

SUBJECT: TREATMENT PROTOCOL –
ABDOMINAL DISCOMFORT/GI/GU (NON-TRAUMATIC)

Date: 7/1/2015

BLS

ALS

<ul style="list-style-type: none">• Ensure patent airway• O₂ Saturation prn• O₂ and/or ventilate prn• NPO• Transport suspected symptomatic aortic aneurysm to facility with surgical resources immediately available.	<ul style="list-style-type: none">• Monitor EKG• IV/IO <u>SO</u> adjust prn• Treat pain as per Pain Management Protocol (S-141) <p>Suspected volume depletion:</p> <ul style="list-style-type: none">• 500 ml fluid bolus IV/IO <u>SO</u> <p>Suspected AAA:</p> <ul style="list-style-type: none">• 500ml fluid bolus IV/IO <u>SO</u>, for BP <80 to maintain a BP of 80, may repeat x1 <u>SO</u> <p><u>For nausea or vomiting:</u></p> <ul style="list-style-type: none">• Zofran 4mg IV/IM/ODT <u>SO</u>, MR x 1 q10" <u>SO</u>
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SUBJECT: TREATMENT PROTOCOL --
AIRWAY OBSTRUCTION (Foreign Body)

Date: 7/1/2015

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<p>For a <u>conscious</u> patient:</p> <ul style="list-style-type: none">• Reassure, encourage coughing• O₂ prn <p>For inadequate air exchange: airway maneuvers (AHA)</p> <ul style="list-style-type: none">• Abdominal thrusts• Use chest thrusts in the obese or pregnant patient <p>If patient <u>becomes unconscious or is found unconscious</u></p> <ul style="list-style-type: none">• Begin CPR <p><u>Once obstruction is removed:</u></p> <ul style="list-style-type: none">• High flow O₂, ventilate prn• O₂ Saturation prn	<p><u>If patient becomes unconscious or has a decreasing LOC:</u></p> <ul style="list-style-type: none">• Direct laryngoscopy and Magill forceps <u>SO</u>. MR prn• Capnography <u>SO</u> prn <p><u>Once obstruction is removed:</u></p> <ul style="list-style-type: none">• Monitor/EKG• IV/IO <u>SO</u> adjust prn
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Note: If unable to secure airway, transport STAT.

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- Ensure patent airway
- O₂ Saturation prn
- O₂ and/or ventilate prn

- Remove stinger/injection mechanism

- May assist patient to self medicate own prescribed EpiPen or MDI **ONE TIME ONLY**. Base Hospital contact required prior to any repeat dose.

ALS

- Monitor EKG
- IV/IO SO adjust prn
- Capnography SO prn

Allergic Reaction: mild (rash, urticaria)

- Benadryl 50 mg IV/IM SO

Allergic Reaction: acute (facial/cervical angioedema, bronchospasm or wheezing):

- Epinephrine 1:1000 0.3mg IM SO. MR x2 q10" SO
- Benadryl 50mg IM/IV SO
- Albuterol 6ml 0.083% via nebulizer SO. MR SO
- Atrovent 2.5ml 0.02% via nebulizer added to the first dose of Albuterol SO

Anaphylaxis (shock or cyanosis):

- Epinephrine 1:1,000 0.3mg IM per SO. MR x2 q10" SO
- 500 ml fluid bolus IV/IO for systolic BP < 90 SO.
MR to maintain systolic BP ≥90 SO
- Benadryl 50mg IM/IV SO
- Albuterol 6ml 0.083% via nebulizer SO MR SO
- Atrovent 2.5ml 0.02% via nebulizer added to the first dose of Albuterol SO

- Epinephrine 1:10,000 0.1mg IV/IO BHO. MR x2 q3-5" BHO

- Dopamine 400mg/250ml @ 10-40mcg/kg/min IV/IO drip.
Titrate systolic BP ≥90 BHO

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- Ensure patent airway, O₂ and/or ventilate prn
- O₂ Saturation prn
- Spinal stabilization prn
- Secretion problems, position on affected side
- Do not allow patient to walk
- Restrain prn

Hypoglycemia (suspected) or patient's glucometer results read <60 mg/dL

- If patient is awake and able to swallow give 3 oral glucose tabs or paste (15g total). Patient may eat or drink if able.
- If patient is unconscious, NPO

CVA/Stroke:

- For suspected stroke with major deficit with onset of symptoms known to be <6 hours in duration, expedite transport.
- Bring witness, or obtain contact number, to help hospital personnel establish time of onset. Document and report the last time known normal
- Make initial notification early to confirm destination.
- Use the Prehospital Stroke Scale in the assessment of possible CVA patients (facial droop, arm drift and speech abnormalities).
- Only use supplemental O₂ to maintain O₂ saturation 94-98%

Seizures:

- Protect airway, and protect from injury
- Treat associated injuries

Behavioral Emergencies (S-422 and S-142)

- Monitor EKG
- Capnography SO prn
- IV/IO SO adjust prn
- Monitor blood glucose prn SO

CVA:

- 250ml fluid bolus IV/IO without rales SO to maintain BP \geq 120, MR SO
- Large bore antecubital IV

Symptomatic suspected opioids OD (with respiratory rate <12): (Use caution in opioid dependent pain management patients)

- Narcan 2mg IN/IM/IV SO. MR SO, titrate IV dose to effect, **to drive the respiratory rate.**
- If patient refuses transport, give additional Narcan 2mg IM SO

Hypoglycemia:

Symptomatic patient with altered LOC or unresponsive to oral glucose agents:

- D₅₀ 25Gm IV SO if BS <60 mg/dL
- If patient remains symptomatic and BS remains <60 mg/dL MR SO
- **If no IV:** Glucagon 1ml IM SO if BS < 60 mg/dL

Hyperglycemia:

Symptomatic patient with diabetic history

- 500ml fluid bolus IV/IO if BS \geq 350 or reads high SO x 1

Seizures:

For:

- A. Ongoing generalized seizure lasting \geq 5" (includes seizure time prior to arrival of prehospital provider) SO
- B. Recurrent tonic-clonic seizures without lucid interval SO
- C. Eclamptic seizure of any duration SO

Give:

- Versed IN/IM/IV/IO SO to a max dose of 5mg (d/c if seizure stops) SO, MR x1 in 10" SO. Max 10mg total.



SUBJECT: TREATMENT PROTOCOL – BURNS

Date: 7/1/2015

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<ul style="list-style-type: none">• Move patient to a safe environment• Break contact with causative agent• Ensure patent airway, O₂ and/or ventilate prn• O₂ Saturation prn• Treat other life threatening injuries• Carboxyhemoglobin monitor prn, if available <p><u>Thermal burns:</u></p> <ul style="list-style-type: none">• Burns of < 10% body surface area, stop burning with non-chilled water or saline• For burns ≥ 10% body surface area, cover with <u>dry</u> dressing and keep warm• Do not allow the patient to become hypothermic <p><u>Toxic Inhalation (CO exposure, smoke, gas, etc):</u></p> <ul style="list-style-type: none">• Move patient to safe environment• 100% O₂ via mask• Consider transport to facility with hyperbaric chamber for suspected carbon monoxide poisoning for unconscious or pregnant patient <p><u>Chemical burns:</u></p> <ul style="list-style-type: none">• Brush off dry chemicals• Flush with copious amounts of water <p><u>Tar burns:</u></p> <ul style="list-style-type: none">• Cool with water, transport; do not remove tar	<ul style="list-style-type: none">• Monitor EKG• IV/IO <u>SO</u> adjust prn <p>• Treat pain as per Pain Management Protocol (S-141)</p> <p>For patients with ≥20% partial thickness or ≥5% full thickness burns and ≥15 yo:</p> <ul style="list-style-type: none">• 500 ml fluid bolus IV/IO then TKO <u>SO</u> <p>In the presence of respiratory distress with bronchospasm:</p> <ul style="list-style-type: none">• Albuterol 6ml 0.083% via nebulizer <u>SO</u>. MR <u>SO</u>
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Note: Base Hospital Contact and Transport (Per S-415) will be made to UCSD Base Hospital for patients meeting burn center criteria.

BURN CENTER CRITERIA

Patients with burns involving:

- ≥ 20% partial thickness or ≥ 5% full thickness of BSA
- Suspected respiratory involvement or significant smoke inhalation in a confined space
- Injury of the face, hands, feet or perineum or circumferential
- Electrical injury due to high voltage (greater than 120 volts)

Disposition:

Consider Hyperbaric chamber for suspected CO poisoning in unconscious or pregnant patients.

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SUBJECT: TREATMENT PROTOCOL --
DISCOMFORT/PAIN OF SUSPECTED CARDIAC ORIGIN

Date: 7/1/2015

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<ul style="list-style-type: none">• Ensure patent airway• O₂ Saturation prn• Only use supplemental O₂ to maintain O₂ saturation 94-98%• O₂ and/or ventilate prn.• Do not allow patient to walk• If systolic BP \geq 100, may assist patient to self medicate own prescribed NTG SL (<u>maximum 3 doses, including those patient has taken.</u>)• May assist with placement of 12 lead.• May assist patient to self medicate own prescribed Aspirin (a max dose of 325mg)	<ul style="list-style-type: none">• Monitor EKG• IV <u>SO</u> adjust prn• Obtain 12 Lead EKG. If STEMI, notify base immediately and transport to appropriate STEMI center.*• ASA 324mg chewable PO <u>SO</u> <p>If systolic BP \geq 100:</p> <ul style="list-style-type: none">• NTG 0.4mg SL <u>SO</u>. MR q3-5" <u>SO</u>• NTG ointment 1" <u>SO</u>• Morphine per Pain Management Protocol (S-141) <p>If systolic BP $<$ 100:</p> <ul style="list-style-type: none">• NTG 0.4mg SL <u>BHO</u>. MR <u>BHPO</u>• Morphine per Pain Management Protocol (S-141) <p><u>Discomfort/Pain of suspected Cardiac Origin with Associated Shock:</u></p> <ul style="list-style-type: none">• 250ml fluid bolus IV/IO without rales <u>SO</u>. MR to maintain systolic BP \geq90 <u>SO</u> <p>If BP refractory to second fluid bolus:</p> <ul style="list-style-type: none">• Dopamine 400mg/250ml @ 10-40mcg/kg/min IV/IO drip. Titrate to systolic BP \geq 90 <u>BHO</u>
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Note:

- If discomfort/pain is relieved prior to arrival, continue treatment with NTG ointment and ASA. ASA should be given regardless of prior daily dose(s).
- If any patient has taken an erectile dysfunction medication such as Viagra, Cialis, Levitra within 48 hours, NTG is contraindicated.
- May encounter patients taking similar medication for pulmonary hypertension (Revatio, Flolan, Veletri). NTG is contraindicated in these patients as well.

***Report:**

12 Lead interpretation of STEMI

Bundle Branch Block (LBBB, RBBB).

Poor quality EKG, artifact, paced rhythm, atrial fibrillation or atrial flutter for exclusion from STEMI assessment.

Repeat the 12-lead EKG only if the original EKG interpretation is NOT ***ACUTE MI SUSPECTED*** AND patient's condition worsens. Do not delay transport to repeat.

Document findings on the PPR and leave EKG with patient.

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<p>O₂ and/or ventilate prn</p> <p>O₂ Sat prn</p> <p>O₂ and/or ventilate prn</p> <p>O₂ Sat prn</p>	<p>If patient unstable OR rhythm refractory to treatment:</p> <p>Conscious (<u>Systolic BP<90 and chest pain, dyspnea or altered LOC</u>):</p> <ul style="list-style-type: none">• Versed 1-5mg IV/IO prn pre-cardioversion <u>BHO</u> If age ≥ 60 consider lower dose with attention to age and hydration status• Synchronized cardioversion at manufacturer's recommended energy dose <u>BHO</u>, MR <u>BHO</u> <p>Unconscious:</p> <ul style="list-style-type: none">• Synchronized cardioversion at manufacturer's recommended energy dose <u>SO</u> MR x 3 <u>SO</u>. MR <u>BHO</u> <p>C. <u>Unstable Atrial Fibrillation/ Atrial Flutter (Systolic BP<90 AND chest pain, dyspnea or altered LOC):</u></p> <ul style="list-style-type: none">• Monitor EKG/ O₂ Saturation prn• 250ml fluid bolus IV/IO without rales <u>SO</u> MR to maintain systolic BP ≥ 90 <u>SO</u> <p>In presence of ventricular response with heart rate ≥180:</p> <p>Conscious:</p> <ul style="list-style-type: none">• Versed 1-5mg IV/IO prn pre-cardioversion <u>BHPO</u> If age ≥ 60 consider lower dose with attention to age and hydration status• Synchronized cardioversion at manufacturer's recommended energy dose <u>BHPO</u> MR <u>BHPO</u> <p>Unconscious:</p> <ul style="list-style-type: none">• Synchronized cardioversion at manufacturer's recommended energy dose <u>SO</u>. MR x 3 <u>SO</u>. MR <u>BHO</u> <p>D. <u>Ventricular Tachycardia (VT):</u></p> <ul style="list-style-type: none">• Monitor EKG• 250ml fluid bolus IV/IO without rales <u>SO</u> to maintain systolic BP ≥ 90, MR <u>SO</u>• Lidocaine 1.5mg/kg IV/IO <u>SO</u>. MR at 0.5mg/kg IV/IO q 8-10" to max 3mg/kg (including initial bolus) <u>SO</u> <p>OR</p> <ul style="list-style-type: none">• Amiodarone 150mg in 100ml of NS over 10 minutes IV/IO <u>SO</u> MR x1 in 10" <u>BHO</u> <p>If patient unstable (<u>Systolic BP<90 and chest pain, dyspnea or altered LOC</u>):</p> <p>Conscious:</p> <ul style="list-style-type: none">• Versed 1-5 mg IV/IO prn pre-cardioversion <u>SO</u> If age ≥ 60 consider lower dose with attention to age and hydration status• Synchronized cardioversion at manufacturer's recommended energy dose <u>SO</u>. MR x 3 <u>SO</u>. MR <u>BHO</u> <p>Unconscious:</p> <ul style="list-style-type: none">• Synchronized cardioversion at manufacturer's recommended energy dose <u>SO</u>. MR x 3 <u>SO</u>. MR <u>BHO</u>
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SUBJECT: TREATMENT PROTOCOL -- DYSRHYTHMIAS

Date:

BLS

ALS

<p><u>30:2 or 10:1 compression ratio at a rate of 110 continuous compressions with ventilations q 6 seconds</u></p> <p>VAD or TAH patients DO NOT perform compressions unless instructed otherwise by VAD or TAH coordinator or base hospital.</p> <p>AED if available</p> <p>Assist ventilation</p> <p>O₂ Sat prn</p>	<p><u>E. VF/Pulseless VT</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> <u>CPR rotate q 2"</u> <input type="checkbox"/> <u>Monitor EKG</u> <input type="checkbox"/> <u>Metronome @ rate of 110</u> <input type="checkbox"/> <u>Team Leader role-CPR quality, monitor rhythm checks</u> <input type="checkbox"/> <u>Defibrillate when ready q 2 min while VF/VT persists</u> <input type="checkbox"/> <u>Charge monitor prior to rhythm checks, do not interrupt CPR while charging for defibrillation</u> <input type="checkbox"/> <u>Capnography</u> <input type="checkbox"/> <u>10 Sec rhythm check maximum</u> <input type="checkbox"/> <u>IV/IO do not interrupt CPR</u> <input type="checkbox"/> <u>Epi 1:10,000 1 mg IV/IO X1 SO</u> <input type="checkbox"/> <u>300 md Amiodarone IVP or 1.5 mg/kg Lidocaine IVP, (max 3mg/kg) after 1st shock if still refractory</u> <input type="checkbox"/> <u>Intubate/PAA SO without interrupting compressions</u> <input type="checkbox"/> <u>NG/OG prn SO</u> <input type="checkbox"/> <u>Persistent VF/VT (4 shock cycles) 4th rhythm check, transport with high quality CPR- Destination of STEMI Center SO or ECMO Center per BHPO (need education on all levels BHMD, MICN & Medic with exclusion/inclusion criteria before including ECMO)</u> <p><u>ROSC</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> <u>Obtain 12 lead</u> <input type="checkbox"/> <u>Ventilate with goal of ETCO₂ >35 or < 40</u> <input type="checkbox"/> <u>Transport to closest STEMI center</u>
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- For drug admin & intubation Perform high quality CPR with goal of appropriate rate (110), depth (1/3 of AP chest diameter), allow full recoil, and minimize interruptions
- Do not interrupt compressions
- 30:2 compression ratio & a rate of 110, until intubated then 10:1 continuous compressions with ventilations q 6 sec
- Utilize mechanical CPR device if available for transport
- Transfer monitor data to QA/QI Dept if able
- Consider reviewing call with crew post event

Document revised
Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- DYSRHYTHMIAS

Date: _____

BLS

ALS

<p>Assist ventilation O₂ Sat prn</p> <p>CPR Begin compressions, after first 30 compressions give first ventilations.</p> <p>VAD or TAH patients <u>DO NOT</u> perform compressions unless instructed otherwise by VAD or TAH coordinator or base hospital.</p> <p>AED if available</p> <p>Assist ventilation</p> <p>O₂ Sat prn</p>	<p>F. Reported/witnessed \geq x2 AICD</p> <ul style="list-style-type: none">• Monitor EKG• 250 ml fluid bolus IV/IO without rales <u>SO</u> to maintain systolic BP \geq 90, MR <u>SO</u> <p>If pulse \geq 60:</p> <ul style="list-style-type: none">• Lidocaine 1.5mg/kg IV/IO <u>SO</u>. MR at 0.5mg/kg IV/IO q8-10", to a max of 3mg/kg (including initial bolus) <u>SO</u> <p>OR</p> <ul style="list-style-type: none">• Amiodarone 150mg in 100ml of NS over 10 minutes IV/IO <u>BHO</u>
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Note: For patients with an EtCO₂ reading of less than 10mm/Hg or for patients in nonperfusing rhythms, consider early Base Hospital contact for disposition/pronouncement at scene

- Flush IV/IO line with Normal Saline after medication administration. Medication should be administered as soon as possible after rhythm checks. The timing of drug delivery is less important than is the need to minimize interruptions in chest compressions.
- CPR ratio 30:2 compressions to ventilations (compression rate of 110/minute) until patient has been intubated, then the ratio becomes 10:1.
- CPR should be performed during charging of the defibrillator.
- Start metronome Rate 110 in CPR

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Date:

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<p><u>Assist ventilation</u> <u>O₂ Sat prn</u></p> <p><u>CPR</u> <u>30:2 or 10:1</u> <u>compression ratio</u> <u>at a rate of 110</u> <u>continuous</u> <u>compressions with</u> <u>ventilations q 6</u> <u>seconds</u></p> <p><u>VAD or TAH</u> <u>patients DO NOT</u> <u>perform</u> <u>compressions</u> <u>unless instructed</u> <u>otherwise by VAD</u> <u>or TAH</u> <u>coordinator or</u> <u>base hospital.</u></p> <p><u>AED if available</u></p> <p><u>Assist ventilation</u></p> <p><u>O₂ Sat prn</u></p>	<p>G. <u>PEA:</u></p> <ul style="list-style-type: none">• <u>CPR rotate q 2"</u>• <u>Monitor</u>• <u>Start Metronome @ rate of 110</u>• <u>Team leader role-CPR quality, Monitor, Rhythm Checks</u>• <u>Charge monitor prior to rhythm checks, do not interrupt CPR while charging for Defib</u>• <u>Capnography</u>• <u>10 Sec rhythm check maximum</u>• <u>IV/IO do not interrupt CPR</u>• <u>Epi 1:10,000 1 mg IV/IO X1 SO</u>• <u>Intubate/PAA SO without interrupting compressions</u>• <u>NG/OG prn SO</u>• <u>250 ml Fluid Bolus IV/IO</u>• <u>After 4 cycles of rhythm checks with persistent PEA transport with high quality CPR- Destination of STEMI Center per BHPO or ECMO Center per BHPO</u> <p><u>ROSC</u></p> <ul style="list-style-type: none">• <u>Obtain 12 lead</u>• <u>Ventilate with goal of ETCO₂ >35 or < 40</u>• <u>Transport to closest STEMI Center SO</u>
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- For drug admin & intubation Perform high quality CPR with goal of appropriate rate (110), depth (1/3 of AP chest diameter), allow full recoil, and minimize interruptions
- do not interrupt compressions
- 30:2 compression ratio & a rate of 110, until intubated then 10:1 continuous compressions with ventilations q 6 sec
- Utilize mechanical CPR device if available for transport
- Transfer monitor data to QA/QI Dept if able
- Consider reviewing call with crew post event

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SUBJECT: TREATMENT PROTOCOL -- DYSRHYTHMIAS

Date: _____

BLS

ALS

<p><u>CPR</u> 30:2 or 10:1 compression ratio at a rate of 110 continuous compressions with ventilations q 6 seconds</p> <p><u>VAD or TAH</u> patients DO NOT perform compressions unless instructed otherwise by VAD or TAH coordinator or base hospital.</p> <p><u>AED</u> Assist Vent</p> <p><u>Sat</u></p>	<p><u>H. Asystole:</u></p> <ul style="list-style-type: none">• <u>CPR rotate q 2"</u>• <u>Monitor EKG</u>• <u>Start Metronome @ rate of 110</u>• <u>Team leader role-CPR quality, Monitor, Rhythm Checks</u>• <u>Charge monitor prior to rhythm checks, do not interrupt CPR while charging for Defib</u>• <u>Capnography</u>• <u>10 Sec rhythm check maximum</u>• <u>IV/IO do not interrupt CPR</u>• <u>Epi 1:10,000 1 mg IV/IO X1 SO</u>• <u>Intubate/PAA SO without interrupting compressions</u>• <u>NG/OG prn SO</u>• <u>If asystolic after 20 minutes resuscitative efforts with no change cease efforts SO.</u>• <u>If the provider feels resuscitative efforts are futile, base hospital contact may be made to discuss ceasing resuscitative efforts before 20 minutes BHPO.</u>• <u>These arrest patients must be of presumed cardiac origin patients.</u> <u>✓ Drowning, Hypothermia, Electrocutation excluded</u> <p><u>ROSC</u></p> <ul style="list-style-type: none">• <u>Obtain 12 lead</u>• <u>Ventilate with goal of ETCO2 >35 or <40</u> <p><u>Transport to closest STEMI Center SO</u></p>
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- For drug admin & intubation Perform high quality CPR with goal of appropriate rate (110), depth (1/3 of AP chest diameter), allow full recoil, and minimize interruptions
- do not interrupt compressions
- 30:2 compression ratio & a rate of 110, until intubated then 10:1 continuous compressions with ventilations q 6 sec
- Utilize mechanical CPR device if available for transport
- Transfer monitor data to QA/QI Dept if able
- Consider reviewing call with crew post event

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SUBJECT: TREATMENT PROTOCOL -- DYSRHYTHMIAS

Date: _____

BLS TOR – N/A

I. Termination of Resuscitation (TOR)

If all these criteria have been met resuscitative efforts may be terminated

1. Victims arrest was not witnessed by EMS
AND
2. No bystander witness of collapse
AND
3. No Bystander CPR
AND
4. Never received a rescue shock
AND
5. Never have a return of pulses

Patients may be pronounced in the field SO

- If asystolic after 20 minutes resuscitative efforts with no change cease efforts SO.
- If the provider feels resuscitative efforts are futile, the base hospital physician contact may be made to discuss ceasing resuscitative efforts before 20 minutes BHPO.
- These arrest patients must be of presumed cardiac origin patients.
✓ Drowning, Hypothermia, Electrocutation excluded

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SUBJECT: TREATMENT PROTOCOL -- ENVENOMATION INJURIES

Date: 7/1/2015

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- O₂ and/or ventilate prn.

Jellyfish sting:

- Liberally rinse with salt water, for at least 30 seconds.
- Scrape to remove stinger(s).
- Heat as tolerated (not to exceed 110 degrees)

Stingray or Sculpin injury:

- Heat as tolerated (not to exceed 110 degrees)

Snakebites:

- Mark proximal extent of swelling and/or tenderness
- Keep involved extremity at heart level and immobile
- Remove pre-existing constrictive device

- IV/IO SO adjust prn

- Treat pain as per Pain Management Protocol (S-141)

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- Ensure patent airway
- O₂ Saturation prn
- O₂ and/or ventilate prn
- Remove excess/wet clothing
- Obtain baseline temperature

Heat Exhaustion:

- Cool gradually
- Fanning, sponging with tepid water
- Avoid shivering
- If conscious, give small amounts of fluids

Heat Stroke:

- Rapid cooling
- Spray with cool water, fan. Avoid shivering
- Ice packs to carotid, inguinal and axillary regions

Cold Exposure:

- Gentle warming
- Blankets, warm packs
- Dry dressings
- Avoid unnecessary movement or rubbing
- If alert, give warm liquids
- If severe, NPO
- Prolonged CPR may be indicated

Near Drowning:

- Spinal stabilization when indicated

ALS

- Monitor EKG
- IV/IO SO adjust prn

Severe Hypothermia with Cardiac Arrest:

- Hold medications
- Continue CPR
- If defibrillation needed, limit to 1 shock maximum

Suspected Heat Exhaustion/ Heat Stroke

- 500ml fluid bolus IV/IO SO, without rales
MR x1 SO

Near Drowning:

- CPAP at 5-10cm H₂O SO for respiratory distress.

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SUBJECT: TREATMENT PROTOCOL -- HEMODIALYSIS PATIENT

Date: 7/1/2015

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ALS

<ul style="list-style-type: none">• Ensure patent airway• O₂ Saturation prn• Give O₂• Ventilate if necessary	<ul style="list-style-type: none">• Monitor EKG• Determine time of last dialysis <p><u>FOR IMMEDIATE DEFINITIVE THERAPY ONLY:</u></p> <ul style="list-style-type: none">• IV access in arm that does not have graft/AV fistula <u>SO</u>. Adjust prn• EJ/IO access prior to accessing graft <p><u>If Unable & no other medication delivery route available:</u></p> <ul style="list-style-type: none">• Access Percutaneous Vas Catheter <u>BHPO</u> if present (aspirate 5mL PRIOR to infusion) <p>OR</p> <ul style="list-style-type: none">• Access graft/AV fistula <u>BHPO</u> <p><u>Fluid overload with rales:</u></p> <ul style="list-style-type: none">• Treat as per S-136 (CHF/Cardiac) <p><u>Symptomatic Patient with Suspected Hyperkalemia (widened QRS complex or peaked T-waves):</u></p> <ul style="list-style-type: none">• Obtain 12-Lead EKG <p>If >72 hours since last dialysis:</p> <ul style="list-style-type: none">• Continuous Albuterol 6ml 0.083% via Nebulizer <u>SO</u>• CaCl₂ 500mg IV/IO per <u>SO</u>• NaHCO₃ 1mEq/kg IV/IO x1 per <u>SO</u>
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Note: Vas Cath contains concentrated dose of Heparin which must be aspirated PRIOR to infusion.

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SUBJECT: TREATMENT PROTOCOL --

Date: 7/1/2015

DECOMPRESSION ILLNESS/DIVING/ALTITUDE RELATED INCIDENTS

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ALS

<ul style="list-style-type: none">• 100% O₂, and/or ventilate prn• O₂ Saturation prn• Spinal stabilization when indicated	<ul style="list-style-type: none">• Monitor EKG• IV/IO <u>SO</u> adjust prn
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Reference Policy S-415 for Disposition of Diving Victims

Diving Victims: Any victim who has breathed sources of compressed air below the water's surface and presents with the following:

Minor presentation: minimal localized joint pain, mottling of the skin surface, localized swelling with pain; none of which are progressive.

Major presentation: symptoms listed above that are severe and/or rapidly progressing, vertigo, altered LOC, progressive paresthesia, paralysis, severe SOB, blurred vision, crepitus, hematemesis, hemoptysis, pneumothorax, trunk pain, or girdle or band-like burning discomfort.

Disposition of Diving Victims:

Major presentation:

All patients with a "major" presentation should be transported to UCSD-Hillcrest

Trauma issues are secondary in the presence of a "Major" presentation

If the airway is unmanageable, divert to the closest BEF

Minor presentation:

Major trauma candidate: catchment trauma center

Non-military patients: routine

Active Duty Military Personnel: transport to the Military Duty Recompression Chamber if possible. The Base Hospital will contact the Duty Recompression Chamber at (619) 556-7130 to determine chamber location. Paramedics/Base Hospital shall transfer care to Diving Medical Officer (or designee) upon arrival to chamber. Hyperbaric treatment may begin in accordance with military medical protocols.

Naval Hyperbaric chamber locations:

Naval Station 32nd Street and Harbor Drive

Note: If possible, obtain dive computer or records.

Hyperbaric chamber must be capable of recompression to 165 ft.

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Approved:



EMS Medical Director

BLS

ALS

<p><u>MOTHER:</u></p> <ul style="list-style-type: none">• Ensure patent airway.• O₂ Saturation prn• O₂ ventilate prn• If no time for transport and delivery is imminent (crowning and pushing), proceed with delivery.• If no delivery, transport on left side. <p><u>Routine Delivery:</u></p> <ul style="list-style-type: none">• Massage fundus if placenta delivered. (Do not wait on scene)• Place identification bands on mother and infant.• Document name of person cutting cord, time cut & address. <p><u>Post Partum Hemorrhage:</u></p> <ul style="list-style-type: none">• Massage fundus vigorously• Baby to breast <p><u>Eclampsia (seizures):</u></p> <ul style="list-style-type: none">• Protect airway, and protect from injury <p>STAT transport for third trimester bleeding to facility with OB services per base hospital direction.</p>	<p><u>MOTHER:</u></p> <ul style="list-style-type: none">• Monitor EKG• IV/IO <u>SO</u> adjust prn <p>Direct to Labor/Delivery area per BHO if ≥ 20 weeks gestation.</p> <p><u>Eclampsia (seizures):</u></p> <p>Give:</p> <ul style="list-style-type: none">• Versed IN/IM/IV/IO <u>SO</u> to a max dose of 5mg (d/c if seizure stops) <u>SO</u>, MR x1 in 10" <u>SO</u>. Max 10mg total.
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Note: If trauma related refer to S-139 and T-460 for disposition.

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EMS Medical Director

BLS

- Ensure patent airway
- O₂ Saturation prn
- O₂ and/or ventilate prn
- Carboxyhemoglobin monitor prn, if available

Ingestions:

- Identify substance

Skin:

- Remove clothes
- Brush off dry chemicals
- Flush with copious water

Toxic Inhalation (CO exposure, smoke, gas etc.):

- Move patient to safe environment
- 100% O₂ via mask
- Consider transport to facility with hyperbaric chamber for suspected carbon monoxide poisoning for unconscious or pregnant patient

Symptomatic suspected opioids OD with respiratory rate <12: use with caution in opioid dependent pain management patients)

- May assist family or friend to medicate with patient's own Naloxone

Contamination with commercial grade ("low level") radioactive material:

Patients with mild injuries may be decontaminated (removal of contaminated clothing, brushing off of material) prior to treatment and transport. Decontamination proceedings SHALL NOT delay treatment and transport of patients with significant or life-threatening injuries. Treatment of significant injuries is *always* the priority.

ALS

- Monitor EKG
- IV/IO SO adjust prn
- Capnography SO prn

Ingestions:

- Charcoal 50Gm PO ingestion with any of the following within 60 minutes SO if not vomiting:

Acetaminophen, colchicine, beta blockers, calcium channel blockers, salicylates, valproate, oral anticoagulants (including rodenticides), paraquat, amanita mushrooms,

- Assure patient has gag reflex and is cooperative.

Symptomatic suspected opioids OD with respiratory rate <12: (use with caution in opioid dependent pain management patients).

- Narcan 2mg IN/IM/IV SO. MR SO, titrate IV dose to effect
- If patient refuses transport, give additional Narcan 2mg IM SO

Symptomatic Organophosphate poisoning:

- Atropine 2mg IV/IM/IO SO. MR x2 q3-5" SO. MR q3-5" BHO

Extrapyramidal reactions:

- Benadryl 50mg slow IV/IM SO

Suspected Tricyclic OD with cardiac effects (e.g. hypotension, heart block, or widened QRS):

- NaHCO₃ 1mEq/kg IV/IO SO

In suspected cyanide poisoning: if cyanide kit is available on site (e.g. industrial site) may administer if patient is exhibiting significant symptoms:

- Amyl Nitrite inhalation (over 30 seconds) *BHPO*
 - Sodium Thiosulfate 25%, 12.5 grams IV *BHPO*
- OR**
- Hydroxocobalamin (Cyanokit) 5g IV *BHPO*

NOTE: For scene safety, consider HAZMAT activation as needed.

In symptomatic ?opioids OD (excluding opioid dependent pain management patients) administer Narcan IN/IM prior to IV.

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ALS

<p><u>Hyperthermia from Suspected Stimulant Intoxication:</u></p> <ul style="list-style-type: none">• Initiate cooling measures• Obtain baseline temperature, if possible	<p><u>Excited Delirium:</u></p> <ul style="list-style-type: none">• As soon as able: Monitor/EKG/Capnography• High flow O₂ <u>SO</u>• Ventilate <u>SO</u>• 500 ml fluid bolus IV/IO <u>SO</u>. MR x1 <u>SO</u>, MR BHO• Versed 5mg IM/IN/IV <u>SO</u>, MR x1 in 10" <u>SO</u>
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Note: For agitated patient IN/IM Versed is preferred route to decrease risk of injury to patient and personnel.

Use caution when considering Versed use with ETOH intoxication. Can result in apnea.



SUBJECT: TREATMENT PROTOCOL --
PRE-EXISTING MEDICAL INTERVENTIONS

Date: 7/1/2015

BLS

Proceed with transport when person responsible for operating the device (the individual or another person) is able to continue to provide this function during transport. Bring back up equipment/batteries as appropriate.

Previously established electrolyte and/or glucose containing peripheral IV lines:

- Maintain at preset rates
- Turn off when indicated

Previously applied dermal medication delivery systems:

- Remove chest transdermal medication patches when indicated (CPR, shock) SO

Previously established IV medication delivery systems and/or other preexisting treatment modalities with preset rates:

If the person responsible for operating the device is unable to continue to provide this function during transport, contact the BH for direction.

BH may ONLY direct BLS personnel to

1. Leave device as found OR turn the device off;
THEN,
2. Transport patient OR wait for ALS arrival.

Transports to another facility or to home:

- No wait period is required after medication administration.
- If there is a central line, the tip of which lies in the central circulation, the catheter **MUST** be capped with a device which occludes the end.
- IV solutions with added medications OR other ALS treatment/monitoring modalities require ALS personnel (or RN/MD) in attendance during transport.

Note: Consider early base hospital contact.

ALS

Maintain previously established electrolyte and/or glucose containing IV solutions:

- Adjust rate or d/c BHO

Maintain previously applied topical medication delivery systems:

- Remove dermal medications when indicated (CPR, shock) SO

Pre-existing external vascular access (considered to be IV TKO):

- To be used for definitive therapy **ONLY**

Maintain previously established and labeled IV medication delivery systems with preset rates and/or other preexisting treatment modalities:

- d/c BHO

If no medication label or clear identification of infusing substance:

- d/c BHO

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EMS Medical Director

BLS

ALS

<ul style="list-style-type: none">• Ensure patent airway• Reassurance• O₂ Saturation prn• O₂ and/or ventilate prn • May assist patient to self medicate own prescribed MDI ONE TIME ONLY. Base Hospital contact required prior to any repeat dose. <p><u>Hyperventilation:</u></p> <ul style="list-style-type: none">• Coaching/reassurance• Remove patient from causative environment.• Consider underlying medical problem. <p><u>Toxic Inhalation (CO exposure, smoke gas, etc.):</u></p> <ul style="list-style-type: none">• Move patient to safe environment• 100% O₂ via mask• Consider transport to facility with hyperbaric chamber for suspected carbon monoxide poisoning for unconscious or pregnant patient <p><u>Respiratory Distress with croup-like cough:</u></p> <ul style="list-style-type: none">• Aerosolized saline or water 5ml via oxygen powered nebulizer/mask. MR prn	<ul style="list-style-type: none">• Monitor EKG• Capnography monitoring <u>SO</u> prn• IV/IO <u>SO</u>, adjust prn• Intubate <u>SO</u> prn• NG/OG prn per <u>SO</u> <p><u>Respiratory Distress Suspected CHF/cardiac origin:</u></p> <ul style="list-style-type: none">• <u>NTG SL:</u> If systolic BP \geq 100 but $<$150: NTG 0.4mg SL <u>SO</u>. MR q3-5" <u>SO</u>• If systolic BP \geq 150:<ul style="list-style-type: none">• NTG 0.8mg SL <u>SO</u>. MR q3-5" <u>SO</u>• If systolic BP \geq 100<ul style="list-style-type: none">• NTG Ointment 1" <u>SO</u>• If systolic BP $<$ 100:<ul style="list-style-type: none">• NTG 0.4mg SL per <u>BHO</u> MR <u>BHPO</u>• CPAP at 5-10cm H₂O <u>SO</u> <p><u>Respiratory Distress Suspected Non-Cardiac</u></p> <ul style="list-style-type: none">• Albuterol 6ml 0.083% via nebulizer <u>SO</u>. MR <u>SO</u>• Atrovent 2.5ml 0.02% via nebulizer added to first dose of Albuterol <u>SO</u>• CPAP at 5-10cm H₂O <u>SO</u> <p><u>If severe respiratory distress/failure or inadequate response to Albuterol/Atrovent consider:</u></p> <ul style="list-style-type: none">• Epinephrine 0.3mg 1:1000 IM <u>SO</u>. MR x2 q10" <u>SO</u>• If no definite history of asthma: Epinephrine 0.3mg 1:1000 IM <u>BHPO</u> MR x2 q10" <u>BHPO</u>
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Note: -If any patient has taken an erectile dysfunction medication such as Viagra, Cialis, and Levitra within 48 hours, NTG is contraindicated.

--May encounter patients taking similar medication for pulmonary hypertension, usually Sildenafil (trade name: Revatio, Flolan, Veletri). NTG is contraindicated in these patients as well.

--Use caution with CPAP if ?COPD, start low and titrate pressure.

--Epinephrine IM: use caution if known cardiac history or history of hypertension or BP >150 or age >40

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Approved:



EMS Medical Director

BLS / ALS

- Ensure patent airway
- O₂ and/or ventilate prn
- Advise patient not to bathe or change clothes
- Consult with law enforcement on scene for evidence collection

If the patient requires a medical evaluation:

- Transport to the closest, most appropriate facility.
- Law enforcement will authorize and arrange an evidentiary exam after the patient is stabilized.

If only evidentiary exam is needed:

- Should release to law enforcement for transport to a SART facility.

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EMS Medical Director

BLS

ALS

Shock:

- O₂ Saturation prn
- O₂ and/or ventilate prn
- Control obvious external bleeding
- Treat associated injuries
- NPO, anticipate vomiting
- Remove any transdermal patch

- Monitor EKG
- IV/IO SO
- Capnography SO prn

Shock (suspected cardiac etiology):

- 250ml fluid bolus IV/IO without rates SO.
MR x1 to maintain BP \geq 90 SO

If BP refractory to second fluid bolus:

- Dopamine 400mg/250ml @ 10-40 mcg/kg/min IV/IO drip.
Titrate BP \geq 90 BHO

Shock: Hypovolemic (Nontraumatic):

- 500ml fluid bolus IV/IO SO,
MR to maintain BP \geq 90 SO

Shock: Hypovolemic (suspected AAA):

- 500ml fluid bolus IV/IO SO,
MR to maintain BP \geq 80 SO

Shock: (suspected Anaphylactic, Neurogenic):

- 500ml fluid bolus IV/IO SO.
MR to maintain BP \geq 90 SO

If BP refractory to fluid boluses:

- Dopamine 400mg/250ml @ 10-40 mcg/kg/min IV/IO drip.
Titrate BP \geq 90 BHO

Shock: (Sepsis)

Treat as per Sepsis Protocol (S-143)



BLS

- Ensure patent airway, protecting C-spine
- Control obvious bleeding
- Spinal stabilization prn. (Except in penetrating trauma without neurological deficits.)
- O₂ Saturation prn
- O₂ and/or ventilate prn
- Keep warm
- Hemostatic gauze

Abdominal Trauma:

- Cover eviscerated bowel with saline pads

Chest Trauma:

- Cover open chest wound with three-sided occlusive dressing; release dressing if ?tension pneumothorax develops.
- Use of Chest seal

Extremity Trauma:

- Splint neurologically stable fractures as they lie. Use traction splint as indicated.
- Grossly angulated long bone fractures with neurovascular compromise may be reduced with gentle unidirectional traction for splinting per BHO
- Apply tourniquet in severely injured extremity when direct pressure or pressure dressing fails to control life-threatening hemorrhage.
- In Mass Casualty direct pressure not required prior to tourniquet application

Impaled Objects:

- Immobilize & leave impaled objects in place. Remove BHPO
- **Exception:** may remove impaled object in face/cheek or from neck if there is total airway obstruction.

Neurological Trauma (head and spine injuries):

- Ensure adequate oxygenation without hyperventilating patient. Goal: 6-8 ventilations/minute

Pregnancy of greater than or equal to 6 months:

- Where spinal stabilization precaution is indicated, tilt on spine board 30 degrees.

Blunt Traumatic Arrest: Consider pronouncement at scene
BHPO

ALS

- Monitor EKG
- IV/IO SO
- If MTV IV/IO en route SO
- 500ml fluid bolus IV/IO to maintain BP at 80
- Capnography SO prn

- Treat pain as per Pain Management Protocol (S-141)

Crush injury with extended compression > 2 hours of extremity or torso:

Just prior to extremity being released:

- 500ml fluid bolus IV/IO, then TKO SO
- CaCl₂ 500mg IV/IO over 30 seconds BHO
- NaHCO₃ 1mEq/kg IV/IO BHO

Grossly angulated long bone fractures

- Reduce with gentle unidirectional traction for splinting SO

Severe Respiratory Distress with unilateral diminished breath sounds and systolic BP < 90

- Needle thoracostomy SO

Blunt Traumatic Arrest:

- Consider pronouncement at scene*

Penetrating Traumatic Arrest:

- Rapid transport off scene

*Reference Policy S-402 Prehospital Determination of Death



SUBJECT: TREATMENT PROTOCOL -- TRAUMA

Date: 7/1/2015

TRANSPORT GUIDELINES:

Routine Disposition-Pediatric patients who meet criteria outlined in T-460 "Identification of the Pediatric Trauma Center Candidate" should be delivered to the Designated Pediatric Trauma Center, EXCEPT in the following situations:

1. Adult + Child:

- a. If there is a single ambulance (air/ground) with both a pediatric trauma center candidate AND an adult trauma center candidate, the ambulance should first deliver the more critical patient to the appropriate facility. If both patients are critical, or if there are other questions, both may be delivered to the designated adult trauma center.
 - b. Field personnel should consider splitting the team using additional ALS transport vehicles, or aeromedical resources to transport the pediatric patient to pediatric trauma facility and the adult to the catchment area trauma facility.
- 2. Bypass/Diversion:** If the designated pediatric trauma center is "on bypass", pediatric trauma candidates should be delivered to UCSD.
- 3.** A <15 year old pregnant patient should be delivered to the UCSD.

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Approved:



EMS Medical Director

BLS/ALS

- A. One person will assume responsibility for all scene medical communication
- B. Only one (1) BH will be contacted during the entire incident.
- C. Prehospital providers will utilize Simple Triage and Rapid Treatment (START) guidelines to determine priorities of treatment and transport
- D. If staffing resources are limited, CPR need not be initiated for arrest victims, however, if CPR has been initiated prior to arrival of ALS personnel or briefly during assessment, discontinue only if one of the following occurs or is present*:
 - 1) subsequent recognition of obvious death SO
 - 2) BHPO
 - 3) presence of Advance Health Care Directive that specifies DNR status, DNR Form/Order or Medallion SO
 - 4) lack of response to brief efforts in the presence of any other potentially salvageable patient requiring intervention SO
- E. Radio communication for multi-patient incident (MPI) need only include the following on each patient:
 1. patient number assignment (i.e., #1, #2 . . .)
 2. age
 3. sex
 4. mechanism
 5. chief complaint
 6. abnormal findings
 7. treatment initiated
 8. ETA
 9. destination
 10. transporting unit number
- F. Radio Communication for mass casualty incident (MCI) or Annex D activation need only include the following on each patient:
 1. patient number if assigned (i.e., #1, #2 . . .)
 2. triage category (Immediate, Delayed, Minor)
 3. destination
 4. transporting unit number

* Reference Policy S-402 Prehospital Determination of Death

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EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- PAIN MANAGEMENT

Date 7/1/2016

BLS

ALS

- Assess level of pain
- Ice, immobilize and splint when indicated
- Elevation of extremity trauma when indicated

- Continue to monitor and reassess pain using standardized pain score as appropriate
- Document vital signs before and after each administration

For treatment of pain as needed

BP >100 systolic:

Initial IV Dose

- Morphine 0.1mg/kg IV over 2 minutes SO
Maximum for ANY IV dose is 10mg

Initial IM Dose

- Morphine 0.1mg/kg IM SO
Maximum for ANY IM dose is 10mg

Second IV/IM dose, if pain persists

5 minutes after IV morphine

Or 15 minutes after IM morphine

- Administer half of the initial morphine dose SO

Third IV/IM dose, if pain persists

5 minutes after IV morphine

Or 15 minutes after IM morphine

- Administer half of the initial morphine dose BHO

Treatment of pain if BP <100 systolic BHO

Special Considerations Administer Morphine 0.05mg/kg:

- Cardiac Chest Pain

BHPO for:

- Chronic pain states
- Isolated head injury
- Acute onset severe headache
- Drug/ETOH intoxication
- Multiple trauma with GCS <15
- Suspected active labor

For nausea or vomiting with morphine administration:

- Zofran 4mg IV/IM/ODT SO, MR x1 q10" SO

Note: Use caution when dosing patients ≥ 70 years of age.

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SUBJECT: TREATMENT PROTOCOL – PSYCHIATRIC / BEHAVIORAL
EMERGENCIES

Date: 7/1/2015

BLS

ALS

<ul style="list-style-type: none">• Ensure patent airway, O₂ and/or ventilate prn• O₂ Saturation prn• Treat life threatening injuries• Attempt to determine if behavior is related to injury, illness or drug use.• Restrain only if necessary to prevent injury. Document distal neurovascular status q15'. Avoid unnecessary sirens.• Consider law enforcement support and/or evaluation of patient.• Law enforcement could remove taser barbs, but EMS may remove barbs.	<ul style="list-style-type: none">• Monitor EKG• IV <u>SO</u> adjust prn• Capnography <u>SO</u> <p><u>For Combative patient:</u></p> <ul style="list-style-type: none">• Versed 5mg IM/IN/IV <u>SO</u>, MR x1 in 10" <u>SO</u>
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Note: For combative patient IN or IM Versed is preferred route to decrease risk of injury to patient and personnel.

Use caution when considering Versed use with ETOH intoxication. Can result in apnea.

Consideration for patients presenting with taser barbs:

- Taser discharge for simple behavioral control is usually benign and does not require transport to BEF for evaluation.
- Patients, who are injured, appear to be under the influence of drugs, present with altered mental status, or symptoms of illness should have a medical evaluation performed by EMS personnel, and transported to a BEF.
- If barbs are impaled in an anatomically sensitive location such as the eye, face, neck, finger/hand or genitalia do not remove the barb, patient should be transported to a BEF.

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ALS

<ul style="list-style-type: none">• O₂ Saturation prn• O₂ and/or ventilate prn• NPO, anticipate vomiting• Remove any transdermal patch• Obtain baseline temperature	<ul style="list-style-type: none">• Monitor EKG• IV/IO <u>SO</u>• Capnography <u>SO</u> prn <p><u>Suspected Sepsis</u> If history suggestive of infection and two or more of the following are present suspect sepsis and report:</p> <ol style="list-style-type: none">1. Temperature ≥ 100.4 or < 96.82. HR ≥ 903. RR ≥ 20 <p><u>Administer:</u></p> <ul style="list-style-type: none">• 500ml fluid bolus regardless of blood pressure or lung sounds IV/IO <u>SO</u>• 500ml fluid bolus if BP < 90 regardless of lung sounds <u>SO</u> x1 after initial fluid bolus <p>If BP refractory to fluid boluses:</p> <ul style="list-style-type: none">• Dopamine 400mg/250ml @ 10-40 mcg/kg/min IV/IO drip. Titrate BP ≥ 90 <i>BHPO</i>
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Note: The initial treatment of sepsis involves maximizing perfusion with intravenous fluid boluses, not vasopressors.



SUBJECT: TREATMENT PROTOCOL --
STROKE AND TRANSIENT ISCHEMIC ATTACK

Date: XXX

BLS

ALS

- For patients with symptoms suggestive of TIA or stroke with onset of symptoms known to be <6 hours in duration:
 - Expedite transport
 - Make initial notification early to confirm destination
 - Prenotify accepting stroke receiving center of potential stroke code patient en route
- Get specific last known well time in military time (hours: minutes)
- Bring witness to ED, or if witness unable to ride on rig obtain accurate contact number
 - Allow witness to accompany patient into ED, or provide contact information to ED upon arrival.
- Use supplemental O₂ to maintain O₂ saturation at least 94%
- Keep HOB at 15 degree
- Use the Prehospital Stroke Scale in the assessment of possible TIA or stroke patients (facial droop, arm drift and speech abnormalities)
-
- Provide list of all current meds, especially anticoagulants to the ED upon arrival
- If Systolic BP < 120 mmHg, place head of the stretcher flat if tolerated

- Obtain blood glucose, if blood glucose <60mg/dl treat per hypoglycemia
- Large bore antecubital IV
- 250ml fluid bolus IV/IO without rales SO to maintain BP ≥120, MR SO

Important signs/symptoms to document:

Sudden, unilateral facial drooping/weakness
Sudden, unilateral arm or leg weakness
Sudden, unilateral difficulty speaking (slurred speech or inability to find words)
Asymmetric pupils
Sudden severe headache with no known cause

Witness considerations:

Whenever possible, a witness should accompany the stroke patient in the transport apparatus in order to verify the time of symptom onset and to provide consent for interventions.

Document revised

Approved:

EMS Medical Director

SUBJECT: TREATMENT PROTOCOL - NERVE AGENT EXPOSURE -
AUTOINJECTOR USE

Date: 7/1/2015

BLS

ALS

<p>Upon identification of a scene involving suspected or known exposure of nerve agent: Isolate Area Notify dispatch of possible Mass Casualty Incident with possible Nerve Agent involvement. DO NOT ENTER AREA</p> <p>If exposed: Blot off agent Strip off all clothing, avoiding contact with outer surfaces. Flush area (s) with copious amounts of water Cover affected area (s)</p> <p>If you begin to experience any signs/symptoms of nerve agent exposure, for example: Increased secretions (tears, saliva, runny nose, sweating) Diminished vision SOB Nausea, vomiting diarrhea Muscle twitching/weakness NOTIFY THE INCIDENT COMMANDER (or dispatch if no IC) immediately of your exposure and declare yourself a patient</p> <p>Self Treat Immediately per the following Acuity Guidelines:</p> <p>Mild: <i>Miosis, rhinorrhea, increasing dyspnea fasciculations, sweating</i> Atropine autoinjector 2-PAM CI autoinjector</p>	<p>Triage, decontaminate and treat patient based on severity of symptoms <u>SO</u></p> <p>Mild: <i>Miosis, rhinorrhea, increasing dyspnea, fasciculations, sweating</i> Atropine autoinjector (or 2 mg) IM 2-PAM CI autoinjector (or 600 mg) IM</p> <p>Moderate: <i>Miosis, rhinorrhea, dyspnea/wheezing, increased secretions, fasciculations, muscle weakness, GI effects</i> Atropine Autoinjector (or 2 mg) IM, MR x1 in 5-10" 2-PAM CI autoinjector (or 600 mg) IM, MR x1 in 5-10" *Diazepam autoinjector or Midazolam 5 mg IM if Diazepam autoinjector not available</p> <p>Severe: <i>Unconscious, seizures, flaccid, apnea</i> Initial dosing: Atropine autoinjector (or 2 mg) IM x3 doses in succession 2-PAM CI autoinjector (or 600 mg) IM x3 doses in succession *Diazepam autoinjector, or Midazolam 10mg IM if Diazepam autoinjector not available, for seizure activity O₂/Intubate. Ongoing treatment: Atropine autoinjector (or 2 mg) IM, MR q3-5" until secretions diminish 2-PAM CI autoinjector (or 600 mg) IM, MR x1 in 3-5" For continuous seizure activity MR Midazolam 10 mg IM x1 in 10"</p> <p>Pediatric doses:</p> <table><thead><tr><th><u>Weight</u></th><th><u>Atropine</u></th><th><u>2-PAM CI</u></th><th><u>Midazolam</u></th></tr></thead><tbody><tr><td><20kg</td><td>0.5mg</td><td>100mg</td><td>2.5mg</td></tr><tr><td>20-39kg</td><td>1mg</td><td>300mg</td><td>5.0mg</td></tr><tr><td>≥40kg</td><td>2mg</td><td>600mg</td><td>10mg</td></tr></tbody></table> <p><i>For doses less than the amount in the Autoinjector, use the medication vial and administer with a syringe.</i></p> <p>Consider: For frail, medically compromised, hypertensive or patients with renal failure administer half doses of Atropine and 2-PAM CI</p>	<u>Weight</u>	<u>Atropine</u>	<u>2-PAM CI</u>	<u>Midazolam</u>	<20kg	0.5mg	100mg	2.5mg	20-39kg	1mg	300mg	5.0mg	≥40kg	2mg	600mg	10mg
<u>Weight</u>	<u>Atropine</u>	<u>2-PAM CI</u>	<u>Midazolam</u>														
<20kg	0.5mg	100mg	2.5mg														
20-39kg	1mg	300mg	5.0mg														
≥40kg	2mg	600mg	10mg														

Note: *Diazepam autoinjectors available from Chempack caches only.
Diazepam, Atropine and 2-Pam CI autoinjectors are approved for self-treatment, treatment of public safety personnel, and the treatment of patients ONLY by prehospital personnel who have completed the County of San Diego approved training specific to the use of autoinjectors.

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Approved:



EMS Medical Director

BLS

ALS

<p>For a <u>conscious</u> patient:</p> <ul style="list-style-type: none">• Reassure, encourage coughing• O₂ prn <p>For inadequate air exchange: airway maneuvers (AHA)</p> <ul style="list-style-type: none">• Abdominal thrusts• Use chest thrusts in the obese or pregnant patient <p>NOTE: 5 Back Blows and Chest thrusts for infants <1 year. MR prn</p> <p><u>If patient becomes unconscious OR is found unconscious:</u> Begin CPR</p> <p><u>Once obstruction is removed:</u></p> <ul style="list-style-type: none">• O₂ Saturation prn• High flow O₂, ventilate prn <p>NOTE: If suspected epiglottitis:</p> <ul style="list-style-type: none">• Place patient in sitting position• Do not visualize the oropharynx <p>STAT transport Treat as per Respiratory Distress Protocol S-167.</p>	<p><u>If patient becomes unconscious or has a decreasing LOC:</u></p> <p>Direct laryngoscopy and Magill forceps <u>SO</u>. MR prn</p> <p><u>Once obstruction is removed:</u></p> <p>Monitor EKG</p> <p>IV/IO <u>SO</u> adjust prn</p>
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Note: If unable to secure airway, transport STAT while continuing CPR (unconscious patient).

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Approved:



EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL --
ALTERED NEUROLOGIC FUNCTION (NON TRAUMATIC)

Date: 7/1/2015

BLS

ALS

- Ensure patent airway, O₂ and/or ventilate prn.
- O₂ Saturation
- Spinal stabilization when indicated.
- Secretion problems; position on affected side.
- Do not allow patient to walk.
- Restrain prn.

Hypoglycemia (suspected) or patient's glucometer results, if available, read <60 mg/dL (Neonate <45 mg/dL):

- If patient is awake and has gag reflex, give oral glucose paste or 3 tablets (15g). Patient may eat or drink if able.
- If patient is unconscious, NPO

Seizures:

- Protect airway, and protect from injury
- Treat associated injuries
- If febrile, remove excess clothing/covering

Behavioral Emergencies:

- Restrain only if necessary to prevent injury.
- Avoid unnecessary sirens
- Consider law enforcement support

- IV SO adjust prn
- Monitor EKG /blood glucose prn
- Capnography SO prn

Symptomatic ?opioid OD (excluding opioid dependent pain management patients):

- Narcan per drug chart IN/IV/IM SO. MR SO

Symptomatic ?opioids OD in opioid dependent pain management patients:

- Narcan titrate per drug chart IV (dilute IV dose per drug chart) or IN/IM per drug chart SO. MR BHO

Hypoglycemia:

Symptomatic patient unresponsive to oral glucose agents:

- D₁₀ per drug chart IV SO if BS <60mg/dL (Neonate <45 mg/dL)
- If patient remains symptomatic and BS remains <60 mg/dL (Neonate <45 mg/dL) MR SO
- **If no IV:** Glucagon per drug chart IM SO if BS <60 mg/dL (Neonate <45 mg/dL)

Seizures:

For:

- Ongoing generalized seizure lasting ≥ 5 " (includes seizure time prior to arrival of prehospital provider) SO
- Partial seizure with respiratory compromise SO
- Recurrent tonic-clonic seizures without lucid interval SO

GIVE:

- Versed per drug chart slow IV, (d/c if seizure stops) SO
MR x1 in 10" SO

If no IV:

- Versed per drug chart IN/IM SO. MR x1 in 10" SO

Note: Versed not required for simple febrile seizures

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ALS

- Ensure patent airway
- O₂ Saturation prn
- O₂ and/or ventilate prn

- Remove sting/injection mechanism

- May assist patient to self medicate own prescribed EpiPen or MDI **ONE TIME ONLY**. Base Hospital contact required prior to any repeat dose.

- Monitor EKG

- IV/IO SO adjust prn

Allergic Reaction: mild (rash, urticaria):

- Benadryl per drug chart IV/IM SO

Allergic Reaction: acute (facial/cervical angioedema, bronchospasm or wheezing):

- Epinephrine 1;1000 per drug chart IM SO MR x2 q10" SO
- Benadryl per drug chart IV/IM SO
- Albuterol per drug chart via nebulizer SO MR SO
- Atrovent per drug chart via nebulizer added to first dose of Albuterol SO.

Anaphylaxis (shock or cyanosis):

- Epinephrine 1:1000 per drug chart IM SO MR x2 q10" SO
- Fluid bolus IV/IO per drug chart SO. MR to maintain systolic BP $\geq [70 + (2x \text{ age})]$ SO
- Benadryl per drug chart IV/IM SO
- Albuterol per drug chart via nebulizer SO MR SO
- Atrovent per drug chart via nebulizer added to first dose of Albuterol SO.

- Epinephrine 1:10,000 per drug chart IV/IO BHO. MR x2 q3-5" BHO

Note: In pediatric anaphylaxis the maximum Epinephrine dose is 0.1mg IV/IO, should not exceed adult dose

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ALS

<ul style="list-style-type: none">• Assess level of consciousness• O₂ Saturation prn• Determine peripheral pulses• Ensure patent airway, O₂ and/or ventilate prn <p><u>Unstable Dysrhythmia:</u> <u>Includes heart rate as above and any of the following:</u></p> <ul style="list-style-type: none">• Poor Perfusion (cyanosis, delayed capillary refill, mottling) <p>OR</p> <ul style="list-style-type: none">• Altered LOC, Dyspnea <p>OR</p> <ul style="list-style-type: none">• BP <[70+ (2 x age)] <p>OR</p> <ul style="list-style-type: none">• Diminished or Absent Peripheral Pulses <p>Note: Suspected dehydration and/or fever may cause tachycardias $\geq 200/\text{min}$.</p> <ul style="list-style-type: none">• Pulseless and unconscious, use AED if available. If pediatric pads not available may use adult pads but ensure they do not touch each other when applied.• When heart rate indicates and patient is unstable ventilate per BVM for 30 seconds, reassess HR and begin compression if indicated: <u>Heart rate:</u> <9 yrs HR <60bpm 9-14yrs HR <40bpm	<ul style="list-style-type: none">• Monitor EKG• IV/IO <u>SO</u>• Fluid bolus IV/IO per drug chart with clear lungs <u>SO</u>, MR to maintain systolic BP $\geq [70 + (2x \text{ age})]$ <u>SO</u> <p>A. <u>Unstable Bradycardia:</u> Heart rate: Infant/Child (<9 yrs) <60 bpm Child (9-14yrs) <40bpm</p> <ul style="list-style-type: none">• Ventilate per BVM for 30 seconds, then reassess HR prior to compressions and drug therapy.• Epinephrine 1:10,000 per drug chart IV/IO <u>SO</u>. MR x2 q3-5" <u>SO</u>. MR q3-5" <u>BHO</u> <p>After 3rd dose of Epinephrine:</p> <ul style="list-style-type: none">• Atropine per drug chart IV/IO <u>SO</u>. MR x1 in 5" <u>SO</u> <p>B. <u>Unstable Supraventricular Tachycardia</u> <4yrs $\geq 220\text{bpm}$ $\geq 4\text{yrs} \geq 180\text{bpm}$</p> <ul style="list-style-type: none">• VSM per <u>SO</u>. MR <u>SO</u>• Adenosine per drug chart rapid IV <u>BHPO</u> follow with 20ml NS IV• Adenosine per drug chart rapid IV <u>BHPO</u> follow with 20ml NS IV• If no sustained rhythm change, MR x1 <u>BHPO</u>• Versed per drug chart IV prn precardioversion per <u>BHPO</u>• Synchronized cardioversion per drug chart** <u>BHPO</u>. MR per drug chart <u>BHPO</u> <p>C. Stable Supraventricular Tachycardia</p> <ul style="list-style-type: none">• Continue to monitor <p>D. <u>Ventricular Tachycardia (VT):</u></p> <ul style="list-style-type: none">• 12-Lead to confirm• Contact <u>BHPO</u> for direction
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ALS

- O₂ and/or ventilate prn
 - CPR
- Begin compressions, after first 30 compressions give first ventilations.
- Use AED if, pulseless and unconscious, and AED is available. If pediatric pads not available may use adult pads but ensure they do not touch each other when applied.

E. VF/pulseless VT:

- Begin CPR. If arrest **witnessed** by medical personnel, perform CPR until ready to defibrillate. **If unwitnessed arrest, perform CPR x2 min.**
- Defibrillate per drug chart** SO
- Resume CPR for 2 minutes immediately after shock
- Perform no more than 10 second rhythm check, and pulse check if rhythm is organized
- Defibrillate per drug chart** for persistent VF/pulseless VT prn SO
- Continue CPR for persistent VF/pulseless VT. Repeat 2 minute cycle followed by rhythm/pulse check, followed by defibrillation/medication, if indicated
- IV/IO SO Do not interrupt CPR to establish IV/IO

Once IV/IO established, if no pulse after rhythm/pulse check:

- Epinephrine 1:10,000 per drug chart IV/IO MR x2 q3-5" SO. MR q3-5" BHO
- BVM, if unable to adequately ventilate via BVM intubate SO
- Avoid interruption of CPR
- Capnography monitoring SO
- NG/OG prn SO

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

- Medication should be administered as soon as possible after rhythm checks. The timing of drug delivery is less important than is the need to minimize interruptions in chest compressions.
- Flush IV line with Normal Saline after medication administration
- CPR should be performed during charging of defibrillator.
- Use metronome rate of 110 for CPR

**Or according to defibrillator manufacturer's recommendations

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ALS

<ul style="list-style-type: none">• O₂ and/or ventilate prn • CPR Begin compressions, after first 30 compressions give first ventilations.	<p>F. <u>Pulseless Electrical Activity (PEA)/Asystole:</u></p> <ul style="list-style-type: none">• Perform CPR x2"• Perform no more than 10 second rhythm check, and pulse check if rhythm is organized• CPR for 2"• IV/IO <u>SO</u> Do not interrupt CPR to establish IV/IO <p>Once IV/IO established, if no pulse after rhythm/pulse check:</p> <ul style="list-style-type: none">• Epinephrine 1:10,000 per drug chart IV/IO. MR x2 in q3-5" <u>SO</u>. MR q3-5" <u>BHO</u>• Fluid per drug chart IV/IO <u>SO</u> may repeat x1 • BVM, if unable to adequately ventilate via BVM, intubate <u>SO</u>• Capnography monitoring <u>SO</u>• NG/OG prn <u>SO</u> • Pronouncement at scene <u>BHPO</u>
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Note: For patients with an Capnography reading of less than 10mm/Hg or patients in nonperfusing rhythms after resuscitative effort, consider early Base Hospital contact for disposition/pronouncement at scene.

- Medication should be administered as soon as possible after rhythm checks. The timing of drug delivery is less important than is the need to minimize interruptions in chest compressions.
- Flush IV line with Normal Saline after medication administration
- CPR should be performed during charging of defibrillator.

**Or according to defibrillator manufacturer's recommendations



SUBJECT: PEDIATRIC TREATMENT PROTOCOL --
ENVENOMATION INJURIES-

Date: 7/1/2015

BLS

ALS

- O₂ and/or ventilate prn

Jellyfish Sting:

- Liberally rinse with salt water for at least 30 seconds.
- Scrape to remove stinger (s) .
- Heat as tolerated (not to exceed 110 degrees).

Stingray or Sculpin Injury:

- Heat as tolerated (not to exceed 110 degrees).

Snakebites:

- Mark proximal extent of swelling and/or tenderness
- Keep involved extremity at heart level and immobile
- Remove pre-existing constrictive device

- IV SO adjust prn
- Treat pain as per Pain Management Protocol (S-173)

Note: if using heat pads, temperature not to exceed 110 degrees to prevent burn.

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Approved:



EMS Medical Director

BLS

ALS

- Ensure patent airway
- O₂ Saturation prn
- O₂ and/or ventilate prn
- Carboxyhemoglobin monitor prn, if available

Ingestions:

- Identify substance

Skin:

- Remove clothes
- Brush off dry chemicals
- Flush with copious water

Inhalation of Smoke/Gas/Toxic Substance:

- Move patient to safe environment
- 100% O₂ via mask
- Consider transport to facility with hyperbaric chamber for suspected carbon monoxide poisoning in the unconscious or pregnant patient.

Symptomatic suspected opioid OD:

- May assist family or friend to medicate with patients own Naloxone

- Monitor EKG
- IV/IO SO adjust prn

Ingestions:

- Charcoal per drug chart PO if ingestion within 60 minutes and recommended by Poison Center SO,
- Assure child has gag reflex and is cooperative.
- In oral hypoglycemic agent ingestion any change in mentation requires blood glucose check or recheck, SO

Symptomatic suspected opioid OD (excluding opioid dependent pain management patients):

- Narcan per drug chart IN/IV/IM SO. MR SO

Symptomatic suspected opioid OD in opioid dependent pain management patients:

- Narcan titrate per drug chart IV (dilute per drug chart) or IN/IM SO. MR BHO

Symptomatic organophosphate poisoning:

- Atropine per drug chart IV/IM/IO SO. MR x2 q3-5" SO. MR q3-5" prn BHO

Extrapyramidal reactions:

- Benadryl per drug chart slow IV/IM SO

Suspected Tricyclic OD with cardiac effects (hypotension, heart block, widened QRS):

- NaHCO₃ per drug chart IV x1 BHO

NOTE: For scene safety, consider HAZMAT activation as needed
In symptomatic suspected opioids OD (excluding opioid dependent pain management patients) administer Narcan IN/IM prior to IV

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Approved:



EMS Medical Director

BLS

ALS

- Ensure patent airway.
- Suction baby's airway if excessive secretions causing increased work of breathing, first mouth, then nose, suction after fully delivered.
- O₂ Saturation prn. Ventilate via BVM room air
- Clamp and cut cord between clamps following delivery (wait 60 seconds after delivery prior to clamping and cutting cord.)
- Keep warm & dry (wrap in warm, dry blanket). Keep head warm.
- APGAR at 1" and 5"
- Document name of person cutting cord, time cut & address of delivery.
- Place identification bands on mother and infant.

Premature and/or Low Birth Weight Infants:

- If amniotic sac intact, remove infant from sac after delivery.
- STAT transport
- When HR <100bpm, ventilate room air
- If HR <60 bpm after 90 seconds of ventilation, increase to BVM 100% O₂ and start CPR.
- CPR need NOT be initiated if there are no signs of life AND gestational age is <20 weeks.

Meconium delivery:

- Suction if baby is not vigorous after delivery
- If mechanical suction is used, keep pressure between 80 and 100cm H₂O, otherwise use bulb syringe.

Cord wrapped around neck:

- Slip the cord over the head and off the neck; clamp and cut the cord if wrapped too tightly.

Prolapsed cord:

- Place the mother with her hips elevated on pillows,
- Insert a gloved hand into the vagina and gently push the presenting part off the cord.
- Transport STAT while retaining this position. Do not remove hand until relieved by hospital personnel.

Breech Birth:

- Allow infant to deliver to the waist without active assistance (support only);
- When legs and buttocks are delivered, the head can be assisted out. If head does not deliver within 1-2 min insert a gloved hand into the vagina and create an airway for the infant.
- Transport STAT if head undelivered.

- Monitor
- Ventilate via BVM room air if HR<100 bpm

If HR remains <60 bpm after 90 seconds of ventilation increase to BVM 100% O₂:

- CPR and BVM, if unable to adequately ventilate via BVM intubate SO
- NG prn SO

If HR remains <60 bpm after 30 seconds of CPR:

- Epinephrine 1:10,000 per drug chart IV/IO SO. MR x2 q3-5" SO. MR q3-5" BHO

Disposition per BHO.

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EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL -- RESPIRATORY DISTRESS Date: 7/1/2015

BLS

ALS

<ul style="list-style-type: none">• Ensure patent airway• Dislodge any airway obstruction• O₂ Saturation• Transport in position of comfort• Reassurance• Carboxyhemoglobin monitor prn, if available <ul style="list-style-type: none">• O₂ and/or ventilate prn <ul style="list-style-type: none">• May assist patient to self medicate own prescribed MDI ONE TIME ONLY. Base Hospital contact required to any repeat dose. <p><u>Hyperventilation:</u></p> <ul style="list-style-type: none">• Coaching/reassurance.• Remove patient from causative environment.• Consider underlying medical problem. <p><u>Toxic Inhalants (CO exposure, smoke, gas, etc.):</u></p> <ul style="list-style-type: none">• Consider transport to facility with Hyperbaric chamber for suspected carbon monoxide poisoning for unconscious or pregnant patient <p><u>Respiratory Distress with croup-like cough:</u></p> <ul style="list-style-type: none">• Aerosolized saline or water 5ml via oxygen powered nebulizer/mask. MR prn	<ul style="list-style-type: none">• Monitor EKG• IV <u>SO</u> adjust prn• BVM prn, if unable to adequately ventilate via BVM intubate <u>SO</u>• Capnography monitoring <u>SO</u> prn <p><u>Respiratory Distress with bronchospasm:</u></p> <ul style="list-style-type: none">• Albuterol per drug chart via nebulizer <u>SO</u>. MR <u>SO</u>• Atrovent per drug chart via nebulizer added to first dose of Albuterol <u>SO</u> <p><u>If severe respiratory distress with bronchospasm or inadequate response to Albuterol/Atrovent consider:</u></p> <ul style="list-style-type: none">• Epinephrine 1:1,000 per drug chart IM <u>SO</u>. MR x2 q10" <u>SO</u> <p><u>Respiratory Distress with stridor at rest:</u></p> <ul style="list-style-type: none">• Epinephrine 1:1,000 per drug chart via nebulizer <u>SO</u> MR x1 <u>SO</u>
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Note: If history suggests epiglottitis, do NOT visualize airway; utilize calming measures.
Avoid Albuterol in Croup.

-Consider anaphylaxis if wheezing in the patient with pediatric distress, especially if no history of asthma. Refer to Allergic Reaction/Anaphylaxis Protocol (S-162)

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ALS

Shock:

- O₂ Saturation prn
- O₂ and/or ventilate prn
- Control obvious external bleeding
- Determine peripheral pulses and capillary refill
- Assess level of consciousness
- Obtain baseline temperature
- Keep warm
- Treat associated injuries
- NPO, anticipate vomiting

- Monitor EKG
- IV/IO SO
- Capnography SO prn

Shock (Non cardiogenic):

- IV/IO fluid bolus per drug chart SO. MR SO if without rales.

Shock (Cardiac etiology):

- IV/IO fluid bolus per drug chart SO. MR BHPO to maintain systolic BP \geq [70 + (2x age)] if without rales.

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BLS

- Ensure patent airway, protecting C-spine
- Control obvious bleeding
- Spinal stabilization prn (except in penetrating trauma without neurological deficits)
- O₂ Saturation prn
- O₂ and/or ventilate prn
- Keep warm
- Hemostatic gauze

Abdominal Trauma:

- Cover eviscerated bowel with saline pads

Chest Trauma:

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

Extremity Trauma:

- Splint neurologically stable fractures as they lie.
- Use traction splint as indicated.
- Grossly angulated long bone fractures with neurovascular compromise may be reduced with gentle unidirectional traction for splinting BHO.
- Apply tourniquet in severely injured extremity when direct pressure or pressure dressing fails to control life-threatening hemorrhage. SO
- In Mass Casualty direct pressure not required prior to tourniquet application

Impaled Objects:

- Immobilize & leave impaled objects in place.
- Remove BHPO

Exception: may remove impaled object in face/cheek, or from neck if there is total airway obstruction.

Neurological Trauma (Head & Spine Injuries):

- Assure adequate airway and ventilate without hyperventilation.

Traumatic Arrest:

- CPR
- Consider pronouncement at scene BHPO

ALS

- Monitor EKG
- IV/IO SO adjust prn
- If MTV IV/IO en route SO
- IV/IO fluid bolus per drug chart for hypovolemic shock SO. MR to maintain systolic BP $\geq [70 + (2x \text{ age})]$ SO
- Treat pain as per Pain Management Protocol S-173.

Crush injury with extended compression > 2 hours of extremity or torso:

Just prior to extremity being released:

- IV/IO fluid bolus per drug chart BHO
- NaHCO₃ drug chart IV/IO BHO

Grossly angulated long bone fractures:

- Reduce with gentle unidirectional traction for splinting per SO

Severe Respiratory Distress (with unilateral diminished breath sounds AND BP < [70 + (2 x age)]):

- Needle thoracostomy BHO

Traumatic Arrest:

- Consider pronouncement at scene BHPO

TRANSPORT GUIDELINES:

Routine Disposition-Pediatric patients who meet criteria outlined in T-460 "Identification of the Pediatric Trauma Center Candidate" should be delivered to the Designated Pediatric Trauma Center, EXCEPT in the following situations:

1. Adult + Child:

- a. If there is a single ambulance (air/ground) with both a pediatric trauma center candidate AND an adult trauma center candidate, the ambulance should first deliver the more critical patient to the appropriate facility. If both patients are critical, or if there are other questions, both may be delivered to the designated adult trauma center.
- b. Field personnel should consider splitting the team using additional ALS transport vehicles, or aeromedical

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EMS Medical Director

SUBJECT: TREATMENT PROTOCOL -- TRAUMA-PEDIATRICS

Date: 7/1/2015

resources to transport the pediatric patient to pediatric trauma facility and the adult to the catchment area trauma facility.

2. **Bypass/Diversion:** If the designated pediatric trauma center is "on bypass", pediatric trauma candidates should be delivered to UCSD.
3. A <15 year old pregnant patient should be delivered to UCSD.

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EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL - BURNS

Date: **7/1/2015**

BLS

ALS

<ul style="list-style-type: none">• Move to a safe environment• Break contact with causative agent• Ensure patent airway• O₂ saturation prn• O₂ and/or ventilate prn• Treat other life threatening injuries• Carboxyhemoglobin monitor if available, prn <p><u>Thermal Burns:</u></p> <ul style="list-style-type: none">• Burns of <10% BSA, stop burning with non-chilled saline or water• For burns of >10% BSA, cover with <u>dry</u> dressing and keep warm• Do not allow patient to become hypothermic <p><u>Chemical Burns:</u></p> <ul style="list-style-type: none">• Brush off dry chemicals• Flush with copious water <p><u>Tar Burns:</u></p> <ul style="list-style-type: none">• Cool with water• Transport• Do not remove tar <p><u>Inhalation of Smoke/Gas/ Toxic Substance:</u></p> <ul style="list-style-type: none">• Move patient to safe environment• 100 % O₂ via mask• Consider transport to facility with hyperbaric chamber for suspected carbon monoxide poisoning for unconscious or pregnant patient	<ul style="list-style-type: none">• Monitor EKG for significant electrical injury and prn• IV/IO <u>SO</u> adjust prn• Treat pain as per Pain Management Protocol S-173 <p><u>For patients with $\geq 10\%$ partial thickness or $\geq 5\%$ full thickness burns:</u></p> <p><u>5-14 yo:</u></p> <ul style="list-style-type: none">• 250ml fluid bolus IV/IO then TKO <u>SO</u> <p><u><5 yo:</u></p> <ul style="list-style-type: none">• 150ml fluid bolus IV/IO then TKO <u>SO</u> <p><u>In the presence of respiratory distress with bronchospasm:</u></p> <ul style="list-style-type: none">• Albuterol per drug chart via nebulizer <u>SO</u>. MR <u>SO</u>
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Base Hospital Contact and Transport (Per S-415):

Will be made to UCSD Base Hospital for patients meeting burn center criteria:

BURN CENTER CRITERIA

Patients with burns involving:

- $\geq 10\%$ BSA partial thickness or $\geq 5\%$ BSA full thickness
- Suspected respiratory involvement or significant smoke inhalation in a confined space
- Injury of the face, hands, feet, perineum or circumferential
- Electrical injury due to high voltage (greater than 120 volts)

Disposition:

Consider hyperbaric chamber for suspected CO poisoning in unconscious or pregnant patient.

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EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL –
ALTE (Apparent Life Threatening Event)

Date: 7/1/2015

BLS

ALS

<ul style="list-style-type: none">• Ensure patent airway• O₂ Saturation prn• O₂ and/or ventilate prn.	<ul style="list-style-type: none">• Monitor EKG• Obtain blood glucose prn• IV <u>SO</u> prn
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Note: If the parent/caretaker refuses medical care and/or transport, contact the base hospital prior to completing a refusal of care form.

Definition:

An Apparent Life-Threatening Event is defined as an episode involving an infant less than 12 months of age that is frightening to the observer and is characterized by one or more of the following:

- Apnea (central or obstructive)
- Color change (cyanosis, pallor, erythema)
- Marked change in muscle tone
- Unexplained choking or gagging

Transport:

Transport to nearest appropriate facility:

- ALS transport, if child is symptomatic
- BLS transport, if child is asymptomatic
- Private transport acceptable for asymptomatic patient **IF**:
 - a. Transportation is available now
 - b. The parents/caretaker are reliable
 - c. The parents/caretaker understand the importance of evaluation

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EMS Medical Director

SUBJECT: PEDIATRIC TREATMENT PROTOCOL – PAIN MANAGEMENT

Date: 7/1/2015

BLS

- Assess level of pain
- Ice, immobilize and splint when indicated
- Elevation of extremity trauma when indicated

ALS

- Continue to monitor and reassess pain as appropriate.

For treatment of pain as needed with systolic $BP \geq [70 + (2x \text{ age in years})]$:

- Morphine IV per drug chart SO MR per drug chart BHO
- OR**
- Morphine IM per drug chart SO. MR per drug chart BHO

BHPO for:

- Chronic pain states
- Isolated head injury
- Acute onset severe headache
- Drug/ETOH intoxication
- Multiple trauma with GCS <15
- Suspected active labor

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EMS Medical Director

SUBJECT: TREATMENT PROTOCOL –
GI/GU (NON-TRAUMATIC)

Date: 7/1/2015

BLS

ALS

<ul style="list-style-type: none">• Ensure patent airway• O₂ Saturation <u>SO</u> prn• NPO	<ul style="list-style-type: none">• Monitor EKG• IV/IO <u>SO</u> prn• IV fluid bolus for suspected volume depletion per pediatric drug chart <u>SO</u>.• Treat pain per Pain Management Protocol (S-173) <p><u>For nausea or vomiting:</u></p> <ul style="list-style-type: none">• 6 months-3 years of age: Zofran 2mg ODT/IV <u>SO</u>• Greater than 3 years:: Zofran 4mg ODT/IV <u>SO</u>• If suspected head injury, Zofran BHPO
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EMS Medical Director

SUBJECT: TREATMENT PROTOCOL – PEDIATRIC (< 15 yo and < 37 kg) DRUG CHART

Date: 2016

LBR Tape Color:	GREY	PINK
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Kg range: < 8 kg **Approx Kg:** 5 kg
Approximate LBS: 10 lbs
ETT uncuffed tube size: 3.5
ETT cuffed tube size: 3.0
ETT Depth: 9-10 (G) **10.5 (P)**
NG tube size: 5 Fr

	<u>1st</u>	<u>2nd</u>	<u>3rd</u>
Defib:	10 J	20 J	20 J
Cardiovert:	5 J	10 J	10 J

(or clinically equivalent biphasic energy dose)

VOL	MEDICATION	DOSE	CONCENTRATION
0.2 ml	Adenosine IV 1st	0.5 mg	6 mg/2 ml
0.4 ml	Adenosine IV 2nd/3rd	1 mg	6 mg/2 ml
6 ml	Albuterol- Nebulized	5 mg	2.5 mg/3 ml
1.25 ml	Atrovent- Nebulized	0.25 mg	0.5 mg/2.5 ml
1 ml	Atropine (Bradycardia) IV/IO	0.1 mg	1 mg/10 ml
0.3 ml *	Atropine (OPP) IV/IM	0.1 mg	0.4 mg/1 ml
0.1 ml	Benadryl IV/IM	5 mg	50 mg/1 ml
24 ml	Charcoal PO	5 GM	50 GM/240 ml
25 ML	Dextrose 10% IV	2.5 GM	25 GM/250 ml
10 ml	Dextrose 25% IV	2.5 GM	12.5 GM/50 ml
0.5 ml	Epinephrine IV/IO	0.05 mg	1:10,000 1mg/10ml
0.1 ml *	Epinephrine IM	0.05 mg	1:1,000 1mg/1ml
2.5 ml	Epinephrine- Nebulized	2.5 mg	1:1,000 1mg/1ml
0.3 ml *	Glucagon IM	0.25 mg	1 unit (mg)/1 ml
0.3 ml *	Lidocaine 2% IV/IO	5 mg	100 mg/5 ml
NONE	Morphine Sulfate IV/IM	NONE	10 mg/1 ml
0.5 ml	Narcan IN/IM/IV	0.5 mg	1 mg/1 ml
5 ml	Narcan IV titrated increments	0.5 mg	Diluted to 1 mg/10 ml
100 ml	Normal Saline Fluid Bolus		Standard
5 ml	Sodium Bicarb IV	5 meq	1 meq/1 ml
0.1 ml	Versed IV	0.5 mg	5 mg/1 ml
0.2 ml	Versed IN/IM	1 mg	5 mg/1 ml
½ tablet	Zofran ODT 6 months to 3 years	2 mg	4 mg tablet
1 tablet	Zofran ODT greater than 3 years of age	4 mg	4 mg tablet
1 ml	Zofran IV 6 months to 3 years	2 mg	4 mg/2 ml
2 ml	Zofran IV greater than 3 years of age	4 mg	4 mg/2 ml

- Children ≥37kg use adult medication dosages regardless of age or height.
- Neonates involve base physician
- To assure accuracy be sure the designated **concentration** of medication is used.
- * Volume rounded for ease of administration

SUBJECT: TREATMENT PROTOCOL – PEDIATRIC (< 15 yo and < 37 kg) DRUG CHART

Date: 2016

LBR Tape Color: **RED** **PURPLE** **YELLOW**

Kg range: 8-14kg Approx Kg: 10 kg
Approximate LBS: 20 lbs
ETT uncuffed size: 3.5(R) 4 (P) 4.5(Y)
ETT cuffed size: 3.0(R) 3.5(P) 4.0(Y) (or clinically equivalent biphasic energy dose)
ETT depth: 11 (R) 12 (P) 13.5(Y)
NG tube size: 5-8 Fr 8-10 Fr 10 Fr

1st 2nd 3rd

Defib: 20 J 40 J 40 J

Cardiovert: 10 J 20 J 20 J

VOL	MEDICATION	DOSE	CONCENTRATION
0.3 ml *	Adenosine IV fast 1st	1mg	6 mg/2 ml
0.7 ml *	Adenosine IV fast 2nd/3rd	2 mg	6 mg/2 ml
6 ml	Albuterol- Nebulized	5 mg	2.5 mg/3 ml
1.25 ml	Atrovent- Nebulized	0.25 mg	0.5 mg/2.5 ml
2 ml	Atropine (Bradycardia) IV/IO	0.2 mg	1 mg/10 ml
0.5 ml	Atropine (OPP) IV/IM	0.2 mg	0.4 mg/1 ml
0.2 ml	Benadryl IV/IM	10 mg	50 mg/1 ml
50 ml *	Charcoal PO	10 GM	50 GM/240 ml
50ml	Dextrose 10% IV	5 GM	25 GM/250 ml
20 ml	Dextrose 25% IV	5 GM	12.5 GM/50 ml
1 ml	Epinephrine IV/IO	0.1 mg	1:10,000 1mg/10ml
0.1 ml	Epinephrine IM	0.1 mg	1:1,000 1mg/1ml
2.5 ml	Epinephrine- Nebulized	2.5 mg	1:1,000 1mg/1ml
0.5 ml	Glucagon IM	0.5 mg	1 unit (mg)/1 ml
0.5 ml	Lidocaine 2% IV/IO	10 mg	100 mg/5 ml
0.1 ml	Morphine Sulfate IV/IM	1 mg	10 mg/1 ml
1 ml	Narcan IN/IM/IV	1 mg	1 mg/1 ml
10 ml	Narcan IV titrated increments	1 mg	Diluted to 1 mg/10 ml
200 ml	Normal Saline Fluid Bolus		Standard
10 ml	Sodium Bicarb IV	10 mEq	1 meq/1 ml
0.2 ml	Versed IV slow	1 mg	5 mg/1 ml
0.4 ml	Versed IN/IM	2 mg	5 mg/1 ml
½ tablet	Zofran ODT 6 months to 3 years	2 mg	4 mg tablet
1 tablet	Zofran ODT greater than 3 years of age	4 mg	4 mg tablet
1 ml	Zofran IV 6 months to 3 years	2 mg	4 mg/2 ml
2 ml	Zofran IV greater than 3 years of age	4 mg	4 mg/2 ml

- Children ≥37kg use adult medication dosages regardless of age or height.
- Neonates involve base physician
- To assure accuracy be sure the designated **concentration** of medication is used.
- * Volume rounded for ease of administration

LBR Tape Color:

WHITE

Kg range:15-18kg Approx Kg:15 kg

Approximate LBS: 30 lbs

ETT uncuffed size: 5

ETT cuffed size: 4.5

ETT depth: 14-15

NG tube size: 10 Fr

	<u>1st</u>	<u>2nd</u>	<u>3rd</u>
Defib:	30 J	60 J	60 J

Cardiovert:	15 J	30 J	30 J
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(or clinically equivalent biphasic energy dose)

VOL	MEDICATION	DOSE	CONCENTRATION
0.5 ml	Adenosine IV fast 1st	1.5 mg	6 mg/2 ml
1 ml	Adenosine IV fast 2nd/3rd	3 mg	6 mg/2 ml
6 ml	Albuterol- Nebulized	5 mg	2.5 mg/3 ml
2.5 ml	Atrovent- Nebulized	0.5 mg	0.5 mg/2.5 ml
3 ml	Atropine (Bradycardia) IV/IO	0.3 mg	1 mg/10 ml
0.8 ml	Atropine (OPP) IV/IM	0.3 mg	0.4 mg/1 ml
0.3 ml	Benadryl IV/IM	15 mg	50 mg/1 ml
70 ml *	Charcoal PO	15 GM	50 GM/240 ml
75 ml	Dextrose 10% IV	7.5 GM	25 GM/250 ml
30 ml	Dextrose 25% IV	7.5 GM	12.5 GM/50 ml
	Epinephrine IV/IO		
1.5 ml	Cardiac Arrest	0.15 mg	1:10,000 1mg/10ml
1 ml	Anaphylaxis	0.1 mg	1:10,000 1mg/10ml
0.2 ml *	Epinephrine IM	0.15 mg	1:1,000 1mg/1ml
5 ml	Epinephrine Nebulized	5 mg	1:1,000 1mg/1ml
0.8 ml *	Glucagon IM	0.75 mg	1 unit (mg)/1 ml
0.8 ml	Lidocaine 2% IV slow/IO	15 mg	100 mg/5 ml
0.2 ml *	Morphine Sulfate IV/IM	1.5 mg	10 mg/1 ml
1.5 ml	Narcan IN/IM/IV	1.5 mg	1 mg/1 ml
15 ml	Narcan IV titrated increments	1.5 mg	Diluted to 1 mg/10 ml
300 ml	Normal Saline Fluid Bolus		Standard
15 ml	Sodium Bicarb IV	15 mEq	1 meq/1 ml
0.3 ml	Versed IV slow	1.5 mg	5 mg/1 ml
0.6 ml	Versed IN/IM	3 mg	5 mg/1 ml
½ tablet	Zofran ODT 6 months to 3 years	2 mg	4 mg tablet
1 tablet	Zofran ODT greater than 3 years of age	4 mg	4 mg tablet
1 ml	Zofran IV 6 months to 3 years	2 mg	4 mg/2 ml
2 ml	Zofran IV greater than 3 years of age	4 mg	4 mg/2 ml

- Children ≥ 37 kg use adult medication dosages regardless of age or height.
- Neonates involve base physician
- To assure accuracy be sure the designated **concentration** of medication is used.
- * Volume rounded for ease of administration

LBR Tape Color:

BLUE

Kg range: 19-23kg Approx KG: 20 kg

Approximate LBS: 40 lbs

ETT uncuffed size: 5.5

ETT cuffed size: 5.0

ETT depth: 16.5

NG tube size: 12-14 Fr

1st 2nd 3rd

Defib: 40 J 80 J 80 J

Cardiovert: 20 J 40 J 40 J

(or clinically equivalent biphasic energy dose)

VOL	MEDICATION	DOSE	CONCENTRATION
0.7 ml *	Adenosine IV fast 1st	2 mg	6 mg/2 ml
1.3 ml *	Adenosine IV fast 2nd/3rd	4 mg	6 mg/2 ml
6 ml	Albuterol- Nebulized	5 mg	2.5 mg/3 ml
2.5 ml	Atrovent- Nebulized	0.5 mg	0.5 mg/2.5 ml
4 ml	Atropine (Bradycardia) IV	0.4 mg	1 mg/10 ml
1 ml	Atropine (OPP) IV/IM	0.4 mg	0.4 mg/1 ml
0.4 ml	Benadryl IV/IM	20 mg	50 mg/1 ml
100 ml *	Charcoal PO	20 GM	50 GM/240 ml
100 ml	Dextrose 10% IV	10 GM	25 GM/250 ml
40 ml	Dextrose 25% IV	10 GM	12.5 GM/50 ml
	Epinephrine IV/IO		
2 ml	Cardiac Arrest	0.2 mg	1:10,000 1mg/10ml
1 ml	Anaphylaxis	0.1 mg	1:10,000 1mg/10ml
0.2 ml	Epinephrine IM	0.2 mg	1:1,000 1mg/1ml
5 ml	Epinephrine Nebulized	5 mg	1:1,000 1mg/1ml
1 ml	Glucagon IM	1 mg	1 unit (mg)/1 ml
1 ml	Lidocaine 2% IV slow/IO	20 mg	100 mg/5 ml
0.2 ml	Morphine Sulfate IV/IM	2 mg	10 mg/1 ml
2 ml	Narcan IN/IM/IV	2 mg	1 mg/1 ml
20 ml	Narcan IV titrated increments	2 mg	Diluted to 1 mg/10 ml
400 ml	Normal Saline Fluid Bolus		Standard
20 ml	Sodium Bicarb IV	20 mEq	1 meq/1 ml
0.4 ml	Versed IV slow	2 mg	5 mg/1 ml
0.8 ml	Versed IN/IM	4 mg	5 mg/1 ml
½ tablet	Zofran ODT 6 months to 3 years	2 mg	4 mg tablet
1 tablet	Zofran ODT greater than 3 years of age	4 mg	4 mg tablet
1 ml	Zofran IV 6 months to 3 years	2 mg	4 mg/2 ml
2 ml	Zofran IV greater than 3 years of age	4 mg	4 mg/2 ml

- Children ≥ 37 kg use adult medication dosages regardless of age or height.
- Neonates involve base physician
- To assure accuracy be sure the designated **concentration** of medication is used.
- * Volume rounded for ease of administration

LBR Tape Color:

ORANGE

Kg range: 24-29 kg Approx KG: 25 kg
Approximate LBS: 50 lbs
ETT uncuffed size: 6
ETT cuffed size: 5.5
ETT depth: 17-18
NG tube size: 14-18 Fr

Defib: 1st 50 J 2nd 100 J 3rd 100 J
Cardiovert: 25 J 50 J 50 J
 (or clinically equivalent biphasic energy dose)

VOL	MEDICATION	DOSE	CONCENTRATION
0.8 ml *	Adenosine IV fast 1st	2.5 mg	6 mg/2 ml
1.7 ml *	Adenosine IV fast 2nd/3rd	5 mg	6 mg/2 ml
6 ml	Albuterol- Nebulized	5 mg	2.5 mg/3 ml
2.5 ml	Atrovent- Nebulized	0.5 mg	0.5 mg/2.5 ml
5 ml	Atropine (Bradycardia) IV/IO	0.5 mg	1 mg/10 ml
1.3 ml *	Atropine (OPP) IV/IM	0.5 mg	0.4 mg/1 ml
0.5 ml	Benadryl IV/IM	25 mg	50 mg/1 ml
120 ml	Charcoal PO	25 GM	50 GM/240 ml
125 ml	Dextrose 10% IV	12.5 GM	25 GM/250 ml
50 ml	Dextrose 25% IV	12.5 GM	12.5 GM/50 ml
	Epinephrine IV/IO		
2.5 ml	Cardiac arrest	0.25 mg	1:10,000 1mg/10ml
1 ml	Anaphylaxis	0.1 mg	1:10,000 1mg/10ml
0.25 ml	Epinephrine IM	0.25 mg	1:1,000 1mg/1ml
5 ml	Epinephrine Nebulized	5 mg	1:1,000 1mg/1ml
1 ml	Glucagon IM	1 mg	1 uni t (mg)/1 ml
1.3 ml *	Lidocaine 2% IV slow/IO	25 mg	100 mg/5 ml
0.3 ml *	Morphine Sulfate IV/IM	2.5 mg	10 mg/1 ml
2 ml	Narcan IN/IM/IV	2 mg	1 mg/1 ml
20 ml	Narcan IV titrated increments	2 mg	Diluted to 1 mg/10 ml
500 ml	Normal Saline Fluid Bolus		Standard
25 ml	Sodium Bicarb IV	25 mEq	1 meq/1 ml
0.5 ml	Versed IV slow	2.5 mg	5 mg/1 ml
1 ml	Versed IN/IM	5 mg	5 mg/1 ml
½ tablet	Zofran ODT 6 months to 3 years	2 mg	4 mg tablet
1 tablet	Zofran ODT greater than 3 years of age	4 mg	4 mg tablet
1 ml	Zofran IV 6 months to 3 years	2 mg	4 mg/2 ml
2 ml	Zofran IV greater than 3 years of age	4 mg	4 mg/2 ml

- Children ≥37kg use adult medication dosages regardless of age or height.
- Neonates involve base physician
- To assure accuracy be sure the designated **concentration** of medication is used.
- * Volume rounded for ease of administration

LBR Tape Color:

GREEN

Kg range: 30-36kg Approx Kg: 35 kg

Approximate LBS: 70 lbs

ETT uncuffed size: 6.5

ETT cuffed size: 6.0

ETT depth: 18.5-19.5

NG tube size: 18Fr

Defib: 1st 2nd 3rd
 70 J 140 J 140 J

Cardiovert: 35 J 70 J 70 J

(or clinically equivalent biphasic energy dose)

VOL	MEDICATION	DOSE	CONCENTRATION
1.2 ml *	Adenosine IV fast 1st	3.5 mg	6 mg/2 ml
2.3 ml *	Adenosine IV fast 2nd/3rd	7 mg	6 mg/2 ml
6 ml	Albuterol- Nebulized	5 mg	2.5 mg/3 ml
2.5 ml	Atrovent- Nebulized	0.5 mg	0.5 mg/2.5 ml
5 ml	Atropine (Bradycardia) IV/IO	0.5 mg	1 mg/10 ml
1.8 ml *	Atropine (OPP) IV/IM	0.7 mg	0.4 mg/1 ml
0.7 ml	Benadryl IV/IM	35 mg	50 mg/1 ml
170 ml *	Charcoal PO	35 GM	50 GM/240 ml
175 ml	Dextrose 10% IV	17.5 GM	25 GM/250 ml
70 ml	Dextrose 25% IV	17.5 GM	12.5 GM/50 ml
	Epinephrine IV/IO		
3.5 ml	Cardiac Arrest	0.35 mg	1:10,000 1mg/10ml
1 ml	Anaphylaxis	0.1 mg	1:10,000 1mg/10ml
0.3 ml	Epinephrine IM	0.3 mg	1:1,000 1mg/1ml
5 ml	Epinephrine Nebulized	5 mg	1:1,000 1mg/1ml
1 ml	Glucagon IM	1 mg	1 unit (mg)/1 ml
1.8 ml *	Lidocaine 2% IV slow/IO	35 mg	100 mg/5 ml
0.4 ml	Morphine Sulfate IV/IM	3.5 mg	10 mg/1 ml
2 ml	Narcan IN/IM/IV	2 mg	1 mg/1 ml
20 ml	Narcan IV titrated increments	2 mg	Diluted to 1 mg/10 ml
500 ml	Normal Saline Fluid Bolus		Standard
35 ml	Sodium Bicarb IV	35 mEq	1 meq/1 ml
0.7 ml	Versed IV slow	3.5 mg	5 mg/1 ml
1 ml	Versed IN/IM	5 mg	5 mg/1 ml
½ tablet	Zofran ODT 6 months to 3 years	2 mg	4 mg tablet
1 tablet	Zofran ODT greater than 3 years of age	4 mg	4 mg tablet
1 ml	Zofran IV 6 months to 3 years	2 mg	4 mg/2 ml
2 ml	Zofran IV greater than 3 years of age	4 mg	4 mg/2 ml

- Children ≥37kg use adult medication dosages regardless of age or height.
- Neonates involve base physician
- To assure accuracy be sure the designated **concentration** of medication is used.
- * Volume rounded for ease of administration