OGLETHORPE COUNTY

EMERGENCY MEDICAL SERVICES

2024 STANDING ORDERS

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204 - BiPAP/CPAP Procedure

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306 - Environmental Exposure

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313 - CHF/Acute Pulmonary Edema

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316 - Pulseless Arrest AHA

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320 - Pain Management

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322 - Traumatic Injury

Pediatric Standing Orders

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415 - PED Tachycardia

416 - PED Pulseless Arrest AHA

418 - PED Burns

419 - PED Overdose/Poisoning

420 - PED Pain Management

421 - PED Shock Management

422 - PED Traumatic Injury

EMS Medical Director:	Dr. Brendan Hawthorn	***Signature on file***
EMS Director:	Jason M. Lewis	***Signature on file***
201 – Patient Assessment Progression		**Effective Date: 12/01/2022**

Considerations

A detailed and focused assessment should be performed on every patient encounter unless contraindicated. Each provider should be aware of and adhere to the limitations of their respective scope of practice as defined by the Georgia Department of Public Health (SOP-2021). All evaluations performed should be documented as defined by the rules and regulations of the State of Georgia Office of EMS and Trauma.

The patient assessment should be considered a continuous procedure that should be employed during the entirety of a patient's encounter with EMS.

EMT

PRIMARY SURVEY:

1. Assess Responsiveness (AVPU)
2. Assess airway patency. If obstructed, refer to Airway Progression.
3. Assess breathing for rate, quality, and degree of distress.
4. Assess circulation for rate, rhythm, and quality.

EMT-I

SECONDARY SURVEY:

1. Gather a SAMPLE history when possible.
2. Obtain OPQRST when possible and applicable.
3. Perform secondary assessment of specific problem and refer to the appropriate protocol.
4. Perform diagnostic treatment.
    a. Blood Pressure
    b. Pulse
    c. Respiration
    d. Pulse Oximetry
    e. Blood Glucose (when applicable)
    f. Temperature (when applicable)
5. Perform physical assessment DCAP-BTLS.
6. ECG acquisition and transmission (EMT, EMTI, AEMT)

AEMT

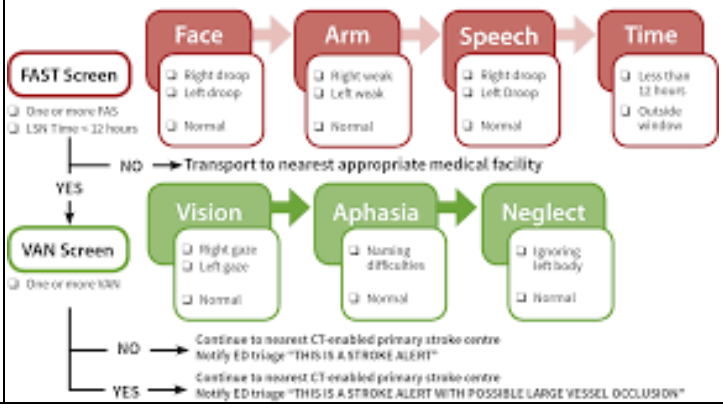
Paramedic

ADVANCED SURVEY:

1. **ECG monitoring and interpretation**
2. **End-tidal CO2 monitoring and interpretation of waveform capnography**

Focused NEURO (All Levels)

FAST VAN Stroke Screen



Cincinnati Prehospital Stroke Severity Scale

2 points: Conjugate gaze deviation (≥ 1 on NIHSS item for Gaze)

1 point: Incorrectly answers at least one of two level of consciousness questions on NIHSS (age or current month) **and** does not follow at least one of two commands (close eyes, open and close hand) (≥ 1 on the NIHSS item for Level of Consciousness 1b and 1c)

1 point: Cannot hold arm (either right, left or both) up for 10 seconds before arm(s) falls to bed (≥ 2 on the NIHSS item for Motor Arm)

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Airway Management Progression - 202		**Effective Date: 12/01/2022**	

EMT

Basic Maneuvers

1. **Head-tilt, chin-lift; tongue-jaw lift; jaw thrust; Sellick's maneuver; manual maneuvers to remove obstruction.**
2. **Oropharyngeal Airway (if no gag reflex); Nasopharyngeal Airway (if no head injury suspected or significant facial trauma evaluated)**
3. **Upper airway suctioning (intermittent, if indicated)**

EMT-I

AEMT

Advanced Airway Management

4. **Insertion of a supraglottic airway device / blind insertion airway device (BIAD)**

KING LT Device

Paramedic

5. **Endotracheal Intubation**
   - a. **For the spontaneously breathing patient requiring intubation**
     - i. **Nasotracheal intubation may be attempted (use BAAM style device PRN)**
     - ii. **Refer to the Sedation Assisted Intubation Standing Order [203] as indicated.**
   - b. **For patients with no gag reflex and no spontaneous respirations or sedation assisted**
     - i. **Orotracheal intubation via VIDEO laryngoscopy. (Direct manual laryngoscopy PRN)**
     - ii. ***If a difficult airway is anticipated, use of a Bougie-style introducer should be considered.***

     IF UNABLE TO PLACE ETT IN A TIMELY MANNER, TRANSITION TO A SUPRAGLOTTIC BIAD DEVICE
   - c. **For patients with secretions, vomitus, blood, or other contaminant in the airway use the Suction Assisted Laryngoscopy Airway Decontamination (S.A.L.A.D.)**
     - i. **Power on and connect VIDEO laryngoscope with appropriate blade.**
     - ii. **Suction airway free from contaminants, seat suction catheter at the proximal esophagus with suction set to continuous**
   - d. **Once ETT tube is inserted to the appropriate depth, confirm ETT placement:**
     - i. **Direct visualization**
     - ii. **Continuous waveform capnography**
     - iii. **Auscultation of positive lung sounds bilaterally, negative in the epigastrium.**
   - e. **Secure ETT and reassess**

6. **Sedation Assisted Intubation**
   - a. **For patients who are responsive to pain, have impending airway compromise or obtunded with an intact gag reflex, refer to the Sedation Assisted Intubation Standing Order.**

7. **For acute upper airway obstruction refractory to clearance maneuvers, refer to Needle Cricothyrotomy Procedure.**

Considerations

Cormack-Lehane Grading

Grade I: The entire vocal cords are visible
Grade II: Parts of the vocal cords are visible
Grade III: The epiglottis is visible, but the vocal cords are not
Grade IV: Epiglottis is not even visible

EMS Medical Director:	Dr. Brendan Hawthorn	***Signature on file***
EMS Director:	Jason M. Lewis	***Signature on file***
Sedation Assisted Intubation - 203		**Effective Date: 5/01/2022**

THIS STANDING ORDER IS TO BE USED IN CONJUCTION WITH THE AIRWAY PROGRESSION

Paramedic

Conscious and/or spontaneously breathing patients, who require immediate airway control to prevent severe deterioration (i.e. airway burns), may require sedation to achieve intubation. This protocol should be used with extreme caution and with enough personnel to safely employ its use.

PRE-MEDICATE

- **Hurricaine Spray PRN for decreasing gag reflex.**
- **Fentanyl 1-3 mcg/kg PRN (Max Dose 250 mcg)**
  - Onset: 1-3 minutes
  - Duration:15-30 minutes
  - Used for blunting of circulatory responses to intubation or suspected/known increased ICP.
  - **USE CAUTION IN MULTI-SYSTEM TRAUMA PATIENTS**

INITIAL SEDATION

For the hemodynamically STABLE or HYPERTENSIVE patient:

- **Etomidate 0.3 mg/kg IV (Max Dose: 40 mg)**
  - *Onset: 15-45 seconds*
  - *Duration: 3-12 minutes*

For the hemodynamically UNSTABLE, SEPTIC or HYPOTENSIVE patient:

- **Ketamine 1-2 mg/kg IV/IO; (Max Dose: 500 mg)**
  - *Onset: less than 30 seconds*
  - *Duration: 5-15 minutes*

CONTINUED MAINTENANCE

MAP>80 or SBP>120

- **Fentanyl 1-3 mcg/kg IVP every 10-15 minutes PRN**

OR

- **Versed 0.25-0.05 mg/kg IV every 5-10 minutes**
  - *Closely monitor SBP*

OR

- **Ativan 1-4 mg IV every 15 minutes**

MAP<80 or SBP<120

- **Fentanyl 0.5 – 1 mcg/kg IVP every 10-15 minutes PRN**
- **Ketamine 0.5 – 1 mg/kg IVP slowly over 1 minute (Max Dose: 250 mg)**

May Consider if NECESSARY:

- **Versed 0.25-0.05 mg/kg IV every 5-10 minutes**
  - *Closely monitor SBP*

OR

- **Ativan 1-4 mg IV every 15 minutes**

THIS STANDING ORDER IS TO BE USED IN CONJUCTION WITH THE AIRWAY PROGRESSION

EMS Medical Director:	Dr. Brendan Hawthorn	***Signature on file***
EMS Director:	Jason M. Lewis	***Signature on file***
204 – BiPAP / CPAP Procedure		**Effective Date: 12/01/2022**

Considerations

Absolute Contraindications:

1. **Severe respiratory failure without spontaneous breathing**
2. **Decreased level of consciousness that prevents the patient's ability to protect their own airway**
3. **Inability to maintain a patent airway or adequately clear secretions**
4. **Non-compliant patients**

Relative Contraindications:

1. **Risk for aspiration of gastric content. (Consider NG tube placement)**
2. **Pre-existing pneumothorax or pneumomediastinum, which may be complicated due to increased pressure.**
3. **Hypotension**
4. **Acute sinusitis or otitis media**
5. **Epistaxis**
6. **Recent facial, oral or skull surgery or trauma**

Potential Complications:

1. **Mask discomfort**
2. **Gastric distention**
3. **Increased intracranial pressure**
4. **Pulmonary barotraumas**
5. **Cardiovascular compromise**

SIGNS OF THERAPY FAILURE:

- **Tachypnea**
- **Hemodynamic Instability**
- **Decreasing GCS**
- **Poor Tolerance**
- **Excessive secretions or vomiting**
- **Agitation**
- **Pneumothorax**
- **Apnea**

EMT-I

SELECTION OF THERAPY

Refractory Hypoxemia	Hypercapnia	Hypoxemia & Hypercapnia
If refractory hypoxemia is the sole issue, CPAP is desired since ventilatory assistance is not an issue. As evidence by EtCo2, it is not uncommon for CHF patients suffering acute refractory hypoxemia to be hyperventilating. In such cases, additional ventilatory support will further decrease an already low EtCO2.	If hypercapnia is the sole issue, BiPAP with a low ePAP setting is desired. Here ventilation is the issue while oxygenation augmentation is not.	If both hypoxemia and hypercapnia are an issue, BiPAP with a higher ePAP setting is desired treatment. Here both ventilatory assistance and oxygenation augmentation are of concern.

AEMT

CPAP Procedure

1. **Ensure adequate oxygen supply for CPAP**
2. **Explain procedure to the patient**
3. **Attach device CPAP to flowmeter / regulator (if no blender, use 100% oxygen)**
4. **Place device in CPAP mode**
5. **Adjust flowmeter / regulator to set CPAP to % cm H20**
6. **Place appropriate size mask on patient and check for leaks.**
7. **Confirm desired pressure and adjust flowmeter as needed.**
8. **Increase in increments of 2.5 cm H2O, as tolerated, to maintain desired SpO2 (90%)**

***If CPAP settings of 10 cm H2O fails to maintain target saturation, consider manual ventilations and potential intubation.**

Paramedic

BiPAP Procedure

1. **Ensure adequate oxygen supply for CPAP device.**
2. **Explain the procedure to the patient.**
3. **Attach device to flowmeter/regulator. If an oxygen blender is available set FiO_2 from 21% - 50% to maintain desired SpO2 (≥ 88% for known CO_2 retainers; 90% if refractory hypoxemia also an issue; ≥ 92% for all others). If refractory hypoxemia is also an issue, and a blender is not available use 100% oxygen as stated above under CPAP settings for Refractory Hypoxemia.**
4. **Place device in CPAP mode.**
5. **Adjust flowmeter/regulator to set CPAP pressure to 5 cm H_2O using attached yellow sticker as a guide.**
6. **Place appropriate size mask on patient and check for leaks.**
7. **If no leaks adjust flow to set CPAP pressure to a minimum of 8 cmH_2O.**
8. **Place device in BiLevel mode.**
9. **Adjust flowmeter/regulator to set CPAP to 10 cmH_2O, this now becomes the iPAP. (Pressure when the patient inhales)**
10. **Adjust the ePAP knob to set the ePAP to 5 cmH_2O (Pressure when the patient exhales). A setting of 10/5 will provide pressure support of 5 cmH_2O.**
11. **Assess the patient.**
12. **If the patient needs additional ventilatory support the iPAP can be increased to a maximum of 13 cm H_2O with FlowSafe II+ providing pressure support of 8 cmH_2O. If pressure support of 8 cmH_2O fails to maintain desired SaO_2 or $EtCO_2$ consider possible intubation and manual ventilation.**

P For anxiety / agitation to assist with CPAP/BiPAP consider:

Ativan 0.5 – 1mg IV/IO/IM

EMS Medical Director:	Dr. Brendan Hawthorn	***Signature on file***
EMS Director:	Jason M. Lewis	***Signature on file***
205 – Venous Access Progression		**Effective Date: 12/01/2022**

EMT

NOT APPLICABLE

EMT-I

AEMT

Paramedic

Intravenous Access Procedure

- All attempts at IV access shall be performed using aseptic technique.
- All attempts at IV access shall be documented appropriately including all complications.
- **External jugular vein cannulation is allowed for EMT-I, AEMT and Paramedic levels only.**
- Venipuncture site and catheter size should be determined based on the needs of the patient while in EMS care, the patient's anatomy, as well as potential needs after care is transferred to hospital staff if possible.
    - Examples include, but are not limited to:
        - Attempting 18 gauge IV or larger in AC or higher for patients who may require a CT scan.
        - Avoiding cannulation on the right side (particularly below the AC) if the patient is a candidate for a heart catheterization.

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1. All materials should be gathered and prepared for use prior to attempting IV access.
2. Constricting band should be applied at least 2'' above the prospective site.
3. Cleanse the site with an alcohol prep pad in a circular, outward motion.
4. Select appropriate size IV catheter.
5. While drawing distal traction, insert the stylette (bevel up) until the flash chamber indicates venipuncture.
6. While maintaining distal traction, advance the catheter just far enough to introduce the end of cannula into the vein.
7. Feed the cannula over the stylette until the hub is flush with the patient's skin.
8. Remove the constricting band and apply pressure to the vein proximal to the site to occlude.
9. Remove the stylette, placing it immediately in the sharps container.
10. Connect the extension set to the hub, flushing to assure a patent line.
11. Secure in place with veni-guard and/or tape.

EMS Medical Director:	Dr. Brendan Hawthorn	***Signature on file***
EMS Director:	Jason M. Lewis	***Signature on file***
206 ECG Placement Procedure		**Effective Date: 12/01/2022**

Lead placement, ECG acquire and Transmit ONLY

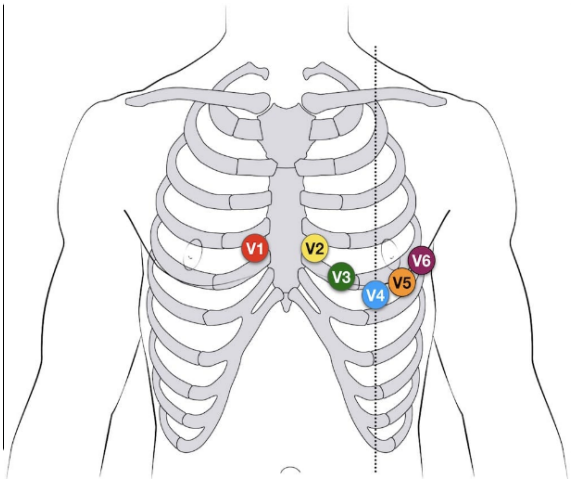
EMT

EMT-I

AEMT

Placement, Interpretation and Monitoring

Paramedic



- V_1 4th intercostal space to the right of the sternum
- V_2 4th intercostal space to the left of the sternum
- V_3 Directly between the leads V_2 and V_4
- V_4 5th intercostal space at midclavicular line
- V_5 Level with V_4 at left anterior axillary line
- V_6 Level with V_5 at midaxillary line *(directly under the midpoint of the armpit)*

Location	ST ↑	ST ↓
Anterior	I, aVL, V1-6	III and aVF
Lateral	I, aVL, V5-6	II, III, aVF
Inferior	II, III, aVF	I and aVL
Right Ventricle	V1 and $V4_R$ III > II	I and aVL

Lead I Lateral	aVR	V1 Septal	V4 Anterior
Lead II Inferior	aVL Lateral	V2 Septal	V5 Lateral
Lead III Inferior	aVF Inferior	V3 Anterior	V6 Lateral

EMS Medical Director:	Dr. Brendan Hawthorn	***Signature on file***
EMS Director:	Jason M. Lewis	***Signature on file***
207 – Intraosseous Access Progression		**Effective Date: 12/01/2022**

EMT-I

AEMT

Paramedic

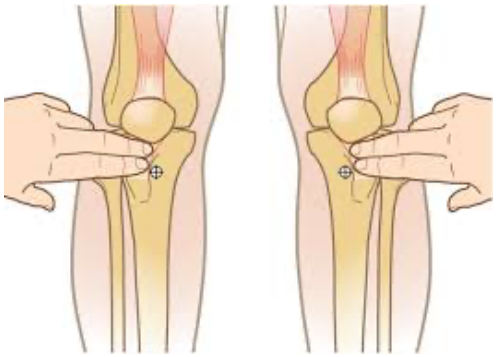
Intraosseous Access Progression

INDICATIONS:

- **Intraosseous access in indicated in any medically necessary case where vascular access is unobtainable and urgent or emergent pharmaceutical intervention is necessary or anticipated.**

CONTRAINDICATIONS: (Absolute)

- **Fracture in the target bone**
- **Previous, significant orthopedic procedure at the target site**
- **Prosthetic limb or joint**
- **IO access in the past 48 hours of the target bone**
- **Infection at the target site.**



APPROVED SITES:

- **Proximal humerus (Adults Only)**
- **Proximal tibia (Adults and Pediatrics)**

PROGRESSION:

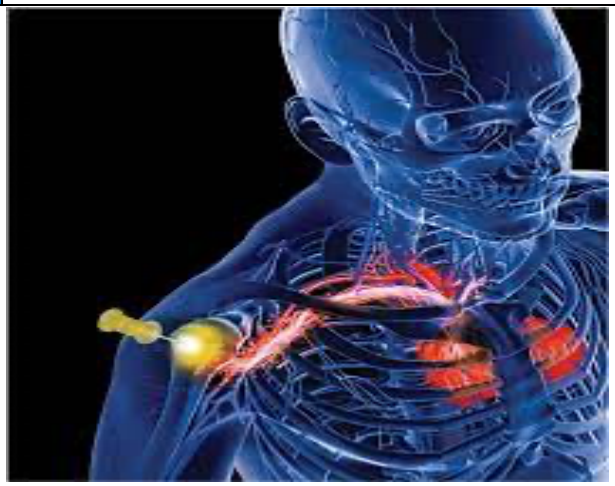
1. **Prepare all equipment and cleans the target site with betadine using aseptic technique**
2. **Attach selected needle to drill and remove the safety cap**
3. **Remove the trigger guard**
4. **Push needle through the skin until the needle touches bone. (At least one black line must be visible outside the skin)**
5. **Apply gentle to moderate pressure and squeeze the trigger**
6. **IN ADULTS: Advance the needle approximately 1-2 cm into the medullary space; in proximal humerus for most adults, needle should be advanced 2 cm or until the hub is flush or against the skin.**
7. **IN PEDS: Release the trigger when a sudden "give" or "pop" is felt, indicating the entry into medullary space.**
8. **Stabilize the needle hub, disconnect the driver and remove the stylet.**
9. **Attach a primed EZ-Connect extension set to the hub, firmly secure by twisting clockwise.**
10. **Stabilize the site.**

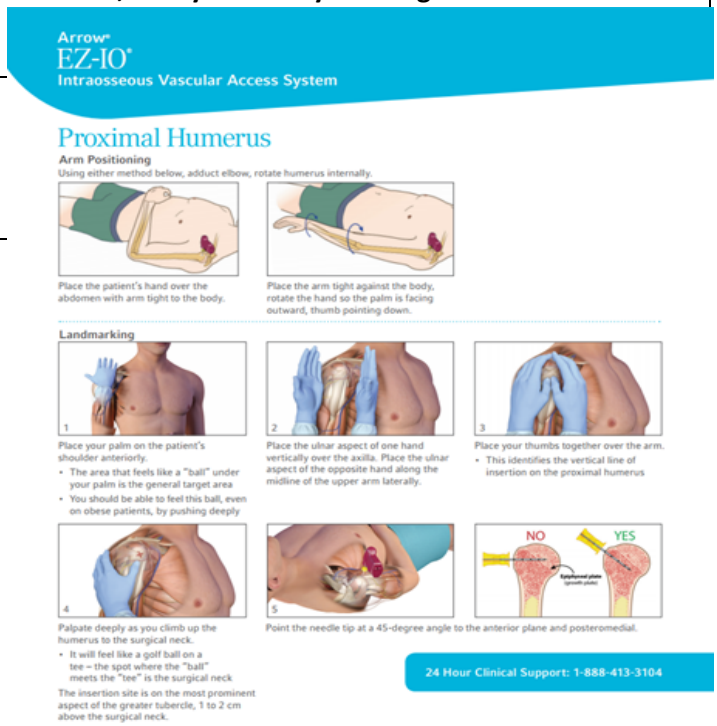
FOR PATEINTS RESPONSIVE TO PAIN CONSIDER:

Lidocaine

Adult: 40mg IO

Pediatric: 0.5 mg/kg (20mg MAX)





EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
208 – Medical Helicopter Use		**Effective Date: 5/01/2022**

EMT

EMT-I

AEMT

Paramedic

Purpose:

EMS Medical Director:	Dr. Brendan Hawthorn	***Signature on file***
EMS Director:	Jason M. Lewis	***Signature on file***
211 – Spinal Immobilization Progression		**Effective Date: 12/01/2022**

EMT

EMT-I

AEMT

Paramedic

Spinal Immobilization Progression

- **Selective Spinal Motion Restriction Criteria**
  - **NSAIDS EXAM – All answers must be "NO" for no spinal restriction.**
    - **N – Neuro Exam: Any focal deficit?**
    - **S – Significant Mechanism: Ejection, significant fall, sudden deceleration injury?**
    - **A – Alertness: Any change in mental status?**
    - **I – Intoxication: Any evidence of drug or alcohol intoxication?**
    - **D – Distracting injury: Any painful injury that may distract from spinal pain?**
    - **S – Spinal Exam: Any point tenderness to spinal processes or pain with ROM?**
  - ***Patients meeting all the above criteria do not require spinal motion restriction. However, patients who fail one or more criteria above require spinal motion restriction, but do NOT always require use of the long spine board.***
  - ***Long spine boards are NOT considered standard of care in most cases of potential spinal injury. Spinal motion restriction with cervical collar and securing patient to cot while padding all void areas is appropriate in most cases.***

- **Manual C-spine Control**
- **Long Spine Board**
  - **C-spine must be maintained throughout process.**
  - **Assess distal pulses, distal motor function and distal sensation.**
  - **Place appropriate size C-collar and secure.**
  - **Log roll patient, inspect the spine, roll patient to long spine board.**
  - **Properly position patient on LSB using vertical movements.**
  - **Secure the patient's torso, pelvis and legs.**
  - **Secure the patient's head.**
  - **Reassess distal pulses, distal motor function and distal sensation.**
- **Short Spine Board (KED)**
  - **C-spine must be maintained throughout process.**
  - **Assess distal pulses, distal motor function and distal sensation.**
  - **Place appropriate size C-collar and secure.**
  - **Place KED and affix firmly in the axillary area.**
  - **Secure straps as follow: middle, bottom, top, legs, head.**
  - **Place patient on Long Spine Board and release the leg straps**
  - **Properly position patient on LSB using vertical movements.**
  - **Secure the patient's torso, pelvis and legs.**
  - **Secure the patient's head.**
  - **Reassess distal pulses, distal motor function and distal sensation.**

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Allergic Reaction / Anaphylaxis - 301		**Effective Date: 6/01/2024**

Considerations

Allergic reactions vary in severity from mild urticaria to severe anaphylaxis. Treatment is based on the severity of symptoms.

Subjective: contact with a known or potential allergen

Objective:

Mild: localized edema and itching

Moderate: systemic cutaneous effects such as hives and itching

Severe: respiratory distress, wheezing, stridor, throat tightness, orofacial edema, and/or hypotension.

- Assessment and History (SAMPLE)
  - Monitor vital signs (BP, HR, RR, Oximetry)
  - A P Monitor capnography (if appropriate and available)
  - P Initiate cardiac monitor
  - P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)
    - ➢ E – I – A Obtain and transmit 12-lead ECG (if appropriate and does not delay care)

A high index of suspicion should exist with those patients who have a known contact with an allergen but have yet to develop signs or symptoms. These patients should be monitored closely as symptoms can appear and/or worsen rapidly.

EMT

Oxygen Therapy
(Appropriate for degree of distress)

****MAY ASSIST PATIENT WITH THEIR OWN EPINEPHRINE AUTOINJECTOR****

EMT-I

Albuterol 2.5mg OR Xopenex 0.63mg
May repeat PRN for wheezing.

IV / IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

AEMT

Anaphylaxis:
Epinephrine 1:1000
0.3-0.5 mg IM
(May repeat every 5 minutes X 2; PRN)

Paramedic

Benadryl
25-50 mg IV/IM
(Contraindicated in asthma)

Solumedrol
125 mg IV

Pepcid
20 mg IV

Reviewed: 9/19, 6/21, 8/22, 2/24, 5/24

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Altered Mental Status (unknown) - 302		**Effective Date: 6/01/2024**

ASSESSMENT

- **Primary Survey**
  - Determine Responsiveness (AVPU); Document initial GCS; Document GCS at destination (if transported)
  - Assure Patent Airway → Refer to Airway Management Progression if indicated.
  - Assess Breathing (rate, quality, and degree of distress) → Refer to Respiratory Distress Protocol if indicated.
  - Assess Circulation (rate, rhythm, and quality) → Refer to Shock Protocol if indicated.

- **Secondary Assessment and History (SAMPLE)**
  - Monitor vital signs (BP, HR, RR, Oximetry)
  - A P Monitor capnography (if appropriate and available)
  - Check blood glucose level → Refer to Altered Blood Glucose Protocol as indicated.
  - P Initiate cardiac monitor
  - P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)
    - E – I – A Obtain and transmit 12-lead ECG (if appropriate and does not delay care)
  - Perform physical exam DCAPBTLS.
- **Determine possible Causes – (AEIOU-TIPS)**
  - **A – alcohol, abuse of substance, acidosis**
  - **E – environmental, epilepsy, electrolytes**
  - **I – infection**
  - **O – overdose, opiates**
  - **U – uremia**
  - **T – trauma**
  - **I – insulin**
  - **P – psychogenic**
  - **S – stroke, shock**

EMT

Oxygen Therapy
(Appropriate for degree of distress)

EMT-I

IV / IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

AEMT

Paramedic

AMS for unknown reason with compromise of airway or respiratory depression:
Narcan
0.4 – 2 mg IV/IN/IO
(May repeat PRN to a MAX of 8mg total)

Reviewed: 8/22, 2/24, 4/24

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Respiratory Distress (Bronchospasm) - 303		**Effective Date: 6/01/2024**

Considerations

Any patient with dyspnea should be monitored and treated aggressively. Extended periods of exertion can cause the patient to rapidly deteriorate into respiratory failure.

Subjective: Complaints of dyspnea or shortness of breath.
Objective: Audible wheezes, auscultated wheezes or diminished breath sounds, accessory muscle usage, cough, chest wall pain,

- Assessment and History (SAMPLE)
  - Monitor vital signs (BP, HR, RR, Oximetry)
  - A P Monitor capnography (if appropriate and available)
  - P Initiate cardiac monitor
  - P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)
    - ➢ E – I – A Obtain and transmit 12-lead ECG (if appropriate and does not delay care)

EMT

Oxygen Therapy
(Appropriate for degree of distress)
CPAP PROCEDURE AS INDICATED

EMT-I

Albuterol 2.5 mg OR Xopenex 0.63 mg; nebulized
May repeat PRN for wheezing.

COPD: Consider initial treatment mixed with Atrovent 0.5mg (MAX dose 0.5mg total)

BiPAP PROCEDURE AS INDICATED

IV / IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

AEMT

IF SEVERE:
Epinephrine 1:1000
0.3-0.5 mg IM
(May repeat every 5 minutes X 2; PRN)

Paramedic

Solumedrol
125mg IV/IO

FOR MODERATE TO SEVERE ASTHMA REFRACTORY TO Albuterol / Xopenex:
Magnesium Sulfate
2-4 grams in 250 ml D5W IV/IO over 10 minutes
May mix with NS if D5W is unavailable.

For anxiety / agitation to assist with CPAP/BiPAP consider: USE CAUTION
Ativan 0.5 – 1 mg IV/IO

Reviewed: 2/24, 4/24

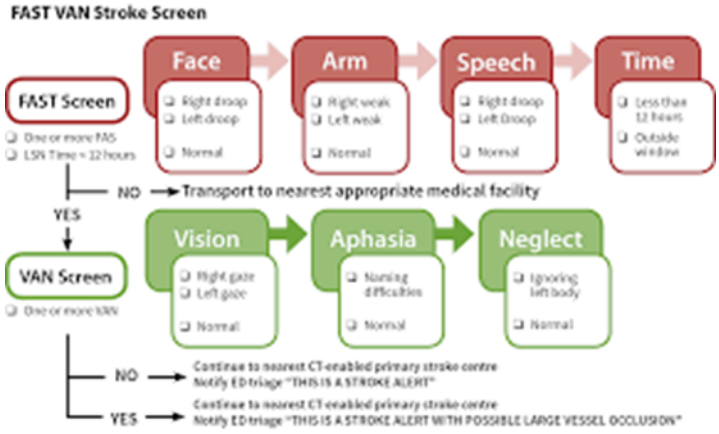
EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
CVA/Stroke – 304		**Effective Date: 6/01/2024**

-Considerations

Consider thrombectomy capable facility if:

- Symptoms are greater than 4.5 hours from onset
- The patient is having a wake-up stroke unknown time of onset

ANTICIPATE THE NECESSITY FOR AIRWAY MANAGEMENT.



Cincinnati Prehospital Stroke Severity Scale

2 points: Conjugate gaze deviation (≥ 1 on NIHSS item for Gaze)

1 point: Incorrectly answers at least one of two level of consciousness questions on NIHSS (age or current month) **and** does not follow at least one of two commands (close eyes, open and close hand) (≥ 1 on the NIHSS item for Level of Consciousness 1b and 1c)

1 point: Cannot hold arm (either right, left or both) up for 10 seconds before arm(s) falls to bed (≥ 2 on the NIHSS item for Motor Arm)

EMERGENT TRANSPORT TO APPROPRIATE FACILITY WITH HEAD ELEVATED AT LEAST 30°

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

AEMT

IV Access X 2
(18 gauge or larger preferred, AC or higher)
If no IV available, may consider a single IO

Normal Saline
Maintenance: 60 ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

Hypotension and hypovolemia should be avoided to facilitate systemic perfusion.

Paramedic

FOR NAUSEA:
Zofran 4-8mg IV or 4mg ODT
(May repeat PRN to a MAX of 8 mg total)

For marked hypertension [SBP>220 and/or DBP >120]
Labetalol 10 mg IV
(May repeat once after 10 minutes)

DOCUMENTATION STANDARDS:
Last Known Well Time
tPA Checklist

[1] the reference guidance for this section is the ***2019 AHA Powers et al*** statement on early management of patients with acute ischemic stroke

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
General Medical - 305		**Effective Date: 06/01/2024**

Considerations

Objective: Complaints of general sickness, non-traumatic abdominal / flank pain, flu-symptoms, fever, nausea, vomiting, diarrhea,

Assessment:

- Assessment and History (SAMPLE)
  - Monitor vital signs (BP, HR, RR, Oximetry)
  - A-P Monitor capnography (if appropriate and available)
  - P Initiate cardiac monitor
  - P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)
    - E-A Obtain and transmit 12-lead ECG (if appropriate and does not delay care)

EMT

Oxygen Therapy
(Appropriate for degree of distress)

EMT-I

****IV / IO Access****
Normal Saline
Maintenance: 60 ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

AEMT

FOR NAUSEA:
PRIMARY - Zofran
4 - 8mg IV or 4mg ODT
(May repeat once in 15 minutes to a MAX of 8mg Total)
(If no IV access, may give 4 – 8mg IM in 4mg increments)

Paramedic

FOR NAUSEA REFRACTORY TO ZOFRAN ADMINISTRATION
SECONDARY - Compazine
5-10 mg slow IVP or IM [MAX:10 mg]
(IV administration should not exceed 5mg/minute]

For non-GI hemorrhages in the presence of physiologic signs of shock (elevated pulse, hypotension, etc.) consider:
Tranexamic Acid (TXA)
2 grams in Normal Saline IV/IO over 10 minutes

FOR PAIN MANAGEMENT SECONDARY TO SUSPECTED KIDNEY STONE(S):
REFER TO PAIN MANAGEMENT PROTOCOL - 320

Reviewed: 8/22, 2/24, 5/24

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Environmental Exposure - 306		**Effective Date: 6/01/2024**

Considerations

I. HYPERTHERMIA

a. Heat Cramps:

i. Remove patient from hot environment, if able.

ii. Remove excessive clothing.

b. Heat Exhaustion:

i. Monitor patient for changes in mental status.

ii. Obtain a temperature.

c. Heat Stroke:

i. If temperature is greater than 103 and due to the environment apply ice packs to the axilla and groin area.

ii. Do not cool patient to the point of shivering.

iii. If the patient is seizing → refer to Seizure Protocol as indicated.

II. HYPOTHERMIA

a. Mild Hypothermia:

i. Remove patient from cold environment.

ii. Remove any wet garments.

iii. Keep patient supine and avoid rough handling.

iv. Protect with blankets.

v. For mild hypothermia, warm IV fluids can be used if available.

vi. Apply hot packs to the axilla and groin.

b. Active rewarming should be avoided in the pre-hospital setting for patients who are severely hypothermic (i.e. not shivering, altered mental status).

EMT

Oxygen Therapy
(Appropriate for degree of distress)

EMT-I

AEMT

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

Paramedic

FOR SEIZURES:
Refer to seizure protocol – 311

FOR PAIN MANAGEMENT ASSOCIATED WITH REWARMING:
Refer to pain management protocol - 320

Reviewed: 8/22, 2/24, 4/24

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Altered Blood Glucose - 307		**Effective Date: 6/01/2024**

Considerations

Assessment: Symptoms may include:

Hypoglycemia:	**Hyperglycemia:**
Altered mental status, unresponsiveness, fatigue, confusion, seizures, dysphasia, pale skin, trembling, anxiety, diaphoresis, hunger, irritability, combative behavior	Nausea, vomiting, weakness, confusion, altered mental status, coma, abdominal pain, excessive thirst, frequent urination, dry mouth, fruity-smelling breath.

- Assessment and History (SAMPLE)
  - Monitor vital signs (BP, HR, RR, Oximetry)
  - A P Monitor capnography (if appropriate and available)
  - Blood Glucose Evaluation
  - P Initiate cardiac monitor
  - P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)
    - E – I – A Obtain and transmit 12-lead ECG (if appropriate and does not delay care)

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

Hypoglycemia BGL<60 and symptomatic:

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus for Hypotension: 500 – 1000 ml
Oral Glucose 15 grams
(If not contraindicated by airway or inability to swallow)
10% Dextrose 125ml IV/IO
(May repeat PRN to maintain BGL>60)

Hyperglycemia BGL>200 and symptomatic:

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus for Hyperglycemia: 500 – 1000 ml

***Special Considerations*: I – A – P**

50% Dextrose 12.5 – 25 grams IV/IO/PR

If patient is in cardiac arrest, is combative, or there is no suitable IV/IO site.

AEMT

FOR NAUSEA:
PRIMARY – Zofran
4 - 8mg IV or 4mg ODT
(May repeat once in 15 minutes to a MAX of 8mg Total)
(If no IV access, may give 4 – 8mg IM in 4mg increments)

Paramedic

FOR NAUSEA REFRACTORY TO ZOFRAN ADMINISTRATION
SECONDARY - Compazine
5-10 mg slow IVP or IM [MAX:10 mg]
(IV administration should not exceed 5mg/minute]

Reviewed: 2/24, 4/24

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Hypertensive Crisis - 308		**Effective Date: 6/01/2024**

Considerations

NOTE: Hypertension can be compensatory in certain situations. A thorough and complete patient assessment may reveal the underlying cause of hypertension. Lowering a patient's blood pressure should be attempted only when the criteria of this order are met.

Objective: headache, chest pain, shortness of breath, vertigo, nausea and vomiting, epistaxis

Assessment:

- Assessment and History (SAMPLE)
  - Monitor vital signs (BP, HR, RR, Oximetry)
  - A P Monitor capnography (if appropriate and available)
  - P Initiate cardiac monitor
  - P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)
    - E – I – A Obtain and transmit 12-lead ECG (if appropriate and does not delay care)

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)

AEMT

FOR NAUSEA:
PRIMARY - Zofran
4 - 8mg IV or 4mg ODT
(May repeat once in 15 minutes to a MAX of 8mg Total)
(If no IV access, may give 4 – 8mg IM in 4mg increments)

Paramedic

If systolic pressure is >220 and/or diastolic pressure is >120 and any of the following:

- Chest pain with suspicion of dissection
- Altered mental status
- Congestive heart failure
- CVA symptoms ***(REFER TO CVA/STROKE STANDING ORDER 304)***

Labetalol 10 mg IV/IO
(May repeat once in 10 minutes at 20mg IV/IO)

FOR NAUSEA REFRACTORY TO ZOFRAN ADMINISTRATION
SECONDARY - Compazine
5-10 mg slow IVP or IM [MAX:10 mg]
(IV administration should not exceed 5mg/minute]

SEVERE PRE-ECLAMPSIA
IF PATIENT IS:

1. **At least 20 weeks gestation to 6 weeks postpartum AND**
2. **New onset of hypertension AND**
3. **SBP> 180 and/or DBP> 110**

CONSIDER:
Magnesium Sulfate
2 grams in 250 ml D5W IV/IO over 10 minutes
(May mix with NS if D5W is unavailable)

REFER TO OBSTETRIC CRISIS- 310

Reviewed: 8/22, 2/24, 4/24

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Child Birth - 309		**Effective Date: 6/01/2024**

Considerations

Objective: spasmodic pain, vaginal discharge, or bleeding, crowning or urge to push, meconium

Assessment:

- **Secondary Assessment and History (SAMPLE)**
  - **Monitor vital signs (BP, HR, RR, Oximetry)**
  - **AP Monitor capnography (if appropriate and available)**
  - **Check blood glucose level**
  - **P Initiate cardiac monitor**
  - **P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)**
  - **Perform physical exam DCAPBTLS**

EMT

Normal Presentation

- Deliver and support the head.
- Suction Mouth, then nose; If meconium is present, repeat several times.
- Deliver upper shoulder, then lower shoulder.
- Deliver the remainder of the baby.
- Clamp the umbilical cord twice (approximately 6'' form the baby's abdomen) then cut the cord between the two clamps.
- If multiple births, repeat steps.
- Deliver placenta.

Limb Presentation

Place patient in the left lateral recumbent position.

Breech Presentation

Support body of the baby during delivery of head.

Cord Presentation

Position patient on elbows and knees with hips elevated.

Wrap cord in moist dressing.

Insert gloved hand to lift baby off the cord; obtain and document cord pulse.

Nuchal Cord

Insert gloved hand to lift the baby off the cord; obtain and document cord pulse.

Apgar Scale (evaluate @ 1 and 5 minutes postpartum)

Sign		2	1	0
A	Activity (muscle tone)	Active	Arms and legs flexed	Absent
P	Pulse	>100 bpm	<100 bpm	Absent
G	Grimace (reflex irritability)	Sneezes, coughs, pulls away	Grimaces	No response
A	Appearance (skin color)	Normal over entire body	Normal except extremities	Cyanotic or pale all over
R	Respirations	Good, crying	Slow, irregular	Absent

EMT-I

AEMT

IV/IO Access

Normal Saline

Maintenance: 60ml/hr (KVO)

For hypotension: 20 ml/kg

(May repeat PRN to maintain a SBP>90 mmHg)

Paramedic

FOR SEVERE POST DELIVERY BLEEDING AND SIGNS OF POOR PERFUSION CONSIDER:

Tranexamic Acid (TXA)

2 grams in Normal Saline IV/IO over 10 minutes

Reviewed: 8/22, 2/24, 4/24

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Obstetric Crisis - 310		**Effective Date: 12/01/2022**

Considerations

Purpose: Pre-eclampsia, eclampsia, placenta previa, abruptio placenta, spontaneous abortion
Objective: Signs and symptoms may include vaginal bleeding, abdominal pain, seizures, hypertension, severe headache, visual changes, edema to the hands or face.

Pre-eclampsia / eclampsia	Placenta Previa	Abruptio Placenta	Spontaneous Abortion
SBP> 180 or DBP>110 Headache Visual Disturbances Seizure (eclampsia)	Bright red vaginal bleeding during the second half of pregnancy Often painless Can cause heavy bleeding during or after delivery	After 20 weeks Vaginal bleeding Abdominal / Back Pain	Prior to 20 weeks Fluid, blood, or tissue passing from the vagina Abdominal / back pain

FOR PATIENTS WITH PRE-ECLAMPSIA / ECLAMPSIA, EXTERNAL STIMULI COULD PRECIPITATE SEIZURES, TRANSPORT SHOULD BE ACHIEVED WITHOUT LIGHTS AND SIRENS IF POSSIBLE.

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

AEMT

IV/IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
For hypotension: 20 ml/kg
(May repeat to maintain SBP >90 mmHg)

Paramedic

SEVERE PRE-ECLAMPSIA
IF PATIENT IS:
At least 20 weeks gestation to 6 weeks postpartum AND
New onset of hypertension AND
SBP> 180 and/or DBP> 110
Magnesium Sulfate IV/IO
2 grams in 250ml D5W over 10 minutes
(May mix with NS if D5W is unavailable)

FOR SEIZURE/ECLAMPSIA:
Magnesium Sulfate IV/IO
4 grams in 250ml D5W over 10 minutes
(May mix with NS if D5W is unavailable)

FOR SEIZURE ACTIVITY REFRACTORY TO MAGNESIUM
REFER TO SEIZURE PROTOCOL- 311

Reviewed: 8/22, 2/24

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Seizure - 311		**Effective Date: 6/01/2024**

Considerations

Objective: signs and symptoms include observation of seizure activity, decreased mental status (postictal), sleepiness, incontinence, unconsciousness.

Assessment:

- **Secondary Assessment and History (SAMPLE)**
  - **Monitor vital signs (BP, HR, RR, Oximetry)**
  - **A P Monitor capnography (if appropriate and available)**
  - **Check blood glucose level**
  - **P Initiate cardiac monitor**
  - **P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)**
    - E – I – A Obtain and transmit 12-lead ECG (if appropriate and does not delay care)
  - **Perform physical exam DCAPBTLS**

Status Epilepticus	Grand Mal Seizures	Focal Seizures
Two or more seizures successively without an intervening lucid period or a seizure lasting over five minutes.	**Generally, are associated with a loss of consciousness, incontinence, and oral trauma.**	**Affect only part of the body and are not usually associated with a loss of consciousness.**

Consider possible causes: CNS trauma, tumor, hypoxia, medication non-compliance, infection, fever, alcohol withdrawal, eclampsia, stroke, hyperthermia, hypothermia, hypoglycemia.

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

AEMT

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

Paramedic

Versed
2.5 mg IV/IO (MAX 10mg)
or
5 mg IM/IN (MAX 15mg)
(May repeat every 3 minutes PRN for continuous seizures so long as vitals remain stable)

OR

Ativan
2 mg IV/IM
(May repeat once in 5 minutes)

Reviewed: 8/22, 2/24, 4/24

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Chest Pain/STEMI/nSTEMI - 312		**Effective Date: 6/01/2024**

Considerations

- **Secondary Assessment and History (SAMPLE)**
  - **Monitor vital signs (BP, HR, RR, Oximetry)**
  - **P Monitor capnography (if appropriate and available)**
  - **Check blood glucose level**
  - **P Initiate cardiac monitor**
  - **P Perform and evaluate 12-lead ECG and transmit to destination PCI facility. Repeat 12-lead at least once.**
    - E – I – A Obtain and transmit 12-lead ECG

*****STEMI ALERT SHOULD BE CALLED AS QUICKLY AS POSSIBLE TO PREPARE THE CATH LAB*****

EMT

Oxygen Therapy
(Appropriate for degree of distress)

EMT-I

IV / IO Access
(Consider additional IV if STEMI or nSTEMI)

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus for Hypotension: 500 – 1000 ml titrated

May assist patient with their own: Aspirin 324mg PO (If not contraindicated)

May assist patient with their own: Nitroglycerin 0.4mg SL
(May repeat every 5 minutes X 2 if SBP>100)

AEMT

Aspirin 324mg PO
(If not contraindicated)

Nitroglycerin 0.4mg SL
(May repeat every 5 minutes X 2 if SBP>100)

FOR NAUSEA:
-PRIMARY - Zofran
4 - 8mg IV or 4mg ODT
(May repeat once in 15 minutes to MAX of 8mg Total)
(If no IV access, may give 4 – 8mg IM in 4mg increments)

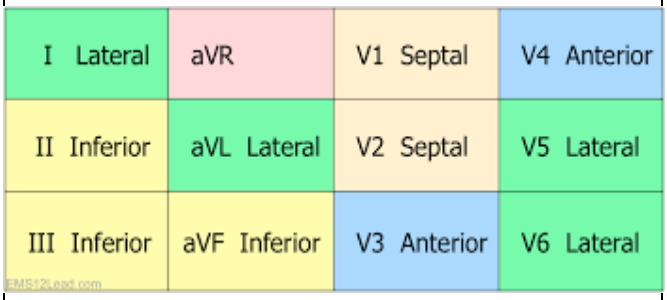
Paramedic

***Dependent on transport time, with improvement of symptoms after second SL Nitroglycerine, may consider:**
Nitroglycerine Paste ½-2 inches, transdermal
(If not contraindicated as in the presence of Inferior ST elevation)

FOR PAIN MANAGEMENT
-PRIMARY - Morphine Sulfate 2 – 5 mg IV/IO/IM
(May repeat X 1, PRN)
Total dosages >15 mg require medical control approval.
****For patients <50kg administer 0.1 mg/kg****
OR
-SECONDARY - Fentanyl
1 mcg/kg; IV/IO/IM
(MAX single dose = 100 mcg; May repeat PRN)
Total dosages >200mcg require medical control approval.
****Should be used first line when SBP<100****

FOR CARDIOGENIC SHOCK:
Norepinephrine
2-20 mcg/min
(4 mg in 250 ml)

FOR NAUSEA REFRACTORY TO ZOFRAN ADMINISTRATION
-SECONDARY - Compazine
5-10 mg slow IVP or IM [MAX:10 mg]
(IV administration should not exceed 5mg/minute]



Reviewed: 4/24

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
CHF / Acute Pulmonary Edema - 313		**Effective Date: 6/01/2024**

Considerations

Objective: respiratory distress, rales, orthopnea, JVD, pink frothy sputum, peripheral edema, diaphoresis, hypotension, shock, chest pain.

Assessment:

- **Secondary Assessment and History (SAMPLE)**
  - **Monitor vital signs (BP, HR, RR, Oximetry)**
  - **A P Monitor capnography (if appropriate and available)**
  - **Check blood glucose level**
  - **P Initiate cardiac monitor**
  - **P Perform and evaluate 12-lead ECG**
    - E – I – A Obtain and transmit 12-lead ECG (if appropriate and does not delay care)

EMT

Oxygen Therapy
(Appropriate for degree of distress)

EMT-I

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus for Hypotension: 20ml/kg titrated **IF NOT CONTRAINDICATED**

AEMT

REFER TO CPAP / BiPAP Procedure [204]

Paramedic

Nitroglycerin 0.4mg SL
(May repeat X 2 if SBP>100 mmHg)
OR
Nitroglycerin Paste
½-2 inches, transdermal
(Maintain SBP > 100 mmHg)

Lasix
40 mg IV/IM
(May repeat once unless contraindicated)

Morphine Sulfate
2-10mg IV/IO
(Maintain SBP > 100 mmHg)

For Anxiety:
Versed 2.5mg IV/IO/IM
OR
Ativan 0.5 – 1 mg IV/IM

For Cardiogenic Shock:
Levophed 2-20 mcg/min IV; titrated
(TITRATE TO: SBP>90mmHg or MAP 70 or greater)

For Hypertensive Crisis (SBP>230 or DBP>130):
Labetalol 10mg IV/IO
(May repeat once in 10 minutes at 20mg IV/IO)

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Bradycardia - 314		**Effective Date: 12/01/2022**

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

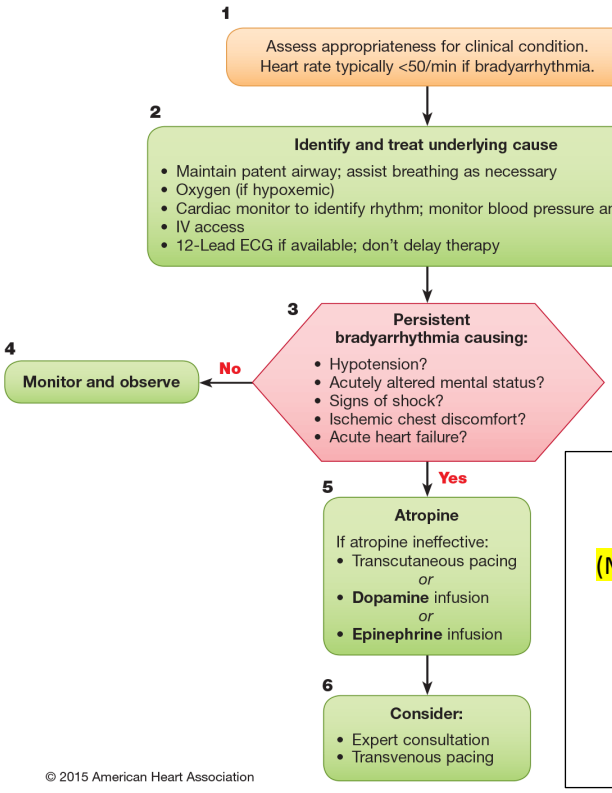
AEMT

IV/IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
For Hypotension: 20 ml/kg

Paramedic

Adult Bradycardia With a Pulse Algorithm



Doses/Details:

Atropine 1mg IV
(May repeat every 3-5 minutes, MAX 3 mg TOTAL)

Epinephrine IV Infusion 2-10 mcg/min
(1 mg of EPI 1:1000 in 250ml NS yields 4mcg/ml)
INFUSE WITH 60 DROP SET

For Pacing, Consider Sedations:
Versed 2.5 mg IV slowly
(May repeat once in 5 minutes)
OR
Ativan 1-2 mg IV/IM

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Tachycardia - 315		**Effective Date: 12/01/2022**

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

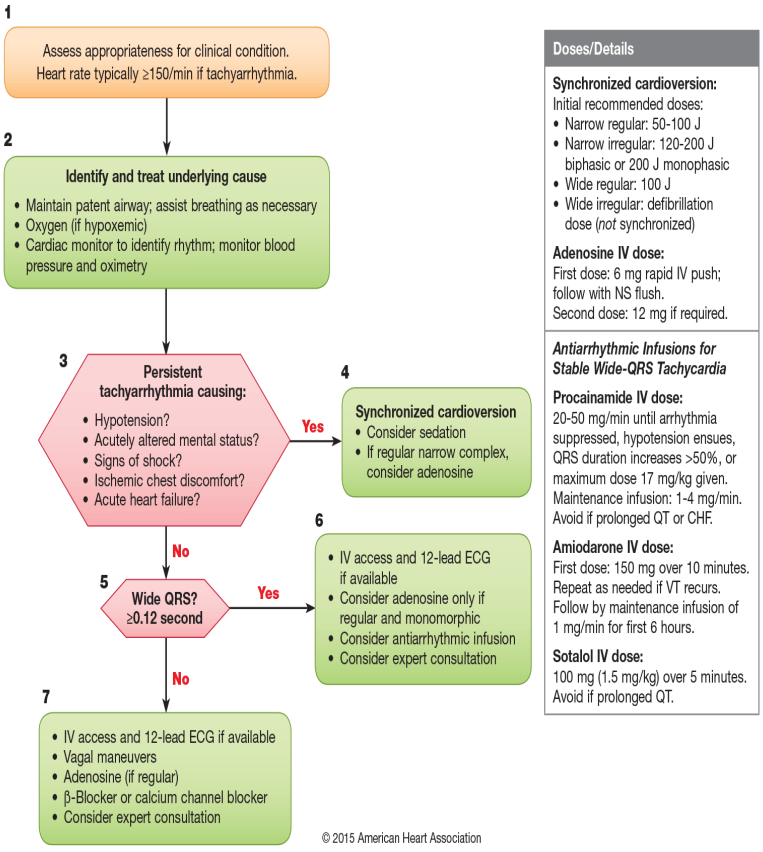
AEMT

IV/IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
For Hypotension: 20 ml/kg

Paramedic

Adult Tachycardia With a Pulse Algorithm



For Cardioversion, Consider Sedation:

Versed 2.5 mg IV/IO slowly
(May repeat once in 5 minutes)
OR
Ativan 1-2 mg IV/IM

IF PATIENT COMPLAINS OF CHEST PAIN, DYSPNEA OR IS HYPERTENSIVE (SBP>150 OR DBP>110, CONSIDER:

Cardizem
Initial Dose = 0.25 mg/kg over 2 minutes (MAX 20mg)
May repeat PRN at 0.35 mg/kg over 2 minutes (MAX 25mg)

MAXIMUM TOTAL DOSE: 45mg

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pulseless Arrest AHA - 316		**Effective Date: 12/01/2022**

Considerations

EXPLORE POSSIBLE CAUSES

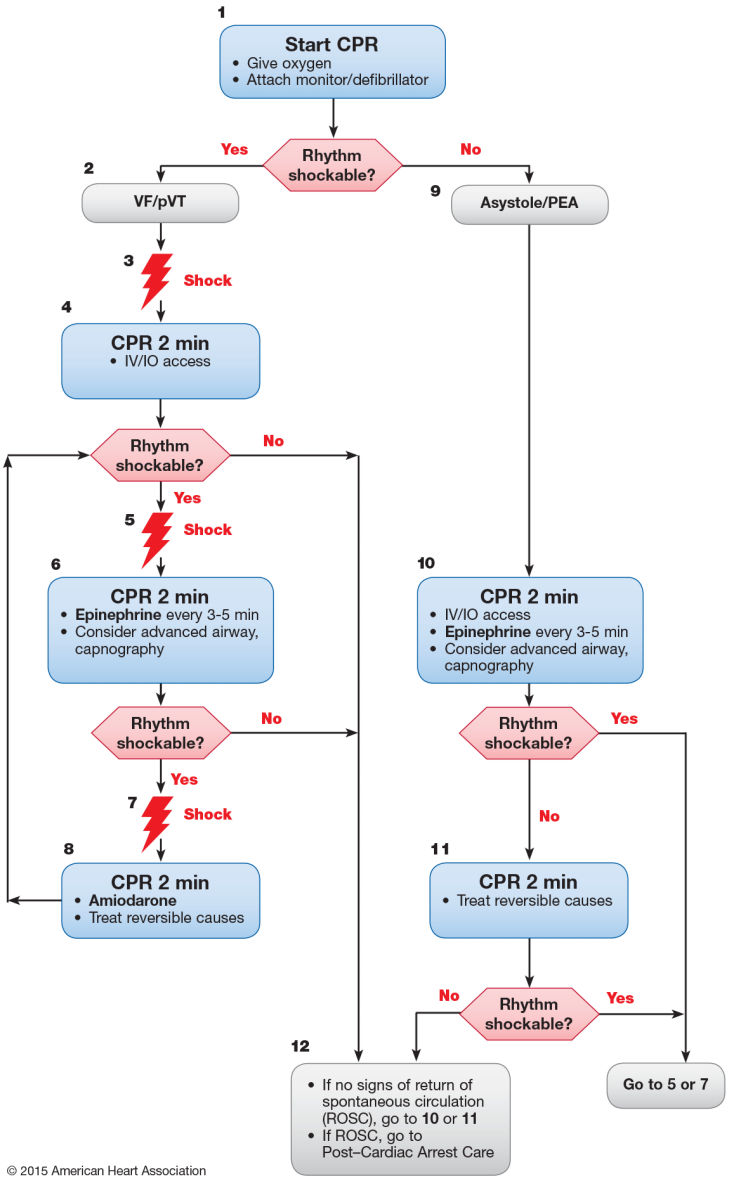
Hypovolemia – Volume infusion — **Tension Pneumothorax – Needle Decompression**
Hypoxia – Oxygenation, Ventilation, CPR — **Tamponade, cardiac – Volume infusion**
Hydrogen ion – Ventilation, CPR — **Toxins – Agent specific antidote**
Hypo/Hyperkalemia – Sodium Bicarbonate, Calcium — **Thrombosis, pulmonary – Volume infusion**
Hypothermia – warming — **Thrombosis, coronary – Emergent PCI**

Passive Insufflation (OPA with High-Flow Oxygen via NRB) should be initiated early in the resuscitation effort.

EFFORTS SHOULD BE DIRECTED AT HIGH QUALITY AND CONTINUOUS COMPRESSIONS WITH LIMITED INTERRUPTIONS

EMT | **EMT-I** | **AEMT** | **Paramedic**

Adult Cardiac Arrest Algorithm—2015 Update



CPR Quality

- Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Rotate compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, 30:2 compression-ventilation ratio.
- Quantitative waveform capnography
  - If P_{ETCO_2} <10 mm Hg, attempt to improve CPR quality.
- Intra-arterial pressure
  - If relaxation phase (diastolic) pressure <20 mm Hg, attempt to improve CPR quality.

Shock Energy for Defibrillation

- **Biphasic:** Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- **Monophasic:** 360 J

Drug Therapy

- **Epinephrine IV/IO dose:** 1 mg every 3-5 minutes
- **Amiodarone IV/IO dose:** First dose: 300 mg bolus. Second dose: 150 mg.

Advanced Airway

- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

Return of Spontaneous Circulation (ROSC)

- Pulse and blood pressure
- Abrupt sustained increase in P_{ETCO_2} (typically ≥40 mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

Reversible Causes

- **H**ypovolemia
- **H**ypoxia
- **H**ydrogen ion (acidosis)
- **H**ypo-/hyperkalemia
- **H**ypothermia
- **T**ension pneumothorax
- **T**amponade, cardiac
- **T**oxins
- **T**hrombosis, pulmonary
- **T**hrombosis, coronary

Reviewed: 8/22

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Behavioral Crisis - 317		**Effective Date: 12/01/2022**

Considerations

The first priority at the scene of a behavioral crisis is the safety of all EMS Personnel.

Objective:

Excited Delirium Syndrome:

- Combination of delirium, psychomotor agitation, anxiety, hallucinations, speech disturbances, disorientation, violent behavior, insensitivity to pain, hyperthermia, and increased strength.
- Potentially life threatening and associated with the use of physical control measures including restraints, TASER, or similar device.
- Most common in male patients with a history of serious mental illness and/or acute or chronic drug abuse, particularly stimulants.

S.A.F.E.R

- **S**tabilize the situation by containing and lowering the stimuli.
- **A**ssess and acknowledge the crisis
- **F**acilitate the identification of resources (chaplain, family, friends, or law enforcement)
- **E**ncourage patient to use resources and take actions in his/her best interest.
- **R**ecover or referral – leave patient in care of a responsible person or professional, or transport to an appropriate facility.

Consider possible medical causes for the patient's behavior:

Hypoxia, intoxication / overdose, hypoglycemia, electrolytes, sepsis, head injury, postictal state, excited delirium

EMT

Implement the *S.A.F.E.R* model

If the patient is an immediate physical threat to themselves or emergency personnel, 4-point restraints may be used. Under no circumstance are patients to be transported restrained in the prone position.

Oxygen Therapy
(Appropriate for degree of distress)

EMT-I

AEMT

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

Paramedic

FOR PATIENTS REQUIRING SEDATION TO PREVENT INJURY TO SELF OR OTHERS

Haldol 5mg IM/IN
(May repeat in 10-15 minutes PRN)

AND

Benadryl 25-50mg IV/IM
(To mitigate or prevent Dystonic Reactions)

FOR ACUTE AGITATION, MAY CONSIDER:

Versed 2.5mg IV or 5mg IM/IN
(May repeat in 10-15 minutes PRN)

Ativan 0.5 – 2 mg IV/IM
(May repeat in 10-15 minutes PRN)

TRANSPORT GUIDELINE:

(1) If a patient has ingested a substance, regardless of the substance or amount, in an attempt at self-harm, EMS should transport the patient to the appropriate hospital emergency department. If the patient is reluctant, or refuses, to be transported to the hospital, the on-line medical control physician should be contacted for consultation.

(2) If a patient has attempted self-harm by physical means, transport should be achieved by the most appropriate agency capable of meeting the patient's needs. If the patient is reluctant, or refuses, to be transported by the agency, the on-line medical control physician should be contacted for consultation.

(3) If a patient has threatened self-harm or harm to others, but has made no actual attempt, the need for a mental health evaluation and treatment may still exist and transportation should be achieved by the safest, most effective means available.

(4) EMS will NOT refuse transport to any patient requesting transportation to an emergency department for a mental health treatment regardless of whether medical necessity can be established. However, every attempt should be made to secure the most appropriate mode of transportation for these patients. If any question exists, supervisory staff should be notified, and medical control consulted.

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Burns - 318		**Effective Date: 6/01/2024**

Considerations

Thermal	Chemical	Electrical
STOP THE BURNING PROCESS **REMOVE SMOLDERING CLOTHING AND JEWELRY** **DO NOT REMOVE STUCK CLOTHING**	**THOROUGHLY BRUSH AWAY DRY CHEMICAL** **USE NS OR STERILE WATER TO IRRIGATE IF NECESSARY AND SAFE.**	**ASSURE ELECTRICAL SOURCE HAS BEEN DISCONNECTED** **LOCATE CONTACT POINTS** **IDENTIFY SOURCE TYPE (AC/DC) AND THE AMOUNT OF VOLTAGE OR AMPERAGE**

EMT

Oxygen Therapy
(Appropriate for degree of distress)

EMT-I
AEMT

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

Request Air Transport PRN

BURN SEVERITY

1st Degree: (superficial)
red and painful

2nd Degree: (partial thickness)
blistering and painful

3rd Degree: (full thickness)
charred or leathery skin, painless

Paramedic

FOR PAIN MANAGEMENT

[PRIMARY for pain management when SBP>100 and not contraindicated]

Morphine Sulfate 2 - 5 mg [IV/IO/IM]
(May repeat 5mg in 15 minutes; Total morphine dosages greater than 10mg require medical control approval)

[PRIMARY for Multi-Trauma or for pain management when SBP<100 and not contraindicated]

Fentanyl 1 mcg/kg [IV/IO/IM] [MAX single dose 100 mcg]
(May repeat up to 100 mcg in 15 minutes; Total fentanyl dosages greater than 200mcg require medical control approval)

[For severe multi-system trauma or SBP<100 where longer acting pain management is indicated:]

Ketamine 0.3 mg/kg IV/IM
(May repeat every 15 minutes PRN)

FOR ANXIETY AND ACUTE AGITATION

Versed 2.5mg [IV/IO] or 5mg [IM/IN]
(May repeat either route once)

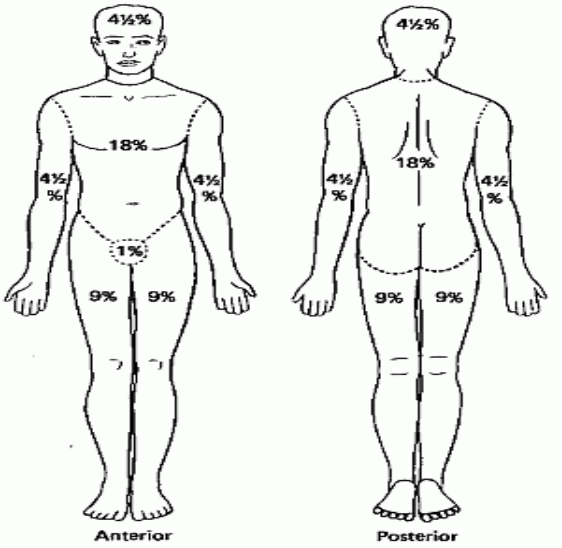
Ativan 1-2mg [IV/IO/IM]
(May repeat once PRN)

AP FOR NAUSEA:

PRIMARY - Zofran
4 - 8mg IV or 4mg ODT
(May repeat once in 15 minutes to a MAX of 8mg Total)
(If no IV access, may give 4 – 8mg IM in 4mg increments)

FOR NAUSEA REFRACTORY TO ZOFRAN ADMINISTRATIONS

SECONDARY - Compazine
5-10 mg slow IVP or IM [MAX:10 mg]
(IV administration should not exceed 5mg/minute]



EXERCISE CARE WHEN ADMINISTERING OPIATES AND BENZODIAZEPINES; THESE COMBINED CAN RESULT IN A DEEPER ANESTHESIA WITH SIGNIFICANT RISK OF RESPIRATORY COMPROMISE.

FOR BURNS TO THE AIRWAY CONSIDER THE AIRWAY PROGRESSION EARLY

Reviewed: 4/24

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Overdose/Poisoning - 319		**Effective Date: 6/01/2024**

Considerations

POISON CONTROL: 800-222-1222

Objective: General symptoms may include changes in mental status, hypotension/hypertension, decreased respiratory rate, tachycardia, dysrhythmias, seizures, malaise, weakness, GI symptoms, dizziness, syncope, chest pain

AGENTS SPECIFIC	
AGENT	**SIGNS AND SYMPTOMS**
Acetaminophen	Initially normal or N/V, tachypnea and AMS may occur later, renal dysfunction, liver failure and/or cerebral edema may manifest
Antidepressants	Decreased heart rate, blood pressure, temperature, and respiratory rate
Anticholinergic	Increased heart rate, increased temperature, dilated pupils, and mental status changes
Insecticides	May include signs and symptoms of organophosphate poisoning
Solvents	Nausea / Vomiting, cough, altered mental status
Stimulants	Increased heart rate, blood pressure, temperature, dilated pupils, seizures and possible violence (excited delirium)
Tricyclic Antidepressants	Decreased mental status, dysrhythmias, seizures, hypotension, coma, death

Assessment:

- **Secondary Assessment and History (SAMPLE)**
  - **Monitor vital signs (BP, HR, RR, Oximetry)**
  - **A P Monitor capnography (if appropriate and available)**
  - **Check blood glucose level**
  - **P Initiate cardiac monitor**
  - **P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)**
    - **E I A Obtain and Transmit a 12-lead ECG (if appropriate and does not delay care)**
  - **Perform physical exam DCAPBTLS**

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

IV/IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
For hypotension: 20 ml/kg

AEMT

FOR OPIATES / NARCOTICS:
Narcan 0.4 – 2 mg IV/IN/IM/IO
(May repeat to a max of 8 mg)

Paramedic

- Tricyclic Antidepressants: **Sodium Bicarbonate 100 mEq IV/IO;** (then 50 mEq in 100 ml NS over 15 minutes)
- Anticholinergic / Organophosphates: After Decontamination; **Atropine 1mg IV/IO** (May repeat in 5 minutes)
- Antipsychotic: For acute dystonic reactions; **Benadryl 25mg IV/IO or 50mg IM** (May repeat in 10 minutes PRN)
- Beta Blocker: **Atropine 1mg IV/IO** (repeat PRN to 3mg MAX); **Transcutaneous Pacing**
- Calcium Channel Blocker: **Calcium Gluconate 10% 500-1000 mg IV/IO** slowly; **Atropine 1mg IV/IO** (may repeat PRN to 3mg MAX, but use caution with wide complex rhythms); **Transcutaneous Pacing**
- Cocaine: **Haldol 5mg IV/IO** or **10mg IM [dorsogluteal site]** (may repeat in 15 minutes to 20mg MAX); **Versed 2.5mg IV/IO/IM** (may repeat once PRN) **Ativan 2mg IV/IO/IM** (may repeat once PRN)

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pain Management - 320		**Effective Date: 6/01/2024**

EMT

EMT-I

Oxygen Therapy
(Appropriate for level of distress)

IV/IO Access
Normal Saline
Maintenance: 60ml/hr (KVO)
For hypotension: 20 ml/kg

AEMT

For Pain Management:
Toradol 15-30 mg [IV/IM] ***if available**
(Contraindicated in pregnancy**)**

FOR NAUSEA:
PRIMARY - Zofran
4 - 8mg IV or 4mg ODT
(May repeat once in 15 minutes to a MAX of 8mg Total)
(If no IV access, may give 4 – 8mg IM in 4mg increments)

Paramedic

FOR PAIN MANAGEMENT

[PRIMARY for pain management when SBP>100 and not contraindicated]

Morphine Sulfate 2-5 mg [IV/IO/IM]
(MAX single dose 5mg, May repeat PRN to a MAX total dose of 15mg; Total morphine dosages greater than 15mg require medical control approval)

[PRIMARY for Multi-Trauma or for pain management when SBP<100 and not contraindicated]

Fentanyl 1 mcg/kg [IV/IO/IM] [MAX single dose 100 mcg]
(May repeat up to 100 mcg in 15 minutes; Total fentanyl dosages greater than 200mcg require medical control approval)

[For severe multi-system trauma or SBP<100 where longer acting pain management is indicated]

Ketamine 0.3 mg/kg IV/IM ***if available**
(May repeat every 15 minutes PRN)

FOR ANXIETY AND ACUTE AGITATION
Versed 2.5mg [IV/IO] or 5mg [IM]
(May repeat either route once)

Ativan 1-2mg [IV/IO/IM]
(May repeat once PRN)

FOR NAUSEA REFRACTORY TO ZOFRAN ADMINISTRATION
SECONDARY - Compazine
5-10 mg slow IVP or IM [MAX:10 mg]
(IV administration should not exceed 5mg/minute]

EXERCISE CARE WHEN ADMINISTERING OPIATES AND BENZODIAZEPINES; THESE COMBINED CAN RESULT IN A DEEPER ANESTHESIA WITH SIGNIFICANT RISK OF RESPIRATORY COMPROMISE.

CONSIDER THE PATIENT'S AGE, WEIGHT, CLINICAL CONDITION, USE OF DRUGS/ALCOHOL, EXPOSURE TO OPIATES WHEN DETERMINING OPIATE USE.

WHEN USING THIS STANDING ORDER, NASAL CANNULA CAPNOGRAPHY IS INDICATED

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Shock Management - 321		**Effective Date: 6/01/2024**

Considerations

Hypovolemic Shock	Cardiogenic Shock	Neurogenic Shock	Septic Shock
Hemorrhage Trauma GI Bleed AAA Pregnancy Related Significant Fluid Loss	Heart Failure Myocardial Infarction Cardiomyopathy Myocardial Contusion Toxins	Trauma Spinal Cord Injury Head Injury	Infection

Assessment:

- **Secondary Assessment and History (SAMPLE)**
  - **Monitor vital signs (BP, HR, RR, Oximetry)**
  - **A P Monitor capnography (if appropriate and available)**
  - **Check blood glucose level.**
  - **P Initiate cardiac monitor**
  - **P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)**
    - **E I A Obtain and transmit 12-lead ECG (if appropriate and does not delay care)**

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I
AEMT

Hypovolemic Shock	Cardiogenic Shock	Neurogenic Shock	Septic Shock
IV/IO Access **Normal Saline** 20 ml/kg (May repeat PRN to maintain SBP>90 mmHg)	**IV/IO Access** **Normal Saline** 20 ml/kg (May repeat PRN to maintain SBP>90 mmHg))	**IV/IO Access** **Normal Saline** 20 ml/kg (May repeat PRN to maintain SBP>90 mmHg)	**IV/IO Access** **Normal Saline** 20 ml/kg (May repeat PRN to maintain SBP>90 mmHg)

Paramedic

Secondary to Hemorrhage Consider: **TXA** **2 grams [IV/IO]** (over 2 minutes)	**Levophed 2-20 mcg/min;** (Titrated to maintain a SBP>90mmHg or MAP 70 or greater) **Epinephrine IV Infusion** **2-10 mcg/min** (1 mg of EPI 1:1000 in 250ml NS yields 4mcg/ml) ***INFUSE WITH 60 DROP SET***		**Levophed 2-20 mcg/min;** (Titrated to maintain a SBP>90mmHg or MAP 70 or greater)

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Traumatic Injury - 322		**Effective Date: 6/01/2024**

Considerations

CONSIDER TRANSPORT TO A DESIGNATED TRAUMA CENTER

Assessment:

- **Secondary Assessment and History (SAMPLE)**
  - **Monitor vital signs (BP, HR, RR, Oximetry)**
  - **A P Monitor capnography (if appropriate and available)**
  - **Check blood glucose level**
  - **P Initiate cardiac monitor**
  - **P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)**
    - **E I A Obtain and transmit 12-lead ECG (if appropriate and does not delay care)**
  - **Perform physical exam DCAPBTLS**

EMT

Spinal Immobilization as indicated.
(Refer to Spinal Immobilization Progression)

Control hemorrhage(s) as indicated.
(Refer to Bleeding Control Progression)

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

AEMT

IV / IO Access
(Consider large bore IV X 2 if indicated)

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus: 20 ml/kg (maintain SBP >90 mmHg)
****Do not exceed 2000 ml fluid infusion without medical control approval****

Paramedic

FOR HEMORRHAGE CONSIDER:
TXA 2 grams [IV/IO] (over 2 minutes)

FOR PAIN MANAGEMENT:
Refer to Pain Management Standing Order - 320

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Allergic Reaction / Anaphylaxis - 401		**Effective Date: 12/01/2022**

Considerations

Allergic reactions vary in severity from mild urticaria to severe anaphylaxis. Treatment is based on the severity of symptoms.

Subjective: contact with a known or potential allergen

Objective:

Mild: localized edema and itching

Moderate: systemic cutaneous effects such as hives and itching

Severe: respiratory distress, wheezing, stridor, throat tightness, orofacial edema, and/or hypotension.

- Assessment and History (SAMPLE)
  - Monitor vital signs (BP, HR, RR, Oximetry)
  - P Monitor capnography (if appropriate and available)
  - P Initiate cardiac monitor
  - P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)

A high index of suspicion should exist with those patients who have a known contact with an allergen but have yet to develop signs or symptoms. These patients should be monitored closely as symptoms can appear and/or worsen rapidly.

EMT

Oxygen Therapy
(Appropriate for degree of distress)

MAY ASSIST PATIENT WITH THEIR OWN EPI AUTO-INJECTOR

EMT-I

Albuterol 2.5mg OR Xopenex 0.63mg
May repeat PRN for wheezing.

IV / IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

AEMT

Anaphylaxis:
Epinephrine 1:1000
0.01 mg/kg [IM] (MAX 0.3mg)
(May repeat every 5 minutes X 2; PRN)

Paramedic

Benadryl 1 mg/kg [IV/IM]
(MAX dose 50mg)
(Contraindicated in asthma)

Solumedrol 2 mg/kg IV
(MAX dose 125 mg)

****PEPCID NOT INTENDED FOR PEDIATRIC USE****

Reviewed: 9/19, 6/21, 1/22, 11/22

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Bronchospasms / Respiratory Distress - 403		**Effective Date: 12/01/2022**

Considerations

Any patient with dyspnea should be monitored and treated aggressively. Extended periods of exertion can cause the patient to rapidly deteriorate into respiratory failure.

Subjective: Complaints of dyspnea or shortness of breath.

Objective: Audible wheezes, auscultated wheezes or diminished breath sounds, accessory muscle usage, cough, chest wall pain,

- Assessment and History (SAMPLE)
  - Monitor vital signs (BP, HR, RR, Oximetry)
  - P Monitor capnography (if appropriate and available)
  - P Initiate cardiac monitor
  - P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)

EMT

Oxygen Therapy
(Appropriate for degree of distress)

EMT-I

Albuterol 2.5 mg OR Xopenex 0.63 mg; nebulized
May consider initial treatment mixed with Atrovent 0.5mg [MAX: 0.5 mg Total]
May repeat PRN for wheezing.

IV / IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

AEMT

IF SEVERE:
Epinephrine 1:1000
0.01 mg/kg [IM] (MAX 0.3mg)
(May repeat every 5 minutes X 2; PRN)

Paramedic

Solumedrol
2 mg/kg [IV/IO] (MAX: 125mg)

FOR MODERATE TO SEVERE ASTHMA REFRACTORY TO BETA AGONIST:
Magnesium Sulfate
50mg/kg IV/IO slowly over 10 minutes
(MAX Dosage 2 grams)

FOR CROUP WITH AUDIBLE STRIDOR CONSIDER:
2.25% Racemic Epinephrine 0.5 ml in 3 ml of NS nebulized

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric General Medical - 405		**Effective Date: 12/01/2022**

Considerations

Objective: Complaints of general sickness, non-traumatic abdominal / flank pain, flu-symptoms, fever, nausea, vomiting, diarrhea,

Assessment:

- Assessment and History (SAMPLE)
  - Monitor vital signs (BP, HR, RR, Oximetry)
  - P Monitor capnography (if appropriate and available)
  - P Initiate cardiac monitor
  - P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)

EMT

Oxygen Therapy
(Appropriate for degree of distress)

EMT-I

AEMT

IV / IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

Paramedic

FOR NAUSEA:
Zofran
0.15 mg/kg IV/IM/IO/PO
(May repeat once in 15 minutes)
[MAX Total Dose 8mg]

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Altered Blood Glucose - 407		**Effective Date: 12/01/2022**

Considerations

Assessment: Symptoms may include:

Hypoglycemia:	**Hyperglycemia:**
Altered mental status, unresponsiveness, fatigue, confusion, seizures, dysphasia, pale skin, trembling, anxiety, diaphoresis, hunger, irritability, combative behavior	Nausea, vomiting, weakness, confusion, altered mental status, coma, abdominal pain, excessive thirst, frequent urination, dry mouth, fruity-smelling breath.

- Assessment and History (SAMPLE)
  - Monitor vital signs (BP, HR, RR, Oximetry)
  - P Monitor capnography (if appropriate and available)
  - Blood Glucose Evaluation
  - P Initiate cardiac monitor
  - P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

Hypoglycemia BGL<60 and symptomatic:

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

Oral Glucose 15 grams
(If not contraindicated by airway or inability to swallow)

Dextrose 10%
5-10 ml/kg IV/IO
(May repeat PRN)
[MAX single dose 125 ml]

Hyperglycemia BGL>200 and symptomatic:

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus for Hyperglycemia: 20 ml/kg

AEMT

Paramedic

FOR NAUSEA:
Zofran 0.15 mg/kg [IV/IN/ODT/IO]
(May repeat once PRN)
[MAX Total Dose: 8mg]

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Seizure - 411		**Effective Date: 12/01/2022**

Considerations

Objective: signs and symptoms include observation of seizure activity, decreased mental status (post-ictal), sleepiness, incontinence, unconsciousness.

Assessment:

- **Secondary Assessment and History (SAMPLE)**
  - **Monitor vital signs (BP, HR, RR, Oximetry)**
  - **P Monitor capnography (if appropriate and available)**
  - **Check blood glucose level**
  - **P Initiate cardiac monitor**
  - **P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)**
  - **Perform physical exam DCAPBTLS**

Status Epilepticus	Grand Mal Seizures	Focal Seizures
Two or more seizures successively without an intervening lucid period or a seizure lasting over five minutes.	**Generally, are associated with a loss of consciousness, incontinence, and oral trauma.**	**Affect only part of the body and are not usually associated with a loss of consciousness.**

Consider possible causes: CNS trauma, tumor, hypoxia, medication non-compliance, infection, fever, alcohol withdrawal, eclampsia, stroke, hyperthermia, hypothermia, hypoglycemia.

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I
AEMT

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus for Hypotension: 20 ml/kg

Paramedic

Ativan
0.1 mg/kg IV/IM
(May repeat PRN not to exceed 4 mg TOTAL)

OR

Versed
0.1 – 0.2 mg/kg IV/IM
0.2-0.3 mg/kg IN
(May repeat PRN not to exceed 10mg TOTAL)

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Bradycardia - 414		**Effective Date: 12/01/2022**

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

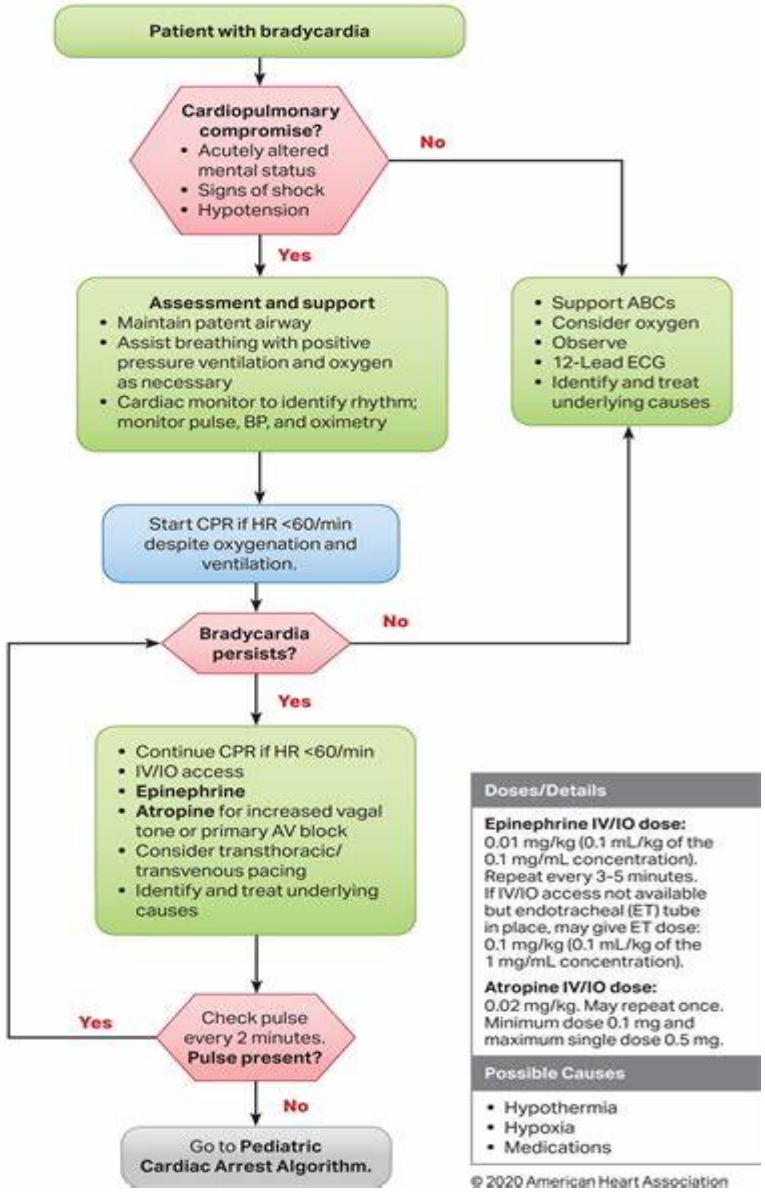
AEMT

IV/IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
For Hypotension: 20 ml/kg

Paramedic

Pediatric Bradycardia With a Pulse Algorithm



EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Tachycardia - 415		**Effective Date: 12/01/2022**

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

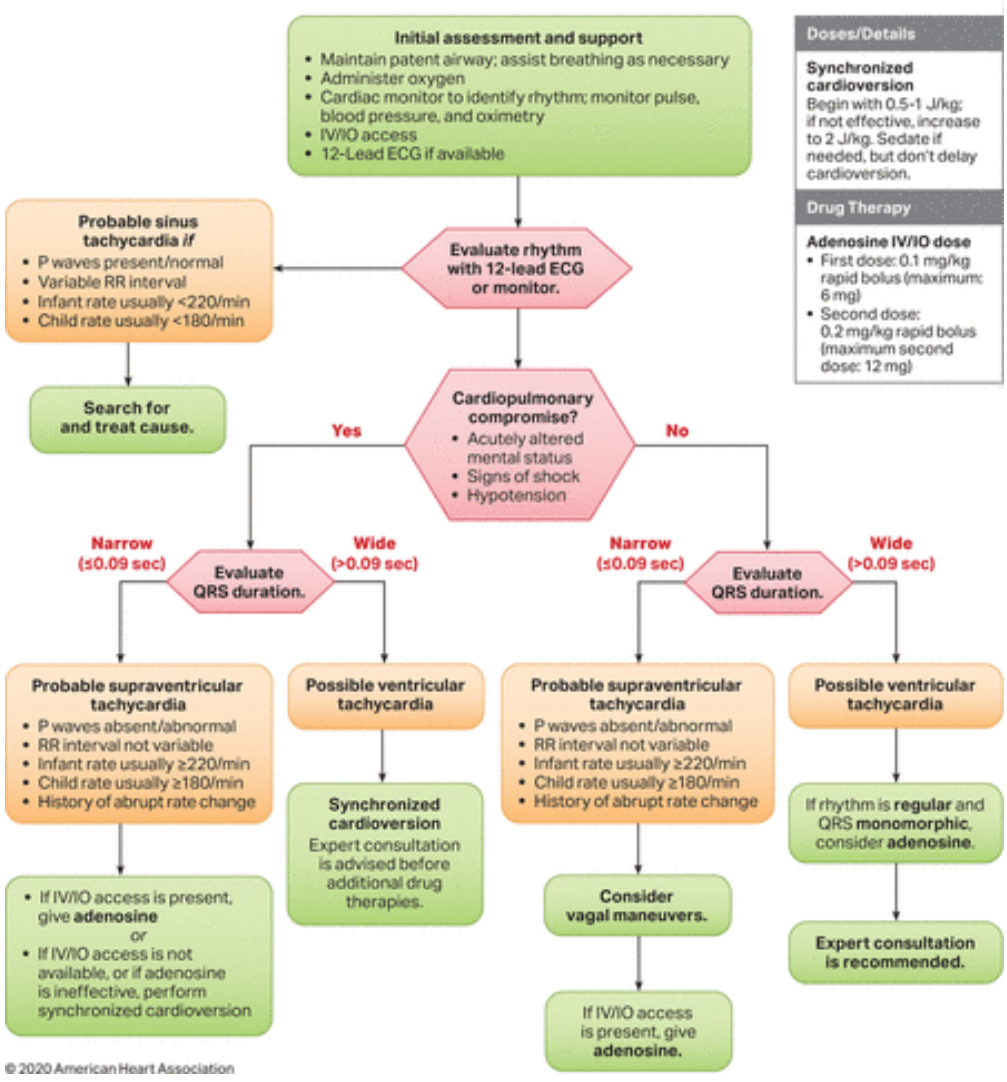
AEMT

IV/IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
For Hypotension: 20 ml/kg

Paramedic

Pediatric Tachycardia With a Pulse Algorithm



FOR CARDIOVERSION: CONSIDER SEDATION

Ativan 0.05 mg/kg IV/IM
(May repeat in 10 minutes PRN not to exceed 4mg TOTAL)

Versed 0.1 mg/kg IV or 2.5 mg IM/IN
(May repeat in 10 minutes PRN not to exceed 10mg TOTAL)

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Pulseless Arrest AHA - 416		**Effective Date: 12/01/2022**

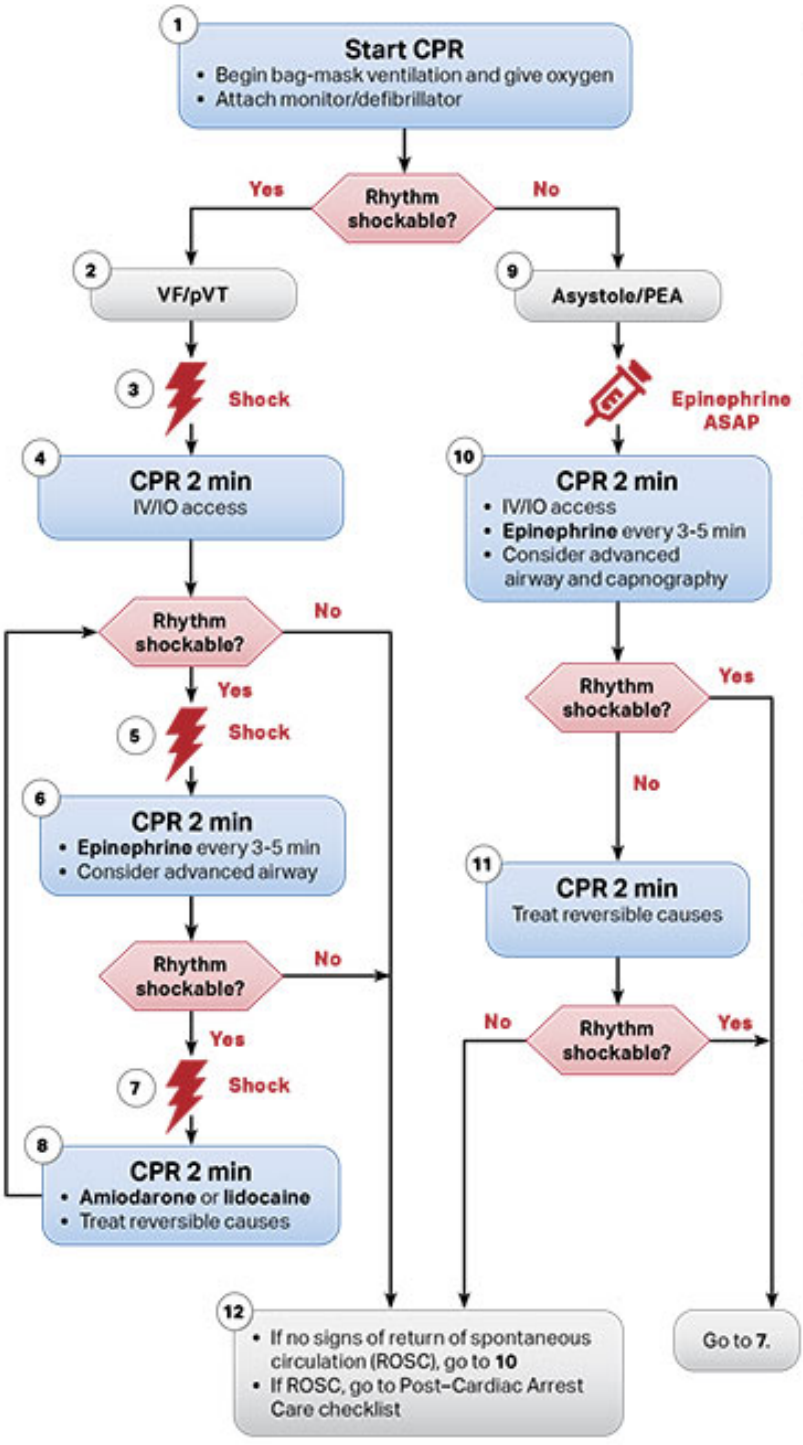
EMT

EMT-I

AEMT

Paramedic

Pediatric Cardiac Arrest Algorithm



CPR Quality

- Push hard (≥⅓ of anteroposterior diameter of chest) and fast (100-120/min) and allow complete chest recoil
- Minimize interruptions in compressions
- Change compressor every 2 minutes, or sooner if fatigued
- If no advanced airway, 15:2 compression-ventilation ratio
- If advanced airway, provide continuous compressions and give a breath every 2-3 seconds

Shock Energy for Defibrillation

- First shock 2 J/kg
- Second shock 4 J/kg
- Subsequent shocks ≥4 J/kg, maximum 10 J/kg or adult dose

Drug Therapy

- **Epinephrine IV/IO dose:** 0.01 mg/kg (0.1 mL/kg of the 0.1 mg/mL concentration). Max dose 1 mg. Repeat every 3-5 minutes. If no IV/IO access, may give endotracheal dose: 0.1 mg/kg (0.1 mL/kg of the 1 mg/mL concentration).
- **Amiodarone IV/IO dose:** 5 mg/kg bolus during cardiac arrest. May repeat up to 3 total doses for refractory VF/pulseless VT
  or
  Lidocaine IV/IO dose: Initial: 1 mg/kg loading dose

Advanced Airway

- Endotracheal intubation or supraglottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement

Reversible Causes

- **H**ypovolemia
- **H**ypoxia
- **H**ydrogen ion (acidosis)
- **H**ypoglycemia
- **H**ypo-/hyperkalemia
- **H**ypothermia
- **T**ension pneumothorax
- **T**amponade, cardiac
- **T**oxins
- **T**hrombosis, pulmonary
- **T**hrombosis, coronary

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Burns - 418		**Effective Date: 12/01/2022**

Considerations

Thermal	Chemical	Electrical
STOP THE BURNING PROCESS **REMOVE SMOLDERING CLOTHING AND JEWELRY** **DO NOT REMOVE STUCK CLOTHING**	**BRUSH AWAY DRY CHEMICAL** **USE NS OR STERILE WATER TO IRRIGATE IF NECESSARY AND SAFE.**	**ASSURE ELECTRICAL SOURCE HAS BEEN DISCONNECTED** **LOCATE CONTACT POINTS** **IDENTIFY SOURCE TYPE (AC/DC) AND THE AMOUNT OF VOLTAGE OR AMPERAGE**

EMT

Oxygen Therapy
(Appropriate for degree of distress)

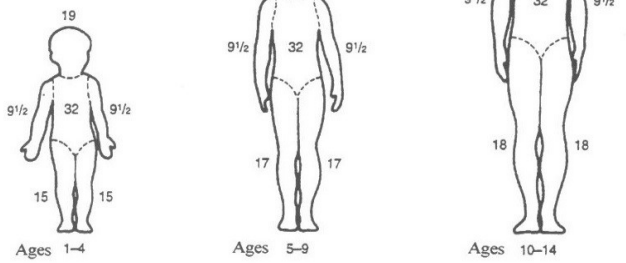
EMT-I

IV / IO Access

Normal Saline
1-5 years: 125 ml/hr
5-13 years: 250 ml/hr
>13: 500 ml/hr

Request Air Transport PRN

AEMT



Paramedic

FOR PAIN MANAGEMENT REFER TO PAIN MANAGEMENT STANDING ORDER 420

FOR ANXIETY AND SEDATION
Versed 0.1 mg/kg [IV/IO] or 0.2 mg/kg [IN] (Max single dose 5 mg)
(May repeat either route once not to exceed 10mg TOTAL)

Ativan 0.05 -0.1 mg/kg [IV/IO/IM]
(May repeat once PRN not to exceed 4mg TOTAL)

FOR NAUSEA
Zofran 0.15 mg/kg [IV/IN/IO/PO]
(May repeat once PRN not to exceed 8mg TOTAL)

FOR BURNS TO THE AIRWAY CONSIDER THE AIRWAY PROGRESSION EARLY

Reviewed: 11/22

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Overdose/Poisoning - 419		**Effective Date: 12/01/2022**

Considerations

POISON CONTROL: 800-222-1222

Objective: General symptoms may include changes in mental status, hypotension/hypertension, decreased respiratory rate, tachycardia, dysrhythmias, seizures, malaise, weakness, GI symptoms, dizziness, syncope, chest pain

AGENTS SPECIFIC	
AGENT	**SIGNS AND SYMPTOMS**
Acetaminophen	Initially normal or N/V, tachypnea and AMS may occur later, renal dysfunction, liver failure and/or cerebral edema may manifest
Antidepressant	Decreased heart rate, blood pressure, temperature, and respiratory rate
Anticholinergic	Increased heart rate, increased temperature, dilated pupils, and mental status changes
Insecticides	May include signs and symptoms of organophosphate poisoning
Solvents	Nausea / Vomiting, cough, altered mental status
Stimulants	Increased heart rate, blood pressure, temperature, dilated pupils, seizures and possible violence (excited delirium)
Tricyclic Antidepressants	Decreased mental status, dysrhythmias, seizures, hypotension, coma, death

Assessment:

- **Secondary Assessment and History (SAMPLE)**
  - **Monitor vital signs (BP, HR, RR, Oximetry)**
  - **P Monitor capnography (if appropriate and available)**
  - **Check blood glucose level**
  - **P Initiate cardiac monitor**
  - **P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)**
  - **Perform physical exam DCAPBTLS**

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

IV/IO Access

Normal Saline
Maintenance: 60 ml/hr (KVO)
For hypotension: 20 ml/kg

AEMT

Narcan for Opiates
INTRAMUSCULAR DOSE: 0.1 mg/kg IM
INTRAVENOUS/ INTEROSSEOUS DOSE: 0.2 mg/kg IV/IO (if 5 years or older or >20 kg
(May repeat every 3 minutes PRN)
INTRANASAL DOSE: 2-4 mg IN [single dose]

Paramedic

- Tricyclic Antidepressants: **Sodium Bicarbonate 1 mEq/kg IV/IO;** (then 0.5 mEq/kg in 100 ml NS over 15 minutes)
- Anticholinergic / Organophosphates: After Decontamination; For 12 years and under: **Atropine 0.02mg/kg IV/IO** to a maximum single dose of 0.5mg (May repeat once if needed): **If >12 years refer to Adult Standing Order.**
- Antipsychotic: For acute dystonic reactions; **Benadryl 1 mg/kg IV/IO** (May repeat in 10 minutes PRN)
- Beta Blocker: For 12 years and under: **Atropine 0.02mg/kg IV/IO** to a maximum single dose of 0.5mg (May repeat once if needed): **If >12 years refer to Adult Standing Order. TCP**
- Calcium Channel Blocker: **Calcium Gluconate 10% 500 mg IV/IO** slowly; For 12 years and under: **Atropine 0.02mg/kg IV/IO** to a maximum single dose of 0.5mg (May repeat once if needed): **If >12 years refer to Adult Standing Order.**, but use caution with wide complex rhythms); **TCP**
- Cocaine: **Haldol 0.05 mg/kg IM** (may repeat in 15 minutes); **Versed 0.1 – 0.2 mg/kg IV/IM or 0.2-0.3 mg/kg IN** (may repeat once PRN not to exceed 10mg TOTAL) **Ativan 0.05 mg/kg IM** (may repeat once PRN)

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Pain Management - 420		**Effective Date: 12/01/2022**

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I

AEMT

IV/IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
For hypotension: 20 ml/kg

Paramedic

FOR PAIN MANAGEMENT

[PRIMARY for pain management when hemodynamically stable and not contraindicated]

[Longer Acting]-> Morphine Sulfate 0.1 mg/kg [IV/IO/IM] (MAX single dose 4mg)
(May repeat in 15 minutes; Total morphine dosages greater than 10mg require medical control approval)

[PRIMARY for Multi-Trauma or for pain management with boarder-line hemodynamic instability and not contraindicated]

Fentanyl 1 mcg/kg [IV/IO/IM]
[MAX single dose 100 mcg]
(May repeat in 15 minutes; Total fentanyl dosages greater than 200mcg require medical control approval)

[For severe multi-system trauma or boarder-line hemodynamic instability where longer acting pain management is indicated]

Ketamine 0.3 mg/kg IV/IM
(May repeat every 15 minutes PRN)

FOR ANXIETY AND SEDATION
Versed
0.1 – 0.2 mg/kg IV/IM
0.2-0.3 mg/kg IN
(May repeat PRN not to exceed 10mg TOTAL)

Ativan 0.05 mg/kg IM (MAX single dose 2mg)
(May repeat once PRN not to exceed 4mg TOTAL)

FOR NAUSEA
Zofran 0.15 mg/kg IV/IN/IO
(May repeat once PRN not to exceed 8mg TOTAL)

EXERCISE CARE WHEN ADMINISTERING OPIATES AND BENZODIAZEPINES; THESE COMBINED CAN RESULT IN A DEEPER ANESTHESIA WITH SIGNIFICANT RISK OF RESPIRATORY COMPROMISE.

CONSIDER THE PATIENT'S AGE, WEIGHT, CLINICAL CONDITION, USE OF DRUGS/ALCOHOL, EXPOSURE TO OPIATES WHEN DETERMINING OPIATE USE.

WHEN USING THIS STANDING ORDER, NASAL CANNULA CAPNOGRAPHY IS INDICATED

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Shock Management - 421		**Effective Date: 12/01/2022**

Considerations

Assessment:

- **Secondary Assessment and History (SAMPLE)**
  - **Monitor vital signs (BP, HR, RR, Oximetry)**
  - **P Monitor capnography (if appropriate and available)**
  - **Check blood glucose level**
  - **P Initiate cardiac monitor**
  - **P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)**
  - **Perform physical exam DCAPBTLS**

EMT

Oxygen Therapy
(Appropriate for level of distress)

EMT-I / AEMT

Hypovolemic Shock	**Cardiogenic Shock**	**Neurogenic Shock**	**Septic Shock**
IV/IO Access **Normal Saline** 20 ml/kg (May repeat PRN to maintain SBP>90 mmHg)	**IV/IO Access** **Normal Saline** 20 ml/kg (May repeat PRN to maintain SBP>90 mmHg))	**IV/IO Access** **Normal Saline** 20 ml/kg (May repeat PRN to maintain SBP>90 mmHg)	**IV/IO Access** **Normal Saline** 20 ml/kg (May repeat PRN to maintain SBP>90 mmHg)

Paramedic

Secondary to Hemorrhage	**Levophed 0.1 mcg/kg/min.** **(4 mg in 250ml)** (Titrated to maintain a SBP>90mmHg or MAP 70 or greater)		**Levophed 0.1 mcg/kg/min.** **(4 mg in 250ml)** (Titrated to maintain a SBP>90mmHg or MAP 70 or greater)
Consider: **TXA** **15mg/kg IV** (Over 10 minutes) (Not to exceed 1 gram)			

Consider sepsis of two or more of the following are present:

- **Systolic Blood Pressure <80 mmHg**
- **GCS <15**
- **Heart Rate >110**
- **Temperature >100.4 or <96.0**
- **Respiratory Rate >25**
- **End-tidal CO2 <26**

CALL SEPSIS ALERT AS SOON AS POSSIBLE

EMS Medical Director:	Dr. Brendan Hawthorn	
EMS Director:	Jason M. Lewis	
Pediatric Traumatic Injury - 422		**Effective Date: 12/01/2022**

Considerations

CONSIDER TRANSPORT TO A DESIGNATED PEDIATRIC TRAUMA CENTER

Assessment:

- **Secondary Assessment and History (SAMPLE)**
  - **Monitor vital signs (BP, HR, RR, Oximetry)**
  - **P Monitor capnography (if appropriate and available)**
  - **Check blood glucose level**
  - **P Initiate cardiac monitor**
  - **P Perform and evaluate 12-lead ECG (if appropriate and does not delay care)**
  - **Perform physical exam DCAPBTLS**

EMT

Spinal Immobilization as indicated
(Refer to Spinal Immobilization Progression)

Oxygen Therapy
(Appropriate for level of distress)

EMT-I
AEMT

IV / IO Access

Normal Saline
Maintenance: 60ml/hr (KVO)
Bolus: 20 ml/kg (maintain SBP >80 mmHg)
Do not exceed 1000 ml fluid infusion without medical control approval

Paramedic

FOR HEMORRHAGE CONSIDER:
<12 years: TXA 15 mg/kg [IV] (over 10 minutes, not to exceed 1 gram)

FOR PAIN MANAGEMENT REFER TO PAIN MANAGEMENT STANDING ORDER 420

FOR ANXIETY AND SEDATION
Versed 0.1 – 0.2 mg/kg IV/IM
Versed 0.2-0.3 mg/kg IN
(May repeat PRN not to exceed 10mg TOTAL)

Ativan 0.05 mg/kg IM (MAX single dose 2mg)
(May repeat once PRN not to exceed 4mg TOTAL)

FOR NAUSEA
Zofran 0.15 mg/kg IV/IN/IO
(May repeat once PRN not to exceed 8mg TOTAL)