 PEDIATRIC ALTERED MENTAL STATUS

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>

P10 PEDIATRIC BRIEF RESOLVED UNEXPLAINED EVENT (BRUE)

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

BLS
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • 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 <div style="border: 2px solid red; padding: 10px; margin: 10px 0;"> <p style="text-align: center; font-size: 1.5em; font-weight: bold; letter-spacing: 0.5em;">S A F E T Y A L E R T</p> <p style="text-align: center;">OLMC consult prior to acceptance of a refusal is highly recommended due to the potential lack of clinical findings despite the high-risk nature of ALTE/BRUE</p> </div>

OLMC
<ul style="list-style-type: none"> • Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
<ul style="list-style-type: none"> • Even though patients usually look fine on EMS arrival, BRUE is SERIOUS! <ul style="list-style-type: none"> ○ 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!

P10 - PEDIATRIC BRUE

P10 PEDIATRIC BRIEF RESOLVED UNEXPLAINED EVENT (BRUE)

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>
- <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/>

P10 - PEDIATRIC BRUE

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 bag-valve-mask device 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 intravenous
- 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

P11 - PEDIATRIC DIABETIC EMERGENCY

P11 PEDIATRIC DIABETIC EMERGENCY

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasemso.org/projects/model-ems-clinical-guidelines/>

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 non-breather mask
- Provide ventilation assistance (bag-valve-mask device and airway adjunct) as needed (Ref. CP3.1)
 - If excessive fluid in airway/lungs is preventing adequate oxygenation/ventilation, may disengage popoff valve on bag-valve-mask device taking care not to generate pressures in the RED (greater than 40 cmH2O)
- Suction as needed
 - **DO NOT** delay bag-valve-mask ventilations for suction

ALS

- Establish vascular access
- If evidence of bronchospasm, initiate treatment per Asthma Protocol (Ref. P2)
- If rales, decreased SpO2, 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. 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 (Ref. CS4)

QUALITY MEASURES

- Pending

P12 - PEDIATRIC DROWNING/SUBMERSION

P12 PEDIATRIC DROWNING/SUBMERSION

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>
- <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
<ul style="list-style-type: none">• 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 <div style="border: 2px solid red; padding: 5px; text-align: center;"><p>S A F E T Y A L E R T DO NOT allow a hot pack to have direct skin contact</p></div> <ul style="list-style-type: none">• Minimize movement during transport and consider transport to a burn center if evidence of frostbite• Consider hypoglycemia (Ref. P11)• Provide ventilation assistance (bag-valve-mask device and airway adjunct) as needed (Ref. CP3.1)

ALS
<ul style="list-style-type: none">• 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
<ul style="list-style-type: none">• Consult Online Medical Control Physician as needed or required (Ref. CS10)

P13 - PEDIATRIC COLD EMERGENCY

P13 PEDIATRIC COLD EMERGENCY

PEARLS

- Peripheral vascular access may be difficult to establish in a hypothermic patient; intraosseous access is acceptable for a patient 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://naseonso.org/projects/model-ems-clinical-guidelines/>

P14 PEDIATRIC HYPERTHERMIA

PEDIATRIC ONLY	GOALS OF CARE
	Remove patient from environment then initiate cooling and appropriate supportive care

BLS
<ul style="list-style-type: none"> • Move patient into an area with shade, air conditioning, air movement, etc. • Remove excessive clothing • If no altered mental status: <ul style="list-style-type: none"> ○ Provide oral fluids (e.g., cool water, Gatorade, Pedialyte, etc.) if patient able to tolerate • If altered mental status (heat stroke): <ul style="list-style-type: none"> ○ 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
<ul style="list-style-type: none"> • Establish vascular access • If nauseated and/or vomiting, administer: <ul style="list-style-type: none"> ○ Antiemetic <i>NOTE: ondansetron is contraindicated in patients with congenital prolonged QT syndrome or known QTc > 500 milliseconds and should be used with caution in patients QT prolonging medications. Obtain ECG and initiate cardiac monitoring if any concern for prolonged QT risk.</i> <ul style="list-style-type: none"> ▪ Pediatric: ondansetron slow intravenous push (IVP) or ondansetron oral dissolving tablet (ODT). May repeat once in fifteen (15) minutes, as needed • If hypotensive, tachycardic, or altered mental status (heat stroke): <ul style="list-style-type: none"> ○ 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
<ul style="list-style-type: none"> • Consult Online Medical Control Physician as needed or required (Ref. CS10)

PEARLS
<ul style="list-style-type: none"> • 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.

P14 - PEDIATRIC HYPERTHERMIA

P14 PEDIATRIC HYPERTHERMIA

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasemso.org/projects/model-ems-clinical-guidelines/>

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. CT18)
- For **MILD ACUTE PAIN** (Pain Scale 1-3) implement BLS Pain Control Measures:
 - 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

S A F E T Y A L E R T

DO NOT use Ketorolac in a pediatric patient

- For **MODERATE ACUTE PAIN** (Pain Scale 4-6): Ensure Mild Acute Pain measures are implemented and, if available, administer non-opioid pain medication as follows:

ACETAMINOPHEN:

If no history of liver disease (see PEARLS), recent (less than 6 hrs.) acetaminophen, concern for acetaminophen overdose, or allergy give acetaminophen 15 mg/kg (max. 1g or 100 mL) intravenous infusion over 15 minutes once

DO NOT re-dose acetaminophen

P15 PEDIATRIC ACUTE PAIN MANAGEMENT

Acetaminophen Weight Based Dosing						
Age	Ideal weight (kg)	Vol (mL) over 15 minutes	mL/hr (20gtt/set)	Route	Dose/Kg	Amount (mg)
Premie	2	3	*Use 20mL syringe and administer over 15 minutes	IV	15mg/kg	30
Newborn	4	6		IV	15mg/kg	60
4 Month	6	9		IV	15mg/kg	90
6 Month	8	12		IV	15mg/kg	120
1 Years	10	15		IV	15mg/kg	150
2 Years	12	18		IV	15mg/kg	180
3 Years	15	22.5	67.5 mL/hr	IV	15mg/kg	225
4 Years	17	25.5	76.5 mL/hr	IV	15mg/kg	255
5 Years	20	30	90 mL/hr	IV	15mg/kg	300
6 Years	22	33	99 mL/hr	IV	15mg/kg	330
7 Years	25	37.5	112.5 mL/hr	IV	15mg/kg	375
8 Years	27	40.5	121.5 mL/hr	IV	15mg/kg	405
9 Years	30	45	135 mL/hr	IV	15mg/kg	450
10 Years	35	52.5	157.5 mL/hr	IV	15mg/kg	525
11 Years	40	60	180 mL/hr	IV	15mg/kg	600
12 Years	50	75	225 mL/hr	IV	15mg/kg	750
13 Years	60	90	270 mL/hr	IV	15mg/kg	900

- For **SEVERE ACUTE PAIN** (Pain Scale 7-10) ensure Mild and Moderate Acute Pain measures are implemented and if necessary (pain score remains greater than 7) administer fentanyl:
 - Intravenous or intraosseous to a maximum single dose of 50 mcg fentanyl. May repeat every 10 minutes to a maximum combined total dose of 3 mcg/kg
 - Intranasal to a maximum single dose of 100 mcg fentanyl (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, administer:
 - Antiemetic
 - NOTE: ondansetron is contraindicated in patients with congenital prolonged QT syndrome or known QTc > 500 milliseconds and should be used with caution in patients QT prolonging medications. Obtain ECG and initiate cardiac monitoring if any concern for prolonged QT risk.
 - Pediatric: ondansetron slow intravenous push (IVP) or ondansetron oral dissolving tablet (ODT). May repeat once in fifteen (15) minutes, as needed
 - Fluids
 - Pediatric: 0.9% sodium chloride bolus
- Refer to appropriate protocol for underlying cause

OLMC

- Consult OLMC Physician for questions on pain medicine contraindications, additional dosing, and as needed

P15 PEDIATRIC ACUTE PAIN MANAGEMENT

PEARLS

- The objective of pain management is not the complete removal of pain, but rather to make the pain tolerable
- **Acetaminophen contraindications include but are not limited to:** known or suspected liver disease (including history of cirrhosis, ascites or need for paracentesis, liver disease associated GI bleeding, autoimmune or genetic liver disease, visible or reported jaundice or icterus, concern for hepatic encephalopathy), recent (less than 6 hrs.) acetaminophen use, suspected acetaminophen overdose, and allergy.
- 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
- <https://www.tandfonline.com/doi/full/10.1080/10903127.2021.2018073e.com>
- http://editor.fresenius-kabi.us/admin/assets/PIs/Acetaminophen_FK_PI_451659B_Nov_2020.pdf
- Lindbeck, Shah, Braithwaite, et al (2022): Evidence-Based Guidelines for Prehospital Pain Management: Recommendations, Prehospital Emergency Care, DOI: 10.1080/10903127.2021.2018073
<https://doi.org/10.1080/10903127.2021.2018073>

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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
- S A F E T Y A L E R T**

SpO2 and EtCO2 Monitoring is MANDATORY after the administration of Midazolam
- 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

P16 - PEDIATRIC SEIZURE

P16 PEDIATRIC SEIZURE

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
- Any pediatric administration

REFERENCES

- <https://www.teleflex.com/usa/en/product-areas/emergency-medicine/>
- <http://wongbakerfaces.org/>
- <https://nasemso.org/projects/model-ems-clinical-guidelines/>
- <http://www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm518110.htm>
- Pinellas County EMS Medical Quality Management Plan

P16 - PEDIATRIC SEIZURE

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 (**XABCDE**) and implement stabilizing treatments:

X	Control any major, exsanguinating, or life-threatening hemorrhage using direct pressure followed by appropriate device or procedure when indicated - Ref. CP16 (if older child/device fits) and CP18
A	Airway management (BLS maneuvers and adjuncts) as needed and implement spinal precautions as indicated
B	<ul style="list-style-type: none"> • Provide supplemental oxygen to ensure oxygen saturation as close to 100% as possible • Assist ventilations at 12-16 breaths per minute with bag-valve-mask (BVM) device and appropriate airway adjunct as needed (Ref. CP3)
C	Assess for and treat any ongoing circulation threats: <ul style="list-style-type: none"> ▪ Seal chest wounds - Ref. CP17 ▪ Re-assess and ensure hemorrhage control with direct pressure followed by appropriate device or procedure when indicated - Ref. CP16 (if older child/device fits) and CP18
D	Assess neurologic function
E	Expose patient as indicated to ensure no missed injuries or something smaller and protect from environment/ KEEP WARM

- Assess trauma transport criteria, declare "**Trauma Alert**" if indicated (Ref CT13)



Initiate **EMERGENCY** Transport and Early Hospital Notification to an **Appropriate Receiving Facility** - Reference CS4 & CS5
Goal Less Than 10 Minute Scene Time

- Perform a complete head-to-toe physical assessment and implement additional appropriate stabilizing care:
 - Stabilize impaled objects in place - **DO NOT REMOVE**
 - Dress wounds - Moist for eviscerations, dry 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. Consider removal of tight clothing, jewelry, etc. distal to the injury
- Implement injury-specific additional BLS care as indicated (Ref. T2-T7)
- Repeat Primary Trauma Assessment (**XABCDE**) frequently during transport and implement any further needed treatments

P17 PEDIATRIC GENERAL TRAUMA CARE

ALS

NOTE

Except in cases of delayed transport (e.g., entrapment), the only ALS interventions allowed prior to transport are:
CP1/CP3 Airway Management + CP7 Needle Thoracostomy

- 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 from head trauma- see PEARLS next page
- Establish IV/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 less than Handtevy minimum for age or if signs of poor perfusion. May repeat once as needed.
- Implement appropriate pain management (Ref. P15)
- Repeat Primary Trauma Assessment (**XABCDE**) frequently during transport and implement any further needed treatments
- Implement injury-specific additional ALS care as indicated (Ref. T3-T7)

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

- A pediatric patient requires a complete **toe-to-head** assessment due to being unreliable historians
- Prevent hypothermia. Trauma patients who become hypothermic have increased mortality
- A Sager Splint will fit a patient four years of age or older. For patients younger than four years of age requiring traction, use manual traction
- A head injury should be considered in a pediatric patient with altered mental status.



AVOID the H-Bombs of TBI!

Hypoxia, Hypotension, Hyperventilation/Hypocarbia

Even short periods of any of these will increase mortality!

- Only hyperventilate to EtCO₂ of 30-35 mmHg if evidence of active herniation develops (rapid decrease in LOC, seizure, new pupil defects, Cushing's reflex)

P17 PEDIATRIC GENERAL TRAUMA CARE

PEARLS (cont.)

- 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 CS19 for alterations in standard of care during Major Incidents with Ongoing Threats (e.g., Active Shooter Response)

QUALITY MEASURES

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

REFERENCES

- <https://nasemso.org/projects/model-ems-clinical-guidelines/>
- EPC 4th Edition / Fuchs S, Klein BL. Pediatric Education for Prehospital Professionals.

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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. CT7)
- Determine capillary blood glucose and treat 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)

P18 - PEDIATRIC FEVER/SUSPECTED SEPSIS

P18 PEDIATRIC FEVER/SUSPECTED SEPSIS

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

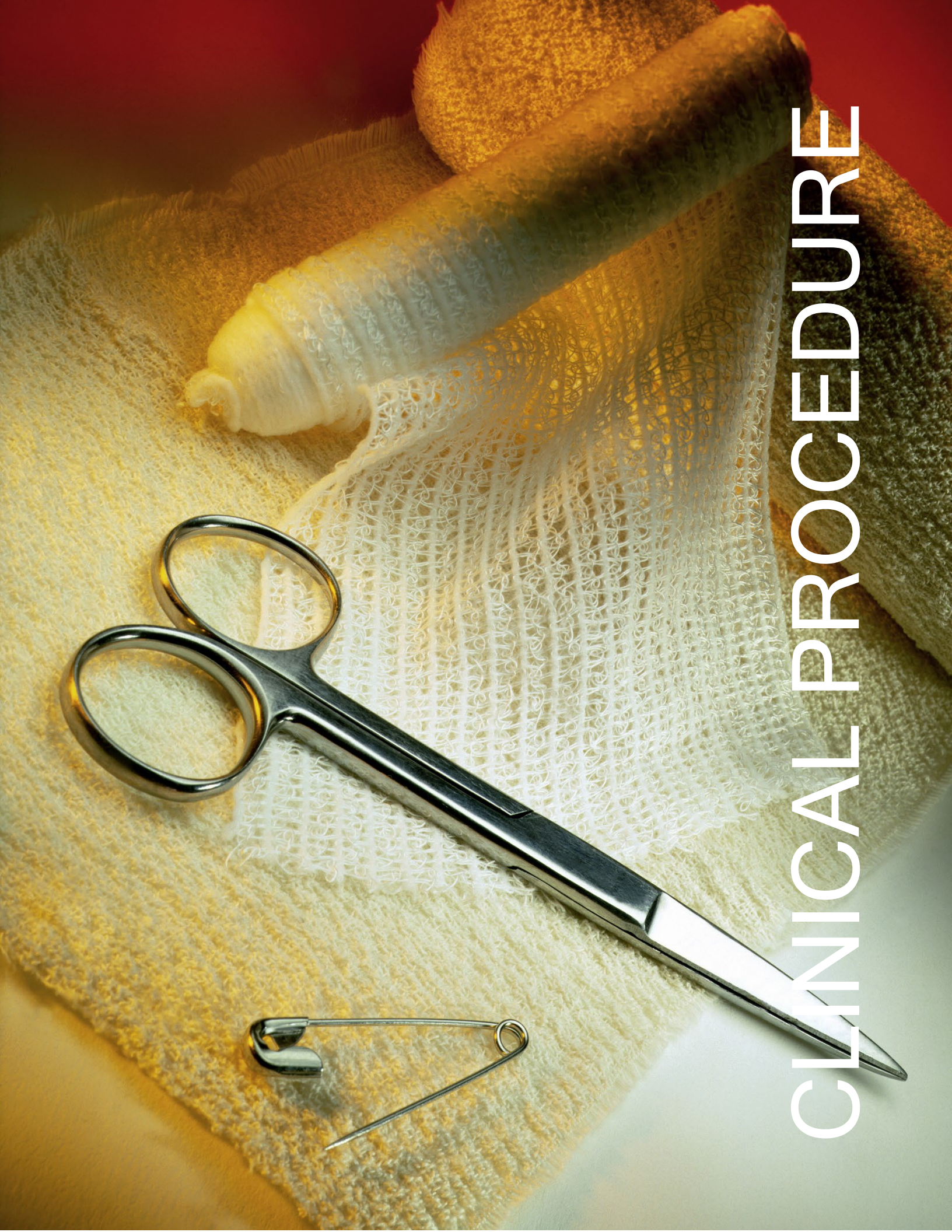
- A patient with a genetic disorder, immunocompromised, indwelling catheter (IV/Foley/ etc), or medical device is at significantly increased risk of sepsis
- Caregivers will be your best source of information
- Caution in fluids if cardiac history (10 mL/kg at a time) due to high sensitivity to small fluid volume changes
- Children are at high risk for sudden decompensation

QUALITY MEASURES

- Pending

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5072914/>



CLINICAL PROCEDURE

CLINICAL PROCEDURE



CP1 ADULT 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. 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. A patient requiring ventilatory assistance will be managed initially with a bag-valve-mask (BVM) device and airway adjunct (OPA/NPA) until choice of an advanced airway device is made and preparations for placement are completed
2. A patient in cardiac arrest or in whom endotracheal intubation is anticipated to be especially difficult, will primarily have the King Airway device employed
3. Other patients may receive a maximum of two (2) total attempts at endotracheal intubation with facilitated medications, if indicated
4. If Step #3 or #4 is unsuccessful, the alternate may be attempted
5. If both Step #3 and Step #4 are unsuccessful, ventilations with a bag-valve-mask (BVM) device should be employed as a temporizing measure until arrival at the hospital
6. If endotracheal intubation, King Airway placement and bag-valve-mask (BVM) device ventilations are all unsuccessful, emergency surgical or needle cricothyrotomy (Ref. CP2, CP4) may be performed as a last resort.

EQUIPMENT

<ul style="list-style-type: none"> • Bag-valve-mask device • Appropriately sized: <ul style="list-style-type: none"> ○ OPA & NPA ○ EtCO2 filterline set ○ King LTD-S airway ○ Laryngoscope blade ○ Endotracheal tube 	<ul style="list-style-type: none"> • Suction • Lubricating jelly • 60 mL luer lock syringe • 18 Fr orogastric tube • 60 mL catheter tip syringe • Laryngoscope handle 	<ul style="list-style-type: none"> • 10 mL luer lock syringe • Bougie • Scalpel • Kelly curved forceps
--	---	--

CP1 ADULT AIRWAY MGMT. & ADVANCED AIRWAY PLACEMENT

CP1.1 BAG-VALVE-MASK DEVICE VENTILATION

CP1.1 - BAG-VALVE-MASK VENTILATION

INDICATIONS	
<ul style="list-style-type: none">• Respiratory insufficiency/failure/arrest	<ul style="list-style-type: none">• Pre-oxygenation prior to advanced airway placement attempt

CONTRAINDICATIONS
<ul style="list-style-type: none">• None

CAUTIONS
<ul style="list-style-type: none">• An effective seal may be difficult in a patient with facial abnormalities, beard, lack of teeth, and/or facial trauma• Mitigate against high intra-thoracic pressures by avoiding excessive tidal volumes, PEEP, and dynamic hyperinflation when ventilating

PROCEDURE
<ol style="list-style-type: none">1. Assemble equipment per manufacturer's instructions and connect to oxygen source2. Attach EtCO₂ filterline set between mask and bag-valve device (ALS ONLY)3. Place NPA/OPA if patient tolerates and not contraindicated (e.g., no NPA in head/facial trauma)4. Utilizing 2-person technique whenever possible, ventilate at a baseline rate of 12 - 16 breaths per minute5. Adjust ventilation rate to achieve adequate SpO₂ and EtCO₂ of 35 - 45 mmHg (ALS ONLY)

COMPLICATIONS	
<ul style="list-style-type: none">• Inability to maintain adequate seal• Inappropriate hyperventilation	<ul style="list-style-type: none">• Gastric distention• Hypotension and/or pneumothorax resulting from positive pressure ventilation

CP1 ADULT AIRWAY MGMT. & ADVANCED AIRWAY PLACEMENT

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
<ul style="list-style-type: none">• May be difficult or ineffective in a patient with significant head/neck face structure abnormalities or trauma resulting in instability of the face or oropharynx• Mitigate against high intra-thoracic pressures by avoiding excessive tidal volumes, PEEP, and dynamic hyperinflation when ventilating• Positive pressure ventilation may worsen shock and precipitate cardiovascular collapse - INITIATE RESUSCITATION AS SOON AS POSSIBLE in a hypotensive patient who requires ventilatory support or airway management (Ref. C2, C6, M9)

PROCEDURE
<ol style="list-style-type: none">1. Choose appropriate size device, assemble equipment per manufacturer's directions, test balloon and lubricate2. Grasp jaw and tongue and lift anteriorly3. Place device from corner of mouth with device rotated 45 - 90 degrees laterally4. Insert device and advance along the posterior tongue while rotating back to midline until hub is at lip/gum line5. Inflate balloon with up to 60 mL air to achieve seal6. Attach EtCO₂ between tube and bag-valve device7. Begin ventilations while gently retracting tube until it seats, and ventilations are easy8. If air leaking is still noted, instill up to an additional 20 mL air into balloon9. Secure with tape or appropriately sized commercial tube holder device10. Ventilate at a baseline rate of 12 - 16 breaths per minute.11. Adjust ventilation to maintain adequate SpO₂ and EtCO₂ of 35 - 45 mmHg

COMPLICATIONS
<ul style="list-style-type: none">• 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, 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

CP1.2 - KING AIRWAY PLACEMENT (ALS ONLY)

CP1 ADULT AIRWAY MGMT. & ADVANCED AIRWAY PLACEMENT

CP1.3 ENDOTRACHEAL INTUBATION

INDICATIONS

- Respiratory insufficiency/failure/arrest

CONTRAINDICATIONS

- None

CAUTIONS

- Positive pressure ventilation may worsen shock and precipitate cardiovascular collapse - INITIATE RESUSCITATION AS SOON AS POSSIBLE in a hypotensive patient who requires ventilatory support or airway management (Ref. C2, C6, M9)
- May be difficult in a patient with facial/neck trauma, blood, or other secretions in the airway
- Difficulty with a patient who lacks teeth
- Limited mobility or congenital malformation of the neck or jaw
- Patient with a beard 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 mmHg

COMPLICATIONS

- | | |
|---|--|
| <ul style="list-style-type: none">• Inability to place tube• Esophageal placement• Mainstem placement | <ul style="list-style-type: none">• Unrecognized displacement• Hypotension and/or pneumothorax resulting from positive pressure ventilation |
|---|--|

CP1 ADULT AIRWAY MGMT. & ADVANCED AIRWAY PLACEMENT

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

- Mitigate against high intra-thoracic pressures by avoiding excessive tidal volumes, PEEP, and dynamic hyperinflation when ventilating

S A F E T Y A L E R T

EXTREME CAUTION should be exercised prior to attempting medication facilitated intubation to avoid administering in a patient in whom airway management is anticipated to be particularly difficult

- Positive pressure ventilation may worsen shock and precipitate cardiovascular collapse - INITIATE RESUSCITATION AS SOON AS POSSIBLE in a hypotensive patient who requires ventilatory support or airway management (Ref. C2, C6, M9):

PROCEDURE

1. Prepare all equipment as per “CP1.3 Endotracheal Intubation”
2. Ensure vascular access and prepare medications
3. Administer fentanyl, 2 mcg/kg (max total single dose 400 mcg), intravenous push, then after one to two minutes administer etomidate 0.3 mg/kg **SLOW** intravenous push (**over 30 to 60 seconds**)
4. Perform “CP1.3 Endotracheal Intubation” as listed above
5. Following confirmation of successful intubation, administer midazolam 2.5 mg intravenous, may repeat one time

COMPLICATIONS

- Adverse reactions to medications
- **Trismus due to rapid administration of etomidate**
- Ineffectiveness of medications
- Sedation with failure to secure airway

CP1 ADULT AIRWAY MGMT. & ADVANCED AIRWAY PLACEMENT

QUALITY MEASURES

- | | |
|--|---|
| <ul style="list-style-type: none">• Ventilation assistance provided• Single airway type used• Confirmation of placement with EtCO2 | <ul style="list-style-type: none">• Airway re-confirmed• Multiple EtCO2 values |
|--|---|

REFERENCES

- <https://nasems.org/projects/model-ems-clinical-guidelines/>
- Pinellas County EMS Medical Quality Management Plan
- Salim Rezaie, "Critical Care Updates: Resuscitation Sequence Intubation - Hypotension Kills (Part 1 of 3)", REBEL EM blog, September 26, 2016. Available at: <https://rebelem.com/critical-care-updates-resuscitation-sequence-intubation-hypotension-kills-part-1-of-3/>
- Salim Rezaie, "Critical Care Updates: Resuscitation Sequence Intubation - Hypoxemia Kills (Part 2 of 3)", REBEL EM blog, September 29, 2016. Available at: <https://rebelem.com/critical-care-updates-resuscitation-sequence-intubation-hypoxemia-kills-part-2-of-3/>
- <https://litfl.com/intubation-hypotension-and-shock/>

CP2 SURGICAL CRICOTHYROTOMY AIRWAY ACCESS

INDICATIONS

- Ten (10) years of age or older
- Respiratory insufficiency/failure/arrest with inability to adequately provide oxygenation or ventilation by bag-valve-mask (BVM) device, endotracheal tube or extraglottic airway device

CONTRAINDICATIONS

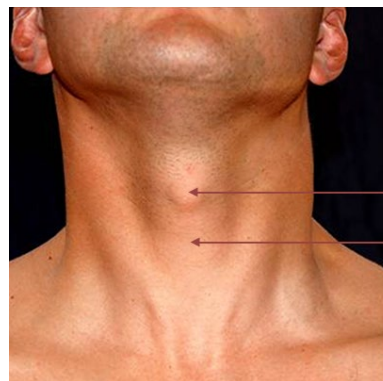
- Less than ten (10) years of age
- Inability to identify landmarks

CAUTIONS

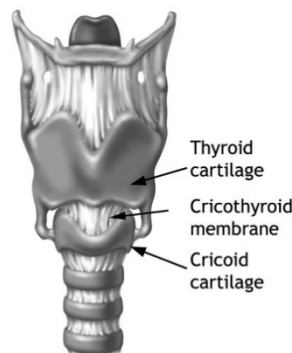
- Anticipate difficulty with excess soft tissue and previous scarring to neck

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



Thyroid cartilage
Cricoid cartilage



- 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



CP2 SURGICAL CRICOTHYROTOMY AIRWAY ACCESS

PROCEDURE (cont.)

- 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 rate of ventilations to achieve adequate oxygen (O₂) saturation and EtCO₂ 35-45 mmHg
- May secure the endotracheal tube using tape, but continue to maintain manual stabilization until transfer of care at the receiving facility

COMPLICATIONS

- Inability to identify 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. The six (6) steps below outline this approach and are followed by the specifics of the individual procedures

Prehospital pediatric 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 bag-valve-mask device or ETI. ***Pediatric medication-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. Appropriate equipment sizing will be determined by the patient’s length, not the weight.
2. A pediatric patient requiring ventilatory assistance will be primarily managed with appropriate positioning, bag-valve-mask (BVM) device and airway adjunct (OPA/NPA) when such a device is not contraindicated.
3. A clinician may attempt endotracheal intubation with an endotracheal tube if bag-valve-mask (BVM) is inadequate to maintain ventilation and/or oxygenation.
Note: INFLATE CUFF EXCEPT FOR A PATIENT LESS THAN 30 DAYS OLD
4. No more than two (2) total attempts at direct laryngoscopy may be performed
5. Needle cricothyrotomy (Ref. CP4) shall be performed as a last resort on a pediatric patient whose airway is unable to be managed using any other means
6. A pediatric patient who is receiving positive pressure ventilation (bag-valve-mask device or intubated) should have an orogastric tube placed (Ref. CP20) to decompress the stomach and facilitate ventilation, unless contraindicated

EQUIPMENT

<ul style="list-style-type: none"> • Handtevy pediatric bag • Bag-valve-mask device • Appropriately sized: <ul style="list-style-type: none"> ○ OPA & NPA ○ EtCO2 filterline set ○ Laryngoscope blade ○ Endotracheal tube ○ Orogastric tube 	<ul style="list-style-type: none"> • Suction • Lubricating jelly • Laryngoscope handle • 10 mL luer-lock syringe • 60 mL catheter tip syringe • Needle cricothyrotomy kit
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CP3 PEDIATRIC AIRWAY MGMT. & ADVANCED AIRWAY PLACEMENT

CP3.1 PEDIATRIC BAG-VALVE-MASK VENTILATION

CP3.1 PEDIATRIC BAG VALVE MASK VENTILATION - CP3.1

INDICATIONS	
<ul style="list-style-type: none">• Respiratory insufficiency/failure/arrest	<ul style="list-style-type: none">• Pre-oxygenation prior to advanced airway placement attempt

CONTRAINDICATIONS
<ul style="list-style-type: none">• None

CAUTIONS
<ul style="list-style-type: none">• Effective seal is crucial and may be difficult in a pediatric patient• Facial trauma may further complicate

PROCEDURE
<ol style="list-style-type: none">1. Assemble equipment per manufacturer's instructions and connect to oxygen source2. 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 minute6. Adjust ventilation rate to achieve adequate SpO₂ and EtCO₂ of 35 - 45 mmHg (ALS ONLY)

COMPLICATIONS	
<ul style="list-style-type: none">• Inability to maintain adequate seal• Inappropriate hyperventilation	<ul style="list-style-type: none">• Gastric distention• Hypotension and/or pneumothorax resulting from positive pressure ventilation

CP3 PEDIATRIC AIRWAY MGMT. & ADVANCED AIRWAY PLACEMENT

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.
 - Maximum of 15 seconds per attempt
 - Maximum of 2 total combined attempts by all clinicians

Note: INFLATE CUFF EXCEPT FOR A PATIENT LESS THAN 30 DAYS OLD

5. Attach EtCO₂ filterline set and ventilate to check for bilateral breath sounds, quiet epigastrium, and confirm placement with EtCO₂
6. Secure endotracheal tube with commercial tube holder device (if appropriately sized)
7. 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 PEDIATRIC AIRWAY MGMT. & ADVANCED AIRWAY PLACEMENT

CP3.3 PEDIATRIC FACILITATED INTUBATION

CP3.3 - PEDIATRIC FACILITATED INTUBATION - CP3.3

INDICATIONS
<ul style="list-style-type: none">Respiratory insufficiency/failure/arrest requiring airway management in patients with retained consciousness, gag reflex or jaw clenching

CONTRAINDICATIONS
<ul style="list-style-type: none">Allergic or adverse reaction history to any of the medications

CAUTIONS
<div style="display: flex; justify-content: space-between; align-items: center;"><div style="text-align: center;"></div><div style="text-align: center;"><p>OLMC CONSULT IS MANDATORY PRIOR TO ATTEMPTING FACILITATED INTUBATION</p></div><div style="text-align: center;"></div></div> <div style="border: 2px solid red; padding: 10px; margin-top: 10px;"><p style="text-align: center; font-size: 24px; font-weight: bold; letter-spacing: 0.5em;">S A F E T Y A L E R T</p><p style="text-align: center;">EXTREME CAUTION should be exercised prior to attempting medication facilitated intubation to avoid administering in a patient in whom airway management is anticipated to be particularly difficult</p></div>

PROCEDURE
<ol style="list-style-type: none">Prepare all equipment as per “CP3.2 Pediatric Endotracheal Intubation”Ensure patent intravenous/intraosseous access and prepare medicationsAdminister fentanyl 2 mcg/kg intravenous push followed by etomidate 0.3 mg/kg SLOW intravenous push (over 30 TO 60 SECONDS)Perform “CP3.2 Pediatric Endotracheal Intubation” as listed aboveFollowing confirmation of successful intubation, administer midazolam, may repeat one time

COMPLICATIONS
<ul style="list-style-type: none">Adverse reactions to medications (e.g., trismus due to rapid administration of etomidate)Ineffectiveness of medicationsSedation with failure to secure airway

CP3 PEDIATRIC AIRWAY MGMT. & ADVANCED AIRWAY PLACEMENT

QUALITY MEASURES	
<ul style="list-style-type: none"> Ventilation assistance provided Single airway type used Confirmation of placement with EtCO2 	<ul style="list-style-type: none"> Airway re-confirmed Multiple EtCO2 values

NOTES
<ul style="list-style-type: none"> <i>OLMC CONSULT IS MANDATORY PRIOR TO ATTEMPTING FACILITATED INTUBATION</i> Prehospital pediatric facilitated intubation is generally not indicated and should only be considered in exceptional circumstances in consultation with the OLMC physician

REFERENCES
<ul style="list-style-type: none"> https://nasemso.org/projects/model-ems-clinical-guidelines/ Pinellas County EMS Medical Quality Management Plan - Medical Operations Manual Vol. 2 Protocol AD18 http://www3.pedsanesthesia.org/newsletters/2018summer/procon-pro.html https://www.merckmanuals.com/professional/multimedia/clinical-calculator/endotracheal-tube-size-for-children-age-1-to-8-years https://www.anesthesiologynews.com/Review-Articles/Article/08-19/10-Common-Pediatric-Airway-Problems-And-Their-Solutions/55657?sub=B9BFD2B22AAB91C738BEFA44BD6987A27AB424466CD7E09740FF4A4786780

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CP4 NEEDLE CRICOTHYROTOMY

INDICATIONS

- A patient 10 years of age or younger
- Inability to adequately ventilate with an established airway of other means (e.g., bag-valve-mask device with adjunct, endotracheal tube) due to:
 - Severe oral or facial trauma
 - Airway obstruction unable to be cleared by other techniques

CONTRAINDICATIONS

- A patient 11 years of age or older (Ref. CP2)
- Neck tumor that obstructs the ability to identify anatomical landmarks
- Inability to identify anatomical landmarks

CAUTIONS

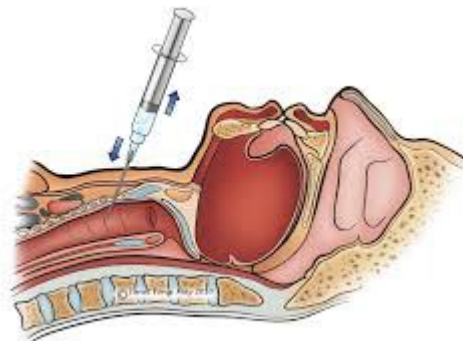
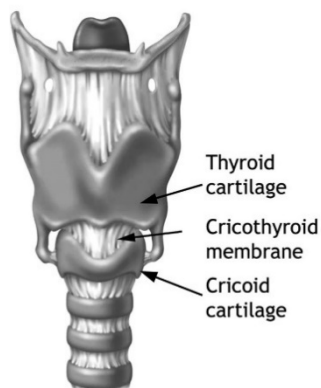
- **This is a rescue procedure ONLY**

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, Chlorprep or betadine (if available)
- Insert the 14-gauge IV catheter at 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

CP4 NEEDLE CRICOTHYROTOMY

PROCEDURE (cont.)

- 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 catheter 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://naseonso.org/projects/model-ems-clinical-guidelines/>
- <https://www.youtube.com/watch?v=BrpzH5G-VHM>

CP5 CONTINUOUS WAVEFORM CAPNOGRAPHY

INDICATIONS

- Continuous waveform capnography use is **MANDATORY** in:
 - Advanced airway placement (endotracheal tube or King Airway)
 - Continuous waveform capnography is the only acceptable method of confirmation for endotracheal tube placement
 - Altered mental status
 - Sedating medication administration
 - BVM ventilations - unless EtCO₂ capability is unavailable
 - 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 cardiac monitor. 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 cardiac 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://nasemso.org/projects/model-ems-clinical-guidelines/>

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CP6 CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)

INDICATIONS	
<ul style="list-style-type: none"> Congestive heart failure (CHF)/Acute pulmonary edema Reactive airway disease (Asthma/COPD) 	<ul style="list-style-type: none"> Drowning/near drowning Selected toxic inhalations

CONTRAINDICATIONS	
<ul style="list-style-type: none"> Hypotension (SBP less than 90 mmHg) Altered mental status Respiratory arrest/respiratory rate less than eight (8) 	<ul style="list-style-type: none"> Suspected or known pneumothorax Tracheostomy/cricothyrotomy Vomiting

CAUTIONS
<ul style="list-style-type: none"> None

PROCEDURE
<ul style="list-style-type: none"> 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 cmH₂O and titrate by 2.5 cmH₂O pressure every 3 - 5 minutes to maximum 10 cmH₂O 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	
<ul style="list-style-type: none"> Pneumothorax Hypotension 	<ul style="list-style-type: none"> Apnea Inability to tolerate

NOTES
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> https://nasmso.org/projects/model-ems-clinical-guidelines/ https://www.youtube.com/watch?v=H8z80e3YPO0

CP6 - CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)

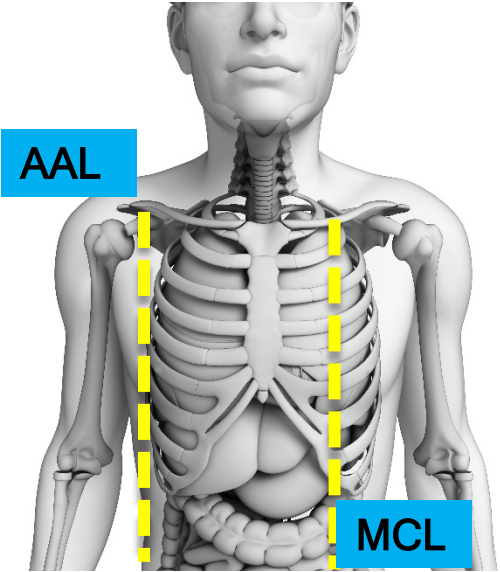
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CP7 NEEDLE THORACOSTOMY

INDICATIONS
<ul style="list-style-type: none"> Suspected tension pneumothorax with severe respiratory distress, hypotension, or cardiovascular collapse Traumatic cardiac arrest with chest or upper abdominal injury

CONTRAINDICATIONS
<ul style="list-style-type: none"> Simple pneumothorax

CAUTIONS
<ul style="list-style-type: none"> A malposition endotracheal tube may be mistaken for tension pneumothorax

PROCEDURE	
<ul style="list-style-type: none"> Expose entire chest and identify landmarks Prep area well with alcohol preps and chlorprep or betadine (if available) Adult <ul style="list-style-type: none"> Insert 10 gauge 3.25-inch decompression needle into one of the following: <ul style="list-style-type: none"> Lateral (<i>preferred Site</i>): 5th intercostal space, anterior axillary line (AAL) Anterior: 2nd intercostal space, mid-clavicular line (MCL) Pediatric (age less than 13 y/o) <ul style="list-style-type: none"> Insert 16 gauge 1.16-inch IV catheter into: <ul style="list-style-type: none"> Lateral (<i>preferred site</i>): 4th intercostal space, anterior axillary line Anterior: 2nd intercostal space, mid-clavicular line Remove needle leaving angiocath in place Notify receiving facility of needle thoracostomy Reassess patient and interventions frequently (minimum every 5 minutes) 	

COMPLICATIONS	
<ul style="list-style-type: none"> Inability to find landmarks Bleeding Failure to penetrate the pleural cavity Subcutaneous emphysema 	<ul style="list-style-type: none"> Clogging of needle by blood or soft tissue Internal bleeding due to incorrect placement

NOTES
<ul style="list-style-type: none"> None

CP7 - NEEDLE THORACOSTOMY

CP7 NEEDLE THORACOSTOMY

REFERENCES

- <https://www.narescue.com/kit-needle-decompression-ars-10-ga-x-3-25.html>
- <https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/>
- NAEMT, Pre-hospital Trauma Life Support Committee. American College of Surgeons, Committee on Trauma. (2020). PHTLS: Prehospital Trauma Life Support (9th ed.) Burlington, MA: Jones & Bartlett Learning

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

- | | | |
|--|---|--|
| <ul style="list-style-type: none">• Pneumothorax• Hypotension | <ul style="list-style-type: none">• Apnea• Inability to tolerate | <ul style="list-style-type: none">• Severe Tachycardia• Myocardial Ischemia |
|--|---|--|

CP8 NEBULIZER INHALATION THERAPY

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
- Apnea
- Severe Tachycardia
- Hypotension
- Inability to tolerate
- 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 NEBULIZER INHALATION THERAPY

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

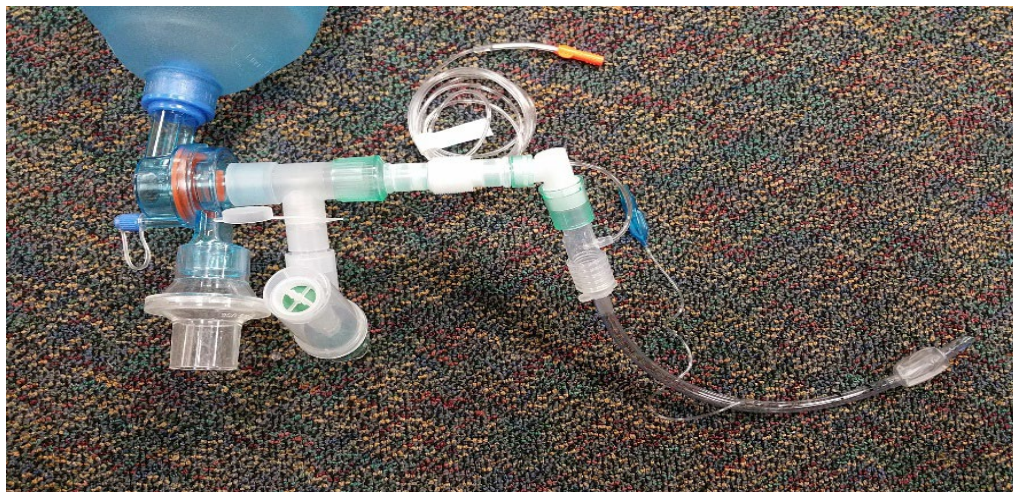
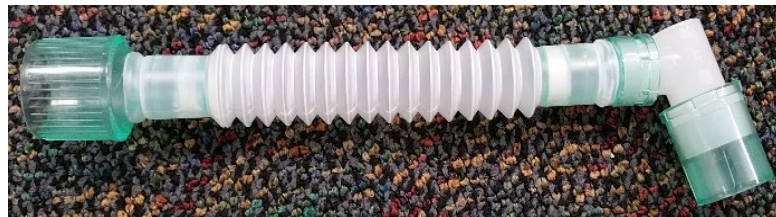
- Allergy to medication

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.

CP8 NEBULIZER INHALATION THERAPY

COMPLICATIONS

- | | |
|--|--|
| <ul style="list-style-type: none">• Pneumothorax• Hypotension | <ul style="list-style-type: none">• Severe Tachycardia• Myocardial Ischemia |
|--|--|

NOTES

- None

REFERENCES

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

CP9 COMPRESSION PERFORMANCE RESUSCITATION

CP9.1 Adult CPR

INDICATIONS

- Adult cardiac arrest
- Cardiac arrest in a child 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. CT3):
 - **Position #1 - Compress/Defib (EMT or Paramedic)**
 - **Initiate uninterrupted compressions**
 - Attach monitor/defibrillator or AED & CPR feedback device during pauses for ventilations
 - Defibrillate 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/defibrillator or AED during initial cycle of compressions
 - Attach oxygen and EtCO₂
 - Provide ventilations with BVM device 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/defibrillator or AED
 - Initiate uninterrupted compressions following initial rhythm/pulse check and defibrillation
 - Defibrillate 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)
 - If unable, start peripheral IV or access indwelling catheter (Ref. CP25)
 - Administer medications as indicated
 - Assist with other ALS procedures as needed

CP9 COMPRESSION PERFORMANCE RESUSCITATION

PROCEDURE (cont.)

- **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 CPR Feedback Sensor 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 CPR Feedback Sensor 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 COMPRESSION PERFORMANCE RESUSCITATION

CP9.2 CHILD CPR

INDICATIONS

- Cardiac arrest in a patient 1 year to 13 years of age

CONTRAINDICATIONS

- Presence of valid DNR (Ref. CS16)
- Presence of criteria for withholding resuscitation (Ref. CS15)

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/defibrillator or AED using age-appropriate pads (pediatric key when indicated/available) & CPR feedback device if age 8 or older during pauses for ventilations
 - Defibrillate 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
 - Provide ventilations with BVM device 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/defibrillator or AED & CPR feedback device
 - Initiate uninterrupted compressions following initial rhythm/pulse check and defibrillation
 - Deliver subsequent defibrillations 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)
 - If unable, start peripheral IV or access indwelling catheter (Ref. CP25, CT24)
 - Administer medications as indicated using PCEMS Handtevy Medication and Equipment Guidebook for dosing
 - Assist with other ALS procedures as needed

CP9 COMPRESSION PERFORMANCE RESUSCITATION

PROCEDURE (cont.)

- **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 CPR Feedback Sensor to ensure adequate compression depth, rate, and recoil in a patient 8 years of age 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 defibrillations
- Provide electrical and pharmacologic therapy as indicated
- **“RESTART THE HEART BEFORE YOU DEPART” -- EVERY EFFORT SHOULD BE MADE TO ENSURE ESTABLISHMENT OF EFFECTIVE RESUSCITATION (INCLUDING EPINEPRHINE) PRIOR TO TRANSPORT**

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 (less than five (5) seconds is optimal) during every cycle.
- If personnel need rotation out of position and appropriate personnel are on scene, it may be done if there is no interruption in cardiopulmonary resuscitation
- Any additional personnel may be added into available positions as the situation dictates if it does not interfere with the “triangle” positions that have the greatest impact on patient outcome.
- “ROSC” is intended to represent a brief (approximately greater than 30 seconds) restoration of spontaneous circulation that provides evidence of more than an occasional gasp, occasional fleeting palpable pulse or arterial waveform

CP9 COMPRESSION PERFORMANCE RESUSCITATION

CP9.3 Infant CPR

INDICATIONS

- Cardiac arrest in a patient less than one (1) year of age
- Circulatory collapse (HR less than 60 and evidence of poor perfusion) in a patient less than one (1) year of age

CONTRAINDICATIONS

- Presence of valid DNR (Ref. CS16)
- Presence of criteria for withholding resuscitation (Ref. CS15)

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 using fingers or thumb encircling technique
 - Attach monitor/defibrillator or AED using age-appropriate pads (pediatric key when indicated/available) during pauses for ventilations
 - Defibrillate 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)
 - If unable, start peripheral IV or access indwelling catheter (Ref. CP25)
 - Administer medications as indicated using PCEMS Handtevy Medication and Equipment Guidebook for dosing
 - Assist with other ALS procedures as needed

CP9 COMPRESSION PERFORMANCE RESUSCITATION

PROCEDURE (cont.)

- **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 TRANSPORT**

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 less than 10 second break (less than five (5) seconds is optimal) during every cycle.
- If personnel need rotation out of 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 if it does not interfere with the “triangle” positions that have the greatest impact on patient outcome.
- “ROSC” is intended to represent a brief (approximately greater than 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/>

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CP10 AUTOMATED EXTERNAL DEFIBRILLATOR (AED)

INDICATIONS

- Cardiac arrest

CONTRAINDICATIONS

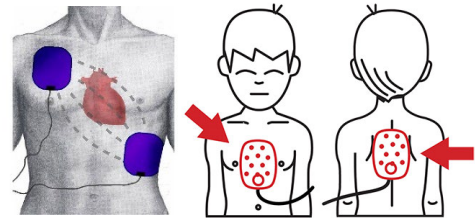
- Hazardous environments (e.g., standing water, fire/ignition hazards, etc.)

CAUTIONS

- Transdermal medication patches should be removed, and the area wiped clean before the hands-free AED pads are attached
- Implanted Pacemakers/ICDs
 - Place hands free AED pads at least 1 inch away
 - 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. **POWER ON** the AED - Follow the prompts
 - b. **Attach AED 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
 - c. **Plug AED electrode pads into device**, if not already preconnected
 - d. **Analyze the Rhythm** - clear rescuers and bystanders from patient and ensure no one is touching the patient
 - e. **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
 - f. After first shock, **DO NOT** restart CPR - Follow the device prompts
 - g. After three (3) shocks, check signs of circulation and prepare to provide chest compressions
 - h. Continue compressions and ventilations for one (1) minute
 - i. Continue to follow the voice prompts until ALS personnel arrive and provide direction.
 - j. **DO NOT** discontinue compressions or ventilations until instructed to do so by ALS personnel.



CP10 AUTOMATED EXTERNAL DEFIBRILLATOR (AED)

COMPLICATIONS

- If patient noticeably diaphoretic, dry the chest with a cloth or towel before attaching the hands-free AED 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

- If AED equipped with pediatric pads/key, use with patient younger than eight (8) years of age

REFERENCES

- <https://www.ahajournals.org/doi/abs/10.1161/CIR.0000000000001017>
- <https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/>

CP10 - AUTOMATED EXTERNAL DEFIBRILLATOR (AED)

CP11 MANUAL DEFIBRILLATION - STRYKER LIFEPAK 15

INDICATIONS

- Ventricular Fibrillation, Pulseless Ventricular Tachycardia, Polymorphic Ventricular Tachycardia

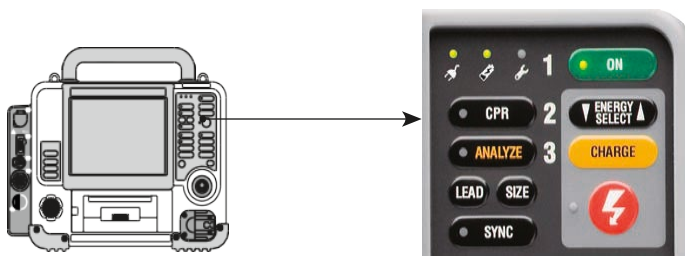
CONTRAINDICATIONS


- Hazardous environments (e.g., standing water, fire/ignition hazards, etc.)
- Valid Florida Do Not Resuscitate Order (DNRO)

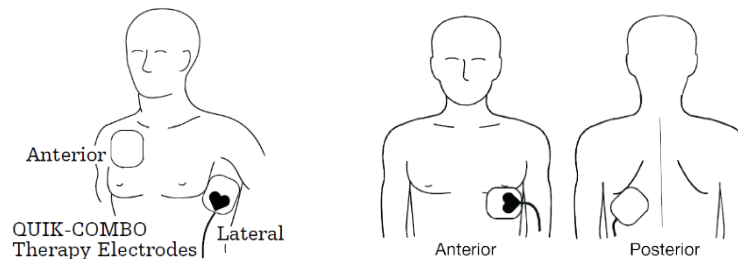
CAUTIONS

- Oxygen enriched environments

PROCEDURE



1. Press **ON** 
2. Remove all clothing from the Patient's chest
3. Prepare patient's chest:
 - Clean and dry skin, remove excess hair, if necessary
 - **DO NOT** use alcohol, tincture of benzoin, or antiperspirant to prepare the skin
 - Determine presence of AICD, pacemaker, other implanted medical devices
 - Avoid placement over the nipple or bony prominences
4. Apply Quik-Combo therapy electrodes to patient's chest in anterior-lateral or anterior-posterior position
 - Pad placement







NOTE: Impedance is measured whenever the defibrillator is charged. To ensure therapeutic patient impedance levels, always charge the defibrillator when the Quik-Combo therapy electrodes are in contact with the patient's chest

CP11 MANUAL DEFIBRILLATION - STRYKER LIFEPAK 15

PROCEDURE (cont.)

5. Press ENERGY SELECT

- Select joules 
 - Press CHARGE 
 - If energy selection is changed after charging has started, the energy is removed. Press CHARGE  to restart charging
 - While the defibrillator is charging, a charging bar appears and a ramping tone sounds, indicating the charging energy level. When defibrillator is fully charged, an overlay appears
6. Make certain all personnel stand clear of the patient, bed, and any equipment connected to the patient
7. Call “I’m Clear”, “You’re Clear”, “Oxygen Clear” and visually verify all clear
8. Confirm that the defibrillator has charged to the desired energy level
9. Press the 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

- Stryker Lifepak 15 Monitor/Defibrillator Pocket Guide 2018 GDR 3307601_D
- Stryker Lifepak 15 Monitor/Defibrillator Operating Instructions November 2022 P/N 3340226-011

CP12 VECTOR CHANGE DEFIBRILLATION

INDICATIONS

- Patient must be large enough to be able to place two sets of pads simultaneously on the body without pads overlapping or touching
- Refractory ventricular fibrillation
 - Has already received 3+ shocks
 - Has already received antiarrhythmic drug therapy

CONTRAINDICATIONS

- Hazardous environments (e.g., standing water, fire/ignition hazards, etc.)

CAUTIONS

- Ensure minimal interruption to compressions

PROCEDURE

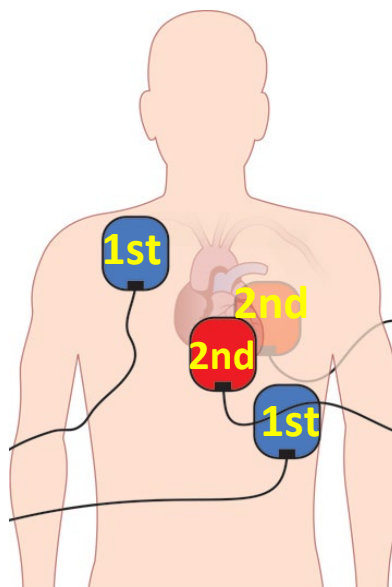
This procedure requires:

- **Two sets of Hands-Free Multi-Function Pads**
- **One Cardiac Monitor/Defibrillator**

Note - patient must be large enough to be able to place 2 sets of pads simultaneously on the body without pads overlapping or touching

1. If first set of Hands-Free Multi-Function pads were placed in standard apex-sternum orientation, add a second set placed anterior-posterior during pulse/rhythm check while avoiding prolonged interruption in compressions.

(Note: if first set was A/P place second set apex/sternum)



CP12 VECTOR CHANGE DEFIBRILLATION

PROCEDURE (cont.)

2. During the next 2-minute cycle of CPR, switch therapy cable to second set of pads
3. Deliver next and subsequent shocks through second set of pads

COMPLICATIONS

- Asystole

NOTES

- Pending

REFERENCES

- Canadian Journal of Emergency Medicine , Volume 20 , Supplement S1 , May 2018 , pp. S67 DOI: <https://doi.org/10.1017/cem.2018.227>

CP13 SYNCHRONIZED CARDIOVERSION - STRYKER LP15

INDICATIONS

- Unstable tachydysrhythmias

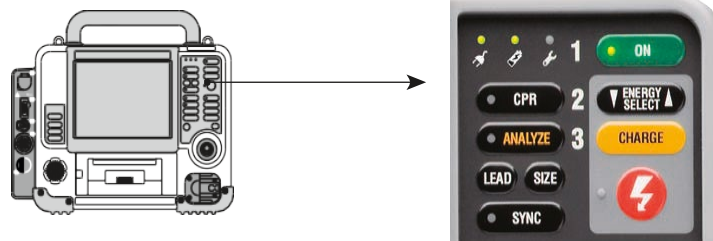
CONTRAINDICATIONS


- 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








1. Press ON 
2. Bare patient's chest
 - Ensure chest is clean and dry
 - Remove excessive chest hair
 - Prepare electrode site with brisk rub
 - Ensure electrodes are in sealed package and the use by date has not passed.
 - Avoid placement over the nipple, bony prominences, dressings, implantable Defibrillators or the diaphragm if possible
3. Attach patient ECG cable and ECG electrodes. ECG electrodes and cable must be used to monitor the ECG when standard paddles are used for cardioversion.
4. Select Lead II or lead with greatest QRS complex amplitude (positive or negative).

NOTE: To monitor the ECG using therapy electrodes, place the electrodes in anterior-lateral position and select PADDLES lead.

Warning Possible Lethal Arrhythmia: Ventricular fibrillation may be induced with improper synchronization. **DO NOT** use the ECG from another monitor (slaving) to synchronize the monitor/defibrillator's discharge. Always monitor the patient's ECG directly through the defibrillator's ECG cable or therapy cable. Confirm proper placement of the sense markers on the ECG.

CP13 SYNCHRONIZED CARDIOVERSION - STRYKER LP15

PROCEDURE (cont.)

5. Press SYNC 
6. The SYNC MODE message appears in the message area when Sync is active.
- NOTE:** Press SYNC  again to deactivate Sync mode.
7. Observe the ECG rhythm. Confirm that a triangle sense marker (▼) appears near the middle of each QRS complex. If the sense markers do not appear or are displayed in the wrong locations (for example, on the T-wave), adjust ECG SIZE or select another lead. (It is normal for the sense marker location to vary slightly on each QRS complex.)
8. Connect the Quik-Combo therapy electrodes to the therapy cable and confirm cable connection to the defibrillator.
9. Prepare the patient's skin and apply therapy electrodes to the patient in the anterior - lateral position.
10. Press ENERGY SELECT  or rotate the SPEED DIAL to select the desired energy.
11. Press CHARGE 
12. While the defibrillator is charging, a charging bar appears and a ramping tone sounds, indicating the charging energy level. When the defibrillator is fully charged, the screen displays available energy.
13. Make certain all personnel, including the operator, stand clear of the patient, bed, stretcher, and any equipment connected to the patient.
14. Confirm ECG rhythm. Confirm available energy.
15. Press and hold the (shock) button  on the defibrillator until the ENERGY DELIVERED message appears on the screen

NOTE: To disarm (cancel a charge), press the SPEED DIAL. The defibrillator disarms automatically if shock buttons are not pressed within 60 seconds, or if you change the energy selection after charging begins

16. Observe the patient and ECG rhythm. Repeat procedure starting from STEP #4, if necessary

COMPLICATIONS

- Pain
- Burns
- Arrhythmias

NOTES

- None

CP13 SYNCHRONIZED CARDIOVERSION - STRYKER LP15

REFERENCES

- Stryker Lifepak 15 Monitor/Defibrillator Pocket Guide 2018 GDR 3307601_D
- Stryker Lifepak 15 Monitor/Defibrillator Operating Instructions November 2022 P/N 3340226-011

CP14 TRANSCUTANEOUS PACING (TCP) - STRYKER LIFEPAK 15

DEMAND MODE (DEFAULT)

INDICATIONS

- Unstable bradycardia

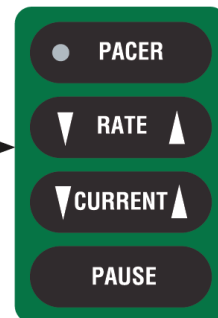
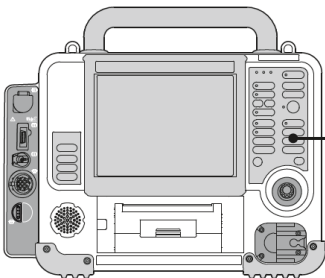
CONTRAINDICATIONS






- 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

PROCEDURE



1. Press **ON** 
2. Apply ECG Electrodes
3. Apply and connect Quik-Combo therapy electrodes
4. Press **PACER** 
5. Confirm placement of the sense marker (▼) is near the middle of each QRS
6. Press **RATE**  to select desired pacing rate
7. Press **CURRENT**  until electrical capture occurs
8. Check blood pressure and pulse to verify mechanical capture
9. **PAUSE**  button facilitates temporary viewing if underlying rhythm

NOTE: Heart rate alarms are disabled during pacing. Observe patient continuously.

CP15 SPINAL PRECAUTIONS

INDICATIONS

- Any sign of blunt trauma or mechanism
- Spine pain, tenderness, or anatomical deformity of the neck or back
- Altered mental status GCS less than 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:
 - From a vehicle:
 1. After placing a cervical collar, if indicated, a child in a booster seat or an adult should be allowed to self-extricate.
 2. For an infant or toddler already strapped in a car seat with a built-in harness, extricate the child while strapped in his/her car seat
 - Other situations requiring extrication:
 1. A padded long board may be used for extrication, using the lift and slide (rather than a logroll) technique
 - 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, to maintain neutral cervical spine positioning (e.g., when wearing shoulder pads)

CP15 SPINAL PRECAUTIONS

PROCEDURE (cont.)

- ***A patient should not routinely be transported on a long board, 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 would 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://nasemso.org/projects/model-ems-clinical-guidelines/>

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

- An incorrectly placed tourniquet may increase venous bleeding
- **DO NOT** place over a joint

PROCEDURE

1. Apply a 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. A tourniquet 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

- A tourniquet may be used as first line treatment in:
 - Traumatic Cardiac Arrest
 - During incidents with ongoing threats (Ref. CS19)
 - When other standard methods of hemorrhage control are not feasible

REFERENCES

- <https://www.narescue.com/combat-application-tourniquet-c-a-t>
- <https://www.narescue.com/education/cat-tourniquet-education.html>

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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. Grip RED TAB to peel clear liner from dressing
3. Place firmly centered over wound, adhesive side down
4. Firmly press dressing to skin to ensure an occlusive seal
5. Repeat with second dressing if a second wound (e.g., exit wound) is present



CP17 - HYFIN VENT COMPACT CHEST SEAL

COMPLICATIONS

- Improper placement may contribute to the development of tension pneumothorax

REFERENCES

- <https://www.narescue.com/hyfin-vent-compact-chest-seal-twin-pack.html>

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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

CP18 - WOUND PACKING - QUIK CLOT & ETD

CP18 WOUND PACKING - QUIKLOT® COMBAT GAUZE & EMERGENCY TRAUMA DRESSING (ETD)

NOTES

- Wound packing may be used as first line treatment in:
 - Traumatic Cardiac Arrest
 - During incidents with ongoing threats - Ref. CS19
 - 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.youtube.com/watch?v=IQsSrvNdloM>
- <https://www.narescue.com/responder-emergency-trauma-dressings>

CP19 TRACTION SPLINT

INDICATIONS

- Treatment of unilateral proximal third and mid-shaft femoral fractures
- Pain relief
- Fits a patient four years of age or older

CONTRAINDICATIONS

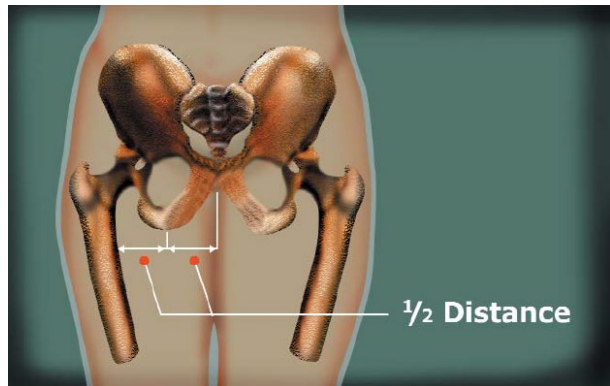
- Pelvic fracture
- Distal femur or supracondylar fractures
- Compound or open fractures of the femur
- Fractures of the ankle and foot

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))



CP19 TRACTION SPLINT

PROCEDURE (cont.)

- 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

- <https://sagersplints.com/indications-cleaning-instructions/>

CP20 OROGASTRIC (OG) TUBE INSERTION

INDICATIONS

- Gastric decompression and emptying in pediatric and adult patients receiving assisted ventilation
- Remove gastric distention of air and to minimize chance of aspiration

CONTRAINDICATIONS

- Awake patient
- Patient with intact gag reflex
- Caustic ingestions
- History of esophageal strictures, varices and/or other esophageal disease
- Adult patient without an advanced airway in place

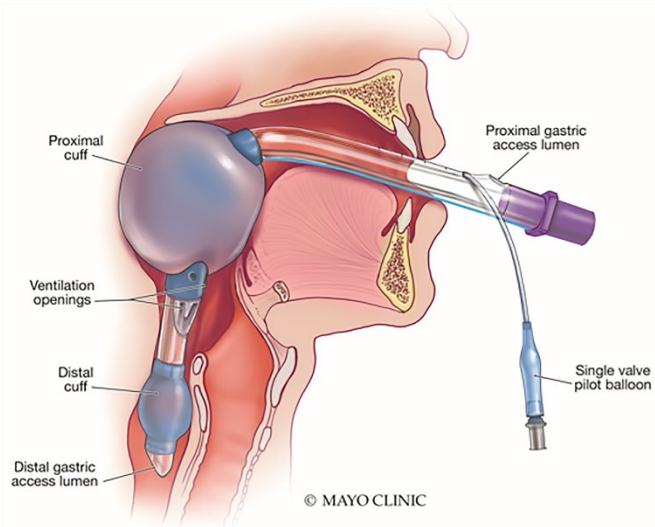
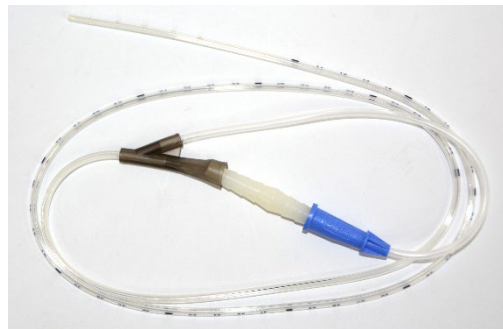
CAUTIONS

- 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



CP20 OROGASTRIC (OG) TUBE INSERTION

CP20 - OROGASTRIC TUBE INSERTION

PROCEDURE (cont.)

- If there is resistance, rotate and retract the tube slightly and try again. Keep insertion attempt limited 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 via the OG tube while auscultating with a stethoscope.
 - If the OG tube is in the stomach, a gurgling should be audible
 - If the OG 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 on low suction to facilitate evacuation of stomach contents
- Discontinue suction when there is no further return of stomach contents
- Secure the gastric tube to the tube holder (if applied) or the exterior cheek lightly with tape

COMPLICATIONS

- Bleeding
- Inadvertent tracheal placement

NOTES

- None

REFERENCES

- <https://nasmso.org/projects/model-ems-clinical-guidelines/>

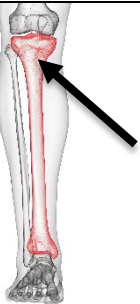
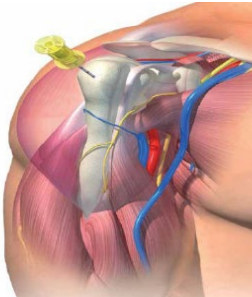
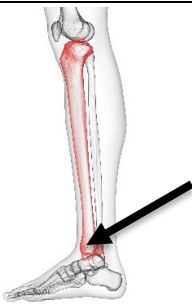
CP21 INTRAOSSEOUS ACCESS

EQUIPMENT		
<ul style="list-style-type: none"> • EZ-IO Power Driver • 10 mL Prefilled 0.9% sodium chloride syringe 	<ul style="list-style-type: none"> • EZ-IO Needle Set (appropriate size for patient) • EZ-Connect Extension Set 	<ul style="list-style-type: none"> • EZ-Stabilizer Dressing • Pressure Infusion Bag

INDICATIONS
<ul style="list-style-type: none"> • 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
<ul style="list-style-type: none"> • Fracture in target bone • Excessive tissue (severe obesity) and/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 (or attempted access) in targeted bone within past 48 hours

CAUTIONS
<ul style="list-style-type: none"> • None

LANDMARKS - ADULT		
Proximal Tibia	Proximal Humerus	Distal Tibia
<ul style="list-style-type: none"> • Remember “Big Toe - IO” • The tibia is on the big toe side • Locate the tibial tuberosity and slide just medial • Insertion site is approx. 2 cm below the patella and approx. 2 cm (depending on the patient’s anatomy) medial to the tibial tuberosity 	<ul style="list-style-type: none"> • Patient positioning is important! • Ensure that the patient’s hand is resting on the abdomen and that the elbow is adducted (close to the body) • Insertion site is located directly on the most prominent aspect of the greater tubercle. • Slide thumb up the anterior shaft of the humerus until you feel the greater tubercle; this is the surgical neck. • Approximately 1 cm (depending on patient anatomy) above the surgical neck is the insertion site • Aim for “big bump” (greater tubercle). Two finger widths inferior to coracoid process and acromion, then slightly anterior 	<ul style="list-style-type: none"> • Remember “Big Toe - IO” • Insertion site is located approximately 3 cm proximal to the most prominent aspect of the medial malleolus. • Place one finger directly over the medial malleolus; move approximately 2 cm (depending on patient anatomy) proximal and palpate the anterior and posterior borders of the tibia to assure that your insertion site is on the flat center aspect of the bone
		

CP21 - INTRAOSSEOUS ACCESS

CP21 INTRAOSSEOUS ACCESS

CP21 - INTRAOSSEOUS ACCESS

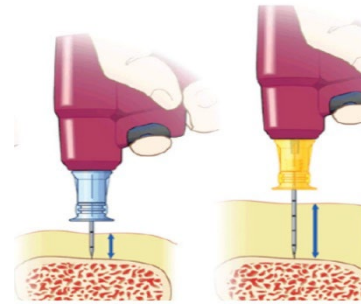
LANDMARKS - INFANT/CHILD			
Proximal Tibia	Proximal Humerus	Distal Tibia	Distal Femur
<p>• Remember “Big Toe - IO”</p> <ol style="list-style-type: none"> Extend the leg. Insertion site is approximately 1 cm medial to the tibial tuberosity, or just below the patella (approximately 1 cm) and slightly medial (approximately 1 cm), along the flat aspect of the tibia. Pinch the tibia between your fingers to identify the medial and lateral borders of the tibia. 	<p>Patient positioning is important!</p> <ol style="list-style-type: none"> Place the patient’s hand over the abdomen (elbow adducted and humerus internally rotated). Place your palm on the patient’s shoulder anteriorly. <ul style="list-style-type: none"> The area that feels like a “ball” under your palm is the general target area. You should be able to feel this ball, even on obese patients, by pushing deeply. Place the ulnar aspect of your hand vertically over the axilla and the ulnar aspect of your other hand along the midline of the upper arm laterally. Place your thumbs together over the arm; this identifies the vertical line of insertion on the proximal humerus. Palpate deeply up the humerus to the surgical neck. This may feel like a golf ball on a tee - the spot where the “ball” meets the “tee” is the surgical neck. The insertion site is above the surgical neck, on the most prominent aspect of the greater tubercle. 	<p>Remember “Big Toe - IO”</p> <ol style="list-style-type: none"> Insertion site is located approximately 1-2 cm proximal to the most prominent aspect of the medial malleolus. Palpate the anterior and posterior borders of the tibia to assure that your insertion site is on the flat center aspect of the bone. 	<ol style="list-style-type: none"> Secure the leg out-stretched to ensure the knee does not bend. Identify the patella by palpation The insertion site is approximately 1 cm proximal to the superior border of the patella and approximately 1-2 cm medial to midline

NEEDLE SELECTION			
<p>25 mm 15-gauge 3 kg or over</p>	<p>EZ-IO® 25 mm Needle Set: ≥3 kg</p> <p>EZ-IO® 45 mm Needle Set: ≥40 kg</p>	<p>45 mm 15-gauge or over and/or excessive tissue depth</p>	<p>Not for Sternal Use PEEL HERE</p>

CP21 INTRAOSSEOUS ACCESS

NEEDLE SELECTION (cont.)

- The needle sets do not have “adult” or “pediatric” sizes
- Clinical judgment should be used to determine appropriate needle set selection based on patient weight, anatomy and tissue depth overlying the insertion site
- With the needle set inserted through the soft tissue and touching bone, the 5 mm mark (at least one black line) must be visible outside the skin for confirmation of adequate needle set length prior to drilling



INSERTION TIPS

- **Apply the minimal amount of pressure required to keep the driver advancing into the bone**
- Immediately release the trigger when you feel the loss of resistance as the needle set enters the medullary space
- Avoid recoil - DO NOT pull back on the driver when releasing the trigger
- With any manipulation, stabilize the catheter hub
- Properly secure using an EZ-Stabilizer® Dressing and stabilize the extremity

INFUSIONS

- Perform a rapid normal saline flush into the intraosseous space before attempting to infuse through the catheter – Infant/Child: 2 to 5 mL
- **VERIFY PLACEMENT/PATENCY PRIOR TO ALL INFUSIONS**
- Compartment syndrome, which can result from undetected infiltration/extravasation, is a serious complication. The intraosseous insertion site should be monitored frequently for signs of infiltration/extravasation

PROCEDURE

- Determine landmarks for approved site per manufacturer and choose appropriate needle length
- Prep area well with alcohol prep pads and Chlorprep or betadine (if available)
- Prepare supplies:
 - Unlock clamp on EZ-Connect Extension Set
 - Prime EZ-Connect Extension Set, purge air
 - Attach EZ-IO Needle Set to EZ-IO Power Driver and remove safety
- Push the needle set tip through the skin until the trip rests against the bone, aiming the needle set at a 90-degree angle to the bone
 - The 5 mm mark (black line closest to the hub) must be visible above skin for needle set length confirmation
 - Consider longer needle to ensure adequate length for insertion
- Squeeze trigger and apply gentle, steady pressure; immediately release the trigger when you feel a sudden “Give” or loss of resistance as the needle set enters the medullary space
 - For most adults, needle set should be advanced until hub is flush or against skin
 - **CAUTION - DO NOT apply excessive pressure as this may cause the driver to slow and/or stop**

CP21 INTRAOSSEOUS ACCESS

PROCEDURE (cont.)

- Stabilize needle set hub, disconnect driver, and remove stylet
- Immediately dispose of the stylet in a sharps container
- Place EZ-Stabilizer Dressing over cannula hub
- Attach a primed EZ-Connect Extension set to the hub. Firmly secure by twisting clockwise and ensure clamp is open
- Pull the tabs off the dressing to expose the adhesive and adhere to the skin
- Aspirate and Flush
 - Prior to flush, aspirate slightly for visual confirmation of bone marrow
 - ***NOTE: inability to aspirate bone marrow doesn't necessarily mean inappropriate placement - continue to flush***
 - It is essential to perform a rapid normal saline syringe flush into the intraosseous space before attempting to infuse fluids. The flush helps displace marrow contents, facilitating flow
 - Adults - 5 - 10 mL
 - Infants and Small Children 2 - 5 mL
 - Failure to appropriately flush the EZ-IO catheter may result in limited or no flow - Repeat flush as needed
 - The initial flush will be met with inherent resistance as the fibrin mesh is being displaced
- Flow rates will vary among patients and anatomical sites.
 - Adequate flow rates are dependent on the rapid normal saline flush prior to intraosseous infusion as well as infusion under pressure
 - ***NOTE:***
 - ***A pressure bag, capable of generating 300 mmHg, is required any time medications are being infused in an intraosseous site for an adult patient - Use syringe boluses for a pediatric patient***
 - ***The pressure outside the bone in the IV fluid bag must be higher than the pressure inside the bone to achieve flow***
- In conscious patients, may administer 2% lidocaine (adults 20 mg & pediatrics 0.5 mg/kg to a max dose of 20 mg) via slow intraosseous push to control infusion related pain
- How do I insert an intraosseous needle manually?
 - In the unlikely event of an EZ- IO® Power Driver failure, disconnect the EZ-IO® Needle and Power Driver, grasp the EZ-IO® Needle Set Hub by hand and advance into the medullary space while twisting back and forth
 - Each Needle Set incorporates a cutting needle tip designed specifically for insertion through the hard cortex of the bone
- Care should be used to prevent rocking back and forth during manual insertion and can be accomplished using gentle-steady pressure

CP21 INTRAOSSEOUS ACCESS

COMPLICATIONS

- Improper placement may cause injury to the bone
- Bleeding
- Extravasation of fluids and medications
- Necrosis
- Loss of limb
- Power driver failure

NOTES

- None

REFERENCES

- <https://www.teleflex.com/usa/en/clinical-resources/ez-io/index>

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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
<ol style="list-style-type: none">1. Expose skin and cleanse if possible2. Grasp age appropriate auto injector without covering end with fingers and remove safety cap3. 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 - AUTO-INJECTOR USE

CP22 AUTO-INJECTOR USE

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 in adults and pediatric patients weighing more than 41 kg (90 lbs.)

CONTRAINDICATIONS

- None

CAUTIONS

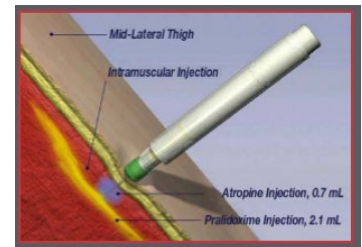
- Individuals should not rely solely upon Atropine and Pralidoxime to provide complete protection from chemical nerve agents and insecticide poisoning

PROCEDURE

***Do Not Remove Gray Safety Release until ready to use.**

***Never touch the Green Tip (Needle End)!**

1. Tear open the plastic pouch at any of the notches.
2. Place the DuoDote autoinjector in your dominant hand. (If you are right-handed, your right hand is dominant.)
3. Firmly grasp the center of the DuoDote autoinjector with the Green Tip (needle end) pointing down.
4. With your other hand, pull off the Gray Safety Release. DuoDote is now ready to be administered.
5. The injection site is the mid-lateral thigh area. **The DuoDote autoinjector can inject through clothing. However, make sure pockets at the injection site are empty. People who may not have a lot of fat at the injection site should also be injected in the mid-lateral thigh, but before giving the injection, bunch up the thigh to provide a thicker area for injection.**
6. Firmly push the Green Tip straight down (a 90° angle) against the mid-lateral thigh. Continue to firmly push until you feel the DuoDote autoinjector trigger. After the autoinjector triggers, hold the DuoDote autoinjector firmly in place against the injection site for approximately 10 seconds.
7. Remove the DuoDote autoinjector from the thigh and look at Green Tip. If the needle is visible, the drug has been administered. If the needle is not visible, check to be sure the Gray Safety Release has been removed, and then repeat above steps beginning with Step 4, but push harder in Step 5.



CP22 - AUTO-INJECTOR USE

CP22 AUTO-INJECTOR USE

PROCEDURE (cont.)

8. After the drug has been administered, push the needle against a hard surface to bend the needle back against the DuoDote autoinjector.
9. Put the used DuoDote autoinjector back into the plastic pouch, if available. Leave used DuoDote autoinjector(s) with the patient to allow other medical personnel to see the number of DuoDote autoinjector(s) administered.
10. Immediately move yourself and the patient away from the contaminated area and seek definitive medical care for the patient.

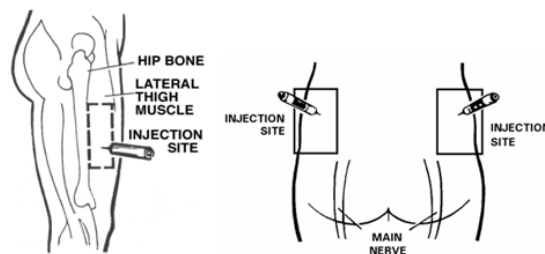


COMPLICATIONS

- | | | |
|------------|-------------|-------------------------------|
| • Bleeding | • Infection | • Adverse medication reaction |
|------------|-------------|-------------------------------|

NOTES

- Each single-dose DuoDote autoinjector contains the following in two separate chambers:
 - Front chamber (visible): a clear, colorless to yellow, sterile solution of atropine (2.1 mg/0.7 mL)
 - Back chamber (not visible): a clear, colorless to yellow, sterile solution of pralidoxime chloride (600 mg/2 mL) equivalent to pralidoxime (476.6 mg/2 mL)
- When activated, DuoDote sequentially administers both drugs intramuscularly through a single needle in one injection.
- Children less than 9 years old - Consult OLMC for administration/dosing determination
- Injector needle may not penetrate bunker gear
- Give injections into a large muscle mass area such as the outer thigh or buttocks



- Each DuoDote autoinjector is supplied in a pouch that provides protection from light - **DO NOT REMOVE UNTIL USE**

REFERENCES

- <http://www.meridianmeds.com/products/duodote>
- <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=241f42a0-1a33-40e8-8221-201767d999e5>
- <https://www.youtube.com/watch?v=0r4lm8b-Y2s&t=319s>

CP22 - AUTO-INJECTOR USE

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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



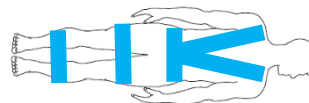
- A patient may be placed on backboard or stretcher to facilitate transfer

- Strap Placement:

- Ambulance/Fire Transport Stretcher

- Shoulder/Chest straps (as indicated)
- Hip strap across hips/pelvis
- Leg strap immediately above the knees

Ambulance



Fire Transport



- Backboard (when utilized) straps

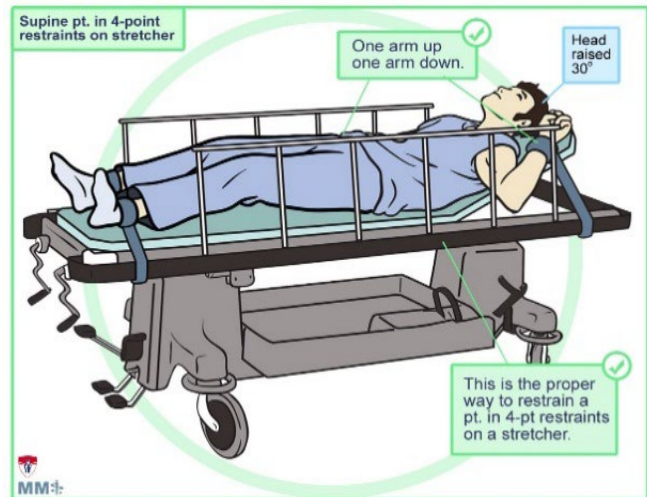
- Chest straps across the chest (in the form of an "X")
- Abdominal strap on the hips (not abdomen - in the form of an "X")
- Leg strap immediately above the knees



CP23 PHYSICAL RESTRAINT

PROCEDURE (cont.)

- 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 a patient is spitting, a surgical mask or N95 disposable respirator mask may be used to block secretions.
- If a 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 ten (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

S A F E T Y A L E R T

If Law Enforcement places a patient in custody and/or handcuffs (metal or plastic) a patient to the stretcher for transport, an Officer MUST accompany the patient in the transport unit

- Law Enforcement restraints

If the officer does not want to ride in, an OLMC contact shall be made

CP23 PHYSICAL RESTRAINT

REFERENCES
<ul style="list-style-type: none">http://i2.wp.com/emcrit.org/wp-content/uploads/2011/11/how-to-restrain.jpg

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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 is an infant or child to 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

CP24 PATIENT RESTRAINT FOR TRANSPORT

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>

CP25 TROUBLESHOOTING & EMERGENCY ACCESS OF INDWELLING CATHETERS

INDICATIONS
<ul style="list-style-type: none"> Displacement, fracture, or bleeding from catheter

CONTRAINDICATIONS
<ul style="list-style-type: none"> Medication ports <i>MAY NOT</i> be accessed

CAUTIONS
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> Troubleshooting <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> Clamp the line and position patient on left side Emergency Access (Paramedic and RN ONLY - Ref. CT16) <ul style="list-style-type: none"> Make sure clamp is closed, remove end cap, and replace with the extension and cap from the IV Start Kit Identify hub to access 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 <ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> Infection Bleeding Embolization of catheter fragments 	<ul style="list-style-type: none"> Blood clots Air embolism

NOTES
<ul style="list-style-type: none"> None

CP25 TROUBLESHOOTING & EMERGENCY ACCESS OF INDWELLING CATHETERS

CP25 - TROUBLESHOOTING & EMER. ACCESS OF INDWELLING CATHS

REFERENCES
<ul style="list-style-type: none">• 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
 - **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

CP26 TROUBLESHOOTING IMPLANTED MEDICAL DEVICES

PROCEDURE (CONT.)

o **LVAD (left ventricular assist device)**

▪ General

- Treat the patient - **DO NOT** focus only on the device
- Most patients do not have a primary pump malfunction
- Common problems
 - Stroke
 - Bleeding Disorders (GI, nose bleeds)
 - Arrhythmias
 - Dehydration
 - Right heart Failure
- 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?

▪ OLMC

- **Contact OLMC EARLY** - they have a comprehensive, brand specific troubleshooting guide that will assist you in your care

▪ Assessment/Treatment

- **CONTACT THE VAD CENTER 24 HOUR EMERGENCY NUMBER** while assessing the patient
- Auscultate heart sounds to determine if the device is functioning.
 - If it is continuous flow device, you should hear a "humming sound".
- Assess vital signs.
 - Non-pulsatile or continuous flow devices provide continuous blood flow from the heart to the aorta
 - o This continuous flow results in a narrow arterial pulse pressure
 - o This means it may be difficult to obtain a pulse or blood pressure reading which may be a normal state for a continuous flow device
 - To obtain a blood pressure an automated cuff or doppler method can be used.
 - o If unable to obtain with automated cuff rely on other methods to assess perfusion e.g., mental status, skin color, capillary refill.
 - The device flow shown on the controller display reflects the patient's cardiac output

CP26 TROUBLESHOOTING IMPLANTED MEDICAL DEVICES

PROCEDURES (cont.)

- **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
- Transport
 - Bring all the patient’s equipment to the hospital
 - CALL the VAD Centers 24 hr emergency number on the patients contact list, controller/equipment, or emergency bag for assistance in the management of the patient and transportation determination and location
 - Bring the significant other, if possible, to act as an expert on the device in the absence of consciousness in the patient

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

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

- <https://www.mylvad.com/medical-professionals/resource-library/ems-field-guides>

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CP27 NORMAL CHILDBIRTH PROCEDURE

INDICATIONS
<ul style="list-style-type: none"> • Imminent or in progress out of hospital delivery

CONTRAINDICATIONS
<ul style="list-style-type: none"> • None

CAUTIONS
<ul style="list-style-type: none"> • Ensure appropriate PPE

EQUIPMENT		
Minimum 2 - OB Kits	Handtevy Bag	Airway Bag

PROCEDURE	
<ul style="list-style-type: none"> • Normal Childbirth Procedure: <ul style="list-style-type: none"> ○ 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 <ul style="list-style-type: none"> ▪ 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 ○ 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. <ul style="list-style-type: none"> ▪ 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 	

CP27 NORMAL CHILDBIRTH PROCEDURE

PROCEDURE (cont.)

- 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



Patients requiring obstetric and/or neonatal services (e.g., L&D, NICU, etc.) **MUST ENTER RECEIVING FACILITIES VIA THE EMERGENCY DEPARTMENT** and be assessed by facility staff prior to proceeding to any specialty care unit within the facility.

COMPLICATIONS

- Prolapsed Cord - Ref. M11
- Breech, failure to progress, shoulder dystocia
- Hemorrhage
- Perineal injury

NOTES

- Ensure use of appropriate PPE

REFERENCES

- PENDING

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

CP28 RESPONDER MEDICAL SCREENING

PROCEDURE (cont.)

- **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](#)

CP29 LEAVE BEHIND NALOXONE

INDICATIONS

- A Prepackaged Naloxone Medical Kit may be left with a patient, family member, friend/acquaintance, bystander, or any other person who requests a kit or is identified by a Pinellas County EMS clinician as a person who may benefit from naloxone possession/administration

CONTRAINDICATIONS

- None

S A F E T Y A L E R T

ALWAYS Recommend Transport to the Emergency Department for all Persons with Opiate Overdose

PROCEDURE

- EMS Personnel will provide the recipient with 1 (one) Prepackaged Naloxone Medical Kit containing the following:
 - Nasal Naloxone medication
 - Multilingual Instruction and information material on naloxone use (including proper storage considerations) and prepaid postcard with instructions to return through the regular mail upon **ANY** use of the kit
 - Addiction recovery community resources
- EMS Personnel will perform real-time informal teaching on overdose recognition, initial first aid actions, Naloxone administration, and kit storage considerations to all persons receiving a kit including discussion of the following topics:
 - Assess scene safety
 - Verbal/tactile stimulation
 - Recovery position/CPR if no immediate improvement
 - **Emphasize early CPR and access to 911**
 - Administration of naloxone
 - Staying with patient until EMS arrives
 - Returning the prepaid postcard after any Naloxone kit use
- EMS Personnel will document Naloxone kits distributed on call in the ePCR by selecting the “Leave Behind Naloxone” intervention.
- EMS Personnel will document Naloxone kits distributed while not on a call (e.g. fire station walk up, community events, etc.) using the following HIPPA compliant Red Cap Survey: <https://redcap.health.usf.edu/surveys/?s=W94FCJP9KTPARRH9>

CP29 - LEAVE BEHIND NALOXONE

CP29 LEAVE BEHIND NALOXONE

NOTES



- Names of kit recipients who are not patients need not be documented and should not be included in the ePCR.
- If an individual in withdrawal is encountered, he/she should be encouraged to go to an Emergency Department with medication for opioid use disorder resources.
- Education notes for patients and bystanders
 - Training and education for family, friends and bystanders is essential as these individuals will administer the naloxone.
 - **Emphasize that naloxone is not a substitute for early CPR and access to 911**
 - Emphasize the importance of returning the postcard after use so we can show the positive impact and continue supporting this initiative
 - People may require multiple doses of naloxone; repeated doses are safe.
 - Naloxone is temperature sensitive and must be stored at 5° - 77° F (may have short time outside these ranges, but never over 104° F)

REFERENCES

- <https://www.narcan.com/wp-content/uploads/2022/06/Gen2-Prescribing-Information.pdf>
- <https://www.narcan.com/>

KIT DE RESCATE DE EMERGENCIA NARCAN

**NARCAN
EMERGENCY
RESCUE KIT**



Bộ cứu hộ khẩn cấp Narcan

INSTRUCCIONES DE USO

**INSTRUCTIONS
FOR USE**

HƯỚNG DẪN SỬ DỤNG

5 pasos

Respuesta de sobredosis

5 STEP

OVERDOSE RESPONSE

5 bước

hành động để thực hiện

STEP

1



SHOUT & SHAKE

agitar y gritar

hét và lắc

STEP

2



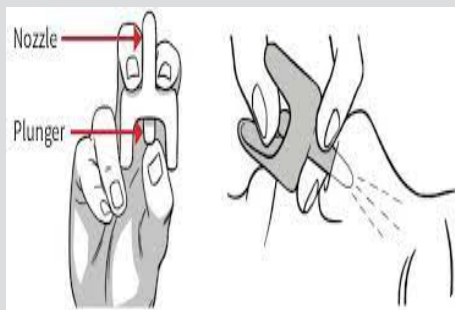
CALL 911

LLAMA AL 911

Quay số 911

STEP

3



ADMINISTER NALOXONE

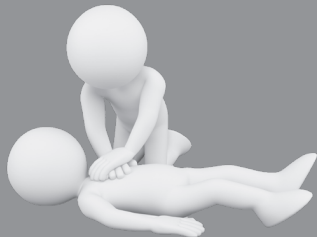
1 Spray In A Nostril

ADMINISTRAR NALOXONA 1 spray en una fosa nasal

Cho Naloxone 1 Xịt vào lỗ mũi

STEP

4



START CPR

INICIAR RCP

Bắt đầu hô hấp nhân tạo

STEP

5



IS IT WORKING?

If **NO** improvement in 2 – 3 minutes repeat Steps 3 & 4

¿Está funcionando? Si **NO** mejora en 2 - 3 minutos, repita los pasos 3 y 4

Đang làm việc? Nếu **KHÔNG** cải thiện sau 2 - 3 phút, lặp lại Bước 3 và 4



Quedate con la persona

STAY WITH THE PERSON

ở lại và chờ đợi

KIT DE RESCATE DE EMERGENCIA NARCAN

**NARCAN
EMERGENCY
RESCUE KIT**



Bộ cứu hộ khẩn cấp Narcan

RECURSOS SOBRE ADICCIONES Y SALUD MENTAL

**Addiction and
Mental Health
Resources**

Tài nguyên về Nghiện ngập và Sức khỏe Tâm thần

Necesita ayuda con la adicción o la salud mental

Need HELP with Addiction or Mental Health

Cần trợ giúp về chứng nghiện hoặc sức khỏe tâm thần



24/7 CALL
LLAMADA 24/7
CUỘC GỌI 24/7

888-727-6398

<http://www.operationpar.org/>



24/7 CALL
LLAMADA 24/7
CUỘC GỌI 24/7

727-490-6768

<https://www.westcare.com/>



24/7 CALL
LLAMADA 24/7
CUỘC GỌI 24/7

988

<https://988lifeline.org/>



24/7 CALL
LLAMADA 24/7
CUỘC GỌI 24/7

211

<https://www.211.org/>

PINELLAS COUNTY RESOURCES - VETERANS, YOUTH IN CRISIS, AND INDIVIDUALS EXPERIENCING HOMELESSNESS



Scan the QR Code

<https://healthystartpinellas.org/>



Scan the QR Code

<https://pinellas.floridahealth.gov/newsroom/2022/11/naloxone-newsroom.html>



Scan the QR Code

<https://www.pinellashomeless.org/>

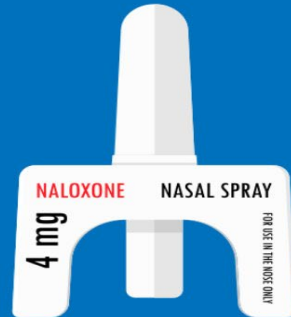
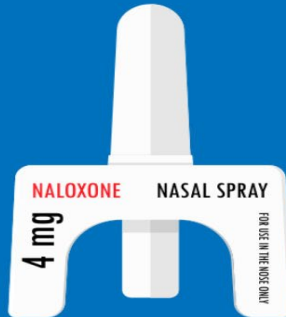
TO:

PINELLAS COUNTY EMS & FIRE ADMINISTRATION

12490 Ulmerton Road Suite #134

Largo, FL 33774

If you use the Naloxone kit, please place this **PREPAID, ANONYMOUS** postcard in the mail or drop off at any fire station



You can obtain a free replacement kit from any Pinellas County EMS Ambulance or Fire Station

CP30 MODIFIED VALSALVA MANEUVER

INDICATIONS

- Initial management of narrow complex supraventricular tachycardia (SVT) in a hemodynamically stable patient

CONTRAINDICATIONS

- Hemodynamically unstable narrow complex tachycardia
- Patient unable to perform the maneuver

CAUTIONS

- Requirement for immediate cardioversion
- Hypotension (SBP less than 90 mmHg)
- Atrial fibrillation/flutter
- Recent myocardial infarction (within 3 months)
- Third trimester pregnancy

EQUIPMENT

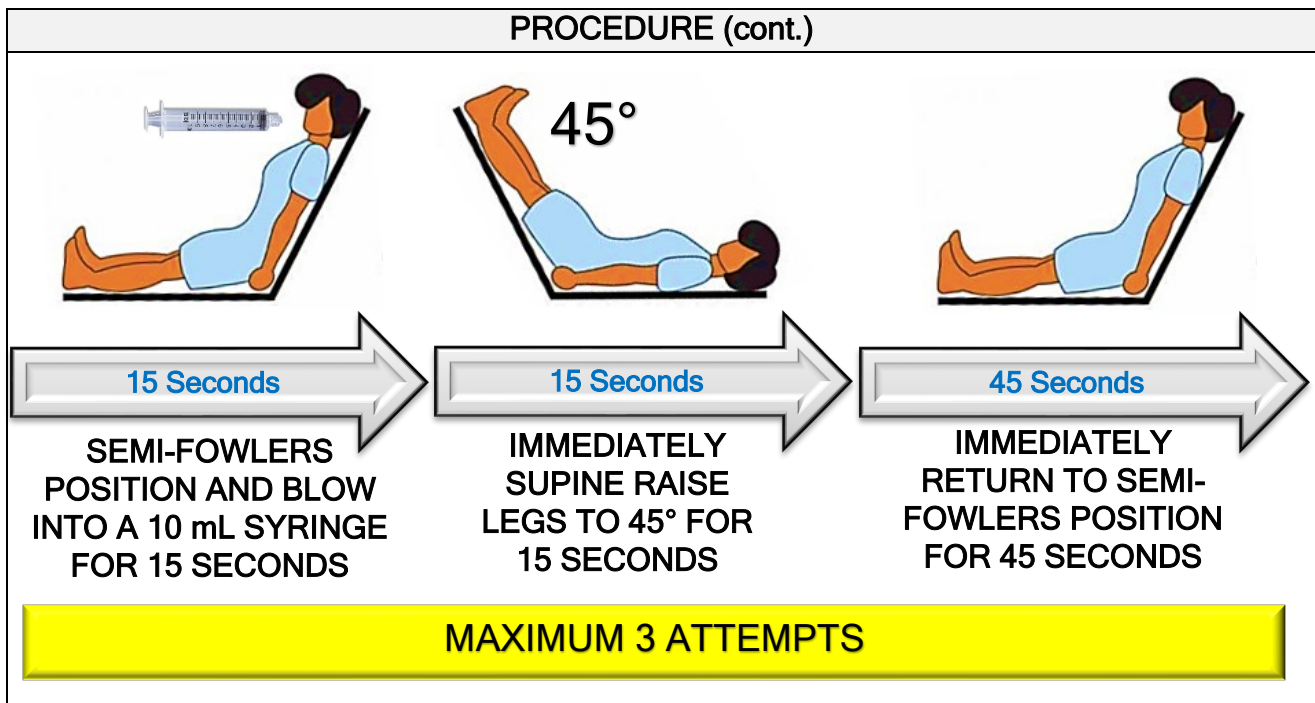
- 10 mL syringe with plunger loosened

PROCEDURE

- Obtain a baseline ECG and 12 lead ECG
- Explain the procedure to the patient
- Position the patient in a semi-fowlers position
- Instruct the patient to perform a forced expiration into a sterile 10 mL syringe for 15 seconds
- At the end of the forced expiration, remove the syringe and immediately lay the patient supine with legs raised to 45° for 15 seconds
- Return the patient to a semi-recumbent position for 45 seconds
- Repeat 12 lead ECG
- Confirm the modified Valsalva maneuver has been successful
- If the SVT has failed to convert, consider repeating the procedure to a maximum of 3 attempts
- If repeated attempts are required, ensure the patient has returned to a hemodynamically stable SVT prior to repeating

CP30 MODIFIED VALSALVA MANEUVER

CP30 - MODIFIED VALSALVA MANEUVER



COMPLICATIONS
<ul style="list-style-type: none"> • Syncope • Lightheadedness • Injury

NOTES
<ul style="list-style-type: none"> • Expected to be effective in 40% of cases, may need to proceed to other treatment modalities per protocol

References
<ul style="list-style-type: none"> • https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)61485-4/fulltext • https://pemcincinnati.com/blog/the-revert-maneuver-to-convert-svt-a-video-tribute/ • https://www.sciencedirect.com/science/article/abs/pii/S0735675721007075

CP31 LUCAS MECHANICAL CPR DEVICE

INDICATIONS

- Cardiac arrest in austere environment where quality of CPR is expected to be negatively impacted due to environmental factors

CONTRAINDICATIONS

- Patient's large body size limits application of Lucas Device - cannot attach upper part to back plate without compressing the chest
- Patient's who are too small to properly touch pressure pad to sternum - 3 quick beeps will indicate if patient is too small
- For use in patients 15 and older, assuming they meet body size criteria above.
- Do not use in obviously pregnant females

CAUTIONS

- **DO NOT put hands, fingers or other objects/body parts near on or below the suction cup when Lucas device is operating.**
- Keep fingers away from claw locks when attaching the upper part or lifting patient.
- Do not lift the device by the shoulder straps. These are only for attaching device to patient.
- Battery must be installed to operate, even when connected to external power supply.

PROCEDURE

1. **Manual chest compressions should be initiated immediately while the LUCAS device is being prepared and placed on the patient. Limit interruptions of compressions to less than 10 seconds.**
2. **Place defibrillation pads anterior/posterior for all Lucas Device Deployments**
3. Clothing **MUST** be removed from chest to ensure skin contact with suction cup.
4. Press ON/OFF to turn the device on and remove from the case.
5. Place the yellow back plate under the patient's head. During first pulse check, lift patient's shoulders and slide the yellow back plate just below the patients arm pits and centered on the patient's nipple line.
 - If patient is small enough, you may slip the backboard under the patient from the side during compressions.
6. Pull the Release Rings on the Lucas device to open the Claw Locks and extend the arms. Release the rings.
7. Continue manual compressions while attaching the Lucas to the back plate. Attach Lucas device one arm at a time, ensuring the other arm will fit between the compressing medic's arms without interrupting compressions.
8. Ensure that defibrillation pads will be clear of the location of the suction cup.
9. Pause compressions and immediately press the adjust mode button to position the suction to the chest. The lower edge of the suction cup should be immediately above the end of the sternum
10. Press the Pause button to lock in the start position.
11. Press the Active 30:2 button or the Active Continuous button to begin compressions

CP31 LUCAS MECHANICAL CPR DEVICE

PROCEDURE (cont.)

12. Utilize the Pause button as necessary during rhythm or pulse checks or upon ROSC.
13. Place the neck roll behind the patient's head and attach the straps to the LUCAS device (to prevent the LUCAS from migrating toward the patient's feet).
14. Place the patients' arms in the arm straps provided.
15. Monitor the device and ensure that it remains in the correct position throughout the resuscitation. You may mark the patient's skin with a marker to rapidly identify any movement
16. If disruption or malfunction of the LUCAS device occurs, immediately revert to manual compressions.
17. If ROSC or efforts are terminated, press and hold the ON/OFF button for one (1) second to turn device off.
18. If transitioning to hospital care with ongoing compressions:
 - Hospital has Lucas device for use during CPR: during PULSE CHECK, remove our device and attach hospital device to our back plate. Crews will stay on scene until ROSC or efforts terminated to obtain original backboard. Do NOT swap EMS with hospital equipment
 - Hospital does NOT use Lucas device: continue mechanical CPR until next appropriate pulse check. During first pulse check, remove Lucas device but keep back plate in place. Remove backboard during the next pulse check. If device or back plate cannot be removed during regular pulse check or if removal will interfere with compressions, wait until ROSC or efforts are terminated to obtain equipment.
19. Once done, refer to maintenance of Lucas Device (below) for cleaning, storage, and battery charging.
20. Document in ePCR by selecting the "Lucas" intervention tab.

DEFIBRILLATION:

- Defibrillation can and should be performed with the LUCAS device in place and in operation. One may apply the defibrillation electrodes either before or after the LUCAS device has been put in position.
- The defibrillation pads and wires should not be underneath the suction cup. If the electrodes are already in an incorrect position when the LUCAS is placed, you must apply new electrodes.
- Defibrillation should be performed according to EMS protocols and following the instructions of the defibrillator manufacturer. If the rhythm strip cannot be assessed during compressions, one may stop the compressions for analysis by pushing the PAUSE BUTTON (The duration of interruption of compressions should be kept as short as possible and should not be > 10 seconds. There is no need to interrupt chest compressions other than to secure airway or analyze the rhythm).
- Once the rhythm is determined to require defibrillation, the appropriate ACTIVE BUTTON (30:2 or continuous) should be pushed to resume compressions while the defibrillator is charging and then the defibrillator should be discharged.

CP31 LUCAS MECHANICAL CPR DEVICE

PROCEDURE (cont.)

MAINTENANCE:

1. Remove the suction cup and the stabilization strap. Inspect for wear and contamination (if used, remove the patient straps)
2. Clean all surfaces and straps with an appropriate alcohol wipes
3. Let the device and parts dry
4. Replace the battery with a fully charged battery
5. Remount (or replace) the suction cup and straps if they are not damaged.
 - a. Note: A suction cup is considered reusable if all of the following conditions are met: suction cup can be cleaned and inspected, is without holes, AND can hold suction on a flat surface
6. Repack the device into the carrying bag.

NOTES

- When fully charged, the battery should allow for 45 minutes of uninterrupted operation. There is additional battery in the Lucas Device Bag.
 - The unit may be charged while in the carrying case. Only the main battery charges while plugged into the Lucas device. The backup battery is NOT charged while the carrying case is plugged in. There is an external charger available as needed.
 - The battery may be hot swapped. The device will not work during the battery change, but the current settings will be saved for 60 seconds after power loss.
- When last green bar/LED on battery turns orange, you have 10 minutes left and should replace battery or connect to wall outlet.
- “Austere EMS” is the delivery of EMS care under conditions of limited personnel and equipment resources, and outside the existing framework of normal EMS.
- An austere EMS environment may include elements of any of the following:
 - An ongoing physical environmental threat (e.g., heat, cold, water, wind, or altitude)
 - Limited medical supplies, technologies, or resources
 - Limited medical expertise available
 - Limited communications, including little or no access to medical direction or oversight
 - Limited availability of transportation
 - Altered condition of the medical responder
 - Urgent clinical situation requiring immediate intervention outside of standard protocols
 - Duration of care extended beyond standard operational situations
 - Any other factor or condition that alters the ability of the EMS responder to provide necessary emergency medical care
 - Limited capacity to provide care due to security environment

CP32 LAERDAL CPRMeter 2

INDICATIONS

- Used as a guide in administering cardiopulmonary resuscitation (CPR) to a suspected sudden cardiac arrest patient at least

CONTRAINDICATIONS

- Patient less than 8 years of age
- **DO NOT** use the device in conjunction with any mechanical or automated compression device
- **DO NOT** use the device on top of defibrillation pads, unless the manufacturer of the defibrillator and the defibrillator pads has explicitly stated the device can be used in such a manner
- The CPRmeter2 is not intended for use in a moving environment, such as an air, sea or road ambulance. If used during patient transport, the device may provide inaccurate feedback. If CPR is indicated in a moving environment, **DO NOT** rely on the depth feedback during such conditions.
- If the device appears to be damaged, **DO NOT USE IT.**

CAUTIONS

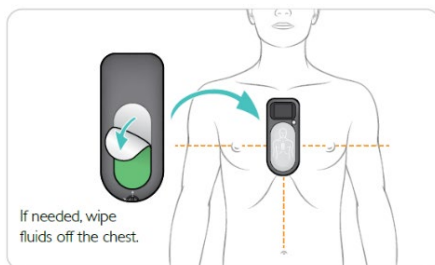
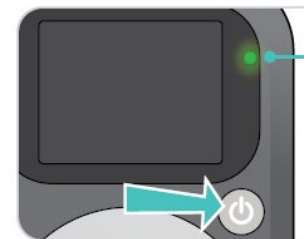
- If difficulty is encountered applying the device **DO NOT** delay initiation of CPR
- **DO NOT** apply the CPRmeter2 to an open wound or recent incision site
- An **ORANGE** status light indicates a technical error. If this occurs, stop using the CPRMeter2 and continue CPR
- Always ensure a clean new patient adhesive pad is applied to the meter after each use

PROCEDURE

- Turn ON - Status Light turns **GREEN** for a few seconds
- Place the meter - if needed, wipe fluids off the chest
- Use the heel of the hand and apply pressure to the light grey area
- Begin CPR - Provide chest compressions according to protocol

NOTE - Release pressure fully between compressions

- CPR performance statistics are only calculated if at least 10 compressions have been delivered



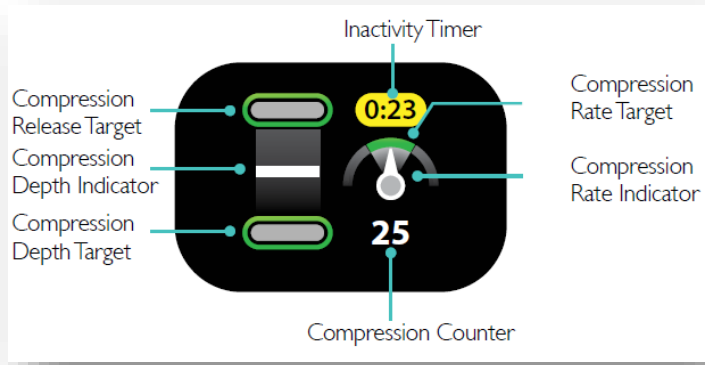
COMPLICATIONS

- Properly performed CPR may result in fracturing of the patients' ribs and other chest injuries (e.g. external chest wall bruising or abrasion)

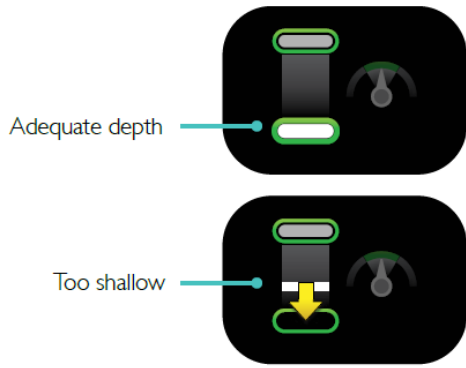
CP32 LAERDAL CPRMeter 2

NOTES

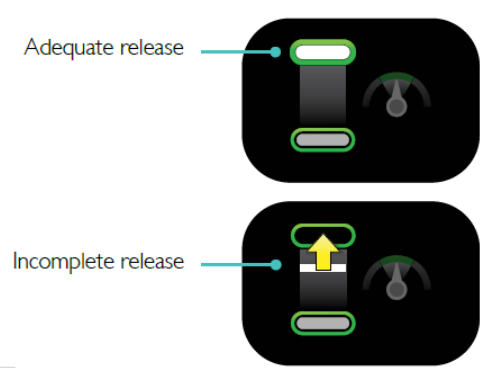
• Feedback Display



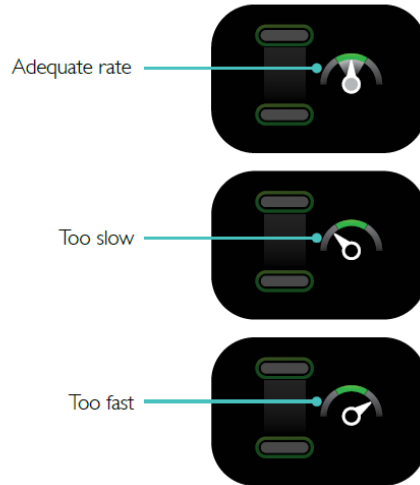
Depth



Release



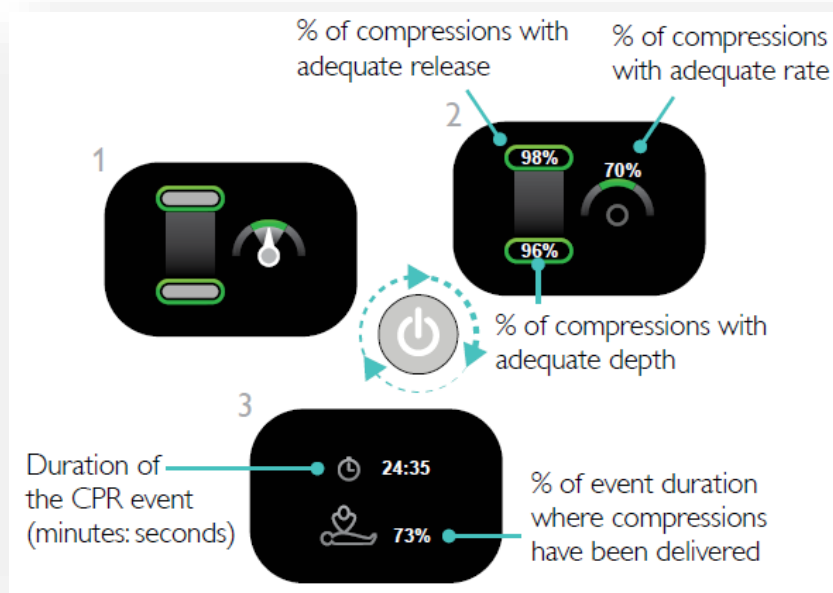
Rate



CP32 LAERDAL CPRMeter 2

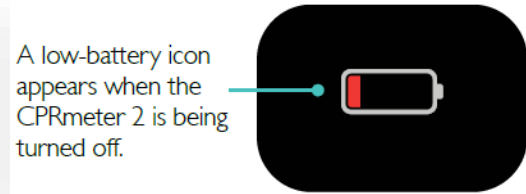
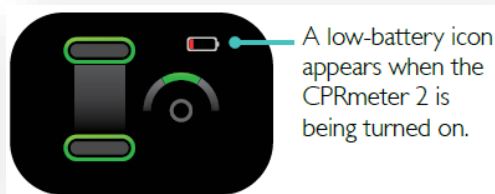
NOTES (cont.)

- Debriefing
 - The CPRMeter 2 can display CPR performance statistics for the last CPR event
 - After the device is turned on, press the ON/OFF button briefly to activate QCPR Quick Review
 - Press the ON/OFF button briefly to cycle between the Compression Feedback and QCPR Quick Review Screens



NOTE: The CPRMeter 2 reverts to Compression Feedback Mode if a compression is delivered

- Battery Indicator
 - The CPRMeter 2 continuously monitors the power of the batteries
 - If the remaining power is estimated to be less than that required for a 30 minute CPR event, the visual indicators signal that the batteries should be replaced before next use
 - Replace batteries at least every 2 years
 - **ONLY USE LITHIUM ION AAA BATTERIES**



CP32 LAERDAL CPRMeter 2

NOTES (cont.)

- After each Use:
 - **NEVER DISCARD THE METER**
 - If it is visibly soiled, wipe the CPRmeter 2 with a paper towel to remove as much gross contamination as possible
 - Remove the patient adhesive pad from the back of the meter and discard
 - Clean and disinfect the meter using provided PCEMS alcohol wipes (same ones used for cleaning and disinfecting the cardiac monitor)
 - Apply a new patient adhesive pad to the device
- Customer Service Indicator
 - If the customer service indicator appears, remove the meter from service



REFERENCES

- Laerdal CPRmeter 2 User Guide 2019 P/N 20-14391 Rev. B

CP33 VENTURI TRACHEOSTOMY MASK

INDICATIONS

- Supplemental oxygen administration in the tracheostomy patient

CONTRAINDICATIONS

- Need for high flow oxygen
- Unstable airway

CAUTIONS

- Refer to A3 - Tracheostomy Emergencies if suspected obstruction or malfunction of tracheostomy

PROCEDURE

- Determine the amount of FiO₂ the patient requires
- Insert selected diluter into the corrugated tubing
- Connect adapter to the diluter
- Attach supplied oxygen connecting tubing to regulator or flow meter and set the appropriate flow rate as follows



Color	BLUE	WHITE	ORANGE	YELLOW	RED	PINK
Setting	24%	28%	31%	35%	40%	50%
Recommend Oxygen Liter Flow	4 LPM	4 LPM	6 LPM	8 LPM	8 LPM	10 LPM

- Unsnap the strap, place the mask on the patient's tracheostomy area with the elastic strap around the neck, then snap the strap. Gently pull the ends of the strap until the mask is secure



COMPLICATIONS

- Patient discomfort
- Error in assembly
- Any backpressure on the Venturi device increases oxygen concentration around the entrainment ports, thereby increasing the FiO₂

NOTES

- None

REFERENCES

- <https://medsourcelabs.com/product/tracheostomy-mask-kit-4/#>
- <https://www.ncbi.nlm.nih.gov/books/NBK593208/>



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	
Authorized 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 2 nd /3 rd 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
Authorized Routes of Administration	<ul style="list-style-type: none"> • Intravenous 	
Technique for Administration	Rapid bolus over 1 - 2 seconds. Administer as proximally as possible & follow with rapid 0.9% Sodium Chloride flush	
PEARLS	<ul style="list-style-type: none"> • Prior to administration - advise patient this will make you feel strange • Philips MRx: <ul style="list-style-type: none"> ○ Start ECG printer just prior to IV administration ○ Continue printing during IV administration through post administration (10 secs.) • Philips Tempus Pro: <ul style="list-style-type: none"> ○ Once Adenosine is administered, press the Camera/Waveform Snapshot button ONCE. This will record the previous ten seconds from the time the button is pressed and the following ten seconds • 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	https://dailymed.nlm.nih.gov/dailymed/	

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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	
Authorized 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
Authorized Routes of Administration	Inhalation	
Technique for Administration	N/A	
PEARLS	<ul style="list-style-type: none"> • Continuous one on one coaching with the patient will improve effectiveness of the medication 	
Y-Site Compatibility	N/A	
Interactions	N/A	
Reference	https://dailymed.nlm.nih.gov/dailymed/	

F2 - ALBUTEROL SULFATE

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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	
Authorized 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
Authorized Routes of Administration	Intravenous	
Technique for Administration	N/A	
PEARLS	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Significantly decreases digoxin levels, enhances pharmacological effects and toxicities of disopyramide, procainamide, quinidine, flecanide, lidocaine, verapamil, diltiazem • Fentanyl may cause bradycardia or hypotension 	
Reference	https://dailymed.nlm.nih.gov/dailymed/	

F3 - AMIODARONE HYDROCHLORIDE

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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	
Authorized 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
Authorized 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	https://dailymed.nlm.nih.gov/dailymed/	

F4 - ASPIRIN

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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.	
Authorized 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
Authorized Routes of Administration	Intravenous, Intramuscular	
Technique for Administration	N/A	
PEARLS	<ul style="list-style-type: none"> • 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	

F5 - ATROPINE

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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.	
Authorized 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
Authorized Routes of Administration	Intravenous	
Technique for Administration	N/A	
PEARLS	<ul style="list-style-type: none"> • 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	https://dailymed.nlm.nih.gov/dailymed/	

F6 - CALCIUM CHLORIDE

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F7 DEXTROSE

Trade Name	Dextrose 5%, Dextrose 10%	
Class(es)	N/A	
Action(s)	N/A	
Authorized 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
Authorized Routes of Administration	Intravenous	
Technique for Administration	<ul style="list-style-type: none"> • 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	https://dailymed.nlm.nih.gov/dailymed/	

F7 - DEXTROSE

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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	
Authorized 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
Authorized Routes of Administration	Intravenous	
Technique for Administration	Give undiluted	
PEARLS	<ul style="list-style-type: none"> • 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	https://dailymed.nlm.nih.gov/dailymed/	

F8 - DILTIAZEM

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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	
Authorized 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
Authorized Routes of Administration	Intravenous, Intramuscular, Oral	
Technique for Administration	<ul style="list-style-type: none"> • Intravenous administration - give at a rate of 25 mg or fraction thereof 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	https://dailymed.nlm.nih.gov/dailymed/	

F9 - DIPHENHYDRAMINE HYDROCHLORIDE

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F10 RESERVED FOR FUTURE USE

Trade Name		
Class(es)		
Action(s)		
Indication(s)		
Contraindication(s)		
Precaution(s)		
Pharmacokinetics	Onset:	Duration:
Routes of Administration		
Technique for Administration		
PEARLS		
Y-Site Compatibility		
Interactions		
Reference		

F10 - RESERVED FOR FUTURE USE

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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)	
Authorized 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 shock; arrhythmias	
Precaution(s)	Older adults; hypertension; diabetes mellitus	
Pharmacokinetics	Onset: 3 - 5 minutes	Duration: N/A
Authorized Routes of Administration	Intravenous, Intramuscular, Intraosseous	
Technique for Administration	<ul style="list-style-type: none"> • Protect from exposure to light at all times • DO NOT remove 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	https://dailymed.nlm.nih.gov/dailymed/	

F11 - EPINEPHRINE

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F12 ETOMIDATE

Trade Name	Amidate	
Class(es)	Ultrashort-acting non-barbiturate hypnotic	
Action(s)	Induces sedation and amnesia	
Authorized 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: Relatively brief - usually three - five minutes
Authorized Routes of Administration	<ul style="list-style-type: none">• Intravenous• Intraosseous	
Technique for Administration	<ul style="list-style-type: none">• 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	https://dailymed.nlm.nih.gov/dailymed/	

F12 - ETOMIDATE



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F13 FENTANYL CITRATE

Trade Name	Sublimaze	
Class(es)	Analgesic; opiate agonist	
Action(s)	Synthetic, potent agonist analgesic that causes analgesia and sedation	
Authorized Indication(s)	Short acting analgesia for pain and sedation	
Contraindication(s)	N/A	
Precaution(s)	Head injuries, older adults, angina, hypotension, bradyarrhythmia	
Pharmacokinetics	Onset: Immediate intravenous, 7 - 15 minutes intramuscular	Duration: 30 - 60 minutes intravenous, 1 - 2 hours intramuscular
Authorized Routes of Administration	Intravenous, Intranasal	
Technique for Administration	<ul style="list-style-type: none"> • I 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	https://dailymed.nlm.nih.gov/dailymed/	

F13 - FENTANYL CITRATE



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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.	
Authorized 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
Authorized Routes of Administration	Intravenous, Intramuscular	
Technique for Administration	Intravenous administration - give over 1 minute	
PEARLS	<ul style="list-style-type: none"> • 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	https://dailymed.nlm.nih.gov/dailymed/	

F14 - GLUCAGON HYDROCHLORIDE

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F15 HYDROXOCOBALAMIN

Trade Name	Cyanokit	
Class(es)	Antidote	
Action(s)	Binds cyanide to form nontoxic cyanocobalamin that is then excreted in urine	
Authorized 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
Authorized Routes of Administration	Intravenous	
Technique for Administration	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • The recommended diluent is 0.9% Sodium Chloride I Lactated Ringers or Dextrose 5% in Water have also been found to be compatible 	
Y-Site Compatibility	Sodium Nitrite, Sodium Thiosulfate, blood products	
Interactions	N/A	
Reference	https://dailymed.nlm.nih.gov/dailymed/	

F15 - HYDROXOCOBALAMIN

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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.	
Authorized Indication(s)	Adjunct to albuterol in asthma/COPD	
Contraindication(s)	Hypersensitivity to atropine	
Precaution(s)	Pregnancy	
Pharmacokinetics	Onset: N/A	Duration: 4 - 6 hours
Authorized Routes of Administration	Inhalation	
Technique for Administration	N/A	
PEARLS	N/A	
Y-Site Compatibility	N/A	
Interactions	N/A	
Reference	https://dailymed.nlm.nih.gov/dailymed/	

F16 - IPRATROPIUM BROMIDE

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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.	
Authorized 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
Authorized 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 overdose and toxicity.	
Y-Site Compatibility	N/A	
Interactions	N/A	
Reference	https://dailymed.nlm.nih.gov/dailymed/	

F17 - LIDOCAINE HYDROCHLORIDE

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F18 MAGNESIUM SULFATE

Trade Name	N/A	
Class(es)	Electrolyte	
Action(s)	Smooth muscle relaxant and anticonvulsant in labor and delivery and cardiac disorders	
Authorized 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
Authorized Routes of Administration	Intravenous, Intramuscular	
Technique for Administration	N/A	
PEARLS	<ul style="list-style-type: none"> • 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	https://dailymed.nlm.nih.gov/dailymed/	

F18 - MAGNESIUM SULFATE

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F19 METHYLPREDNISOLONE SODIUM SUCCINATE

Trade Name	Solu-Medrol	
Class(es)	Glucocorticoid	
Action(s)	Anti-inflammatory, immune suppressant	
Authorized 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
Authorized Routes of Administration	Intravenous	
Technique for Administration	Give each intravenous dose over 2 - 3 minutes	
PEARLS	N/A	
Y-Site Compatibility	Amiodarone, ciprofloxacin, haloperidol	
Interactions	Furosemide, Thiazide diuretics increase potassium loss	
Reference	https://dailymed.nlm.nih.gov/dailymed/	

F19 - METHYLPREDNISOLONE SODIUM SUCCINATE

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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.	
Authorized 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	Duration: < 2 hours IV
Authorized Routes of Administration	Intravenous, Intranasal	
Technique for Administration	<ul style="list-style-type: none"> • 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	https://dailymed.nlm.nih.gov/dailymed/	

F20 - MIDAZOLAM HYDROCHLORIDE



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F21 NALOXONE HYDROCHLORIDE

Trade Name	Narcan	
Class(es)	Opiate antagonist	
Action(s)	Competitively inhibits opiate receptors	
Authorized Indication(s)	Narcotic overdose	
Contraindication(s)	Hypersensitivity to naloxone, naltrexone, nalmeferne	
Precaution(s)	Known or suspected narcotic dependence; brain tumor; head trauma; increased ICP; seizure disorders; pregnancy	
Pharmacokinetics	Onset: 2 minutes	Duration: 45 minutes
Authorized Routes of Administration	Intravenous, Intranasal	
Technique for Administration	N/A	
PEARLS	<ul style="list-style-type: none"> • May precipitate opiate withdrawal 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	https://dailymed.nlm.nih.gov/dailymed/	

F21 - NALOXONE HYDROCHLORIDE

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F22 NITROGLYCERIN AEROSOL

Trade Name	NitroMist, Nitrostat	
Class(es)	Nitrate vasodilator	
Action(s)	Vasodilator which has effects on both arteries and veins	
Authorized 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	
Authorized Technique for Administration	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	https://dailymed.nlm.nih.gov/dailymed/	

F22 - NITROGLYCERIN AEROSOL

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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).
Authorized Indication(s)	<p>For blood pressure control in certain acute hypotensive states (e.g., pheochromocytomectomy, sympathectomy, poliomyelitis, spinal anesthesia, myocardial infarction, septicemia, blood transfusion, and drug reactions).</p> <p>As an adjunct in the treatment of cardiac arrest and profound hypotension.</p>
Contraindication(s)	<p>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.</p> <p>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.</p> <p>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.</p> <p>The same type of cardiac arrhythmias may result from the use of LEVOPHED in patients with profound hypoxia or hypercarbia.</p>

F23 - NOREPINEPHRINE

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F24 ONDANSETRON

Trade Name	Zofran, Zofran ODT, Zuplenz, Ondansetron ODT	
Class(es)	5-HT3 Antagonist, Antiemetic	
Action(s)	Prevents nausea and vomiting	
Authorized Indication(s)	Nausea and / or vomiting	
Contraindication(s)	<ul style="list-style-type: none"> Hypersensitivity to Ondansetron <i>NOTE: ondansetron is contraindicated in patients with congenital prolonged QT syndrome or known QTc > 500 milliseconds</i> 	
Precaution(s)	QT prolongation or pregnancy, concomitant use of apomorphine	
Pharmacokinetics	Onset: Unavailable	Duration: Unavailable
Routes of Administration	Intravenous, intramuscular, oral	
Authorized Technique for Administration	<ul style="list-style-type: none"> <i>Obtain ECG and initiate cardiac monitoring if any concern for prolonged QT risk.</i> DO NOT push orally disintegrating tablet through blister foil. Peel foil back and remove tablet. Tablets will disintegrate with/without liquid Peel open the paper of the outer packaging that displays the product information to access the syringe. DO NOT pop the syringe through the packaging Intravenous administration - give dose over 2 - 5 minutes Assure that the needleless luer access device is securely attached before beginning the injection 	
PEARLS	<ul style="list-style-type: none"> 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	https://dailymed.nlm.nih.gov/dailymed/	

F24 - ONDANSETRON

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F25 ORAL GLUCOSE

Trade Name	Glucose, 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	
Authorized 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
Authorized Routes of Administration	Oral	
Technique for Administration	N/A	
PEARLS	N/A	
Y-Site Compatibility	N/A	
Interactions	N/A	
Reference	https://dailymed.nlm.nih.gov/dailymed/	

F25 - ORAL GLUCOSE

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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	
Authorized 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
Authorized Routes of Administration	Intravenous	
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	https://dailymed.nlm.nih.gov/dailymed/	

F26 - SODIUM BICARBONATE 8.4%

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F27 SODIUM CHLORIDE (0.9% IV Fluid) FOR INJECTION

Trade Name	N/A	
Class(es)	Electrolyte	
Action(s)	N/A	
Authorized Indication(s)	Source of water and electrolytes	
Contraindication(s)	N/A	
Precaution(s)	CHF	
Pharmacokinetics	Onset: Unavailable	Duration: Unavailable
Authorized Routes of Administration	Intravenous	
Technique for Administration	<ul style="list-style-type: none"> 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	https://dailymed.nlm.nih.gov/dailymed/	

F27 - SODIUM CHLORIDE (0.9% IV FLUID) FOR INJECTION

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F28 ACETAMINOPHEN

Trade Name	Tylenol, Paracetamol	
Class(es)	Analgesic	
Action(s)	Pain control mechanism is not fully understood but thought to be due to activation of inhibitory serotonergic pathways in the CNS; Fever reduction from inhibition of hypothalamic heat-regulating center	
Authorized Indication(s)	Reduction of pain	
Contraindication(s)	Known or suspected liver disease (including history of cirrhosis, ascites or need for paracentesis, liver disease associated GI bleeding, autoimmune or genetic liver disease, visible or reported jaundice or icterus, concern for hepatic encephalopathy), recent (less than 6 hrs.) acetaminophen use, suspected acetaminophen overdose, and allergy	
Precaution(s)	Acetaminophen is often combined in other over the counter medications (cold/flu meds, combo headache treatments) and can lead to accidental overdose.	
Pharmacokinetics	Onset: 5-10 minutes	Duration: 4-6 hours
Authorized Routes of Administration	Intravenous	
Technique for Administration	Give undiluted	
PEARLS	Give as an infusion over 15 minutes	
Y-Site Compatibility	Multiple interactions, do not administer with other medications through Y site	
Interactions	Alcohol	
Reference	Hanifah, Suci. (2019). Compatibility of Acetaminophen with Common Medication in Critical Care during Simulated Y-Site Injection.	

F28 - ACETAMINOPHEN

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F29 KETOROLAC

Trade Name	Toradol	
Class(es)	Analgesic	
Action(s)	Non-steroidal anti-inflammatory drug; inhibits cyclooxygenase enzyme leading to decreased prostaglandin production	
Authorized Indication(s)	Reduction of Pain	
Contraindication(s)	Active or recent bleeding risk (including any recent or expected surgery, trauma, pregnancy, breastfeeding, GI bleeding, stroke/ICH, etc.) as well as cardiac and renal disease, recent NSAID (less than 8 hrs.) use and allergy	
Precaution(s)	Black box warning - platelet inhibition; possible CAD risk, gastric ulcer/GI bleed with prolonged use	
Pharmacokinetics	Onset: 1-2 min	Duration: 4-6 hours
Authorized Routes of Administration	Intravenous, Intramuscular	
Technique for Administration	Give undiluted	
PEARLS	Give as slow IV push dose or IM	
Y-Site Compatibility	N/A	
Interactions	Aspirin, blood thinners	
Reference	Mahmoodi AN, Kim PY. Ketorolac. [Updated 2021 Jul 26]. In: StatPearls [Internet]. 2022 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK545172/	

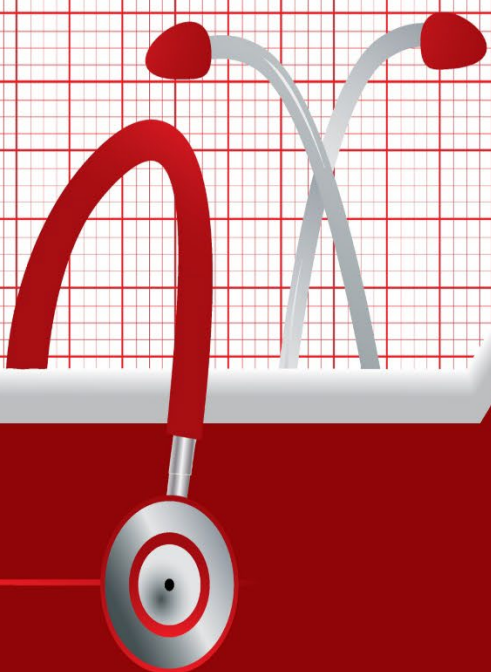
F29 - KETOROLAC

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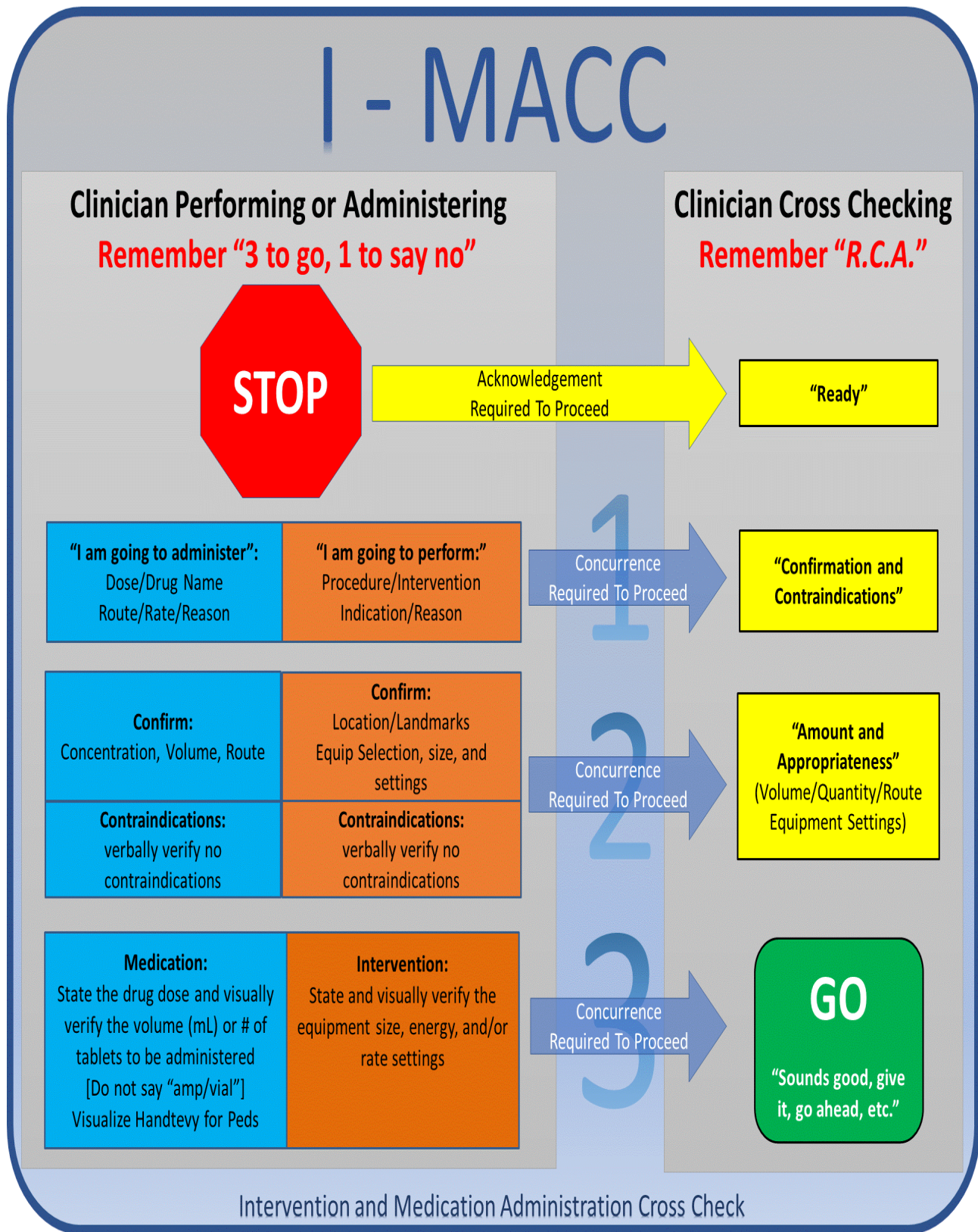


CLINICAL TOOLS

CLINICAL TOOLS



CT1 INTERVENTION AND MEDICATION ADMINISTRATION CROSS CHECK (I-MACC)

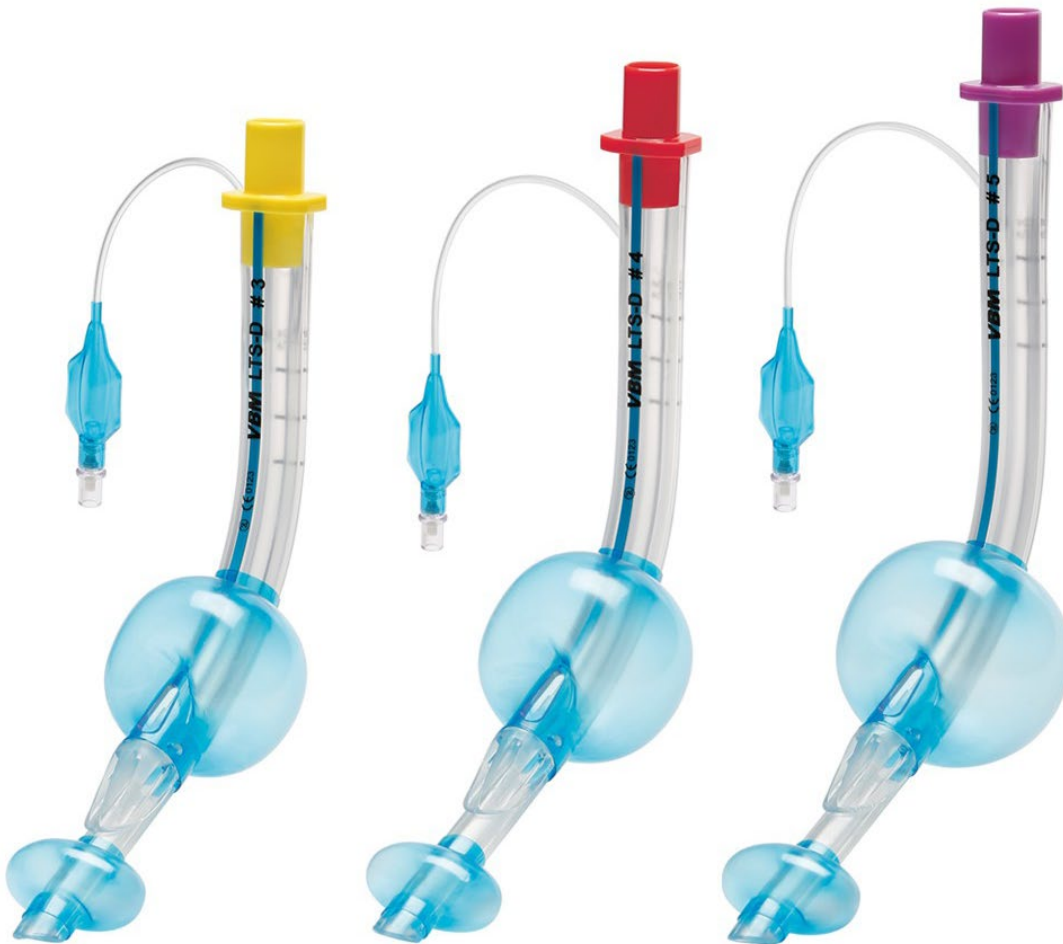


CT1 - INTERVENTION AND MEDICATION CROSS CHECK (I-MACC)

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CT2 KING AIRWAY SIZING

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



CT2 - KING AIRWAY SIZING

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CT3 CARDIAC ARREST PIT CREW MODEL - ADULT

Position 2 - Airway/Ventilation

Paramedic (if available)

- Open/Clear Airway
- Position/Ready Monitor/Defibrillator or AED during initial cycle of compressions
- Attach O2/EtCO2. Provide ventilations with BVM device and adjunct at appropriate ratio for number of rescuers
- Insert King Airway (Paramedic ONLY)/Confirm with EtCO2
- Provide ongoing ventilations 10-12/min.

Cardiac Monitor/Defibrillator or
AED - Suction/Airway Bag

Cardiac Monitor/Defibrillator or
AED - Suction/Airway Bag

Position 1 - Compress/Defib

EMT or Paramedic

- **Initiate Uninterrupted Compressions**
- Attach Monitor/Defibrillator or AED & CPR feedback device during pauses for ventilations
- Defibrillate 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/Defibrillator or AED
- Initiate uninterrupted compressions following initial rhythm/pulse check and defibrillation
- Defibrillate 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).
- If unable, start peripheral IV or access indwelling catheter (Ref. CP25, CT16)
- Administer medications as indicated
- Assist with other ALS procedures as needed

Medication Bag

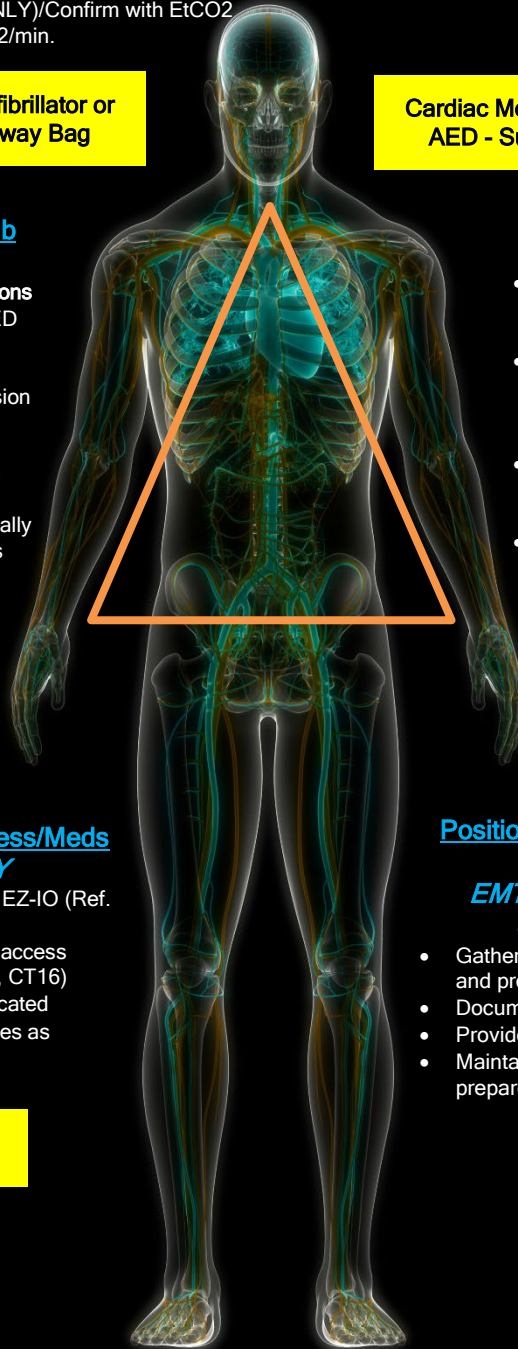
Position 5 - Documentation/Family

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

ePCR



CT3 CARDIAC ARREST PIT CREW MODEL - ADULT

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CT4 CARDIAC ARREST PIT CREW MODEL - CHILD/INFANT

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 device and adjunct at appropriate ratio for number of rescuers and age of patient
- Perform airway management if unable to adequately ventilate with BVM (Ref. CP3)
- Provide ongoing ventilations 12-20/min.

Cardiac Monitor/Defibrillator or AED - Suction/Airway Bag

Cardiac Monitor/Defibrillator or AED - Suction/Airway Bag

Position 1 - Compress/Defib *EMT or Paramedic*

- **Initiate Uninterrupted Compressions**
- Attach Monitor/Defibrillator or AED using age-appropriate pads (ped key when indicated/available) & CPR feedback device if age 8 or older during pauses for ventilations
- Defibrillate 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/Defibrillator or AED & CPR feedback device
- Initiate uninterrupted compressions following initial rhythm/pulse check and defibrillation
- Deliver subsequent defibrillations 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*

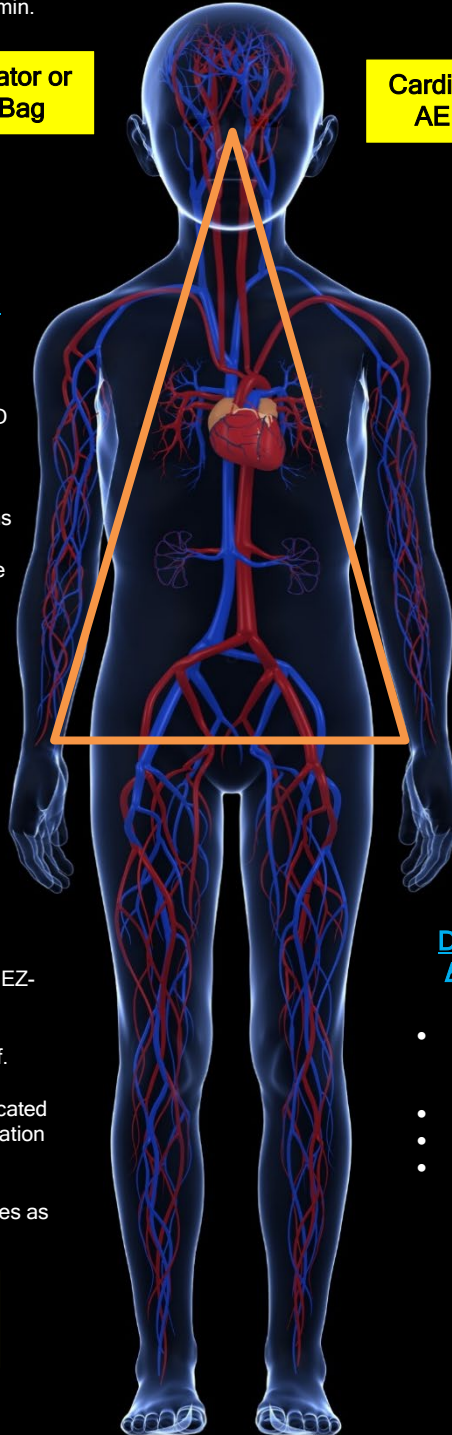
- Establish vascular access with EZ-IO (Ref. CP21).
- If unable, start peripheral IV or access indwelling catheter (Ref. CP25, CT16)
- Administer medications as indicated using PCEMS Handtevy Medication and Equipment Guidebook for dosing
- Assist with other ALS procedures as needed

Medication & Handtevy Bag

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

ePCR



CT4 - CARDIAC ARREST PIT CREW MODEL - CHILD/INFANT

CT4 CARDIAC ARREST PIT CREW MODEL -
CHILD/INFANT

CT4 - CARDIAC ARREST PIT CREW MODEL - CHILD/INFANT

Restart The Heart™

Before You Depart

A	RRIVE
B	VM
C	OMPRESS
D	RILL
E	PINEPHRINE

On Scene
5 STEPS
2 Minutes

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CT5 VECTOR CHANGE DEFIBRILLATION

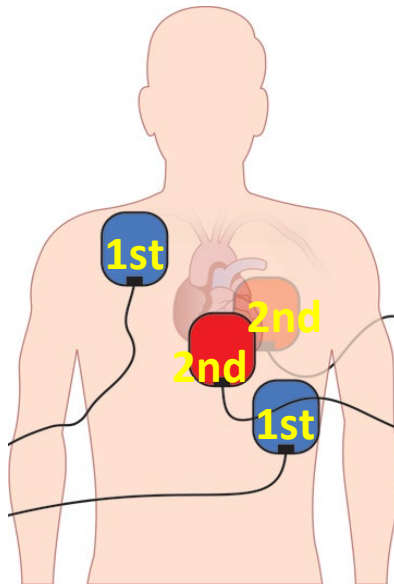
This procedure requires:

- **Two sets of Hands-Free Multi-Function Pads**
- **One Cardiac Monitor/Defibrillator**

Note - patient must be large enough to be able to place 2 sets of pads simultaneously on the body without pads overlapping or touching

1. If first set of Hands-Free Multi-Function pads were placed in standard apex-sternum orientation, add a second set placed anterior-posterior during pulse/rhythm check while avoiding prolonged interruption in compressions.

(Note: if first set was A/P place second set apex/sternum)



2. During the next 2-minute cycle of CPR, switch therapy cable to second set of pads
3. Deliver next and subsequent shocks through second set of pads

CT5 - VECTOR CHANGE DEFIBRILLATION

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CT6 STEMI ALERT & PREACT STEMI ALERT CRITERIA

Anginal Equivalent

PreACT STEMI ALERT

Must meet all these criteria

- ST Segment Elevation > 2 mm in 2 or more contiguous leads
- Heart Rate < 130
- Patient Age - 30 to 90 years old
- Patient able to give consent
- Pain < 24 hours
- QRS complex < 0.12 mm (OK if RBBB pattern)

Must NOT have any the following criteria

- No DNR order
- No paced rhythm
- No significant arrhythmia

PARAMEDICS CONFIDENT IN STEMI IMPRESSION AND AGREE WITH APPROPRIATE

STEMI ALERT

ST Segment Elevation > 1 mm in 2 or more contiguous leads

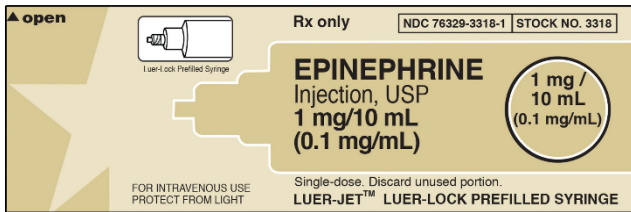
Transmit 12 Lead ECG to receiving facility for all STEMI and PreACT STEMI Alerts (must include patient name and date of birth)

Initiate EMERGENCY TRANSPORT early for STEMI and PreACT STEMI Alerts

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CT7 - EPINEPHRINE DRIP INFUSION

1. Add **ONE (1)** epinephrine prefilled syringe (1 mg) **OR ONE (1)** vial of Adrenalin (1 mg) to a 1000 mL bag of 0.9% sodium chloride via the injection port (port with **WHITE** cover [arrow pointing towards the bag])
2. Gently rock the 0.9% sodium chloride back and forth to mix in the epinephrine
3. Spike the IV fluid bag with an IV administration set with flow controller (20 gtt/mL)
4. Complete and attach a PCEMS MEDICATION ADDED label to the IV fluid bag
5. Administer the medication based on the chart below*



OR



MEDICATION ADDED

PATIENT NAME: Susan B. Anthony

DATE: 01/01/2023 TIME: 1645

DRUG NAME AND AMOUNT OF DRUG ADDED:
Epinephrine 1 mg

UNIT ID#/CLINICIAN EMS ID#:
E29/SS434 #050758

PINELLAS COUNTY EMERGENCY MEDICAL SERVICES



EPINEPHRINE DRIP INFUSION (1 mcg/mL)		
mcg/min	gtt/min	Set Dial (mL/hr) **** See note below ****
2	40	120
3	60	180
4	80	240
5	100	300

*If specific DIAL number is not reflected, approximate the dial, but then provide secondary confirmation by counting drops

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CT8 NOREPINEPHRINE DRIP INFUSION



MEDICATION ADDED

PATIENT NAME: Susan B. Anthony

DATE: 01/01/23 TIME: 0221

DRUG NAME AND AMOUNT OF DRUG ADDED:
Norepinephrine 4 mg

UNIT ID#/CLINICIAN EMS ID#:
E29/SS434 #050758

PINELLAS COUNTY EMERGENCY MEDICAL SERVICES

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) **** See note below ****
1	5	15
2	10	30
3	15	45
4	20	60
5	25	75
6	30	90
7	35	105
8	40	120
9	45	135
10	50	150

*If specific DIAL number is not reflected, approximate the dial, but then provide secondary confirmation by counting drops

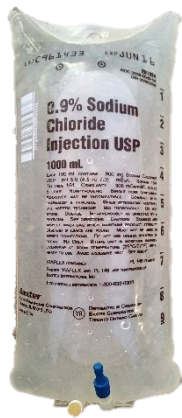
CT8 - NOREPINEPHRINE DRIP INFUSION

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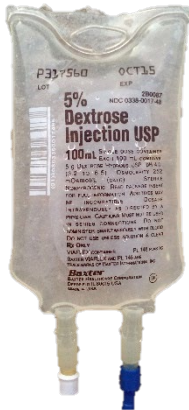
CT9 CYANOKIT



+ 200 mL



OR



OR



CT9 - CYANOKIT

Preparation and Administration¹

Starting dose: 5 g

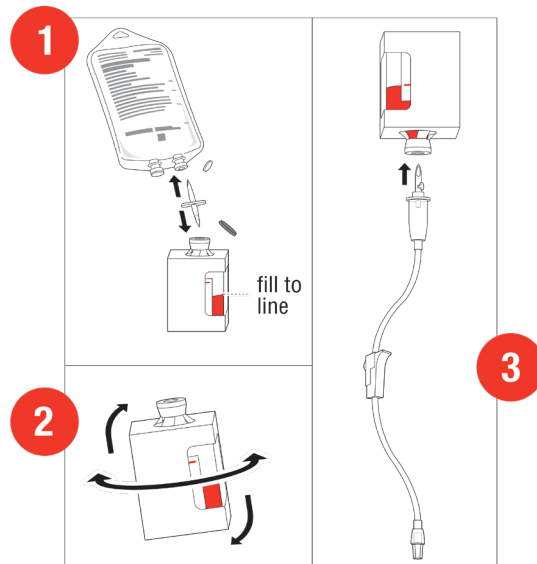
- 1 Reconstitute:** Place the vial in an upright position. Add 200 mL of 0.9% Sodium Chloride injection[†] to the vial using the transfer spike. **Fill to the line.**

[†]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**.



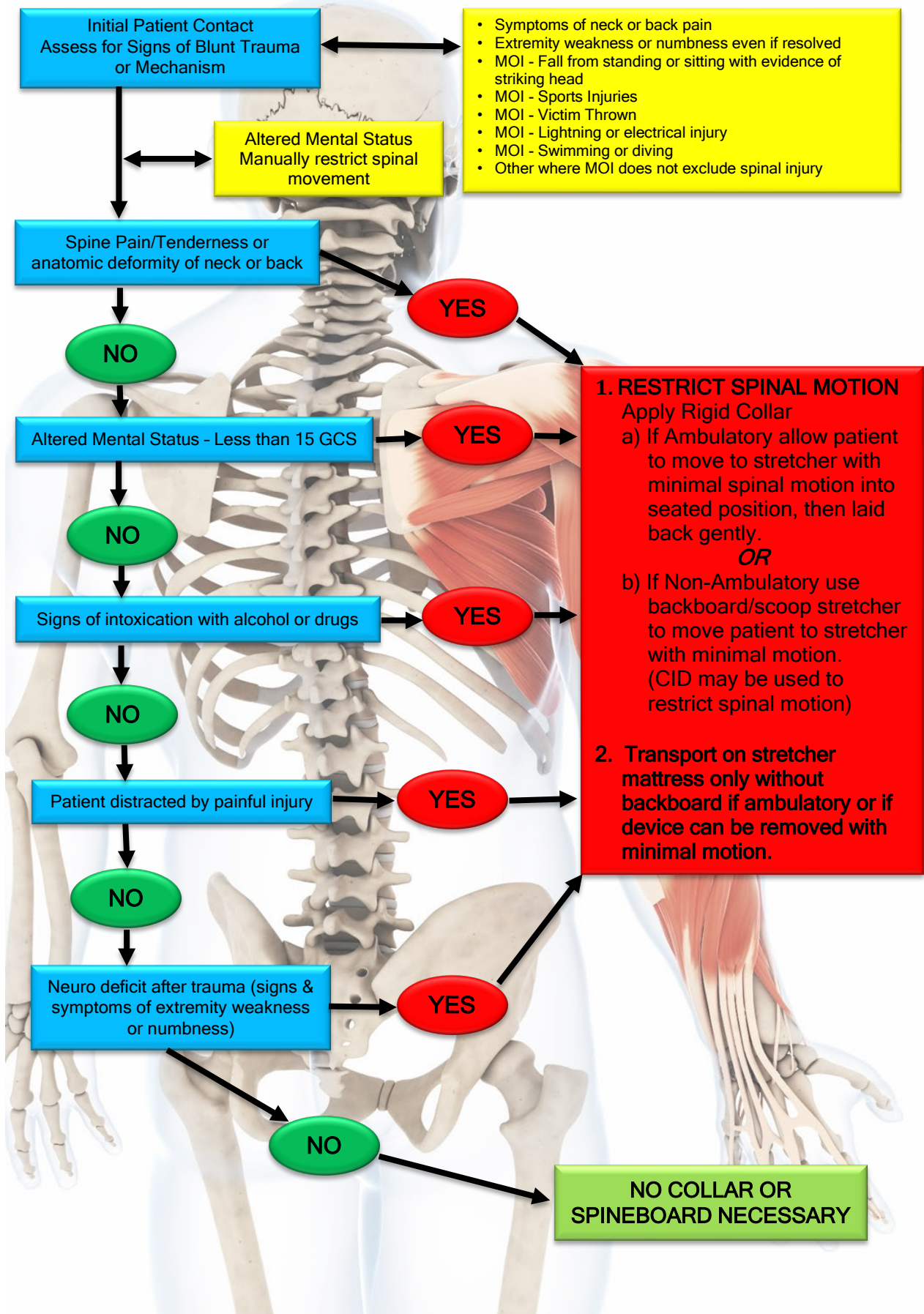
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CT10 FIELD ASSESSMENT STROKE TRIAGE FOR EMERGENCY DESTINATION (FAST-ED)

		Test Component	Rapid Screen	Full Scoring	Score
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	Absent or minor paralysis = 0	
			Abnormal: One side of the face droops or does not move symmetrically	Partial or complete paralysis = 1	
A	Arm Weakness	Have patient lift arms up and hold them out with eyes closed for 10 seconds	Normal: Symmetrical movement in both arms	No Drift = 0	
			Abnormal: One arm drifts down or asymmetrical movement of the arms	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	Absent = 0	
			Abnormal: The words are slurred; the wrong words are used, or the patient is aphasic	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		
TOTAL SCORE					

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CT11 SPINAL PRECAUTIONS



CT11 - SPINAL PRECAUTIONS

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CT12 ADULT (AGE ≥ 16 y/o) 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 (<i>including</i> moped, motorcycle, all-terrain vehicle, watercraft)**
2 nd or 3 rd degree burns equal to or greater than 15% TBSA	Death of another passenger from trauma**
Active bleeding requiring a tourniquet or wound packing with continuous pressure **	

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 in ePCR)

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

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CT13 PEDIATRIC (AGE ≤ 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	2 nd or 3 rd 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 (<i>including</i> moped, motorcycle, all-terrain vehicle, watercraft)**
Active bleeding requiring a tourniquet or wound packing with continuous pressure **	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	

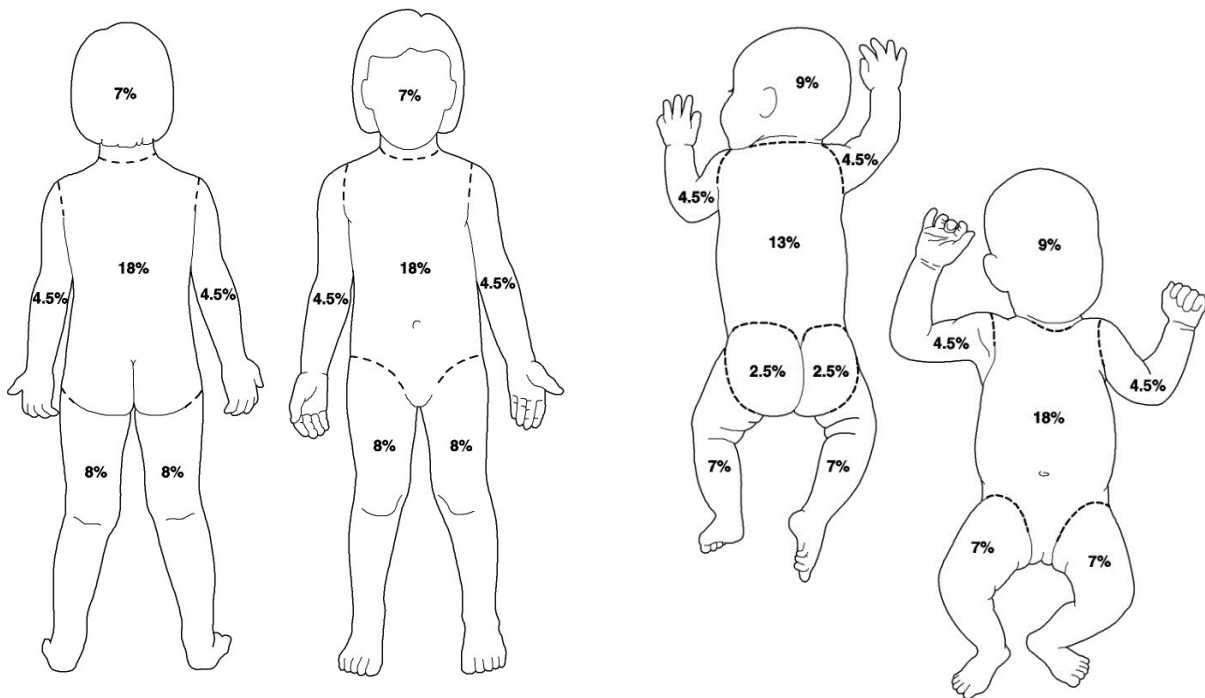
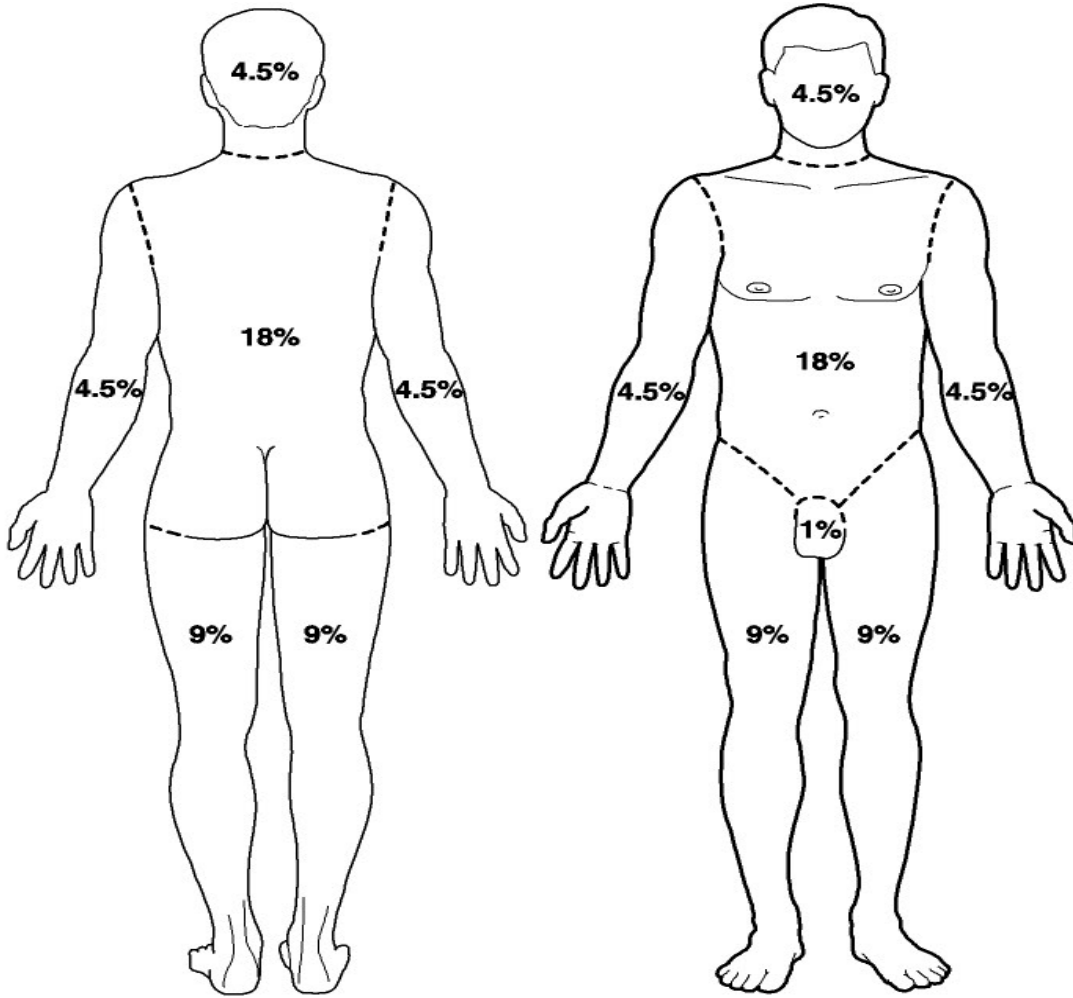
Paramedic Intuition = "Trauma Alert" (must document basis for declaration on PCR)

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

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CT14 BURNS - RULES OF 9'S



CT14 - BURNS - RULE OF 9S

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CT15 TOXIDROMES

Class	Signs and Symptoms	Agents	Treatment
Sympathomimetics	<ul style="list-style-type: none"> • Agitation • Seizures • Mydriasis • Tachycardia • Hypertension • Diaphoresis • Pallor • Cool Skin • Fever 	<ul style="list-style-type: none"> • Albuterol • Terbutaline • Amphetamines • Cocaine • Methamphetamines • PCP • Theophylline • Caffeine • Catecholamine's • Ketamine 	<ol style="list-style-type: none"> 1. Supportive care 2. Uncooperative/potentially violent: <ul style="list-style-type: none"> • Midazolam 2.5 mg IV/IM, may repeat once after 5 minutes if needed 3. Agitated/Actively violent: <ul style="list-style-type: none"> • Midazolam 5 mg IV/IM, may repeat once after 5 minutes, if needed <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • 10 mg (5 mg per nare) intranasal. May give an additional 5 mg (2.5 mg per nare) after 5 minutes if needed
Cholinergics	<p>(DUMBBELS) - Diarrhea, Urination, Miosis, Bradycardia, Bronchorrhea, Emesis, Lacrimation, Salivation</p>	<ul style="list-style-type: none"> • Organo-phosphates • Pesticides • Carbamates • Nerve Agents 	<ol style="list-style-type: none"> 1. Atropine 2 mg IV every 2 min until secretions dry 2. Contact OLMC for DuoDote utilization 3. If Seizing, Ref. M14
Opioids	<ul style="list-style-type: none"> • Respiratory Depression • Coma • Miosis • Bradycardia • Hypotension • Constipation 	<ul style="list-style-type: none"> • Morphine • Methadone • Codeine 	<ol style="list-style-type: none"> 1. Naloxone 0.4 mg IV, may repeat to maximum 4 mg, as needed <p style="text-align: center;">OR</p> <p>Naloxone 2 mg intranasal, may repeat one time in 3 minutes, as needed</p> <ol style="list-style-type: none"> 2. Perform Leave Behind Naloxone Procedure (CP29)
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"	<ul style="list-style-type: none"> • Antihistamines • Atropine • Carbamazepine • Cyclic Antidepressants • Jimson Weed • Oxybutynin • Phenothiazines • Scopolamine 	<ol style="list-style-type: none"> 1. Supportive care 2. Uncooperative/potentially violent: <ul style="list-style-type: none"> • Midazolam 2.5 mg IV/IM, may repeat once after 5 minutes if needed 3. Agitated/violent: <ul style="list-style-type: none"> • Midazolam 5 mg IV/IM, may repeat once after 5 minutes, if needed <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> • 10 mg (5 mg per nare) intranasal. May give an additional 5 mg (2.5 mg per nare) after 5 minutes if needed

CT15 TOXIDROMES

SPECIFIC WITHDRAWAL/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	<ol style="list-style-type: none"> 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.	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 1. Remove contaminated clothing/contact lenses 2. Flush copiously

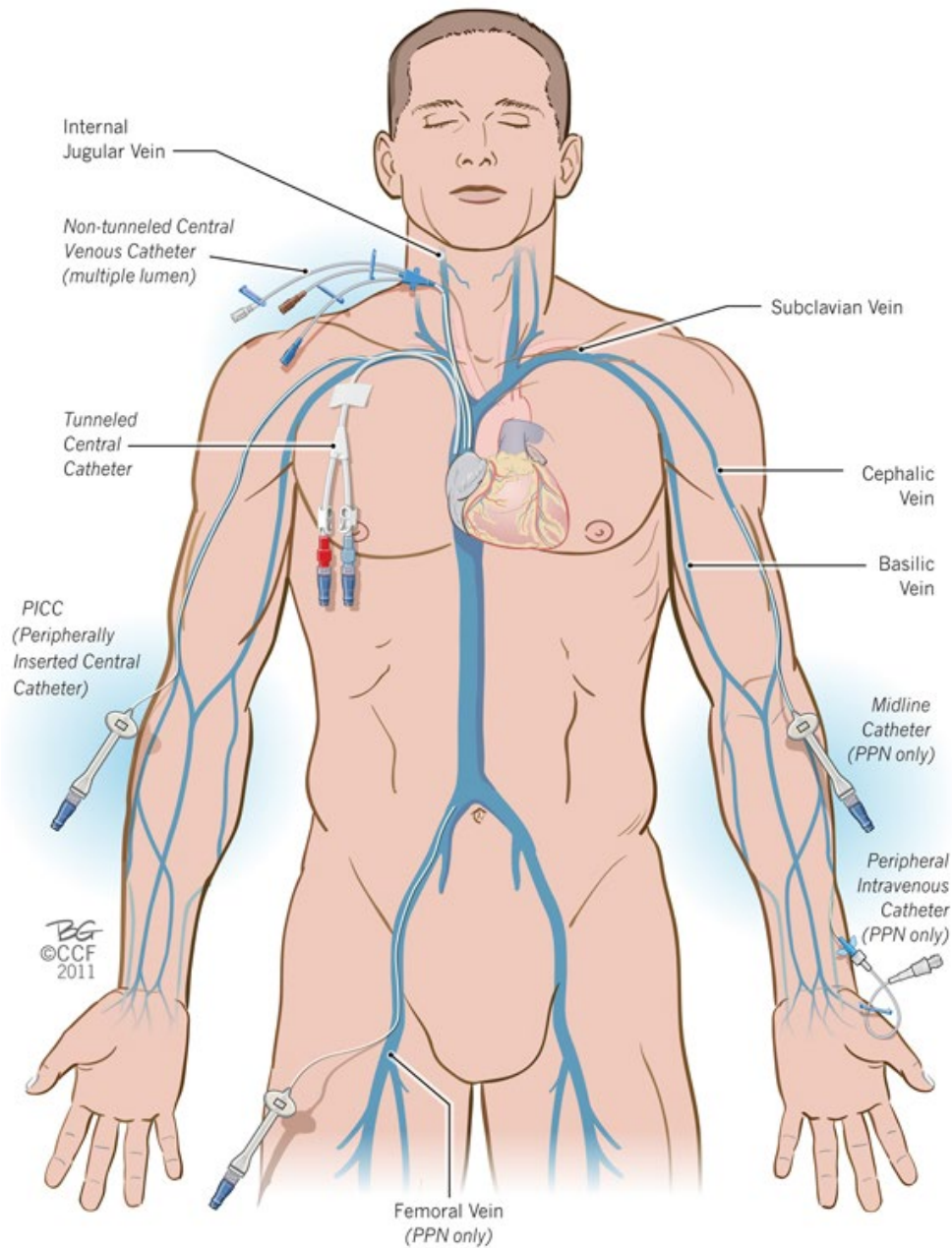
CT16 INDWELLING CATHETERS

SAFETY ALERT

Misconception: If the catheter end is BLUE "it's venous" and if the end is RED "it's 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



<http://www.clevelandclinicmeded.com/medicalpubs/diseasemanagement/gastroenterology/principles-of-nutrition-support/images/figure-2.jpg>

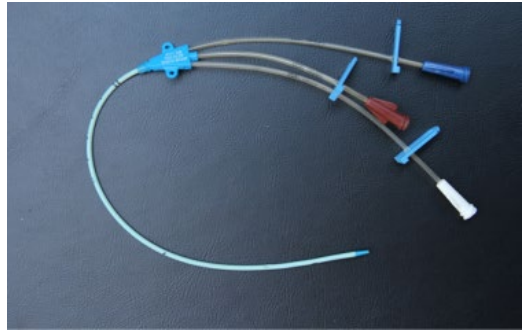
CT16 - INDWELLING CATHETERS

CT16 INDWELLING CATHETERS

CT16 - INDWELLING CATHETERS

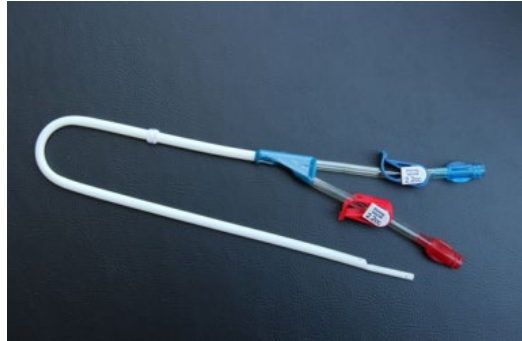
Triple Lumen Central Line

- 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



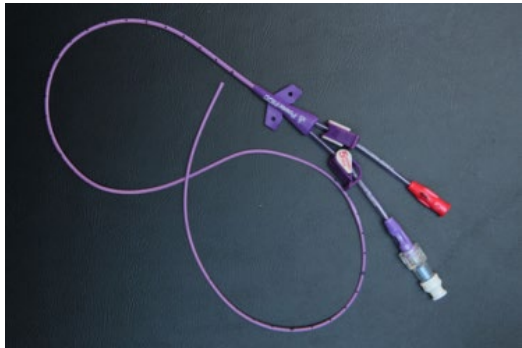
Dialysis Tunnel Catheter

- 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

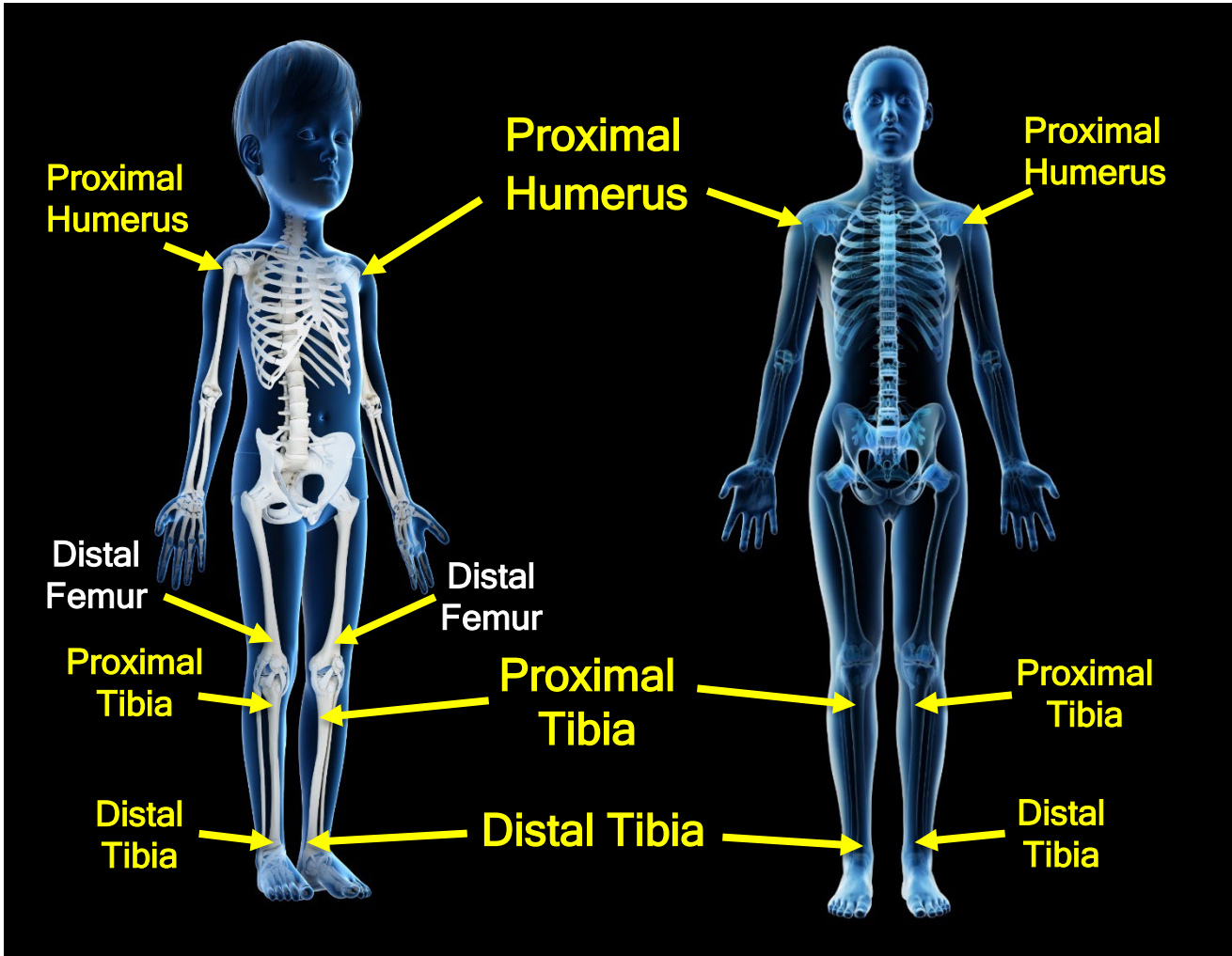


Port

- 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 EZ-IO INSERTION SITES



Infant/Child

Adult

CT17 - EZ-IO INSERTION SITES

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CT18 FACES PAIN SCALE

Wong-Baker FACES® Pain Rating Scale



0

**No
Hurt**



2

**Hurts
Little Bit**



4

**Hurts
Little More**



6

**Hurts
Even More**



8

**Hurts
Whole Lot**



10

**Hurts
Worst**

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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.

CT18 - FACES PAIN SCALE

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CT19 APGAR SCORE

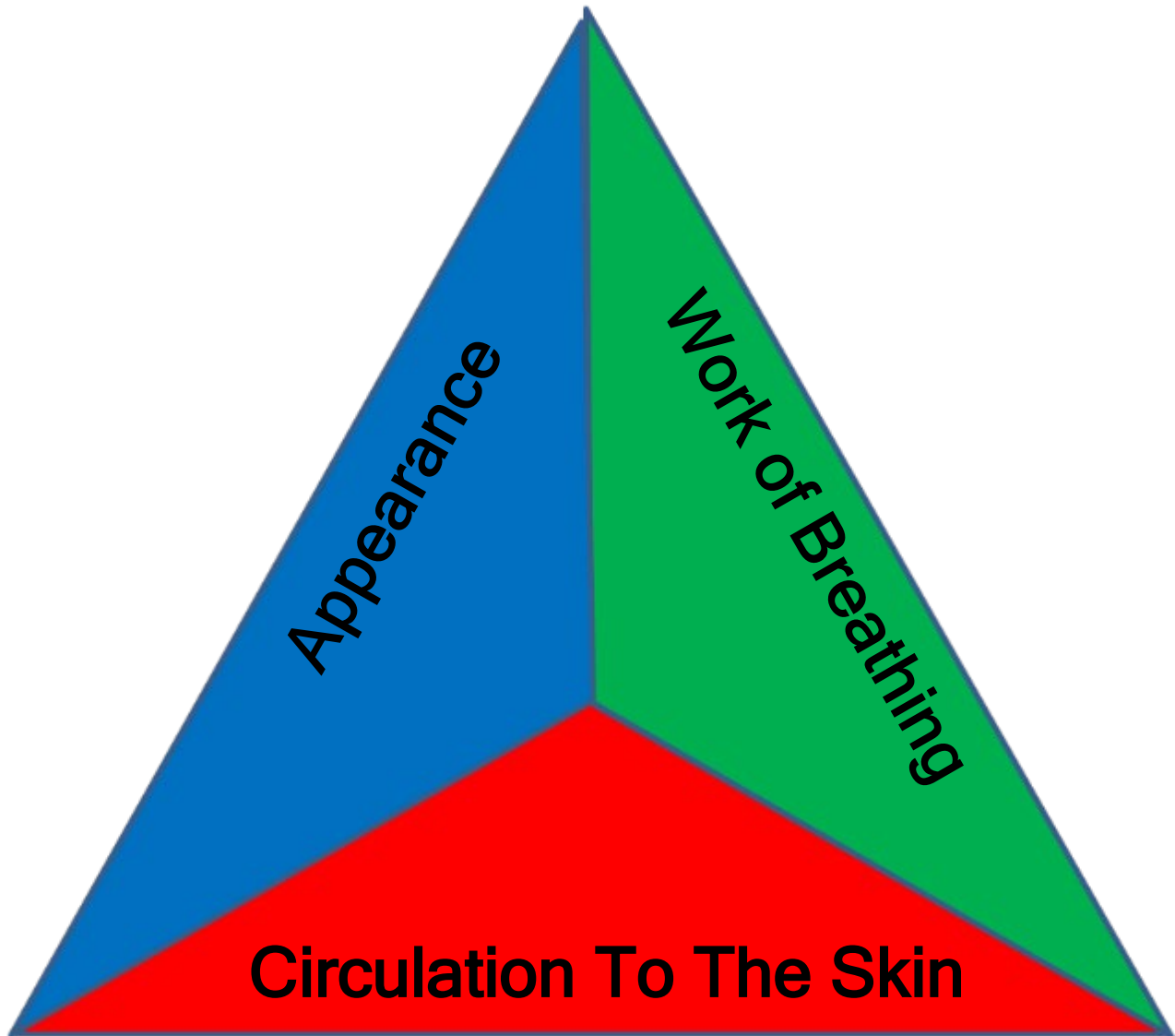
	0 Points	1 Point	2 Points	1 Minute - Total Points	5 Minute - Total Points	10 Minute - Total Points	15 Minute - Total Points
Activity (muscle tone)	Absent	Arms and Legs Flexed	Active Movement				
Pulse	Absent	Below 100 BPM	Over 100 BPM				
Grimace (reflex irritability)	Flaccid	Some Flexion of Extremities	Active Motion (sneeze, cough, pull away)				
Appearance (skin color)	Blue, Pale	Body Pink, Extremities Blue	Completely Pink				
Respiration	Absent	Slow, Irregular	Vigorous Cry				
			TOTAL POINTS				

CT19 - APGAR SCORE

Severely Depressed 0 - 3
Moderately Depressed 4 - 6
Excellent Condition 7 - 10

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CT20 PEDIATRIC ASSESSMENT TRIANGLE



Appearance

- Tone
- Interactiveness
- Consolability
- Look/Gaze
- Speech/Cry

Work of Breathing

- Abnormal Breath Sounds
- Abnormal Positioning
- Retractions/Nasal flaring

Circulation To The Skin

- Mottling
- Cyanosis
- Pallor

CT20 - PEDIATRIC ASSESSMENT TRIANGLE

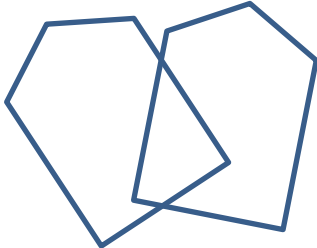
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CT22 EMS COGNITIVE EVALUATION

Administer and document the EMS Cognitive Evaluation as indicated

Minimum Passing Score = 23

Maximum Score = 29

<u>Question or Task</u>	<u>Points</u>
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
<hr/>	
11. Ask the patient to copy the design below:	1
	
Total Score	_____

CT22 - EMS COGNITIVE EVALUATION

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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: _____	<input type="checkbox"/> Released From Rehab <input type="checkbox"/> Referred To Medical Medical Evaluation Completed on Entry <input type="checkbox"/> Yes <input type="checkbox"/> No Medical Evaluation Completed on Exit <input type="checkbox"/> Yes <input type="checkbox"/> No
First: _____ Last: _____ Unit Assignment: _____	Time In: _____ Time Out: _____	<input type="checkbox"/> Released From Rehab <input type="checkbox"/> Referred To Medical Medical Evaluation Completed on Entry <input type="checkbox"/> Yes <input type="checkbox"/> No Medical Evaluation Completed on Exit <input type="checkbox"/> Yes <input type="checkbox"/> No
First: _____ Last: _____ Unit Assignment: _____	Time In: _____ Time Out: _____	<input type="checkbox"/> Released From Rehab <input type="checkbox"/> Referred To Medical Medical Evaluation Completed on Entry <input type="checkbox"/> Yes <input type="checkbox"/> No Medical Evaluation Completed on Exit <input type="checkbox"/> Yes <input type="checkbox"/> No
First: _____ Last: _____ Unit Assignment: _____	Time In: _____ Time Out: _____	<input type="checkbox"/> Released From Rehab <input type="checkbox"/> Referred To Medical Medical Evaluation Completed on Entry <input type="checkbox"/> Yes <input type="checkbox"/> No Medical Evaluation Completed on Exit <input type="checkbox"/> Yes <input type="checkbox"/> No

CT23 - REHAB TRACKING TOOL

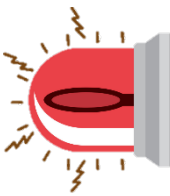
Return form to Agency Representative or Incident Command
One Agency per form

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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 Number			
State Level of Urgency			
EMERGENCY		AS SOON AS POSSIBLE	
 Lights and Sirens		Non-critical: Patient can wait for next available ambulance	
		Non-critical: Specific pick-up time requested	
SCHEDULED/ROUTINE			
For Unusual Circumstances or Response Time Concerns Please Call Back and Ask to be Conferenced with the Sunstar AOD			
Additional Information Necessary			
1	Patient's name, age & social security number	4	Isolation or Safety Precautions
2	Diagnosis & reason for transport	5	Sending Physician Name
3	Adjuncts necessary for transport	6	Destination facility name, unit, room/bed
		7	Receiving Physician Name
		8	Transport Coordinator/Primary RN name & direct telephone number
Transport Options (See over for EMS Levels of Care)			
Pinellas EMS System Transport		Pediatric & NICU Transfers	
Critical Care Transport Team		Johns Hopkins/All Children's:	
Critical Care Paramedic Ambulance		727-767-7337	
ALS Ambulance		St. Joe's/Baycare:	
BLS Ambulance		800-277-5437	
Air Medical Transport		Wheelchair/Stretcher Van	
Lifeline 1:		https://pinellas.gov/safety-emergency-services-transport/	
727-893-6010			
TGH AeroMed:			
800-727-1911			

CT24 - INTERFACILITY TRANSPORT LEVELS OF CARE

CT24 - INTERFACILITY TRANSPORT LEVELS OF CARE - CT24

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 (SpO2 /EtCO2) & Oxygen (titration) & 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, nitroglycerin, vasopressors]	Triage by CCT RN to meet CCP Criteria	Emergency STEMI/STROKE Transfers with: <ul style="list-style-type: none"> 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, A/V Sheaths Swan-Ganz, CVP, ICP etc.) Cardiac Adjuncts (Transvenous Pacer, Balloon Pump, Impella LVAD, BIVAD, ECMO) Fetal Monitoring/tocolysis	Advanced Medications (6 channels max) Blood Products	Triage by CCT RN to meet CCT Criteria	CCT RN will assist in triage for appropriateness <ul style="list-style-type: none"> High Risk OB (No active labor) Infants > 28 days or 5 Kgs (No Isolette) Neonatal transports meeting criteria in FL 64J-1.001(11) (12) must use a NICU Transport Team (see over for contact) ECMO patients must have a facility perfusionist accompanying them

CT25 PATIENT/HOSPITAL 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

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

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

ADULT (specific)	PEDIATRIC (specific)	ADULT & PEDIATRIC
Percutaneous Coronary Intervention (PCI)	Pediatric/Neonatal	Obstetrics
Primary or Comprehensive Stroke Center	Pediatric Trauma Center (15 years old and younger)	
Adult Trauma Center (16 years old and older)	Pediatric (17 years old and younger) Psychiatric/Baker Act	Burn Center
Adult Psychiatric/Baker Act		

CT25 - PATIENT/HOSPITAL STATUS DEFINITIONS

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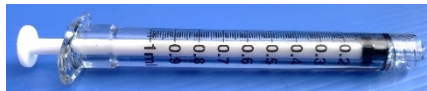
CT26 - PUSH DOSE EPINEPHRINE

SUPPLIES REQUIRED

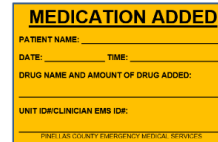
1



3-Way Stopcock



1 mL Luer-Lock Syringe



PCEMS "Medication Added" Label

10 mL 0.9% Sodium Chloride Prefilled Syringe



Epinephrine (0.1 mg/mL)
10 mL Prefilled Syringe



2



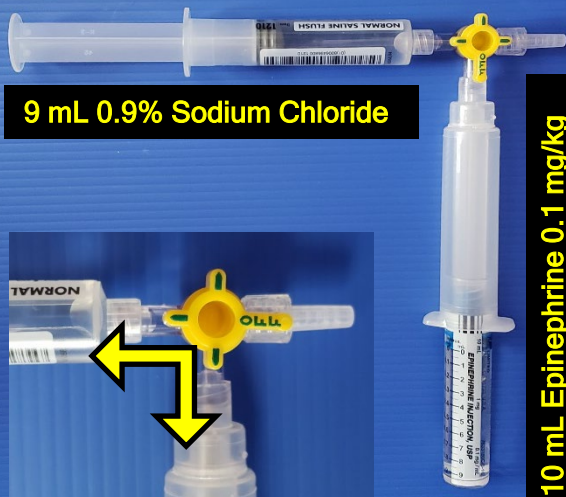
Waste 1 mL of 0.9% sodium chloride from the prefilled syringe

3



Expel the air from the epinephrine (0.1 mg/mL) - 10 mL prefilled syringe

4



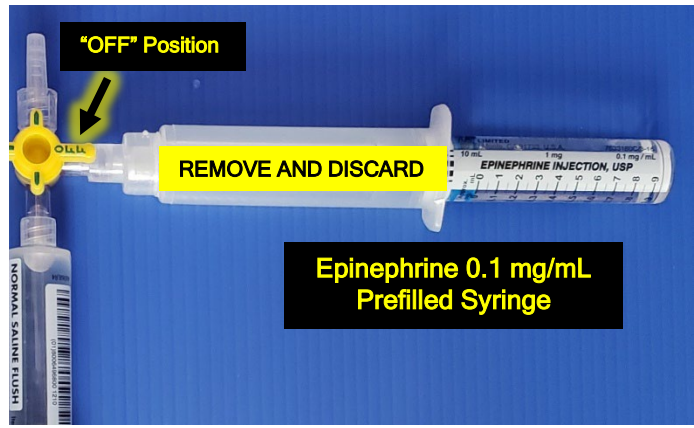
- Connect the syringe with 9 mL of 0.9% sodium chloride and the syringe with 10 mL epinephrine (0.1 mg/mL) to a 3-Way Stopcock as reflected in the picture
- Turn the stopcock valve to the position allowing you to push 1 mL of epinephrine (0.1 mg/mL) into the 9 mL of 0.9% sodium chloride.

CT26 - PUSH DOSE EPINEPHRINE

CT26 - PUSH DOSE EPINEPHRINE

5

- Turn the stopcock valve off and separate the epinephrine (0.1 mg/mL) prefilled syringe
- Discard in a sharps container
- Gently rock the syringe containing the epinephrine and 0.9% sodium chloride to mix before use



6



A 1 mL syringe is now utilized to draw EACH 1 mL DOSE of Push Dose Epinephrine (10 mcg/mL) from the syringe still attached to the 3-Way Stopcock.



Throughout this entire process, the 3 - Way Stopcock nor any 10 mL syringe involved is **EVER** to be connected to a patient IV Start Extension, IV Catheter Hub or any IV Tubing Port.



KEY CONCEPTS

- Push-dose Epinephrine doses are small with extremely dilute concentration - **USE CAUTION TO ENSURE THE MEDICATION IS MIXED PROPERLY**
- The 10 mL labeled syringe contains TEN (10) doses (10 mcg/mL) of Push-Dose Epinephrine
- Push-dose epinephrine is a "Bridge" that has a rapid onset = One (1) minute but a very short half-life of less than five (5) minutes

CT27 - JUST CULTURE

Duty to produce an outcome	Duty to follow established protocols & procedures	Duty to avoid causing unjustifiable risk or harm
Human Error	At-Risk Behavior	Reckless Behavior
Root cause is human error or inadvertent action-oversight, lapse, or mistake.	Root cause is at-risk behavior by a clinician where the risks were unrecognized or believed to be insignificant or justified.	Root cause is a conscious disregard of substantial & unjustifiable risk by a clinician.
Improvement Efforts	Improvement Efforts	Management
Individual/Team:	Individual/Team:	Individual/Team
<ul style="list-style-type: none"> Quality assurance review Medical case review Remedial training 	<ul style="list-style-type: none"> Clinical restriction (case basis) Quality assurance review Medical case review Remedial training 	<ul style="list-style-type: none"> Clinical restriction or suspension (case basis) Quality assurance review Administrative proceeding Corrective action plan Probation Revocation of clinical privileges
<p>System:</p> <ul style="list-style-type: none"> Continuing medical education Protocol improvement Situational awareness Best practices implementation Patient care safety systems Process improvement Medical equipment & supply improvements 	<p>System:</p> <ul style="list-style-type: none"> Supporting culture expects healthy behaviors, corrects & minimizes at-risk behavior Continuing medical education Situational awareness <p>NOTE: Repeat at-risk behavior is reckless.</p>	
Console	Coach	Correct

CT27 - JUST CULTURE

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CT28 - REPORTING REQUIREMENTS SUMMARY TABLE

Immediate Reporting Requirements
Any circumstances that in the judgement of the Certified Professional requires immediate notification of the Medical Director
Known or suspected Esophageal Intubation and/or failure to employ continuous EtCO2 waveform capnography on an advanced airway (CP1, CP5)
Known or suspected medication error or other patient harm resulting from therapeutic misadventure (CS3, CS15)
Known or suspected patient harm resulting from failure to adhere to established protocols and standards (6.4 #5 or reckless behavior)
Known or suspected clinical incompetence or any potential threat to public health, safety, or welfare (6.4 #7) including but not limited to:
Performance of unauthorized procedures or skills (6.4 #9)
Known or suspected patient abuse (6.4 #13) or sexual misconduct with a patient (6.4 #15)
Being under the influence of a controlled substance, illegal drug, or alcohol, at any level, while on duty (6.4 #17)
Arrest or conviction which violates PCEMS Rules & Regulations Section 4.18 (6.4 #12)
Known or suspected violation of policies or protocols pertaining to the use, handling, or storage of controlled substances (6.4 #10) or controlled substance tampering or diversion (6.4 #18) (AD13)

Routine Reporting Requirements (3 business days)
Any case which the Certified Professional or agency supervisor feels would be beneficial to review
Equipment failures
Protocol failures
Complaints from healthcare providers
Substantiated, serious, or serial citizen complaints
Any violation of Pinellas County Rules & Regulations Section 6.4 not listed above or previously reported



Note: Immediate Reporting Requirements (ALL Certified Clinicians) -

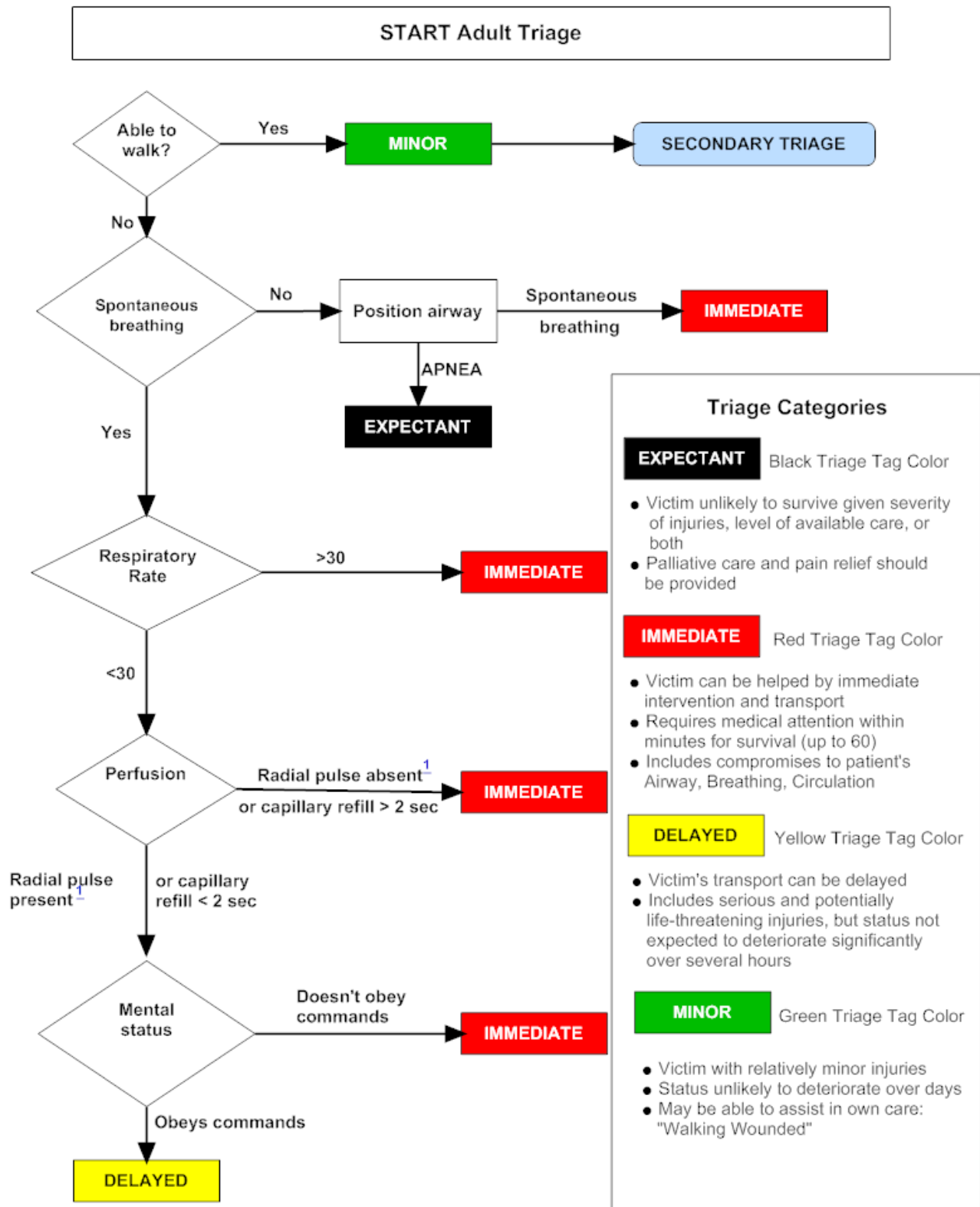
Requires verbal discussion with MD1 who may be accessed 24 hrs. a day via Sunstar Communications Supervisor.

OLMC CONTACT DOES NOT SATISFY THIS CRITERIA!

CT28 - REPORTING REQUIREMENTS SUMMARY TABLE

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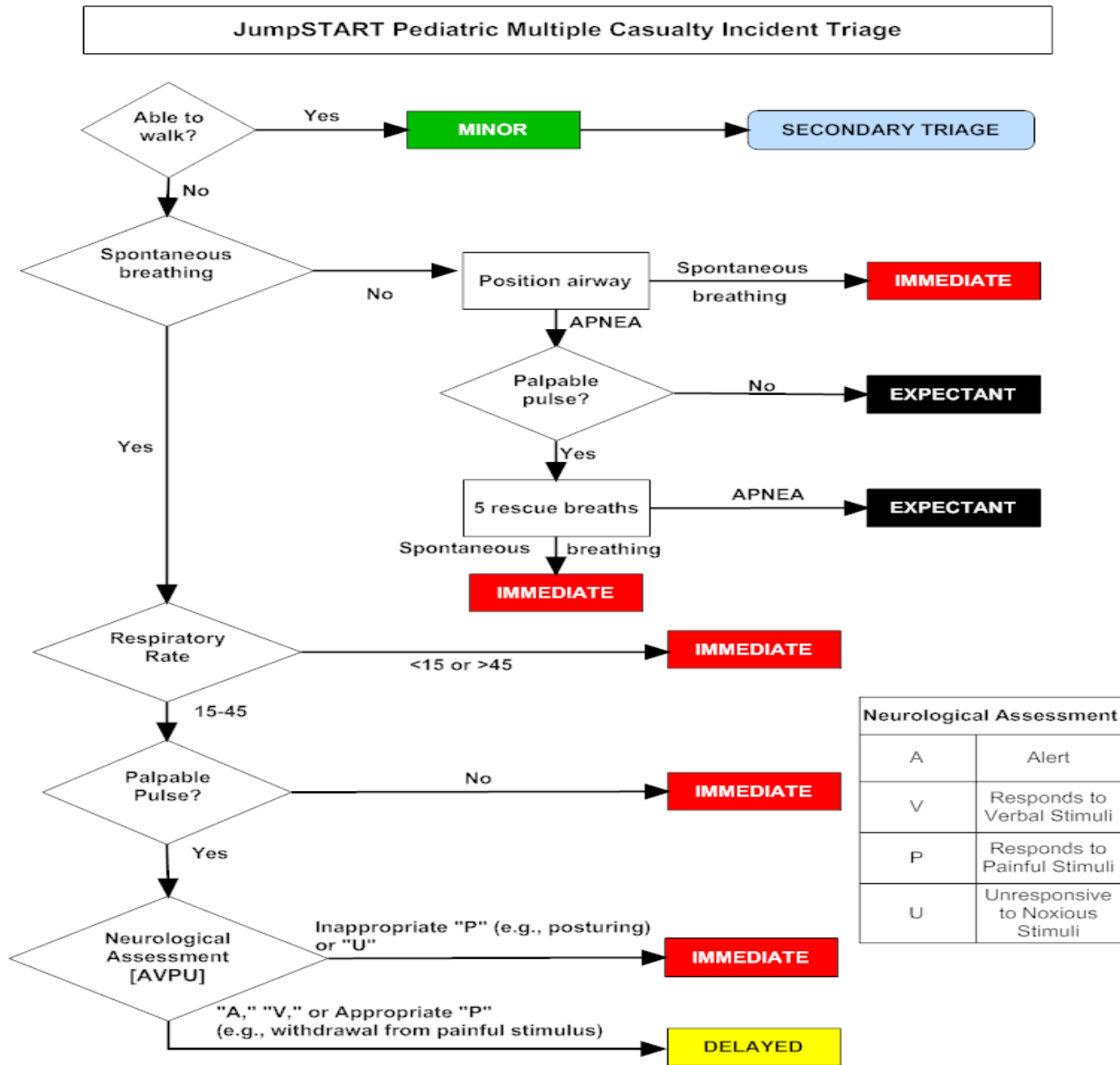
CT29 START/JumpSTART TRIAGE



CT29 - START/JumpSTART TRIAGE

CT29 START/JumpSTART TRIAGE

CT29 - START/JumpSTART TRIAGE



Use JumpSTART if the Patient appears to be a child.

Use an adult system, such as START, if the patient appears to be a young adult.

Triage Categories

<p>EXPECTANT Black Triage Tag Color</p> <ul style="list-style-type: none"> Victim unlikely to survive given severity of injuries, level of available care, or both Palliative care and pain relief should be provided 	<p>DELAYED Yellow Triage Tag Color</p> <ul style="list-style-type: none"> Victim's transport can be delayed Includes serious and potentially life-threatening injuries, but status not expected to deteriorate significantly over several hours
<p>IMMEDIATE Red Triage Tag Color</p> <ul style="list-style-type: none"> Victim can be helped by immediate intervention and transport Requires medical attention within minutes for survival (up to 60) Includes compromises to patient's Airway, Breathing, Circulation 	<p>MINOR Green Triage Tag Color</p> <ul style="list-style-type: none"> Victim with relatively minor injuries Status unlikely to deteriorate over days May be able to assist in own care: "Walking Wounded"

CT30 LUCAS QUICK REFERENCE GUIDE



LUCAS® 3 Chest Compression System

Quick reference guide

	Rescuer 1 (LUCAS device operator)	Rescuer 2
ON/OFF ADJUST Manual positioning of the Suction Cup ADJUST PAUSE ACTIVE	1. Power on the LUCAS device <ul style="list-style-type: none"> • Push ON/OFF to start self-test and power up the LUCAS device • The device will be ready and in the ADJUST mode 	<ul style="list-style-type: none"> • Provide manual CPR
	2. Place the LUCAS BACK PLATE <ul style="list-style-type: none"> • Pause manual CPR briefly • Put the BACK PLATE under the patient, immediately below the armpits 	<ul style="list-style-type: none"> • Assist BACK PLATE placement • Resume manual CPR
	3. Attach the UPPER PART <ul style="list-style-type: none"> • Pull the RELEASE RINGS once to open CLAW LOCKS. Then let go of the rings • Stop manual CPR briefly while attaching the UPPER PART to the BACK PLATE. Listen for "CLICK" sound • Pull up once to assure attachment 	<ul style="list-style-type: none"> • Continue manual CPR as long as possible • Help to attach the UPPER PART
	4. Push down SUCTION CUP. Adjust position if needed. <ul style="list-style-type: none"> • Push down the SUCTION CUP • The lower edge of SUCTION CUP should be immediately above the end of the sternum • Adjust if necessary (stay in ADJUST mode) 	<ul style="list-style-type: none"> • Assist
	5. Lock position. Start compressions. <ul style="list-style-type: none"> • Push PAUSE to lock START POSITION • Push ACTIVE (continuous) or ACTIVE (30:2) to start compressions 	<ul style="list-style-type: none"> • Assist
Attach stabilization strap. Follow CPR protocols.		

The LUCAS 3 device is for use as an adjunct to manual CPR when effective manual CPR is not possible (e.g., transport, extended CPR, fatigue, insufficient personnel). Refer to operating instructions for complete directions for use indications, contraindications, warnings, cautions, and potential adverse events.

Physio-Control is now part of Stryker.
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www.physio-control.com/LUCAS

