

2023 Protocol Updates

Treatments

- **Abdominal pain**
 - note regarding pregnant patients 20-36 weeks-destination
- **ACS**
 - 12 lead & **activation** of STEMI at EMR
 - Posterior STEMI activation criteria
 - STEMI treatment protocol
 - No STEMI activations for HR >140 narrow complex - treat arrhythmia first
 - OLMC required prior to activation for DNR comfort measures only, known non-interventional status from prior heart cath, known creatinine >2.5, known anaphylactic reaction to IV contrast, and significant dementia.
 - Report time of first EMS contact with patient in PCR
- **Acute dystonic reaction**
 - EMTI/P - 25mg diphenhydramine
- **Adrenal Crisis**
 - prescribed corticosteroid as prescribed-paramedic
- **Altered mental status**
 - Droperidol added
 - Ketamine-only if needed for patient/staff safety
 - Behavioral disorders and suicidal ideology are ALS calls
- **Barotrauma -**
 - Note added for OLMC to determine hyperbaric availability
 - Removed aspirin administration
- **Burns**
 - Added assessment information and considerations for immediate intubation
 - Added treatment for hydrofluoric acid/hydrogen fluoride burns or exposure
 - Fluid infusion rates updated
- **Cardiac arrest protocol**
 - New
- **Cardiac dysrhythmia**
 - High performance CPR @ EMR
- **Cerebral Vascular accident (Stroke)**
 - Added posterior stroke screen
 - Added algorithm with activation timelines and destination information
 - Interfacility post TPA updated with post-TNK
- **Childbirth-care of the newborn**
 - Added history taking GPTPAL
 - Added neonatal resuscitation algorithm
- **Childbirth - post-partum hemorrhage**
 - Added TXA-paramedic
- **Childbirth - uncomplicated**
 - Added GPTPAL for maternal history taking

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- **Do Not Resuscitate - Initiation and termination of resuscitation, transport, and POLST**
 - New protocol
- **Exercise Associated Hyponatremia (EAH)**
 - New protocol
- **Exsanguinating Hemorrhage**
 - AEMT & above - vascular access - prefer large bore with saline lock & crystalloid if SBP <90 and signs of shock-titrate to SBP 90
- **Eye Injury**
 - New protocol
- **Fractures and dislocations**
 - EMR and above-edited traction splint for *mid-shaft* femur fractures
 - Added language consistent with PHTLS guidelines for realignment of extremities with arterial compromise-Paramedic
- **Head Trauma**
 - EMR - prevent/treat hypoxia
 - AEMT and above - prevent/treat hypotension
 - Added objective information for consideration for ICH Trauma System activation and destination decision
 - Added prevent/treat hypo/hypercapnia in trauma activation and EtCO2 range
- **Hospice**
 - New protocol
- **Hypothermia**
 - Algorithm added
- **Insect stings and bites**
 - Added info for black widow, brown recluse, and hobo spider bites
 - Added info for tick and animal bites
- **Near Drowning**
 - Added assessment information
 - EMR and above - advocate for transport for evaluation (symptoms may not occur for 24hrs!)
 - EMT and above - added CPAP consideration
 - Paramedic - consider PEEP for hypoxia refractory to oxygen admin
- **Pain management**
 - Assessment information added
 - EMR and above - splinting and hot/cold compresses added
 - Paramedic - acetaminophen
- **Poisoning and Overdose**
 - Added toxidromes reference
 - Hydroxocobalamin - CO poisoning - paramedic
- **Poisoning Nerve Agent / Organophosphate**
 - New protocol

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- **Respiratory distress**
 - Formatting changes
 - Respiratory Distress Algorithm added
- **Responder Rehabilitation - treat in place**
 - New protocol
- **Seizures**
 - Algorithm added
 - Paramedic - benzodiazepine names are listed in parenthesis in order of preference for seizure treatment
- **Sepsis**
 - Objective information added
 - Sepsis activation removed.
 - Paramedic - added adrenal insufficiency corticosteroid
- **Snake Bites**
 - New protocol
- **Spine Trauma**
 - New protocol
- **Syncope/Near Syncope**
 - Includes near-syncope
- **Trauma System Activation**
 - Additions for destinations
 - MARCH algorithm added
 - Special patient considerations added

Medications

- **Acetaminophen**
 - Dosing unchanged, removed concentration from protocol for clarity
- **Activated Charcoal**
 - Pediatric patients note added regarding sorbitol
- **Atropine**
 - Symptomatic bradycardia 1mg (consistent with 2020 ACLS guidelines)
- **Calcium Gluconate**
 - Indication additions - symptomatic hyperkalemia and symptomatic bradycardia refractory to atropine, TCP, and epinephrine infusion
 - Use with caution in patients taking digoxin - can precipitate dysrhythmias
 - Added dosing for hyperkalemia and refractory symptomatic bradycardia
- **Crystalloid**
 - Added precaution to limit fluids in hemorrhagic trauma, titrating to SBP
 - Peds and Neonates note - if cardiogenic shock 5-10mL/kg boluses
- **Dextrose 10%**
 - Added hypoglycemic state definition for neonates
- **Diazepam**
 - Added for sedation prior to cardioversion or TCP when etomidate unavailable
 - Added for psychotic/combatative when other agents are unavailable

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- **Dopamine**
 - Agency optional
 - Returned to protocol for when other preferred agents are unavailable
- **Droperidol**
 - New protocol
- **Epinephrine**
 - Added indications for severe symptomatic bradycardia, peri-procedural hypotension, hypotension, and non-traumatic shock
 - Croup - dosing and concentration changed for nebulizer administration
 - Push-dose epinephrine preparation and dosing added
- **Etomidate**
 - RSI - midazolam is mandatory to continue sedation
- **Fentanyl**
 - Relative contraindication - head injury/suspected TBI - contraindicated unless conscious and neuro monitoring for transport.
 - Absolute contraindication - head injuries/suspected TBI that are unconscious, sedated, or obtunded
 - Added repeat dose at 15min, dependent on initial dosing
 - Added indications: as part of postintubation management protocol & RSI induction with midazolam when other agents are unavailable
- **Furosemide**
 - Added contraindications of pneumonia (recent hx and/or clinical suspicion)
 - Dosing updated to 20-40 or at oral dose.
- **Hydroxocobalamin (Cyanokit)**
 - Added indication - suspected carbon monoxide poisoning with altered mental status
- **Ipratropium Bromide**
 - Added to EMT - scope
- **Ketamine**
 - Indications, contraindications, and administration updated. (Many changes to this protocol)
- **Levalbuterol**
 - Added as alternative to albuterol when albuterol is unavailable.
- **Lidocaine**
 - Updated IO dosing for adults and pediatrics
- **Lorazepam**
 - Added interfacility only for premedication for anxiety/restlessness
- **Magnesium Sulfate**
 - Updated dosing for all indications
- **Midazolam**
 - Added indications for when other preferred agents are unavailable
 - Added IM administration as a possible route, though it is not preferred to be administered IM. Administer via IV, IO, or IN is preferred over IM.

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- **Morphine Sulfate**
 - Added indication of air hunger and post-intubation management with dosing
 - Closed head injury moved from contraindication to precaution. Not a preferred agent in the setting of head injury. Moderately increases intracranial pressure, decreases mean arterial blood pressure, and cerebral perfusion pressure, but has no significant effect on arteriovenous oxygen content difference and middle cerebral artery mean flow velocity in patients with severe brain injury.
- **Olanzapine**
 - Contraindication updated with exception
- **Oxygen**
 - Note added for patients with TBI
- **Rocuronium**
 - Indication for maintenance updated with 'when continued paralysis is necessary to achieve ventilation and oxygenation'
- **Tranexamic Acid**
 - Indication added-post partum hemorrhage
- **Vecuronium Bromide**
 - Indication edited - 'continued neuromuscular blockade after intubation when necessary to achieve ventilation and oxygenation after adequate sedation and pain management has been administered'

2023 Protocol Updates

Procedures

- **Airvo**
 - New Protocol
- **CPAP**
 - Procedure updated to follow manufacturer's recommendation for oxygen flow to titrate PEEP to 5cmH2O
- **CPR-High Performance**
 - New protocol
- **Infant T-Piece Resuscitator (Neo-Tee)**
 - New protocol
- **Intraosseous infusion - EZIO**
 - Updated standard site - Adult - tibia unless in cardiac arrest then humerus
- **Needle Cricothyrotomy**
 - New protocol
- **Peep Valve**
 - New protocol
- **PICC Line access**
 - New protocol
- **Post-Intubation Management**
 - New protocol
- **Rapid Sequence Induction**
 - Updated procedure-see protocol
- **Spinal Motion Restriction (previously spinal immobilization)**
 - Updated-consistent with PHTLS guidelines
- **Transport Ventilator - Surevent**
 - Updated procedure with PIP initiation

Medical System Policies and Procedures

- **2.2 Dispatch**
 - Dispatch intermediary - avoided whenever possible.
- **3.2 Primary care of the patient during transport based on chief complaint**
 - Added without concern for obstetric complaint or etiology
- **5.2 Death in the field**
 - Language added for hypothermic patients, lightning strikes, and electrocution patients.
- **9.0 Destination Protocol**
 - Updated and added to main protocol set.

2023 Protocol Updates

General changes and updates

- AEMT and above
 - Changed IV or IO language to vascular access
 - Changed fluid bolus language to crystalloid-refer to crystalloid protocol
- EMTI and above
 - Removed specific analgesic names from treatment protocols. Now listed as analgesia unless specific medications are preferred
 - Removed specific benzodiazepine names from treatment protocols. Now listed as benzodiazepine unless specific medications are preferred. Names in parenthesis are listed in order of preference for treatment protocol.
- Paramedic
 - All infusion medications - infusion pump required if available