Denver Metro EMS Medical Directors

Protocol Updates January 2026

January 2026 Change List

- 0050 Field Pronouncement
- 1030 Cricothyrotomy
- 1060 Non-invasive Positive Pressure Ventilation (NIPPV)
- 1090 Cardioversion
- 1100 Pacing
- 1110 Intraosseous Infusion
- 3080 Hypertension
- 4070 Drug/Alcohol Intoxication
- 8010 Traumatic Arrest

0050 Field Pronouncement

Previous

C. Traumatic Arrest:
1. Do not attempt resuscitation if there is evidence of a non-survivable injury and no sign of life. Examples of non-survivable injuries include decapitation, evidence of massive head, chest, or abdominal trauma, or massive bum with charring.
2. Blunt trauma: consider field pronouncement if there are no signs of life. Signs of life include spontaneous movement, breathing, presence of a pulse, or reactive pupils.
3. Penetrating trauma: consider field pronouncement if there are no signs of life, and the arrest duration is suspected to be > 10 minutes.

New

C. Traumatic Arrest:
1. Do not attempt resuscitation if there is evidence of a non-survivable injury and no sign of life. Examples of non-survivable injuries include decapitation; GSW to the head with exposed brain matter and no signs of life; massive burns without signs of life; evidence of massive blunt head, chest, or abdominal trauma; decomposition; or dependent lividity/rigor mortis.
2. Consider field pronouncement if there are no signs of life. Signs of life include spontaneous movement, breathing, presence of a pulse, reactive pupils or cardiac activity on ultrasound (if applicable).

1030 Cricothyrotomy

Previous

Technique:

1. Position the patient supine, with in-line spinal motion restriction if indicated. If cervical spine injury not suspected, neck extension will improve anatomic view.
2. Clean skin per agency approved aseptic technique.
3. Stabilize the larynx with the thumb and middle finger of your non dominant hand, and identify the cricothyroid membrane with your index finger, typically 4 fingerbreadths below mandible
4. Using a scalpel, make a 3 cm centimeter vertical incision 0.5 cm deep through the skin and fascia, over the cricothyroid membrane. With finger, dissect the tissue and locate the cricothyroid membrane
5. Make a horizontal incision through the cricothyroid membrane with the scalpel blade oriented caudal and away from the cords. Remove scalpel blade and insert finger.

New

Technique:

1. Position the patient supine, with in-line spinal motion restriction if indicated. If cervical spine injury not suspected, neck extension will improve anatomic view.
2. Clean skin per agency approved aseptic technique.
3. Stabilize the larynx with the thumb and middle finger of your non dominant hand, and identify the cricothyroid membrane with your index finger, typically 4 fingerbreadths below mandible
4. Using a scalpel, make a 3 cm centimeter vertical incision 0.5 cm deep through the skin and fascia, over the cricothyroid membrane. With finger, dissect the tissue and locate the cricothyroid membrane
5. Make incision through the cricothyroid membrane with the scalpel blade oriented away from the cords.

1060 Non-invasive Positive Pressure Ventilation (NIPPV) **NEW NAME**

- All references to CPAP changed to NIPPV
- Indications – Respiratory rate changed to “tachypnea per age”
- Contraindications – Hypotension changed to “hypotension for age”
- CPAP for EMT and above. Bi-level for Paramedic only. Follow agency specific guidelines.

1060 Non-invasive Positive Pressure Ventilation (NIPPV) **NEW NAME**

Previous

1060 PROCEDURE PROTOCOL: CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)

EMT	AEMT
EMT-I	Paramedic

Indications:

- Symptomatic patients with moderate-to-severe respiratory distress as evidenced by at least two (2) of the following:
  - Rales (crackles), rhonchi, or wheezes
  - Dyspnea with hypoxia (SpO_2 less than 90% despite O_2)
  - Dyspnea with inability to speak full sentences
  - Accessory muscle use
  - Respiratory rate greater than 24/minute despite O_2
  - Diminished tidal volume

Contraindications:

- Respiratory or cardiac arrest
- Systolic BP less than 90mmHg
- Lack of airway protective reflexes
- Significant altered level of consciousness such that unable to follow verbal instructions or signal distress
- Vomiting or active upper GI bleed
- Suspected pneumothorax
- Trauma
- Patient size or anatomy prevents adequate mask seal

Technique:

1. Place patient in a seated position and explain the procedure to him or her
2. Assess vital signs (BP, HR, RR, SpO_2, and $ETCO_2$)
3. Apply the CPAP mask and secure with provided straps, progressively tightening as tolerated to minimize air leak
4. Operate CPAP device according to manufacturer specifications
5. Start with the lowest continuous pressure that appears to be effective. Adjust pressure following

New

1060 PROCEDURE PROTOCOL: NON-INVASIVE POSITIVE PRESSURE VENTILATION (NPPV)

EMT	AEMT
EMT-I	Paramedic

Indications:

- Symptomatic patients with moderate-to-severe respiratory distress as evidenced by at least two (2) of the following:
  - Rales (crackles), rhonchi, or wheezes
  - Dyspnea with hypoxia (SpO_2 less than 90% despite O_2)
  - Dyspnea with inability to speak full sentences
  - Accessory muscle use
  - Respiratory rate with tachypnea per age despite O_2
  - Diminished tidal volume

Contraindications:

- Respiratory or cardiac arrest
- Hypotension for age
- Lack of airway protective reflexes
- Significant altered level of consciousness such that unable to follow verbal instructions or signal distress
- Vomiting or active upper GI bleed
- Suspected pneumothorax
- Trauma
- Patient size or anatomy prevents adequate mask seal

Technique:

1. Place patient in a seated position and explain the procedure to him or her
2. Assess vital signs (BP, HR, RR, SpO_2, and $ETCO_2$)
3. Initially assist the patient in holding the mask firmly to their face and evaluate the tolerance of the mask. If adequately tolerated, progressively tightening as tolerated to minimize air leak.
4. CPAP for EMT and above. Bi-level for Paramedic only. Follow agency specific guidelines.
5. Operate NIPPV device according to manufacturer specifications
6. Start with the lowest settings that appear to be effective. Adjust pressure following manufacturer

1060 Non-invasive Positive Pressure Ventilation (NIPPV) **NEW NAME**

Previous

Precautions:

- Should patient deteriorate on CPAP:
  - Troubleshoot equipment
  - Consider endotracheal intubation
  - Assess need for possible chest decompression due to pneumothorax
  - Assess for possibility of hypotension due to significantly reduced preload from positive pressure ventilation
- In-line nebulized medications may be given during CPAP as indicated and in accordance with manufacturer guidelines
- Some fixed pressure CPAP devices do not have FiO2 adjustment and will only administer up to 30% oxygen. If no improvement in oxygenation with a fixed pressure CPAP device, consider adding supplemental oxygen.

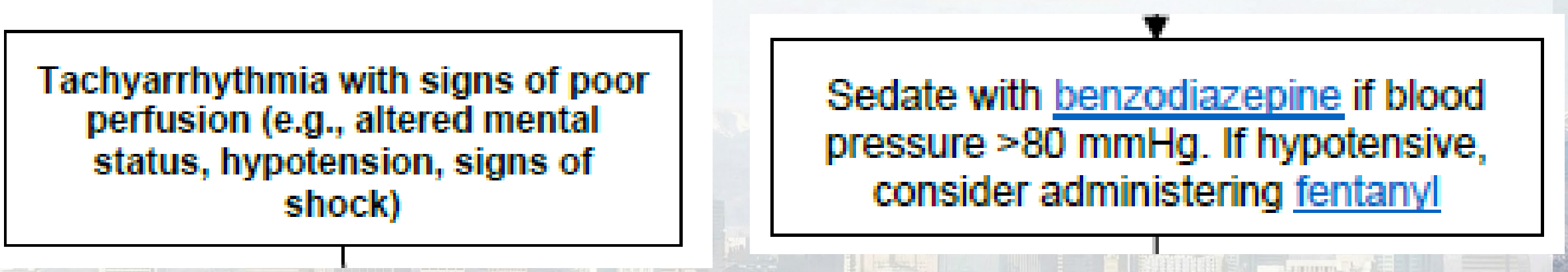
New

Precautions:

- Should patient deteriorate on NIPPV:
  - Troubleshoot equipment
  - Consider endotracheal intubation
  - Assess need for possible chest decompression due to pneumothorax
  - Assess for possibility of hypotension due to significantly reduced preload from positive pressure ventilation
- In-line nebulized medications may be given during NIPPV as indicated and in accordance with manufacturer guidelines
- Some fixed pressure devices do not have FiO_2 adjustment and will only administer up to 30% oxygen. If no improvement in oxygenation with a fixed pressure device, consider adding supplemental oxygen.
- This procedure may be performed on a patient with active Do Not Resuscitate.

1090 Synchronized Cardioversion

- Indication changed to "Tachyarrhythmia with signs of poor perfusion (e.g., altered mental status, hypotension, signs of shock)"
- Sedation change – Sedate with benzodiazepine if blood pressure >80 mmHg. If hypotensive, consider administering fentanyl



1100 Transcutaneous Cardiac Pacing

Previous

EMT-I	Paramedic

Indications
1. Symptomatic bradyarrhythmias (includes A-V block) not responsive to medical therapy
2. Pacing is rarely indicated in patients under the age of 12 years. **CONTACT BASE**

Precautions
1. Conscious patient will experience discomfort; consider sedation with benzodiazepine if blood pressure allows.

Contraindications
1. Pacing is contraindicated in pulseless arrest.

Technique
1. Apply electrodes as per manufacturer specifications: (-) left anterior, (+) left posterior.
2. Turn pacer unit on.
3. Set initial current to 80 mAmps.
4. Select pacing rate at 80 beats per minute (BPM)
5. Start pacing unit.
6. Confirm that pacer senses intrinsic cardiac activity by adjusting ECG size.
7. If no initial capture, increase current 10 mAmps every 10-15 seconds until capture or 200 mAmps (usually captures around 100 mAmps).
8. Check for femoral pulse once there is electrical capture.
9. If no capture occurs with maximum output, discontinue pacing and resume ACLS.

Complications
1. Ventricular fibrillation and ventricular tachycardia are rare complications, but follow appropriate protocols if either occur.
2. Muscle tremors may complicate evaluation of pulses; femoral pulse may be more accurate.
3. Pacing may cause diaphragmatic stimulation and apparent hiccups.

New

EMT-I	Paramedic

Indications
1. Symptomatic bradyarrhythmia (includes A-V block) not responsive to medical therapy and with signs of poor perfusion (e.g., altered mental status, hypotension, signs of shock)

Precautions
1. Conscious patients will experience discomfort; consider sedation with benzodiazepine if blood pressure allows (>80 mmHg). If hypotensive, consider administering fentanyl.

Contraindications
1. Pacing is contraindicated in pulseless arrest.
2. Pacing is rarely indicated in patients under the age of 12 years. **CONTACT BASE**

Technique
1. Apply electrodes as per manufacturer specifications.
2. Turn pacer unit on.
3. Set initial current to 80 mAmps.
4. Select pacing rate at 80 beats per minute (BPM)
5. Start pacing unit.
6. Confirm that pacer senses intrinsic cardiac activity by adjusting ECG size.
7. If no initial capture, increase current 10 mAmps every 10-15 seconds until capture or 200 mAmps (usually captures around 100 mAmps).
8. Verify mechanical capture
    a. Check for femoral pulse once there is electrical capture.
    b. Alternate confirmation techniques: Consider verification by SpO_2 pleth waveform matching QRS, as well as blood pressure and end tidal CO_2 improvement.
9. If no capture occurs with maximum output, discontinue pacing and resuscitate per bradyarrhythmia protocol.

Considerations
1. Address underlying causes, such as sepsis, hyperkalemia.

Complications
1. Ventricular fibrillation and ventricular tachycardia are rare complications, but follow appropriate protocols if either occur.
2. Muscle tremors may complicate evaluation of pulses; femoral pulse may be more accurate.
3. Pacing may cause diaphragmatic stimulation and apparent hiccups.

1100 Intraosseous Catheter Placement

Previous

Technique:

1. Site of choice – typically proximal tibia. Other sites such as distal femur or humeral head may be considered based on clinical presentation if authorized by agency Medical Director after completion of appropriate training.

New

Technique:

1. Site of choice

Age	Preferred Site	Alternative Site(s)
Adult	Tibia	Humeral head, femur, or other sites as authorized by Medical Director
Pediatric	Femur	Tibia

3080 Hypertension

Previous

Intent:

A. Even with extremes of blood pressure, treat the medical emergency associated with hypertension ("treat the patient, not the number")
    1. Treat chest pain, pulmonary edema, or stroke according to standard protocols (pain control will usually improve BP significantly)
B. Do not use medication to treat asymptomatic hypertension
C. Do not treat hypertension in acute stroke
D. Obtain a 12 lead ECG if patient's chief complaint is hypertension

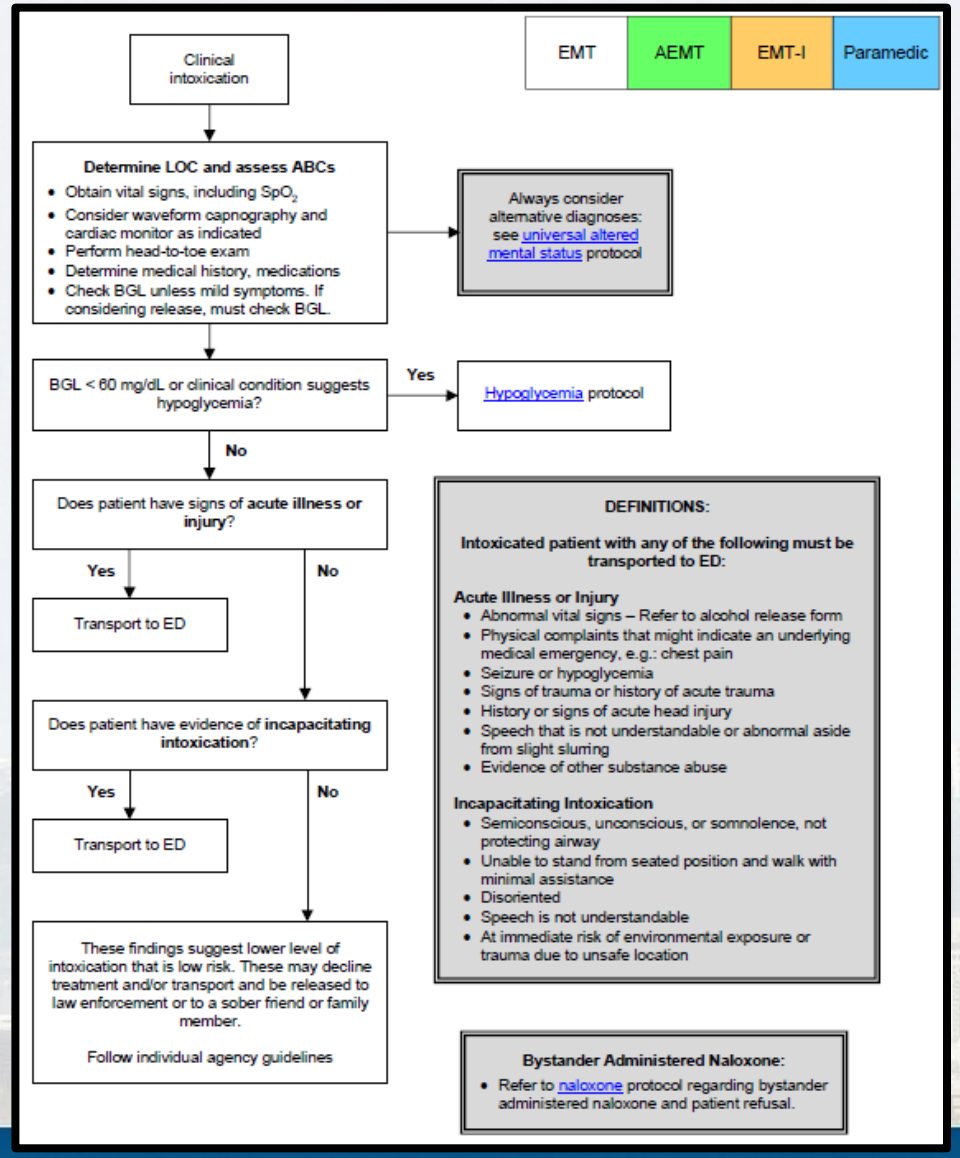
New

Intent:

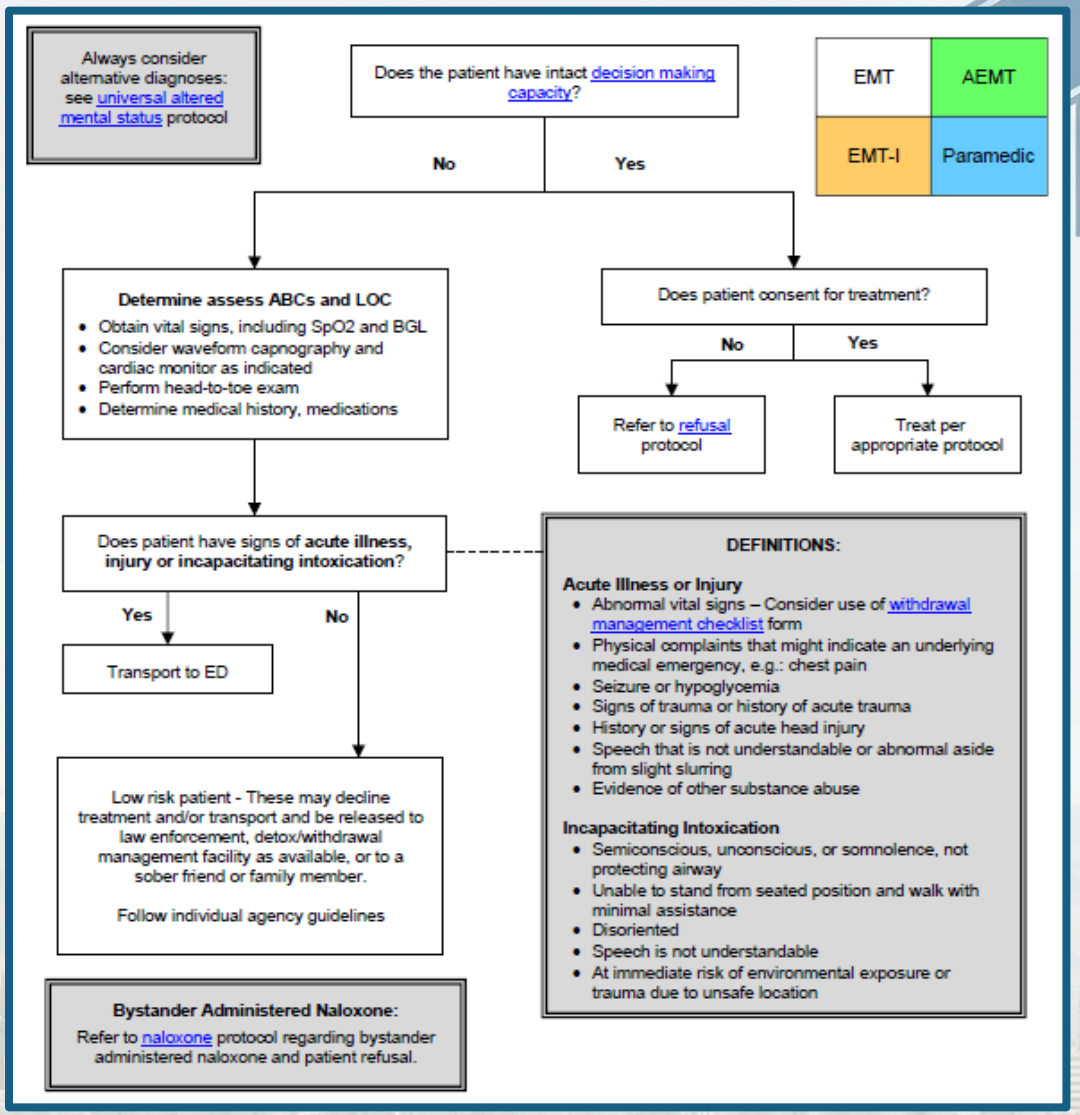
A. Even with extremes of blood pressure, treat the medical emergency associated with hypertension ("treat the patient, not the number")
    1. Treat chest pain, pulmonary edema, or stroke according to standard protocols (pain control will usually improve BP significantly)
B. Do not use medication to treat asymptomatic hypertension
C. Do not treat hypertension in acute stroke

4070 Drug/Alcohol Intoxication

Previous

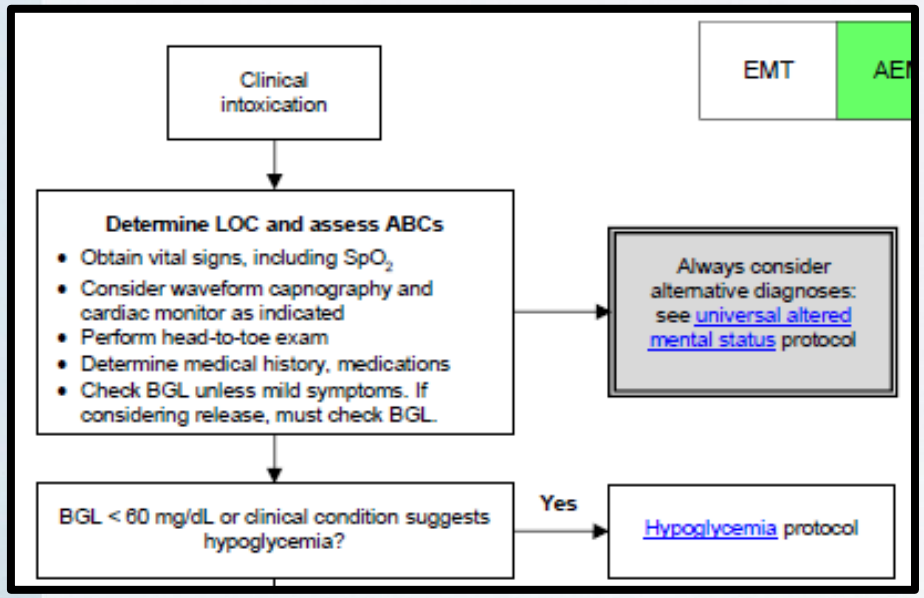


New



4070 Drug/Alcohol Intoxication

Previous



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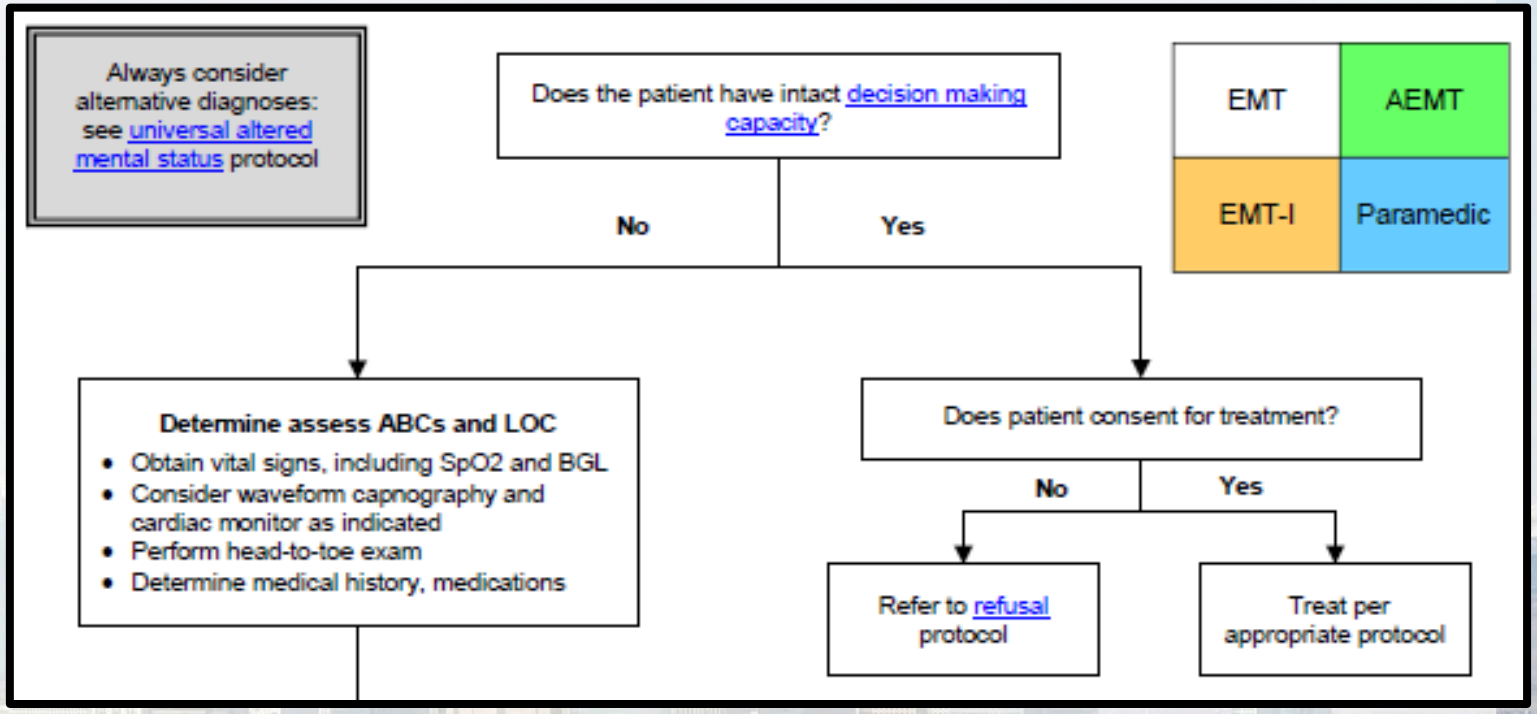
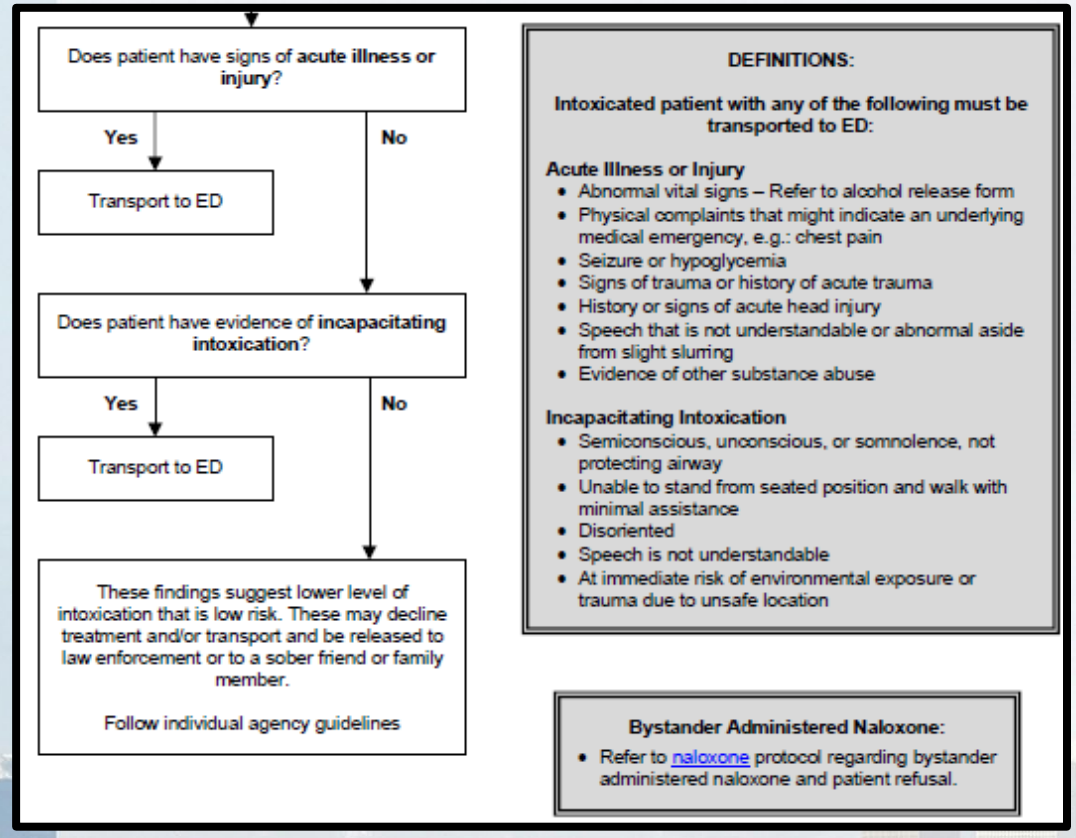


4070 Drug/Alcohol Intoxication

Previous



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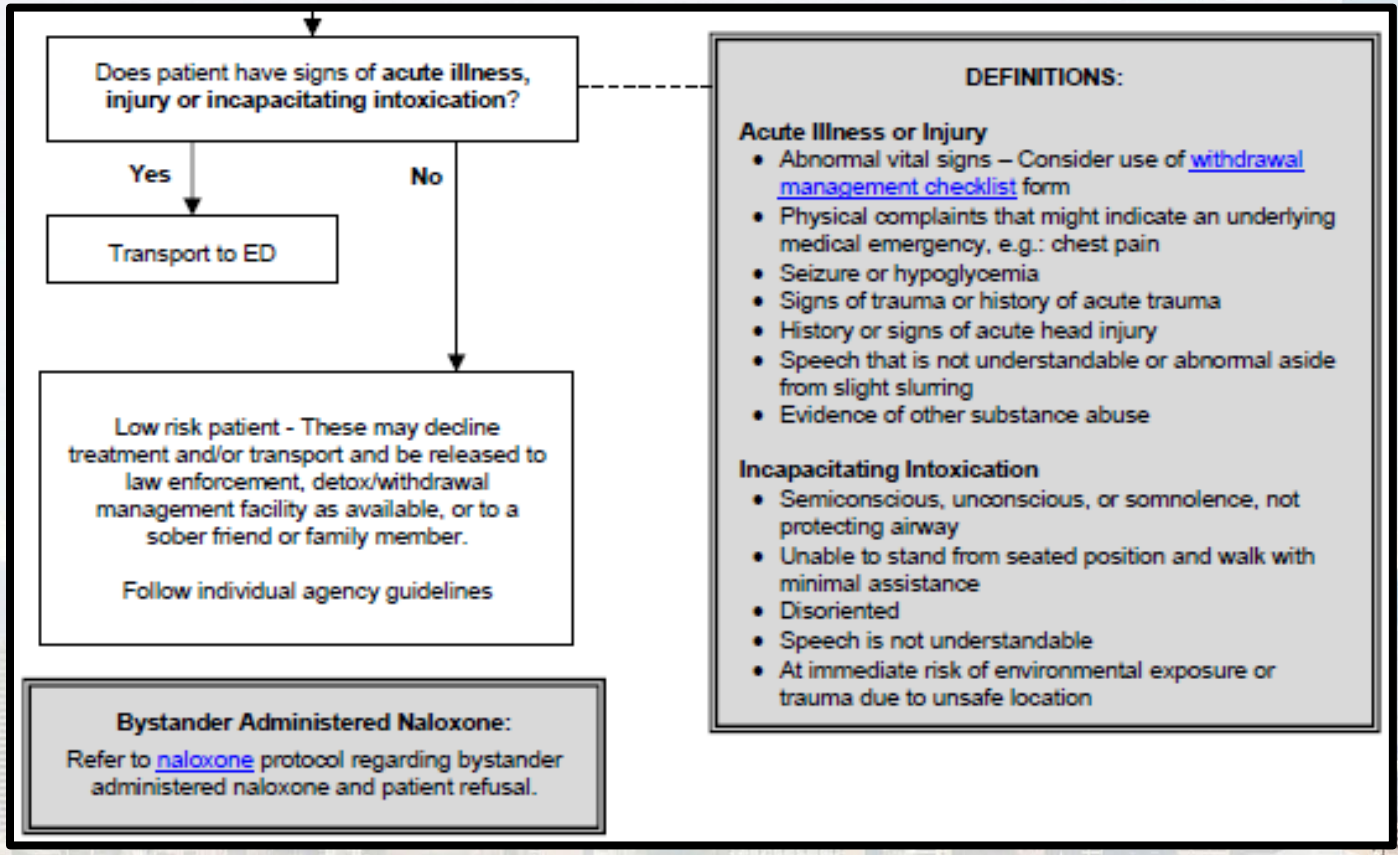
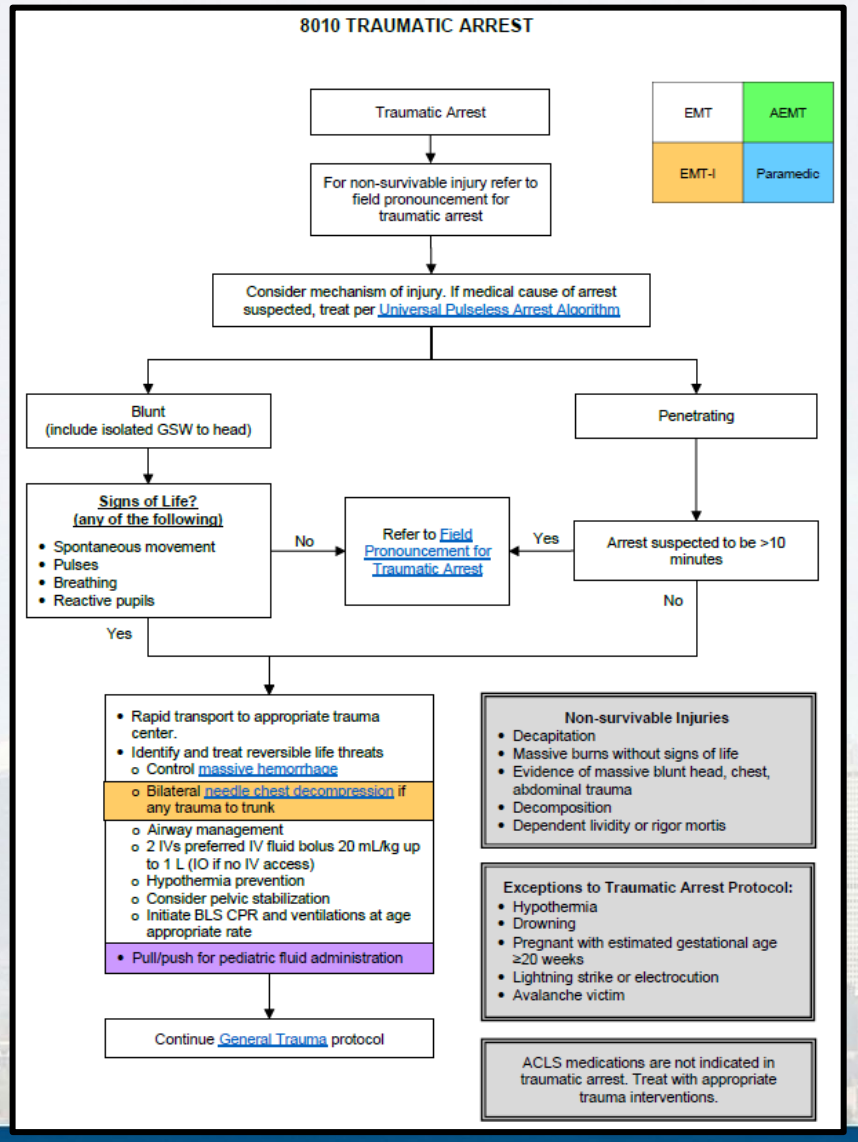


8010 Traumatic Arrest

Previous



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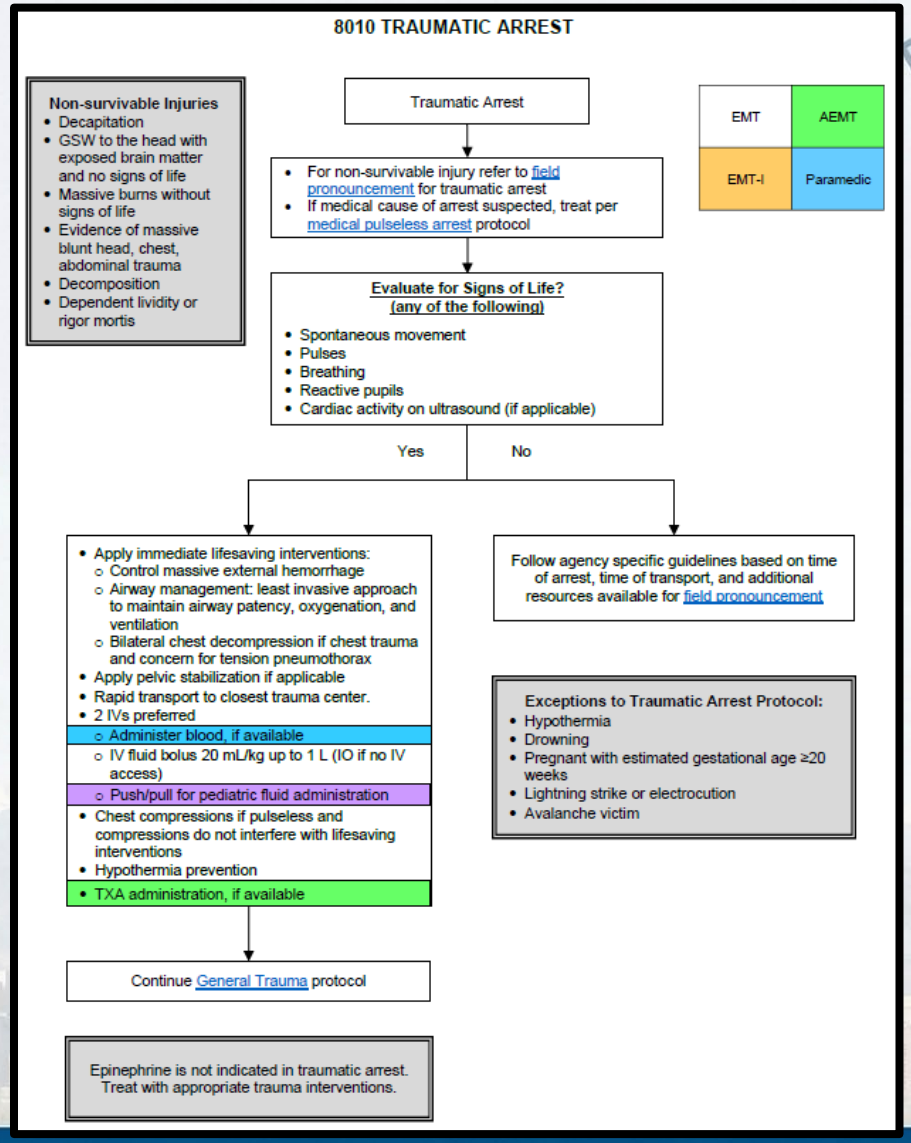
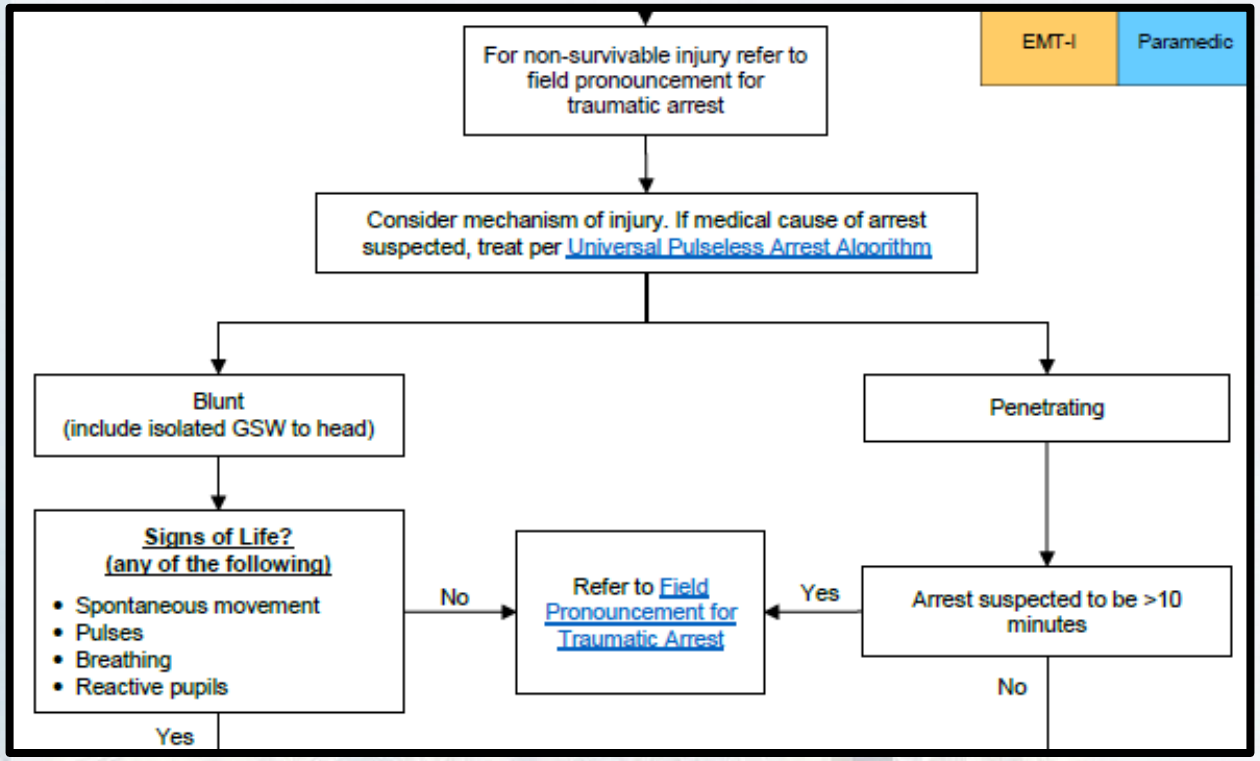


8010 Traumatic Arrest

Previous



New

- For non-survivable injury refer to field pronouncement for traumatic arrest
- If medical cause of arrest suspected, treat per medical pulseless arrest protocol

Evaluate for Signs of Life?
(any of the following)

- Spontaneous movement
- Pulses
- Breathing
- Reactive pupils
- Cardiac activity on ultrasound (if applicable)

Yes | No

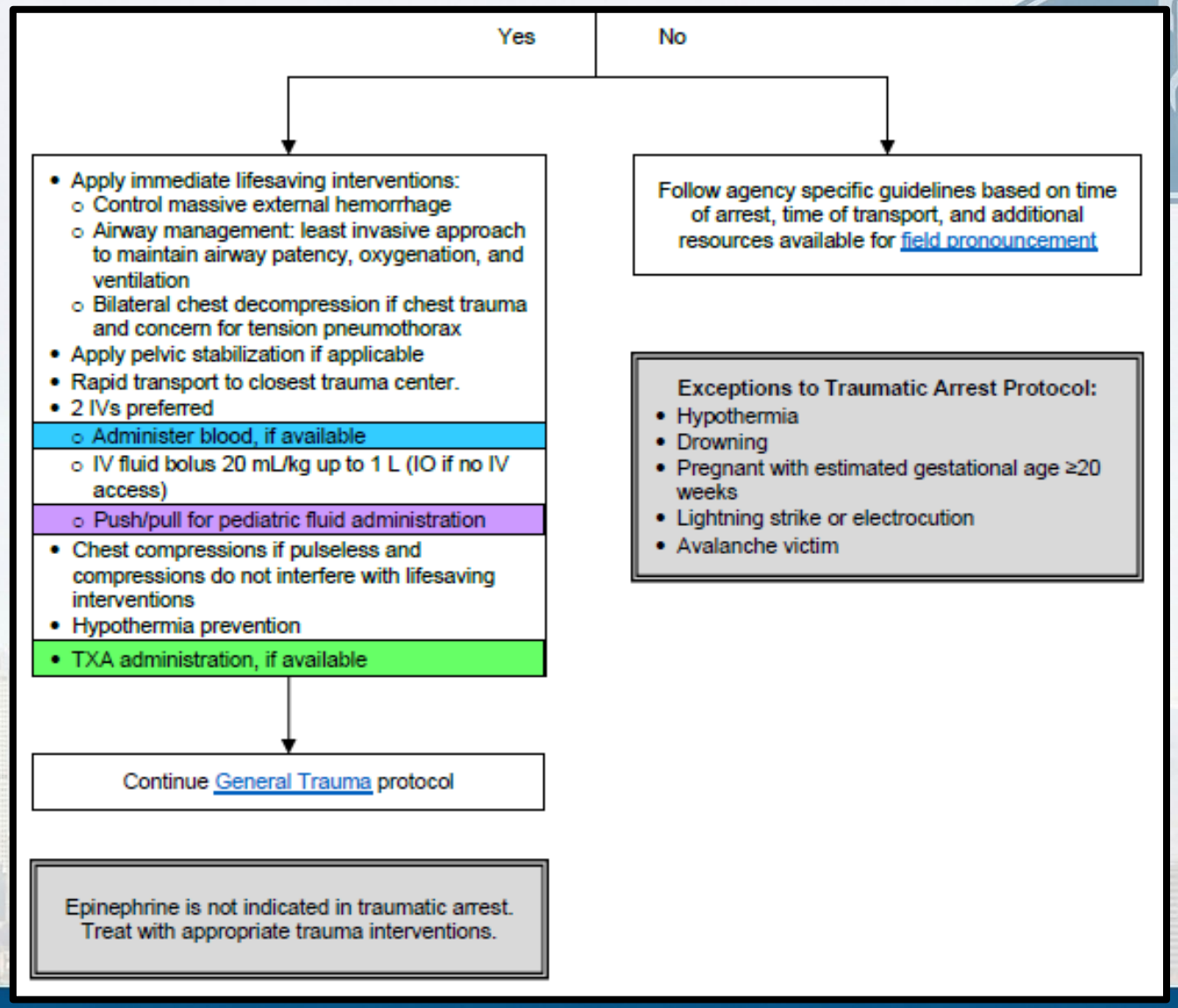
8010 Traumatic Arrest

Previous

- Rapid transport to appropriate trauma center.
- Identify and treat reversible life threats
  - Control massive hemorrhage
  - Bilateral needle chest decompression if any trauma to trunk
  - Airway management
  - 2 IVs preferred IV fluid bolus 20 mL/kg up to 1 L (IO if no IV access)
  - Hypothermia prevention
  - Consider pelvic stabilization
  - Initiate BLS CPR and ventilations at age appropriate rate
- Pull/push for pediatric fluid administration

Continue General Trauma protocol

New



REMINDER – Evidence Based Sources List

A list of evidence-based sources used for protocol development is available

DMEMSMD Evidence Based Sources : Evidence Based Sources

DMEMSMD Protocol	Author	Title	Link to Source
9120 Epinephrine	Weant K et al.	Efficacy of bolus-dose epinephrine to manage hypotension in the prehospital setting	https://pubmed.ncbi.nlm.nih.gov/34303186/
9120 Epinephrine	Holden et al.	Safety Considerations and Guideline-Based Safe Use Recommendations for "Bolus-Dose" Vasopressors in the Emergency Department	https://pubmed.ncbi.nlm.nih.gov/28601272/
9070 Benzodiazepines	Uebinger RM, Zaidi HQ, Tataris KL, et al.	Retrospective Study of Midazolam Protocol for Prehospital Behavioral Emergencies	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC72
9070 Benzodiazepines 9045 Antipsychotics	Chan EW, Taylor DM, Knott JC, Phillips GA, Castle DJ, Kong DC.	Intravenous droperidol or olanzapine as an adjunct to midazolam for the acutely agitated patient: a multicenter, randomized, double-blind, placebo-controlled clinical trial.	https://pubmed.ncbi.nlm.nih.gov/22981685/
9070 Benzodiazepines 9045 Antipsychotics	Yap CYL, Taylor DM, Knott JC, Taylor SE, Phillips GA, Karro J, Chan EW, Kong DCM, Castle DJ.	Intravenous midazolam-droperidol combination, droperidol or olanzapine monotherapy for methamphetamine-related acute agitation: subgroup analysis of a randomized controlled trial	https://pubmed.ncbi.nlm.nih.gov/28160494/
9070 Benzodiazepines 9045 Antipsychotics	Taylor DM, Yap CYL, Knott JC, Taylor SE, Phillips GA, Karro J, Chan EW, Kong DCM, Castle DJ.	Midazolam-Droperidol, Droperidol, or Olanzapine for Acute Agitation: A Randomized Clinical Trial	https://pubmed.ncbi.nlm.nih.gov/27745766/
9045 Antipsychotics	Page CB, Parker LE, Rashford SJ, et al.	A Prospective Before and After Study of Droperidol for Prehospital Acute Behavioral Disturbance	https://pubmed.ncbi.nlm.nih.gov/29558224/
9070 Benzodiazepines	Guterman EL, Sporer KA, Newman TB, Crowe RP, et. al.	Real-World Midazolam Use and Outcomes With Out-of-Hospital Treatment of Status Epilepticus in the United States	https://pubmed.ncbi.nlm.nih.gov/35931608/
9190 Magnesium Sulfate	Camargo CA Jr, Rachelefsky G, Schatz M.	Managing asthma exacerbations in the emergency department: summary of the National Asthma Education and Prevention Program Expert Panel Report 3 guidelines for the management of asthma exacerbations	https://pubmed.ncbi.nlm.nih.gov/19683665/
9190 Magnesium Sulfate		Global Initiative for Asthma (GINA) 2024 guidelines	https://ginasthma.org/wp-content/uploads/2024/05 Strategy-Report-24_05_22_WMS.pdf
9190 Magnesium Sulfate	Schiermeyer RP, Finkelstein JA	Rapid infusion of magnesium sulfate obviates need for intubation in status asthmaticus	https://www.sciencedirect.com/science/article/abs 94902380
9190 Magnesium Sulfate		Gestational Hypertension and Preeclampsia: ACOG Practice Bulletin	https://pubmed.ncbi.nlm.nih.gov/32443079/
9190 Magnesium Sulfate		Which anticonvulsant for women with eclampsia? Evidence from the Collaborative Eclampsia Trial	https://pubmed.ncbi.nlm.nih.gov/7769899/
9190 Magnesium Sulfate	Altman D, Carroli G, Duley L, et al.	Do women with pre-eclampsia, and their babies, benefit from magnesium sulphate? The Magpie Trial: a randomised placebo-controlled trial	https://pubmed.ncbi.nlm.nih.gov/12057549/
9190 Magnesium Sulfate	Crowther CA, Brown J, McKinlay CJ, Middleton P.	Magnesium sulphate for preventing preterm birth in threatened preterm labour	https://pubmed.ncbi.nlm.nih.gov/25126773/
9190 Magnesium Sulfate	Grissinger M	Avoiding patient harm from a magnesium bolus dose	https://pubmed.ncbi.nlm.nih.gov/24669174/
9045 Antipsychotics	Beach SR, Gross AF, Hartney KE, Taylor JB, Rundell JR.	Intravenous haloperidol: A systematic review of side effects and recommendations for clinical use	https://pubmed.ncbi.nlm.nih.gov/32979582/
9045 Antipsychotics	Stollings JL, Boncyk CS, Birdrow CI, Chen W, Raman R, Gupta DK, Roden DM, Rivera EL, Maiga AW, Rakhit S, Pandharipande PP, Ely EW, Girard TD, Patel MB	Antipsychotics and the QTc Interval During Delirium in the Intensive Care Unit: A Secondary Analysis of a Randomized Clinical Trial	https://pubmed.ncbi.nlm.nih.gov/38252439/

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