OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **03/08/12**

SUBJECT: ABDOMINAL DISCOMFORT (NON-TRAUMATIC) POLICY NUMBER: 9100

BLS

Ensure patent airway, give oxygen and/or ventilate prn
Monitor O2 saturation prn
Nothing by mouth
Anticipate vomiting

ALS

Monitor ECG for upper abdominal pain in patients for whom a cardiac cause is a consideration (e.g., males > 35 yrs; females > 45 yrs/postmenopausal), Monitor O2 saturation prn

SO Establish Saline lock/IV prn
SO Ondansetron 4mg ODT/IV/IM.
BH Morphine Sulfate 2-10mg in 2mg increments IVP q 5 min. for pain if stable
(Use caution: suspected intra-abdominal catastrophe - see note)

If patient presents with a suspected intra-abdominal catastrophe:
SO 500 ml Normal Saline bolus IV; titrate fluid infusion to a systolic BP ≥ 90.

PEDIATRIC NOTE:

Refer to Pediatric Drug Guide
BHP Morphine Sulfate
BHP Ondansetron 0.1mg/kg max of 4mg IV/IM
For patients ≥ 40 kg; Administer one (1) Ondansetron 4mg ODT

NOTE: Immediate transport for suspected intra-abdominal catastrophe (e.g., suspected ectopic pregnancy, abruptio placenta, abdominal aortic aneurysm, or unstable vital signs). Titrate fluid infusion to a systolic BP 90.

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: 01/01/03

SUBJECT: **AIRWAY OBSTRUCTION (Foreign Body)** **POLICY NUMBER:** **9110**

BLS	ALS
American Heart Association/American Red Cross procedures for conscious/unconscious patient for appropriate age group. **Once obstruction is removed:** Monitor respiratory/circulatory status Give oxygen and/or ventilate prn.	**Losing Consciousness/Unconscious** **SO** Direct laryngoscopy and Magill forceps If unsuccessful, alternate BLS procedures with ALS (laryngoscopy/Magills) while enroute to hospital.

PEDIATRIC NOTE: Consider the possibility of croup and epiglottitis. If epiglottitis is suspected, keep patient in sitting position and do not attempt to visualize the oropharynx; immediate transport.

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: Rev. 04/16/12

SUBJECT: ALLERGIC REACTION/ANAPHYLAXIS

POLICY NUMBER: 9120

BLS

Ensure patent airway, give oxygen and/or ventilate prn.
Monitor O2 saturation prn
Assist ventilations with Bag Valve Mask when airway threatened

Remove stinger

For respiratory distress or hypotension:

May assist patient with prescribed
Epinephrine auto-injector
Adult dose: 0.3 mg
Child/Infant dose: 0.15 mg
ONE TIME ONLY
BH Contact required prior to any repeat dose

If patient does not have auto-injector available, transport immediately.

ALS

Monitor ECG/Monitor O2 saturation prn

SO Insert ETT/Perilaryngeal (if airway threatened and patient losing consciousness or unconscious)

SO Establish IV prn

ALLERGIC REACTION (Rash, urticaria)

SO Diphenhydramine 25 mg slow IVP or IM (if no IV); may repeat X1 to max 50 mg SO

ALERGIC REACTION ACUTE (respiratory distress, threatened airway, hypotension, mild angioedema):

SO Epinephrine (1:1,000) 0.3 mg IM; May repeat X1 q10 minutes SO

SO Diphenhydramine 50 mg slow IVP or IM (if no IV)

SO Nebulized Albuterol 2.5 mg (if wheezing persists after Epinephrine)

ANAPHYLAXIS (severe hypotension, severe respiratory distress, cyanosis):

SO Epinephrine (1:1,000) 0.3 mg IM; May repeat X1 q10 minutes SO

SO Give IV fluids for hypotension; titrate fluid infusion to a systolic BP > 90.

SO Diphenhydramine 50 mg slow IVP or IM (if no IV)

SO Nebulized Albuterol 5 mg (if wheezing persists after Epinephrine)

BH Epinephrine (1:10,000) 0.1 mg slow IVP

If patient still presents with profound hypotension after Epinephrine and fluids

BH Consider Dopamine 400 mg/250 mL NS at 5-20 mcg/kg/min; titrate to systolic BP 90 mm Hg

BLS	ALS
	PEDIATRIC NOTE:
	Refer to Pediatric Medication Guide
	SO Nebulized Albuterol 2.5 mg (if wheezing persists after Epinephrine)
	SO Normal Saline 20 mL/kg initial bolus via Volutrol rapid IV drip; may repeat per BH
	BH Diphenhydramine dosage as per pediatric medication guide slow IVP or IM (if no IV)
	BHP Epinephrine (1:1,000) dosage as per pediatric medication guide; May repeat per BHP
	BHP Dopamine 200 mg/250 mL NS, run at 5-20 mcg/kg/min

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS DATE: Rev. 4/16/12

SUBJECT: ALTERED NEUROLOGIC FUNCTION (NON-TRAUMATIC) POLICY NUMBER: 9130

BLS

Ensure patent airway, monitor O2 saturation prn,
give oxygen (Saturation <94%) and/or ventilate prn.

Position patient as follows:

If conscious with suspected CVA, elevate head 20-30 degrees

If unconscious, place patient lateral recumbent

Immobilize spine if indicated

HYPOGLYCEMIA (suspected)

If patient is awake, has a gag reflex and can swallow:

Give oral glucose solutions to include:

fruit juices, 2-3 packets of granulated sugar dissolved in liquid, glucopaste on tongue depressor placed between cheek and gum, glucose tablets: 2-3 tablets, repeat as needed

SEIZURES

Protect from injury

Treat associated injuries

Febrile seizures (pediatric)

Remove clothing

Avoid shivering

ALS

Glucometer

Monitor ECG/monitor O2 saturation prn

SO Establish Saline lock/IV prn

HYPOGLYCEMIA (Symptomatic patient with altered LOC or insufficient response to oral glucose preparations)

SO Dextrose 50% 25 gm IV if BS level < 60 mg/dL or unobtainable; may repeat per SO

OR

SO Glucagon 1 mg IM if no IV and BS level < 60 mg/dL or unobtainable

SEIZURES **For generalized seizures that last longer than 5 min., seizures that cause respiratory compromise, or generalized seizures that are recurrent without lucid interval:**

SO Midazolam 0.1 mg/kg slow IV (1 mg/min) to max 5 mg (discontinue if seizure stops); may repeat X 1 in 10 min. per SO **OR**

SO Midazolam 0.2 mg/kg IM (2-3 mL increments) to max 10 mg; may repeat X 1 in 10 min. per SO **OR**

SO Midazolam 0.2 mg/kg IN (2-3 mL increments) to max 10 mg; may repeat X 1 per BH

PEDIATRIC NOTE:

Refer to Pediatric Drug Guide

SO

SUSPECTED CEREBROVASCULAR ACCIDENT Important: document time of onset of symptoms. If possible take witness who can establish onset to hospital.

Patients exhibiting any of the signs/symptoms of stroke which started within the previous four hours may be experiencing an acute stroke. Assess for signs of obvious asymmetry:

- ☐ Check for facial droop/asymmetry (ask patient to show their teeth or to smile - observing for asymmetry)
- ☐ Assess for motor weakness or paralysis (have patient extend both arms - observe for weakness / have patient perform hand grasps - assess grip strength)
- ☐ Check for speech abnormalities (observe for slurring or inappropriate words)

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **Rev. 4/16/12**

SUBJECT: **ALTERED NEUROLOGIC FUNCTION (NON-TRAUMATIC)** **POLICY NUMBER:** **9130**

The Los Angeles Prehospital Stroke Screen (LAPSS) is useful to evaluate acute, non-comatose, non-traumatic neurologic complaints. It is based on six criteria - if all are checked "yes", or ("unknown") the patient has a high likelihood of having an acute stroke.

LAPSS Criteria:

- ☐ Age > 45 years
- ☐ History of seizures or epilepsy absent
- ☐ At baseline, patient is not wheelchair bound or bedridden
- ☐ Blood glucose between 60 and 400
- ☐ Obvious asymmetry (right versus left) in any of the following categories (must be unilateral):
  - * Facial smile/grimace
  - * Grip
  - * Arm strength
- ☐ Duration of signs/symptoms < 24 hours

Disposition:

Patients with a high likelihood of an acute stroke should be transported to the appropriate receiving hospital with a functioning CT scanner.
Alert receiving hospital early if patient meets stroke screen criteria.

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

IMPERIAL COUNTY EMERGENCY MEDICAL SERVICES AGENCY
POLICY/PROCEDURE/PROTOCOL

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **03/08/12**

SUBJECT: **BEHAVIORAL EMERGENCIES** **POLICY NUMBER:** **9140**

BLS

Ensure patent airway, monitor O2 saturation prn,
give oxygen and/or ventilate prn
Nothing by mouth
Attempt to determine if illness, injury, or drug use as cause
Consider Altered Neurologic Function Policy # 9120
Restrian only if necessary to prevent injury (enlist support)
No compression of chest and neck
Restrain on side or supine (never prone or hog-tied)
TASER® probes should be treated as impaled objects and not removed unless they are affecting the airway, may prevent life saving treatment or BH is consulted
Consider law enforcement support (possible 5150)

ALS

Glucometer
Monitor ECG/Monitor O2 Saturation prn
SO Establish Saline lock/IV prn

For Patients Exhibiting Severe Agitation:

SO Midazolam 0.2mg/kg IM (2-3 mL increments) to a max of 10 mg; May repeat X 1 per BH.

OR

SO Midazolam 0.2mg/kg IN to a max of 5 mg; May repeat X 1 per BH.

OR

SO Midazolam 0.1 mg/kg slow IVP to max 5 mg; May repeat X 1 per BH.

Note: For severely agitated patients IN or IM Midazolam is the preferred route due to risk of injury to patient and/or to EMS personnel. Monitor BP and level of sedation every 5 minutes titrating to lowest dose possible. Maintain O2 saturation >94%. Monitor ECG on all patients who have been exposed to TASER® Non-lethal devises. Treat probes as contaminated sharps. If TASER® probe wires need to be removed to facilitate transport simply cut wires with trauma shears

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **Rev. 4/16/12**

SUBJECT: BURNS

POLICY NUMBER: 9150

BLS

Move patient to a safe environment
Break contact with causative agent
Ensure patent airway, monitor O_2 saturation, give oxygen and/or ventilate prn.
Treat other injuries

THERMAL BURNS

Burns < 10% BSA - cool saline soaks; Stop burning process with non-chilled water or saline
Burns 10% or greater - cover with dry dressings and keep warm

CHEMICAL BURNS

Brush off dry chemicals
Flush with copious amounts of water
See Poisoning (Absorbed) Policy # 9230

TAR BURNS

Cool with water; Do not attempt to remove tar

ALS

Monitor ECG/Monitor O_2 saturation prn.

SO Establish IV prn

SO Morphine Sulfate 2-10 mg in 2 mg increments slow IV; may repeat per BH; titrate to pain relief, BP ≥ 90, and O_2 saturation > 94%

For patients with ≥20% 2nd or ≥5% 3rd degree burns and ≥ 15 years

SO Normal Saline 500 ml fluid bolus IV, then TKO

RESPIRATORY BURNS (for wheezing)

SO Nebulized Albuterol 5 mg; may repeat SO

PEDIATRIC NOTE:

Refer to Pediatric Drug Guide

SO For fluid replacement Refer to Pediatric Drug Guide

BH Morphine IV; may repeat per BHP

DISPOSITION: STAT transport for critical burns (e.g., 2nd or 3rd degree burns involving > 20% BSA, suspected respiratory involvement, significant burns to face, hands, feet, perineum, chemical or electrical burns). Patients meeting previous criteria will be transported directly to the nearest burn center. Burn patients meeting critical truma criteria will be transported to the nearest trauma center.

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **Rev. 4/16/12**

SUBJECT: CARDIAC ARREST (non-traumatic)

POLICY NUMBER: 9160

BLS

Perform CPR, rate of at least 100 compressions per minute without interruption (compressions/ventilations 30:2 without interuption)

Ensure patent airway, monitor O_2 saturation, give oxygen and/or ventilate via BVM prn

Remove dermal NTG

SO AED (defibrillate in accordance with Policy #7210)

SO Insert Perilaryngeal Airway, after 3 rounds of 2 min. CPR*

*Perilaryngeal Airway may only be utilized by authorized EMT-I, or Advanced EMT, who have EMT-I Optional Skill Accreditation.

If hypovolemia suspected:

Immediate transport.

If applicable refer to:

Determination of Death in the Field Policy # 4140

Do Not Resuscitate Policy # 4150

ALS

Monitor ECG/Monitor O_2 saturation prn.

SO Perform defibrillation if indicated (in accordance with Policy #7200)

SO Insert ETT/Perilaryngeal Airway

Monitor ETCO2 (35-45 mmhg)

SO Establish IV TKO

Refer to specific dysrhythmia protocol

If hypovolemia suspected:

Immediate transport

SO Establish IV enroute run wide open to max 2 liters

PEDIATRIC NOTE:

Refer to Pediatric Drug Guide

If hypovolemia suspected:

SO Normal Saline 20 mL/kg initial bolus via Volutrol rapid IV drip; may repeat per BH

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

IMPERIAL COUNTY EMERGENCY MEDICAL SERVICES AGENCY
POLICY/PROCEDURE/PROTOCOL

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **03/08/12**

SUBJECT: **CHEST PAIN (Suspected Cardiac Origin)** **POLICY NUMBER:** **9170**

BLS

Ensure patent airway, monitor O_2 saturation, give oxygen and/or ventilate to a target saturation of 94% prn.

Do not allow patient to walk or exert self

May assist patient with prescribed Nitroglycerin 0.4 mg (1/150 gr) sublingual if BP > 100 systolic

ALS

Monitor ECG; Obtain 12 lead if available and report STEMI findings;Monitor O_2 saturation

SO Establish IV TKO

Treat dysrhythmias per specific protocol

SO Nitroglycerin 0.4 mg (1/150 gr) SL q 5 min. X 3 if BP ≥ 90 systolic (*AEMT if BP ≥ 100 systolic) additional NTG per BH

SO Aspirin 162 mg chewable PO

SO Morphine Sulfate 2-20 mg in 2 mg increments IVP; titrate to pain relief

HYPOTENSION (suspected Cardiogenic Shock)

SO Fluid challenge 250 mL with clear lungs; may repeat per BH

BH Dopamine 400 mg/250 mL NS, run at 5-20 mcg/kg/min IV; titrate to systolic BP 90-100 mmhg

NOTE:

Ask patients who are candidates for nitroglycerin if they are on erectile dysfunction medications and, if so, the dose and time last taken. No nitroglycerin should be given under standing orders to a patient who has taken erectile dysfunction medications within the last 48 hours. If Base contact cannot be made and a patient is experiencing chest pain who has taken erectile dysfunction medication in the last 48 hours and IV line should be started and small doses of morphine (2 mg increments) should be given and titrated to pain relief with necessary fluid

NOTE: For suspected thoracic aortic aneurysm, transport immediately.

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: 03/08/12

SUBJECT: DYSRHYTHMIAS

POLICY NUMBER: 9180

BLS

Ensure patent airway/Monitor O2 saturation prn.
Give oxygen
Ventilate prn.

ALS

Cardiac dysrhythmias are treated only if they are causing or have the potential to cause unstable condition or severe patient distress.

Monitor ECG - if stable, obtain 12-lead if available; report results/Monitor O2 saturation prn.

SO Establish IV TKO (Antecubital site and large bore are required for Adenosine Administration)

SUPRAVENTRICULAR TACHYCARDIA (SVT)

SO Valsalva's manuever

SO Adenosine 6 mg IV followed immediately by 20 ml NS IV

BH If no response, may repeat after 3-5 minutes Adenosine 12 mg IV followed immediately by 20 ml NS IV

ATRIAL FIBRILLATION / ATRIAL FLUTTER STABLE

BH CaCL 10% 5 mL slow IV (if BP < 100 systolic)

BH Verapamil 5 mg slow (over 2-3 minutes) IV; may repeat to max 15 mg in 30 min. per BH
titrate medication administration to a SBP >90 mmHg

UNSTABLE

(chest pain, BP < 90 systolic, decreased LOC, CHF)

BH Midazolam 1-2 mg slow IV (1 mg/min) prn. pre-cardioversion, may use Intra-Nasal administration; use with caution in SBP 80 - 90 mmHg

BH Synchronized cardioversion at manufacturer's recommended energy dose; May repeat X 3 per BH

NOTE

PSVT and Atrial Flutter often respond to lower energy levels, start at 50 joules.

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **03/08/12**

SUBJECT: **DYSRHYTHMIAS (continued)** **POLICY NUMBER:** **9180**

BLS	ALS
	PEDIATRIC NOTE: **If UNSTABLE SVT, additional signs of poor perfusion include cyanosis, mottled skin, delayed capillary refill, altered LOC, dyspnea, diminished or absent peripheral pulses with the following heart rates:** Premie - 3 yrs > 240 bpm 4 yrs or older > 200 bpm **Refer to Pediatric Drug Guide** **BHP** Midazolam IVP prn. pre-cardioversion **BHP** Synchronized cardioversion at 1 J/kg; may repeat with 2 J/kg, 4 J/kg, 4 J/kg per BHP (Contraindicated if unable to deliver < 4 J/kg)

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

SUBJECT: DYSRHYTHMIAS (continued) **POLICY NUMBER: 9181**

BLS

Ensure patent airway
Give oxygen
Ventilate prn.
Monitor O2 saturation prn.

ALS

Monitor ECG/Monitor O2 saturation prn.
If stable Perform 12 lead ECG if available and report findings

SO Establish IV TKO

UNCOMPENSATED BRADYCARDIAS WITH PULSE

(Clinical manifestations include chest pain, shortness of breath, decreased LOC, BP < 90 systolic, pulmonary congestion)

SO Normal Saline 250 mL fluid bolus IV with clear lungs; may repeat to maintain BP ≥ 90 SO

SO Atropine Sulfate 0.5 mg IV, may repeat per BH q 5 min. to max 3 mg

SO Transcutaneous pacing

For discomfort caused by TCP (mechanical capture and SBP ≥100):

SO Morphine Sulfate 2-20 mg IV in 2 mg increments, titrate to pain relief and SBP ≥ 90

For discomfort not relieved by Morphine Consider:

SO Midazolam 1-5 mg slow IV (1 mg/min); titrate to pain relief; minimum SBP ≥ 80

BH Dopamine 400 mg/250 mL NS at 5-20 mcg/kg/min IV drip; titrate to cardiac rate/rhythm response and SBP ≥ 90

NOTE: If heart rate increases to greater than 60/min and BP < 90 systolic, treat as Cardiogenic Shock.
For complete heart block or Mobitz II with wide ventricular response, go directly to TCP

BLS	ALS
	PEDIATRIC NOTE: **Unstable bradycardias are usually the result of hypoxia or severe shock in pediatrics - not cardiac abnormality. Additional signs of poor perfusion include cyanosis, mottled skin, dyspnea, delayed capillary refill, altered LOC, diminished or absent peripheral pulses, and may be caused by the following heart rates:** Infant/Child (< 9 years) < 60 bpm Child (9-14 yrs) < 40 bpm **Refer to Pediatric Drug Guide** **SO** Normal Saline 20 mL/kg IV initial bolus via Volutrol; may repeat per SO X2 **BHP** Atropine 0.02 mg/kg to a max of 0.5mg; Maximum total dose of 2mg **BHP** Dopamine 200 mg/250 mL NS, run at 5-20 mcg/kg/min

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: 03/08/12

SUBJECT: DYSRHYTHMIAS (continued)

POLICY NUMBER: 9183

BLS

Ensure patent airway
Give oxygen
Ventilate prn.
Monitor O2 saturation prn.

ALS

Monitor ECG/Monitor O2 saturation prn.

SO Establish IV TKO

VENTRICULAR TACHYCARDIA (or wide-complex tachycardia of uncertain type)

STABLE

SO Lidocaine 1.0-1.5 mg/kg slow IVP

SO Repeat dose of Lidocaine 0.5-0.75 mg/kg slow IVP every 5-10 min. until patient converts or to max 3 mg/kg if needed

UNSTABLE (BP < 90 systolic, dyspnea, chest pain, altered LOC, pulmonary edema)

SO Midazolam 1-2 mg slow IVP (1 mg/min) prn. pre-cardioversion; minimum SBP ≥ 80
Midazolam 1 mg if age 60 or above; minumim SBP ≥ 80

SO Synch. cardioversion at manufacturer's recommended energy dose; May repeat per BH

BH Repeat cardioversion as needed

NOTE: Perform unsynchronized cardioversion if patient is unconscious or if monitor does not sync. Automated Implantable Cardioverter Defibrillator > 1 shock causing discomfort, lidocaine and pain medication prn.

POST CONVERSION (if heart rate > 50/min)

SO Lidocaine 1.0-1.5 mg/kg slow IVP (if not already given)

SO Repeat dose of Lidocaine 0.5-0.75 mg/kg slow IVP q 5-10 min. to max 3 mg/kg if needed

PEDIATRIC NOTE:

Refer to Pediatric Drug Guide

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **Rev. 4/16/12**

SUBJECT: **DYSRHYTHMIAS (continued)** **POLICY NUMBER:** **9184**

BLS

Begin CPR , after first 30 compressions give fist ventilations and continue until ready to defibrillate

AED if available

Assist ventilations

Monitor O2 saturation prn.

*Perilaryngeal Airway may only be utilized by authorized EMT-I, or Advanced EMT, who have EMT-I Optional Skill Accreditation.

ALS

If unwitnessed, perform CPR x2 min. prior to defibrillation (if witnessed by EMS, perform CPR until ready to defibrillate)

VENTRICULAR FIBRILLATION/PULSELESS VENTRICULAR TACHYCARDIA

Monitor ECG/Monitor O2 saturation prn.

SO Defibrillate at max setting x1 at manufacturer's recommended energy dose

Perform CPR x2 minutes immediately after shock

Perform max. 10 second rhythm check (perform pulse check only if perfusing rhythm)

SO Defibrillate at max setting x1 if indicated for persistent VF/Pulseless VT

After each shock, continue with sequence of CPR x2 minutes & rhythm check until patient converts

SO Establish IV TKO, do not interrupt CPR to start IV

SO Epinephrine (1:10,000) 1 mg IV during CPR, may repeat q 3-5 min., OR (1:1,000) 2 mg in 8 cc NS ETT X I (if no IV)

SO After each drug, continue with sequence of CPR x2 minutes, rhythm/pulse check and shock prn until patient converts

SO Insert ETT/Perilaryngeal Airway (once airway is in place ventilate patient at a rate of 8-10 breaths/min)

SO EtCO2 monitoring (Waveform Capnography 35 - 45 mm/Hg)

SO If return of pulses obtain 12-Lead ECG if available

Note: For patients with an EtCO2 reading of less than 10mm/Hg or patients in nonperfusing rhythms after resuscitative effort, consider early Base Hospital contact for disposition/pronouncement at scene.

□ Flush IV line with N.S. after medication administration. Medication should be administered as soon as possible after rhythm checks.

□ CPR ratio 30:2 compressions to ventilations (compression rate of 100/min) until patient is intubated, then ratio becomes 10:1.

PEDIATRIC NOTE:

Refer to Pediatric Drug Guide

APPROVAL:

Bruce E. Haynes, M.D.

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **Rev. 4/16/12**

SUBJECT: **DYSRHYTHMIAS (continued)** **POLICY NUMBER:** **9185**

BLS

Perform CPR and apply AED prn.

(CPR Ratio 30:2 compressions to ventilations until patient is intubated; After intubation ratio 10:1.)

Assist ventilations prn.

Monitor O2 saturation prn.

*Perilaryngeal Airway may only be utilized by authorized EMT-I, or Advanced EMT, who have EMT-I Optional Skill Accreditation.

ALS

Monitor ECG/Monitor Oxygen Saturation prn.

PULSELESS ELECTRICAL ACTIVITY (PEA)

SO Establish IV TKO (Do not interrupt CPR to establish IV)

SO Insert ETT/Perilaryngeal

Consider possible causes: hypovolemia, hypoxia, tension pneumothorax, drug overdose, hyperkalemia, cardiogenic shock. Treat underlying problem in accordance with appropriate protocol.

SO Epinephrine (1:10,000) 1 mg IVP, may repeat q 5 min., OR
Epinephrine (1:1,000) 2 mg in 8 cc NS ETT X 1 (if no IV)

SO Consider fluid challenge 250-500 mL NS (if clear lungs); additional fluids per BH

BH Consider Dopamine 400 mg/250 mL NS, run at 10-20 mcg/kg/min

SO EtCO2 monitoring (Waveform Capnography 35 - 45 mm/Hg)

PEDIATRIC NOTE:

Refer to Pediatric Drug Guide

SO Fluid challenge NS 20 mL/kg initial bolus via Volutrol rapid IV drip; may repeat per BH

BH Dopamine 200 mg/250 mL NS, run at 5-20 mcg/kg/min

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **Rev. 4/16/12**

SUBJECT: **DYSRHYTHMIAS (continued)** **POLICY NUMBER:** **9186**

BLS

Perform CPR and apply AED prn.
(CPR Ratio 30:2 compressions to ventilations until patient is intubated; After intubation ratio 10:1.)
Assist ventilations prn.
Monitor O2 saturation prn.

*Perilaryngeal Airway may only be utilized by authorized EMT-I, or Advanced EMT, who have EMT-I Optional Skill Accreditation.

ALS

ASYSTOLE

SO Monitor ECG/Monitor Oxygen Saturation prn.

SO Establish IV
SO Epinephrine (1:10,000) 1mg IV, may repeat q 5 min.
SO Insert ETT/Perilaryngeal Airway
SO EtCO2monitoring (Waveform Capnography 35 - 45 mm/Hg)

NOTE: If patient remains in asystole or other agonal rhythm after successful intubation and medications and no reversible causes are identified, consider termination of resuscitative efforts by BH Phsyician.

PEDIATRIC NOTE:

Refer to Pediatric Drug Guide

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: Rev. 4/16/12

SUBJECT: ENVIRONMENTAL EMERGENCIES

POLICY NUMBER: 9190

BLS

Remove patient from hostile environment
Ensure patent airway
Give oxygen and/or ventilate prn.
Monitor O2 saturation prn.

COLD EXPOSURE:

Remove wet clothing
Handle patient gently and avoid unnecessary movement
Institute gentle warming with blankets or warm packs
Do not apply heat directly to the skin or rub the injured areas
Apply dressings to blistered or necrotic areas
Prolonged CPR may be indicated
If alert, give warm fluids; if altered LOC - NPO

HEAT EXHAUSTION:

Loosen or remove clothing
Cool gradually (spraying with tepid water and fanning); avoid shivering
If conscious and no nausea, give small amounts of cool liquids

HEAT STROKE:

Rapid cooling: remove clothing
Ice packs to axillae, groin, cervical area (avoid pressure on carotids)
Flush or spray with tepid water, fan patient
Avoid shivering
*Perilaryngeal Airway may only be utilized by authorized EMT-I, or Advanced EMT, who have EMT-I Optional Skill Accreditation.

ALS

Monitor ECG/Monitor O2 saturation prn.
SO Establish Saline lock/IV prn.
SO Insert ETT/Perilaryngeal Airway prn.
SO EtCO2 monitoring (Waveform Capnography 35 - 45 mm/Hg) prn.

HEAT EXHAUSTION/STROKE:

SO Consider fluid challenge of 500 mL NS (if clear lungs)
May repeat per SO, limit 2 liters

HYPOTHERMIA (with cardiac arrest)

SO Hold medications
SO Provide CPR prn.
SO For severe hypothermia limit shock to 1, and no medications

PEDIATRIC NOTE:

SO Establish Saline lock/IV prn.
SO Normal Saline 20 mL/kg initial bolus via Volutrol; may repeat per BH

APPROVAL:

Bruce E. Haynes, M.D.

EMS Medical Director

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: 6/1/07 rev.

SUBJECT: HEMODIALYSIS

POLICY NUMBER: 9200

BLS

Ensure patent airway
Give oxygen and/or ventilate prn.

ALS

Monitor ECG

SO Establish IV TKO (preferably in arm without graft/AV fistula)

NOTE: In life-threatening conditions, if unable to start IV elsewhere, may access graft/fistula.

SUSPECTED HYPERKALEMIA (widened QRS, peaked T waves, bradycardia)

SO Calcium Chloride 250-500 mg IVP

SO Dextrose 50% 25 gm IVP

PEDIATRIC NOTE:

Refer to Pediatric Drug Guide

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **Rev. 4/16/12**

SUBJECT: **NEAR DROWNING** **POLICY NUMBER:** **9210**

BLS

Ensure patent airway, suction prn.

SO *Insert Perilaryngeal Airway prn.

Monitor O2 saturation prn.
Give oxygen and/or ventilate prn.
Spinal immobilization for suspected spinal injury
Keep patient warm

All patients in this category should be evaluated in the hospital.

*Perilaryngeal Airway may only be utilized by authorized EMT-I, or Advanced EMT, who have EMT-I Optional Skill Accreditation.

ALS

Monitor ECG/Monitor O2 saturation prn.

SO Insert ETT/Perilaryngeal Airway prn.
SO EtCO2 monitoring (Waveform Capnography 35 - 45 mm/Hg) prn.
SO Establish Saline lock/IV prn.
SO Consider nebulized Albuterol 2.5 mg for wheezing; may repeat per BH
BH CPAP at 5-10cm H2O in cooperative and alert patients

PEDIATRIC NOTE:
Refer to Pediatric Drug Guide

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **03/08/12**

SUBJECT: **OBSTETRICAL EMERGENCIES** **POLICY NUMBER:** **9220**

BLS

Ensure patent airway, give oxygen and/or ventilate prn.
Monitor O2 saturation prn.
If delivery not imminent, transport immediately on left side
(if greater than 16 weeks gestation)
Any birth that is difficult or not progressing, transport immediately

ROUTINE DELIVERY:

If no time for transport, proceed with delivery
If unbroken amniotic sac, puncture sac away from baby's face
If cord around neck, slip over head; if unable: clamp and cut cord
Suction baby's mouth then nose (only for obvious obstruction); PRN
Positive Pressure Ventillation, PRN if HR <100 BPM
Stimulate baby by tapping soles of feet and/or rubbing back
Clamp and cut cord once it stops pulsating (1 min after delivery);record time
Dry baby, wrap warmly and place to mother's breast
Assess APGAR at 1 min. and at 5 min.
Do not wait on scene to deliver placenta
Once placenta is delivered, massage the fundus
Save placenta and deliver with patient to hospital
Place identification bands on mother and infant

ALS

Monitor EKG/Monitor O_2 saturation prn.

SO Establish Saline lock/IV prn. (mother)

MECONIUM STAINING

SO For depressed infant (weak resp. effort, poor muscle tone, HR $\leq$ 100) perform tracheal suctioning
Suction trachea as needed (past cords) under direct visualization with laryngoscope
using 12-14 Fr catheter until heavy meconium is cleared.
Limit suctioning intervals to 5 seconds and monitor for bradycardia.

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS DATE: 03/08/12

SUBJECT: OBSTETRICAL EMERGENCIES (continued) **POLICY NUMBER:** 9220

BLS

BLEEDING DURING PREGNANCY:
Immediate transport. Place pad to perineum.
Treat for shock
Bring tissue/fetus to hospital

PRE-ECLAMPSIA, ECLAMPSIA:
Immediate transport, avoid sirens/excessive stimulation
Treat seizures per Altered Neurologic Function Protocal

BIRTH COMPLICATIONS:
Prolapsed Cord
Place mother in head down position with hips elevated on pillows
Insert gloved hand into the vagina and gently push presenting part off the cord. Do not handle or push cord back in vagina.
Transport immediately while retaining this position until relieved by hospital personnel.

Post Partum Hemorrhage
Massage fundus
Treat for shock, place pad to vagina (do not pack vagina)
Immediate transport

ALS

POST PARTUM HEMORRHAGE
SO 500 ml fluid bolus N.S. and titrate to vital signs.
Treat for shock, additional fluids per BH.

ECLAMPSIA (SEIZURES)
SO Midazolam 0.1 mg/kg slow IV/IO (1 mg/min) to max 5 mg (discontinue if seizure stops); may repeat X 1 per BH

OR

SO Midazolam 0.2 mg/kg IM (2-3 mL increments) to max 10 mg; may repeat X 1 per BH

OR

SO Midazolam 0.2 mg/kg IN (2-3 mL increments) to max 10 mg; may repeat X 1 per BH

OPERATIONS: **BLS/ALS TREATMENT PROTOCOLS** DATE: **03/08/12**

SUBJECT: **OBSTETRICAL EMERGENCIES (continued)** **POLICY NUMBER:** **9220**

BLS	ALS
BIRTH COMPLICATIONS (continued) **Breech Birth** Immediate transport with mother in head down, hips elevated position Allow infant to deliver to the waist Once legs and buttocks are delivered, the head can be assisted out If head does not deliver within 3 min., insert gloved hand and create an airway for the infant. Do not try to pull baby's head out Place mother on high flow oxygen **Hand/arm presentation** Delivery should not be attempted in the field Immediate transport with mother in head down, hips elevated position Place mother on high flow oxygen	

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS DATE: 03/08/12

SUBJECT: OBSTETRICAL EMERGENCIES (continued) **POLICY NUMBER:** 9220

BLS

PREMATURE AND/OR LOW BIRTH WEIGHT INFANTS

Resuscitate as needed
Wrap baby in blanket and place on mother's abdomen
Suction baby's mouth and nose prn (for obvious airway obstructions)
Give oxygen
Immediate transport
Monitor O2 saturation prn.

NEONATAL RESUSCITATION:

After initial care of newborn to include drying and tactile stimulation; if newborn has:

1) Apnea or gasping respirations
2) Heart rate < 100 bpm

Begin BVM ventilations with room air at 40-60 breaths/min
Reassess breathing effort after 30 sec.
If, despite adequate ventilation:

1) heart rate < 60 bpm after 30 seconds

Begin chest compressions at rate of 90/min interposed with ventilations 30/min until spontaneous HR 100/min or greater
Assess APGAR score
Continue resuscitation prn. and immediate transport if no ALS

ALS

NEONATAL RESUSCITATION:

Monitor ECG of newborn/Monitor O2 saturation prn.

For asystole or spontaneous heart rate < 60 bpm despite adequate ventilation or CPR:

SO Epinephrine (1:10,000) IV (see drug chart for dose); may repeat per BH
Continue with treatment per separate dysrhythmia protocol

BH Normal Saline 10mL/kg initial bolus via Volutrol rapid IV drip; may repeat per BH

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: Rev. 4/16/12

SUBJECT: POISONING

POLICY NUMBER: 9230

BLS

Safety first, take precautions to prevent exposure
Isolate the area (if applicable)
Notify the appropriate agencies if HAZ/MAT

Move victim(s) to safe environment
Decontaminate (if applicable)
Ensure patent airway, give oxygen and/or ventilate prn.
Monitor O2 saturation prn.
Contact poison control center as needed 1-800-411-8080

SKIN CONTACT (isolated incident)

Remove contaminated clothing, brush off powder,
rinse with water for at least 20 min.
Irrigate eyes for 20 min.
NOTE: Ensure poison does not react violently with water.

ALS

Monitor ECG/Monitor O2 saturation prn.

SO Establish Saline Lock/IV prn.

INGESTED POISONS

SO Activated Charcoal 50 Gm PO (only if within 60 minutes of ingestion, if recommended by Poison control Center, and if transport time > 30 minutes)

NOTE: **Exceptions to activated charcoal administration: acids, alcohol, alkalies, petroleum distillates, caustic substances, iron or drugs that cause rapid onset of seizures (e.g., camphor, tricyclics).**

NARCOTIC (depressed respirations 12/min or less, pinpoint pupils, evidence of drug use)

SO Naloxone 2 mg IM/IN (half dose each nostril) or 0.5 mg IVP; may repeat SO

SO If patient unconscious and breathing ineffectively after Naloxone, consider intubation

NOTE: **Use with caution in opioid dependent pain management patients.**

ORGANOPHOSPHATE POISONING

SO Atropine 2 mg IV/IM; may repeat every 3 - 5 minutes until symptoms relieved (fewer secretions, easier to ventilate)

SO Midazolam 0.1 mg/kg slow IV (1mg/min) to a max 5mg (discontinue if seizure stops); may repeat X1 in 10 minutes per BH

OR

SO Midazolam 0.2 mg/kg slow IM (2-3 mL increments) to a max 10 mg; may repeat X1 in 10 minutes per BH

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: Rev. 4/16/12

SUBJECT: POISONING (continued)

POLICY NUMBER: 9230

BLS

ENVENOMATION

Ensure patent airway, give oxygen and/or ventilate prn.

Snake bite

Keep involved extremity immobile, at or slightly below heart level

Mark proximal extent of swelling

Remove jewelry prn.

Keep patient calm, do not allow to walk

Bee stings

Remove bee stinger by flicking or scraping with edge of card

Apply cold compress to site

Hyperthermia secondary to stimulant

initiate cooling measures

Insect bites and Scorpion stings

Apply cold compress to site

ALS

SMOKE, GAS, TOXIC SUBSTANCE INHALATION

SO Consider nebulized Albuterol 2.5 mg (give 5 mg for severe distress); may repeat/continuous administration PRN SO

TRICYCLIC OVERDOSE (altered LOC, tachycardia, prolonged QRS)

SO Hyperventilation if intubated

EXTRAPYRAMIDAL REACTIONS

SO Diphenhydramine 25-50 mg IV/IM

STIMULANT OVERDOSE

Sudden hypoventilation, oxygen desaturation or apnea:

SO High flow O2

SO Ventilate prn

SO N.S. 500 mL fluid bolus IV, may repeat per BH

For severe agitation:

SO Midazolam 0.2 mg/kg IM to max dose 10 mg; may repeat X1 in 10 min per SO

OR

SO Midazolam 0.2 mg/kg IN to max dose 5 mg; may repeat X1 in 10 min per SO

OR

SO Midazolam 0.1 mg/kg IV to max dose 5 mg; may repeat X1 in 10 min per SO

NOTE: For severely agitated patient IN/IM Versed is preferred route to decrease risk of injury to patient and EMS presonnel

PEDIATRIC NOTE:

Refer to Pediatric Drug Guide

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: Rev. 4/16/12

SUBJECT: RESPIRATORY DISTRESS

POLICY NUMBER: 9240

BLS

Ensure patent airway, give oxygen and/or ventilate prn; maintain O2 saturation >94%

Monitor O2 saturation prn.

Reassure patient

May assist severe asthma patient BVM @ 6-10 breaths/min

For respiratory distress with bronchospasm:

May assist patient with prescribed inhaler

Note: Does not include steriods or long-acting Serevent (Salmeterol, Pulmicort and Advair)

HYPERVENTILATION SYNDROME

Remove from any causative environment

Coaching/reassurance

Do not use bag or mask rebreathing

ALS

Monitor ECG/Monitor O2 saturation prn.

SO Insert ETT/Perilaryngeal prn.

SO EtCO2 monitoring (Waveform Capnography 35 - 45 mm/Hg)

SO Establish Saline lock/IV prn.

RESPIRATORY DISTRESS WITH BRONCHOSPASM (suspected Asthma, COPD)

SO Albuterol 2.5 mg (give 5 mg for severe distress) via nebulizer; may repeat/continuous administration prn.

SO For severe respiratory distress - CPAP 5-10 cm H_20 for alert patients

Asthma only: If patient in severe distress and unable to use nebulizer:

BH Epinephrine 1:1000 0.3 mg IM (use with caution over 40 yrs, heart disease, or BP > 150 systolic)

RESPIRATORY DISTRESS OF SUSPECTED CARDIAC (CHF) ETIOLOGY

SO BP > 150 systolic, Nitroglycerin 0.8 mg (two 1/150 gr) SL q 5 min. X 3 for severe distress SO

SO BP ≥100- <150 systolic, Nitroglycerin 0.4 mg (1/150 gr) SL q 5 min. X 3 SO

SO For severe respiratory distress - CPAP 5-10 cm H_20; if tolerated by cooperative and alert patient

BH BP < 90 systolic, consider Dopamine 400 mg/250 mL NS, run at 10-20 mcg/kg/min titrate to systolic BP 90-100 mm Hg

BH May repeat Nitroglycerin

RESPIRATORY DISTRESS OF CROUP-LIKE COUGH

SO Aerosolized saline or water 5 mL via oxygen powered nebulizer/mask, may repeat prn

For respiratory distress with stridor at rest suspected croup/epiglottitis (1-2 yr old patient 10-13kg):

BHP Epinephrine 1:1000 via nebulizer 0.5mL/kg max 5mL; monitor ECG during administration

PEDIATRIC NOTE:

Refer to Pediatric Drug Guide

RESPIRATORY DISTRESS with bronchospasm

For child weighing 20 kg or greater in severe distress - give albuterol 5 mg

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: 6/1/07 rev.

SUBJECT: SEXUAL ASSAULT

POLICY NUMBER: 9250

BLS	ALS
Ensure patent airway, give oxygen and/or ventilate prn. For traumatic injuries, treat according to specific Trauma Protocol Do not allow patient to bathe or change clothing. Preserve all evidence and bring to hospital. Refer to Behavioral Emergencies Protocol if appropriate.	**SO** Establish Saline lock/IV prn.

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: 6/1/07 rev.

SUBJECT: SHOCK/HYPOTENSION (non-traumatic)

POLICY NUMBER: 9260

BLS

Ensure patent airway, give oxygen and/or ventilate prn.
Keep warm
Nothing by mouth
Remove dermal NTG prn.
If not contraindicated, place patient supine with legs elevated

NOTE: Do not use Trendelenberg position

ALS

Monitor ECG

SO Establish IV

SO For mild hypotension, give fluid bolus 250-500 mL NS; may repeat per BH order

SO For profound hypotension, run wide open to max 2 liters
Run IVs to maintain systolic BP 90 mm Hg; additional fluids per BH order

BH Dopamine 400 mg/250 mL NS, run at 10-20 mcg/kg/min; titrate to systolic BP 90 mm Hg

See Chest Pain Protocol for cardiogenic shock.

PEDIATRIC NOTE:

SO Normal Saline 20 mL/kg initial bolus via Volutrol rapid IV drip; may repeat per BH

BHP Dopamine 200 mg/250 mL NS, run at 5-20 mcg/kg/min

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: Rev. 4/16/12

SUBJECT: TRAUMA

POLICY NUMBER: 9270

BLS

Ensure patent airway, give oxygen and/or ventilate prn.
Maintain spinal immobilization prn. (except penentrating trauma without deficit)
Monitor O_2 saturation prn.
Control external bleeding
Keep patient warm
Immediate transport if patient critical

ABDOMINAL TRAUMA

Cover eviscerated bowel with saline soaked pads
Flex hips and knees if not contraindicated

CHEST TRAUMA

Cover open chest wound with three-sided occlusive dressing;
release dressing if suspected tension pneumothorax develops

EXTREMITY TRAUMA

Place tourniquet for uncontrolled bleeding despite attempts at
controlling bleeding with direct pressure/dressing (2-4" from wound)
avoid placement over joint, fractures, stab or gun shot wound sites
Splint fractures as they lie if no neurovascular impairment
Splint dislocations in position found
Immobilize joints above and below injury, if possible
Fractures with neurovascular impairment may be realigned
per BH with gentle, unidirectional traction before splinting
If circulation is not restored after two attempts at
straigthening, splint as it lies and transport immediately
Consider pelvis wrap for fractures

ALS

Monitor ECG/Monitor O2 saturation prn.

SO Place tourniquet for uncontrolled bleeding despite direct pressure/dressing (2-4 inches from wound)

SO Establish IV (preferably enroute).
Adjust rate per vital signs; target systolic BP 80-90 mm Hg (except head trauma)
Additional fluids per BH
In severe injury or BP < 90 mmHg, establish IV en-route. 500 mL fluid bolus

SO $EtCO_2$ monitoring prn.

HEAD TRAUMA

SO If GCS less than or equal to 8, maintain SBP ≥ 100 with IV fluids

CHEST TRAUMA

BH For suspected tension pneumothorax with hypotension and severe dyspnea,
consider needle thoracostomy

EXTREMITY TRAUMA

(Isolated extremity injury [including hip] in the presence of adequate vital signs and level of consciousness)

SO Morphine 5-10 mg in 5 mg increments; titrate to pain relief; may repeat as per BH

CRUSH INJURY (With extended compression >2 hours of extremity or torso)

Note: Prior to release of compression administer the following in consultation with BH

SO Give fluid bolus; 500ml N.S. IV, then TKO

BH Calcium Chloride 250mg IV over 30 seconds

BLS

TRAUMATIC ARREST

Consider Determination of Death Protocol

If in doubt, initiate CPR

Assist ventilations with cervical in-line stabilization (if applicable)

See Policy #7210 and 7700 for use of AED and Perilaryngeal Airway

Consider discontinuing CPR for extended transport time

IMPALED OBJECTS

Immobilize (exceptions: may remove object if in face or neck and ventilation is compromised; if object interferes with CPR; or if object interferes with transport)

AMPUTATED PARTS

Place in plastic bag and keep cool during transport

Do not place in water or directly on ice

OPEN NECK WOUNDS

Cover with occlusive dressing

ALS

TRAUMATIC ARREST

BHP Consider discontinuing CPR in blunt trauma

SO Insert ETT/Perilaryngeal Airway with in-line stabilization if indicated (ventilate 8-10/min)

SO Establish IV while enroute, run wide open to max 2 liters; additional fluids per BH order

Monitor ECG; treat dysrhythmias per separate protocols

NOTE: Consider **SO** - Ondansetron 4mg ODT/IV/IM for nausea and vomiting related to prolonged off-road transport

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: Rev. 4/16/12

SUBJECT: TRAUMA (continued)

POLICY NUMBER: 9270

BLS

HELMETS to include full face motorcycle helmets and football helmets:

Indications for removing helmets in the field:

- Inability to assess and/or reassess airway and breathing
- Inability to adequately manage airway and breathing
- Improperly fitted helmet allowing for excessive movement of head
- Proper spinal immobilization cannot be performed due to helmet
- Cardiac arrest

NOTE: When removing football helmet, it may be necessary to remove shoulder pads as well to properly immobilize spine

ALS

PEDIATRIC NOTE:

SO Normal Saline 20 mL/kg initial bolus via Volutrol rapid IV drip; may repeat per BH

BHP Morphine IVP for isolated extremity injury

BHP Needle thoracostomy for chest decompression

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director

IMPERIAL COUNTY EMERGENCY MEDICAL SERVICES AGENCY
POLICY/PROCEDURE/PROTOCOL

OPERATIONS: BLS/ALS TREATMENT PROTOCOLS

DATE: 6/1/2007 rev.

SUBJECT: PEDIATRIC DRUG GUIDE

POLICY NUMBER: 9300

DRUG/ROUTE CONCENTRATION	PREMMIE	NEWBORN	3 M0	6 MO	1-2 YR	3-4 YR	5-6 YR	7-8 YR	9-10 YR	11-12 YR	13-14 YR
Length CM Range for age >	0-53 cm	54-58 cm	59-65 cm	66-74 cm	75-86 cm	87-99 cm	100-113 cm	114-132 cm	133-158 cm	159-189 cm	190-205 cm
Weight Average KG/LB >	2kg/4lb	3kg/7lb	5kg/12lb	7kg/15lb	11kg/24lb	15kg/33lb	19kg/42lb	24kg/52lb	31kg/68lb	40kg/88lb	50kg/110lb
normal HR >	120-170	100-170	100-170	100-170	100-170	100-160	75-120	70-110	60-105	60-100	60-100
RR >	40-60	40-60	30-50	30-50	30-40	20-30	20	16	16	16	16
Albuterol, nebulized (2.5 mg/3.0 mL)	3 mL	3 mL	3 mL	3 mL	3 mL	3 mL	3 mL	3 mL	3 mL	3 mL	3 mL
Atropine, IM/IVP 0.02 mg/kg (0.1 mg/mL)	1 mL	1 mL	1 mL	1 mL	2 mL	3 mL	4 mL	5 mL	6 mL	8 mL	10 mL
Charcoal, PO 1 Gm/kg (6.25 Gm/oz)	0.3 oz	0.5 oz	0.9 oz	1.1 oz	1.8 oz	2.4 oz	3 oz	3.8 oz	5 oz	6.4 oz	8 oz
Dextrose 50%, IV (25 Gm/50 mL)	---	---	---	---	---	15 mL	20 mL	25 mL	30 mL	40 mL	50 mL
Dextrose 25%, IV (12.5 Gm/50 mL)	4 mL	6 mL	10 mL	15 mL	25 mL	---	---	---	---	---	---
Diphenhydramine, IM/IV 0.5 mg/kg (50 mg/mL)	---	---	---	---	0.1 mL	0.2 mL	0.2 mL	0.3 mL	0.3 mL	0.4 mL	0.5 mL
Epinephrine 1:1,000 SC 0.01 mg/kg (1 mg/mL)	0.05 mL	0.05 mL	0.05 mL	0.05 mL	0.1 mL	0.1 mL	0.2 mL	0.2 mL	0.3 mL	0.3 mL	0.3 mL
Epinephrine 1:10,000 IV 0.01 mg/kg (1 mg/10 mL)	0.2 mL	0.3 mL	0.6 mL	0.8 mL	1.0 mL	1.5 mL	2.0 mL	2.5 mL	3.0 mL	4.0 mL	5.0 mL
Glucagon, IM 0.05 mg/kg (1 mg/mL)	0.5 mL	0.5 mL	0.5 mL	0.5 mL	1 mL	1 mL	1 mL	1 mL	1 mL	1 mL	1 mL
Lidocaine, IV 1 mg/kg (20 mg/mL)	0.1 mL	0.15 mL	0.25 mL	0.35 mL	0.5 mL	0.75 mL	1.0 mL	1.25 mL	1.5 mL	2.0 mL	2.5 mL
Midazolam, IV 0.1 mg/kg (1 mg/mL)	0.2 mL	0.3 mL	0.5 mL	0.7 mL	1.0 mL	1.5 mL	2.0 mL	2.5 mL	3.0 mL	4.0 mL	5.0 mL
Midazolam, IM 0.2 mg/kg (1 mg/mL) max 1-2 mL inc.	0.4 mL	0.6 mL	1.0 mL	1.5 mL	2.0 mL	3.0 mL	4.0 mL	5.0 mL	6.0 mL	8.0 mL	10 mL

SUBJECT: PEDIATRIC DRUG GUIDE

POLICY NUMBER: 9300

DRUG/ROUTE CONCENTRATION	PREMMIE	NEWBORN	3 M0	6 MO	1-2 YR	3-4 YR	5-6 YR	7-8 YR	9-10 YR	11-12 YR	13-14 YR
Length CM Range for age >	0-53 cm	54-58 cm	59-65 cm	66-74 cm	75-86 cm	87-99 cm	100-113 cm	114-132 cm	133-158 cm	159-189 cm	190-205 cm
Weight Average KG/LB >	2kg/4lb	3kg/7lb	5kg/12lb	7kg/15lb	11kg/24lb	15kg/33lb	19kg/42lb	24kg/52lb	31kg/68lb	40kg/88lb	50kg/110lb
normal HR >	120-170	100-170	100-170	100-170	100-170	100-160	75-120	70-110	60-105	60-100	60-100
RR >	40-60	40-60	30-50	30-50	30-40	20-30	20	16	16	16	16
Morphine, IM/IV 0.1 mg/kg (10 mg/mL) max .2 mL inc.	---	---	---	---	0.1 mL	0.1 mL	0.2 mL	0.2 mL	0.3 mL	0.4 mL	0.5 mL
Naloxone, IM/IV 0.1 mg/kg (1 mg/mL)	0.2 mL	0.3 mL	0.5 mL	0.7 mL	1 mL	1.5 mL	2 mL	2 mL	2 mL	2 mL	2 mL

Biphasic or Sych. Cardioversion

Initial shock at 2 J/kg >	5 J	7 J	10 J	15 J	20 J	30 J	40 J	50 J	60 J	80 J	100J
subsequent shocks at 4 J/kg >	10 J	15 J	20 J	30 J	40 J	60 J	80 J	100J	120 J	160 J	200 J

Monophasic

Initial shock at 2 J/kg >	5 J	7 J	10 J	15 J	20 J	30 J	40 J	50 J	60 J	80 J	100J
subsequent shocks at 4 J/kg >	10 J	15 J	20 J	30 J	40 J	60 J	80 J	100J	120 J	160 J	200 J

APPROVAL:

Bruce E. Haynes, M.D.
EMS Medical Director