Version 8 Protocol Changes

Protocol No	Name	Level	Change
	In general		Remove statement at bottom of all the protocols Oxygen sat changed to 94 – 98%, IV fluids in pediatrics changed to 10 – 20 mL/kg Check on narcan and the timing for re-dosing throughout (S/B repeat every 5 – 10 minutes (maximum 10 mg) until respiratory depression resolves and not necessarily until return of consciousness. From Advanced Sepsis Protocol Add push dose to shock protocol and link shock protocol for this and other protocols where pressors are allowed. Change RSI to 3 minutes from 2-5 minutes Be sure to include push dose epi in education and Scott Weinguard's image. Clean up benzo dosing. Update Medication Reference How mix calcium drip Diltiazem drip Any other drips
1	Routine Pt Care	All	Added lactated ringers Add BP
1.1	Exception Protocol		No Change
1.2	Extended Care Guidelines	All	Added examples of extreme weather conditions or extended mass casualty with active shooter incidents
2.0	Abdominal Pain	All	Removed the bullet to assess and monitor cardiac rhythms as this is in Routine Patient Care.
2.1	Adrenal Insufficiency	Extended care Paramedic	Grammatical changes in PEARLS
2.2	Allergic Reaction – Adult & Pediatric	ALL	– added a repeat dose of epinephrine under the EMT section; before they had to call Medical Control for a 2nd dose. The definition of anaphylaxis was updated to match the Sampson Criteria.
2.3	Asthma/COPD/RA	Paramedic	added intramuscular route to methylprednisolone and added intramuscular and PO route to dexamethasone.
2.3	Asthma/Bronchiolitis/Croup	Paramedic	Nebulized epinephrine (1 mg/mL) 3 mg (3 mL) in 3 mL 0.9% NaCl, repeat in 20 minute as needed **OR**· Nebulized racemic epinephrine (2.25% solution) 0.5 mL in 2.5 mL 0.9% NaCl, may repeat in 20 minutes as needed

Version 8 Protocol Changes

Protocol No	Name	Level	Change
2.5	Behavioral	All	Complete re-write. Broke out into Anxiety Management, Resistant or Aggressive management and Violent and/or Excited delirium management.
2.5	Behavioral	Paramedic	Benzodiazepines added to treat anxiety under direct contact with medical control
2.3	BRUE AKA: Apparent Life Threatening Event	ALL	Grammatical changes
2.6	Childbirth & Newborn Care	All	Added commercially available infant warming devise and do not use hot packs to warm a newborn.
2.8	Hyperglycemia	All	Updated definition: Hyperglycemia is defined as blood glucose greater than or equal to 250 mg/dL. Patient with associated signs and symptoms such as altered mental status, increased respiratory rate or dehydration may require treatment.
2.8	Hyperglycemia	AEMT & Paramedic	Fluid administration change: • ADULT: Administer ~~500~~ 1000 ml IV bolus of 0.9% NaCl, ○ May repeat 500 mL fluid bolus, as needed. ~~then 250ml/hr.~~ • PEDIATRIC: Administer 10 mL/kg IV bolus of 0.9% NaCl. ○ May repeat fluid bolus two times for a total of 3 fluid boluses, not to exceed 30 mL/kg ~~adult volume~~.
2.9	Hyperthermia	All	No changes
2.1	Hypoglycemia	All	Changed administer oral glucose to administer 15 – 30 gram commercially prepared glucose or equivalent (NH maple syrup). Removed D50 bullet as we have been through a cycle and no longer pertinent. Added: If intranasal glucagon has been prescribed by the patient's physician, assist the patient or care giver with the administration in accordance with the physician's instructions.
2.1P	Hypoglycemia - Pediatric	A/P	Added the pound to go along with kilograms for glucagon administration
2.11	Hypothermia	All	Re-write Need list of hospitals with CPB and ECMO Education on esophageal temperature
2.12	Nausea/Vomiting	AMET	Added IV/IM route for Ondansetron to AEMT level Removed Granistetron and Dolasetron because it has not been used in years.
2.13	Nerve Agent	All	Changed DuoDote to atropine/pralidoxime auto-injectors, as there are now different brands available.
2.15	Newborn Resuscitation	Paramedic	~~• If meconium is present and the newborn is not vigorous (poor muscle tone, weak respiratory effort, or heart rate <100 bpm), perform direct endotracheal suctioning via meconium aspirator.~~

Version 8 Protocol Changes

Protocol No	Name	Level	Change
			• If there is airway or ventilatory compromise due to meconium or other airway obstruction consider endotracheal suctioning using meconium aspirator and/or endotracheal intubation. • Under Oxytocin removed giving after placentas are delivered and put until all babies are delivered.
2.16	Obstetrical	All	Updated definition of postpartum hemorrhage to "Active bleeding after uterine message and oxytocin administration."
2.16	Obstetrical	Paramedic	Added Tranexamic Acid & Oxytocin after delivery
2.07	Opioid Overdose	All	New Protocol
2.17	Pain – Adult	EMT	Added Ibuprofen Ibuprofen 400 mg PO, no repeat Contraindication of ibuprofen:· Hypersensitive to ibuprofen; cerebrovasular bleeding or other bleeding disorders; active gastric bleeding
2.17	Pain	AEMT	Added blunt chest trauma to contraindication of Nitronox
2.17	Pain - Adult	Paramedic	Add IM dose of hydromorphone 1 – 2 mg IM every 20 minutes to a total of 4 mg titrated to pain relief and if systolic BP is greater than 100**,**
2.17	Pain – Pediatric	EMT	If not contraindicated, consider : o Acetaminophen 15 mg/kg PO, no repeat **OR** o Ibuprofen 10 mg/kg PO, no repeat Contraindication of acetaminophen: · Hypersensitive to acetaminophen or any component of the formulation; severe hepatic impairment or severe active liver disease, do not use with other drug products containing acetaminophen. Contraindication of ibuprofen:· Hypersensitive to ibuprofen; cerebrovasular bleeding or other bleeding disorders; active gastric bleeding
2.17	Pain - Pediatric	Paramedic	Hydromorphone 0.1 – 0.2 mg/kg (maximum dose 1 mg) IV every 10 minutes to a total of 4 mg titrated to pain relief and if systolic BP is greater than 100. Ketamine for patient > 3 months: o 0.5 – 1 mg/kg (maximum dose 50 mg) IN **OR** o 0.1 – 0.25 mg/kg (maximum dose 20 mg) IV diluted in 50 – 100 mL 0.9% NaCl or D5W over 10 minutes (no IV pump needed)
2.18	Poisoning/Overdose	All	Moved opioids into its own protocol
2.19	Seizures	All	o Swipe the VNS magnet over the stimulator, located in the left chest area, for one second, counting one-one thousand while it's swiped over the chest~~. The VNS magnet should "hover" (moving randomly like a bee around a hive) over the implanted disc for a slow count of three seconds; if unsuccessful, repeat every 3 – 5 minutes for a total of 3 times~~.

Version 8 Protocol Changes

Protocol No	Name	Level	Change
2.2	Sepsis – Adult & Pediatric	AEMT	Rapidly administer 0.9% NaCl, 30 mL/kg bolus to maintain MAP > 65 mmHg (systolic blood pressure >90 mmHg), administer additional fluid in 500 mL boluses. Total volume should not exceed 4,000 ml ~~Patients should be reassessed frequently, with special attention given to the lung examination to ensure volume overload does not occur.~~ New bullet in PEARLS: Provide receiving facility with written documentation that includes time of initial bolus, time of completion of bolus, total volume infused and rate.
	Sepsis - Adult	Paramedic	• Refer to Advanced Sepsis Protocol, if prerequisites have been met.· • Obtain serum lactate level (if available and trained)· • If there is no adequate hemodynamic response after initial bolus 2,000 ml IV fluid infused consider: ○ Norepinephrine infusion 1 – 30 microgram/minute (preferred) via pump, **OR** ○ Epinephrine infusion 2 – 10 micrograms/minute via pump.· • Continue maintenance fluid concurrently with pressor administration, titrate to MAP ≥ 65 (systolic blood pressure >90 mmHg)
2.21	Shock - non traumatic	All	No change
2.22	Smoke Inhalation	All	Changed the name to include Carbon Monoxide Removed direction to mix hydroxocobalamin because it is with the kit already. Updated PEARLS with: ~~Smoke is a dangerous mixture of toxic gases and suspended chemicals consequential to combustion. While it may be impossible to predict exactly what components of combustion are inhaled, cyanide (CN) and carbon monoxide (CO) are common elements found in smoke and should be suspected in all smoke inhalation victims.~~· Smoke is a combination of many dangerous toxins produced by incomplete combustion. Patients exposed to smoke should be considered for carbon monoxide (CO) and hydrogen cyanide (HNC) poisoning.
2.23	Stroke		FAST –ED added
2.24	Syncope		No change
3	ACS	EMT	324 aspirin unless patient self administered 324 within last 30 minutes
3	ACS	AEMT	IV avoid right wrist if feasible
3	ACS	P	Removed transdermal nitro and Twin Cath
3.1	Bradycardia Adult	P	Changed diazepam dose for sedation from 2 mg to 5 mg and repeat 2.5 mg once in 5 min Under consider vasopressor:

Version 8 Protocol Changes

Protocol No	Name	Level	Change
			Epinephrine by push dose (dilute boluses) prepare 10 mcg/mL by adding 1 mL 0.1 mg/mL Epinephrine to 9 mL normal saline, then administer 10-20 mcg boluses (1 – 2 mL) every 2 minutes (where feasible, switch to infusion as soon as practical), **AND/OR**o
	Bradycardia Pedi	P	Simplified glucagon dose from 0.025 – 0.05 mg/kg to: o 1 mg IV (25-40 kg), every 5 minutes as necessary, o 0.5 mg IV (less than 25 kg), every 5 minutes as necessary Added beta blocker overdose with suspected hyperkalemia. For calcium gluconate, added maximum dose of 2 gm For calcium chloride, added maximum dose of 1 gm over 5 minutes, repeat 10 minutes, if effective consider IV infusion 20 mg/kg/hr
3.2	Cardiac Arrest	All	Changed all CPRs to high performance CPR. First box changed the word insufflation to ventilation. New PEARL: Depending on your local hospital resources, some refractory ventricular fibrillation patients may benefit from emergent cardiac catheterization. For this small patient population, transportation (ideally with a mechanical CPR device) may be indicated. Transporting these patients directly to the cath lab should be done in collaboration with on-line medical control and interventional cardiology EMS
3.2	Cardiac Arrest	All	Red flag Naloxone has no role in the management of cardiac arrest.
3.2	Cardiac Arrest	AEMT	Change administer epi to consider epi
3.2	Cardiac Arrest	Paramedic	Under Vfib and narrow PEA added: Consider resuscitation for up to 60 minutes from the time of dispatch, including transport for potential reversible causes if no ROSC after initial efforts. Changed sodium bicar from 2 mEq/kg to 1 – 2 mEq/kg
3.2P	Cardiac Arrest – Pediatric	Paramedic	To align with AHA changed subsequent shock to ≥ 4 J/kg, maximum 10 J/kg or adult dose.
3.x	Traumatic Cardiac Arrest	All	New protocol focusing on early airway interventions and addressing possible causes rapidly and aggressively. Education on this new protocols will focus on CPR/airway/bleeding control going on at the same time and discussion on why epinephrine and antidysrhythmics are not included as well when to terminate
3.3	CHF	EMT	Moved CPAP up to EMT
3.3	CHF	Paramedic	High dose nitro: For patients with severe dyspnea, signs of pulmonary edema, and systolic blood pressure over 180 mmHg consider:· Nitroglycerin 400 - 1200 mcg IV bolus over 1 - 2 minutes every 3 - 5 minutesNote: · Bolus-dose nitroglycerin should be used in conjunction with CPAP. · Once respiratory distress improves a nitroglycerin infusion may be initiated per the above guidelines. ·

Version 8 Protocol Changes

Protocol No	Name	Level	Change
			Simultaneous administration of IV nitroglycerin infusions and IV nitroglycerin boluses are not contraindicated if symptoms are ongoing and blood pressure is maintained. Removed transdermal nitro
3.4	Post Resuscitative Care – Adult	Paramedic	Consider vasopressor:· Epinephrine by push dose (dilute boluses) prepare 10 mcg/mL by adding 1 mL 0.1 mg/mL Epinephrine to 9 mL normal saline, then administer 10 - 20 mcg boluses (1 – 2 mL) every 2 minutes (where feasible, switch to infusion as soon as practical), **AND/OR**o
3.5A	Tachycardia-Adult & pediatric	Paramedic	Minor grammatical changes
3.6	Team Focused CPR	All	No changes
3.7	Traumatic Cardiac Arrest	All	New Protocol Education: CPR/Airway/Bleeding control all going on at the same time. Collar can compress vasculature in the neck and reduce cerebral perfusion Discuss why epinephrine/antidysrhythmics is not included Discuss termination of efforts
4.0	Burns	All	Transport Decision: • Consider air medical transport for major burns with greater than 20% BSA and/or inhalation injury with risk of airway compromise. • Electrocution injuries with loss of consciousness, arrhythmia, or any respiratory abnormality
4.X	Crush Injuries	All	New Protocol
4.1	Drowning/Submersion	All	No changes
4.2	Eye & Dental	All	No change
4.X	Hemorrhage Control	All	New Protocol
4.3	Musculoskeletal	AEMT/P	Changed fluid administration to reference the Shock protocol
4.4	Shock - Traumatic	All	No change
4.5	Spinal Injury	All	Added soft collar as an alternative if rigid does not fit properly
4.	TXA	Paramedic	Removed and added to formulary
4.6	Thoracic Injuries		No change
4.7	TBI	AEMT	No change
5	Airway Mgmt Procedure	EMT	No change
5	Airway Mgmt Procedure	AEMT & Paramedic	No changes
5.1	Airway Mgmt Protocol		No changes

Version 8 Protocol Changes

Protocol No	Name	Level	Change
5.2	BiPAP	Paramedic	Broke out Absolute and Relative Contraindications and updated the IPAP and EPAP bullets: 7. IPAP: Set pressure to 10 cm H2O and titrate to work of breathing to maintain sufficient support to generate a tidal volume between 6-8 ml/kg IBW; not to exceed 20 cmH2O (See chart below). 8. EPAP: Adjusted as needed, minimum of Set to 5cmH2O and titrate of SpO2 of 94% - 99%; not to exceed 14 cmH2O.
	Capnography	All	Grammatical
5.3	Cricothyrotomy - Percutaneous	Paramedic	No changes
5.4	CPAP	EMT/AEMT/P	Moved to EMT Broke out Absolute and Relative Contraindications
	Gastric Tube Insertion	Paramedic	No changes
5.5	Gum Elastic Bougie/Flexguide	Paramedic	No changes
5.6	Nasotracheal Intubation	Paramedic	No change
5.7	Orotracheal Intubation	Paramedic	No changes
5.X	Sedation for Invasive Airway	Paramedic	New Protocol
5.8	Suction (Advanced)	All	No changes
5.9	Supraglottic Airway	All	No changes
5.1	Tracheostomy Care	Paramedic	No changes
5.11	Ventilators	Paramedic	No changes
6	12 Lead Acquisition	All	Grammatical
6.x	Double Sequential Defibrillation	All	No changes
6.1	Intraosseous Access	A/P	No changes
6.3	Restraints	Paramedic	Updated medication orders
6.4	Tasers	All	No change
6.5	Tourniquets	All	Moved to Trauma re renamed Hemorrhage Control
6.6	Vascular Access via Central Catheter		Update training objectives
7.0	Advanced Sepsis	Paramedic	Added push dose epi when vasopressor infusion is not immediately practical
7	Immunizations		Updated language on public safety incidents
7.1	IFT		Rewritten – separate module for PIFT

Version 8 Protocol Changes

Protocol No	Name	Level	Change
7.2	MIH		Updated renewal criteria
7.3	RSI		Dosing chart
7.4	Sx Cric		No changes
8.1	AMT	All	Under Clinical Conditions/ Circulatory insufficiency: sustained systolic blood pressure < 90mmHg or MAP of < 65 mmHg in adults, age appropriate hypotension in children or other signs of shock. Neurologic compromise: Patient cannot follow commands (GCS motor component ≤ 5) or total GCS ≤ 13 Education on GCS
	Baby Safe Haven		No change
8.2	Bariatric		Grammatical changes
8.3	Communications		No change
8.4	Communications Failure		No change
8.5	Consent for Treatment of a Minor	ALL	No change
8.5	Continuity of Care	All	No change
8.7	Crime Scene	All	Added bullets: • Avoid moving or touching firearms; notify law enforcement to secure. If necessary to move a firearm for safety or resuscitation, document location and position • Document locations of needle punctures by EMS
8.8	DNR, POLST, Advanced Directive	**All**	Add POLST to the Recognized DNR Options
	Hospice	**All**	No Change
8.9	Infectious Control	**All**	Removed the reference to the Emergency Response/Public Safety Worker Incident Report Form, as it does not exist.
8.10	VAD		Cleaned up a lot of old “education” language
8.11	On-Scene Medical Personnel		No changes
8.12	Pt Status Determination	All	Rewritten to comply with 2016 Model of the Clinical Practice of Emergency Medicine and National EMS Core Content Appendix 2 and 3.
8.13	Pedi Transport	All	Updated Mother and Newborn section
8.14	Police Custody		No change
8.15	Refusal of Care	All	Under Procedures: 3. Explain to the patient the nature, severity or uncertainty of his/her illness or injury, the treatments being proposed, the risks and consequences of accepting or refusing treatment, and the potential alternatives. Fully document the explanation given to the patient in your patient care report.
8.15	Response to DV		

Version 8 Protocol Changes

Protocol No	Name	Level	Change
8.16	Resuscitation Initiation and Termination	Paramedic	• Consider resuscitation for up to 60 minutes from the time of dispatch, including transport for potential reversible causes if no ROSC after initial efforts. • Removed the Narrow complex PEA red flag based on the added wording in the bullet above.
8.x	Strangulation	All	Added more S/S: Vision disturbances or changes (spots, light flashes, tunnel vision, etc.)· Hearing disturbances or changes (buzzing or ringing in the ears, etc.)· Headache· Subcutaneous emphysema· Incontinence
8.17	Trauma Triage and Transport Decision		No change
8.18	Victims of Violence	All	Added Human Trafficking
9	Hazardous Material Exposure	All	Rewritten to make simpler and clearer
9.1	Mass/Multiple Casualty Triage	All	Cleaned up, removed the Scene Assessment and Triage Priorities
9.2	Radiation Injuries - MCI	All	No changes
	Scope of Practice	AEMTs	