

Medical Standing Orders



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Routine Medical Care - Definition

- This protocol guides patient care for all patients. Treatments and interventions for specific patient problems are listed in the appropriate protocol.
- Oxygen shall be applied as appropriate for the patient's history and medical condition. Pulse oximetry of all ALS patients and patients that may benefit from monitoring.
- Oral/Nasal ET intubation as indicated. Confirm placement by visualization of the cords, Esophageal Intubation Detector, lung sounds, ETCO₂, and pulse oximetry. A Combitube may be used when ET intubation is not successful or available.
- Cardiac monitoring of all ALS patients and patients that may benefit from monitoring. 12-Lead EKG's should be done on all potential ACS patients except during CPR or if patient is unstable due to life-threatening rhythm identified by 3-lead EKG.
- Pediatrics are generally considered patients <13 and/or <35 kg (77 lbs). Refer to pediatric protocols or Broselow tape for these patients.
- CPR per current AHA standards, cardiac care per current ACLS

Routine Medical Care (continued)

- Blood glucose testing on all patients presenting with AMS.
- When appropriate, IV's will be initiated with saline locks unless the patient needs or may need fluid, TKO means 25-50 cc/hr. IO's may be initiated in patients in extremis when other IV access is not possible.
- Acceptable form of valsalva consist(s) of having the patient bear down.
- Expedient packaging and transport of the patient is of primary importance. Usually treatment for medical patients is initiated on scene and trauma, shock and OB patients enroute. It is understood that paramedic discretion may necessitate variation in this aspect of ALS care. In such cases, clearly document the issue.
- Naloxone, Midazolam, and Fentanyl may be administered intranasally when necessary.
- [Contact with OLMC for any unusual or unfamiliar situations is encouraged.](#)
- Alert the hospital as soon as possible of your transport.

Respiratory Distress

- **Asthma/ COPD:**

- **Albuterol:**

- **2.5mg** nebulized @ 6-10L/min., repeat PRN **EMT-I,P, or**
- **2 puffs** MDI with spacer q 1-2 min PRN max of 20 puffs **EMT-I, P**
- MDI as prescribed for pt. **EMT-B**

- If no improvement, give **Solu-Medrol 125mg slow IVP**, over 1-2 minutes. **EMT-P No Solu-Medrol for peds.**
- In severe cases consider (use caution if pt. Has hx of heart) **Epinephrine 1:1,000 0.3-0.5mg SQ, IM. 0.01mg/kg SQ, IM- peds q 5 min Epinephrine 1:10,000 0.3-0.5mg IVP EMT-P**
- May consider for severe cases **CPAP EMT-P**

- **Pulmonary Edema:**

- **Nitro 0.4mg SL** (if BP>100) to max of 4 doses **EMT-P**

Caution: Viagra, Cialis, Levitra

- Administer **baby ASA x 4, 324 mg PO total EMT-B,I,P**
- Consider **CPAP EMT-P**
- Consider ACS/Chest pain protocol

ACS/Chest Pain

- Routine Medical Care (rapid transport for Acute Coronary Syndrome if indicated).
- EKG, apply 12-lead during initial assessment if possible
- Administer **baby ASA x 4, 324 mg** total, **EMT-B,I,P**
- IV access
- **Nitro 0.4 mg SL x 3 EMT-I,P** Assist pt. with their RX Nitro **EMT-B** if BP >100 systolic; may repeat q 5 minutes PRN
NTG should be given if:
 - Chest discomfort suggestive of ischemia
- If patient having pain post NTG, **Morphine 2-5 mg IVP** may repeat to 20 mg total, as needed (if BP >100 systolic) **or Fentanyl 25-50mcg IVP or IM** may repeat to 200mcg **EMT-P**
[Consult OLMC for additional dosing.](#)
- Notify LCH if 12-Lead shows STEMI, go to STEMI protocol

Caution: Viagra, Cialis, Levitra

Ventricular Fibrillation/ Pulseless Ventricular Tachycardia

- **Treatment:**

- Defibrillate 200J **EMT-I,P** (AED **EMT-B**)
- CPR 5 cycles **EMT-B, I, P**
- Defibrillate 200J, **EMT-I,P** (AED **EMT-B**)
- **Epinephrine 1:10,000 1mg IV/IO** q 3-5min with CPR **EMT-I, P**
- Defibrillate 200J, **EMT-I,P** (AED **EMT-B**)
- **Lidocaine 1-1.5mg/kg IV/IO** (repeat doses at 0.5-0.75mg/kg) q 3-5min to max of 3mg/kg **EMT-I,P**
- ***Repeat above sequence, shocking at 200J, PRN for refractory VF/VT**
- Consider **Magnesium Sulfate 1-2 grams IV/IO** for Torsades de Pointes **EMT-P**

- **Postresuscitation:**

- Follow with **Lidocaine drip at 2-4mg/min EMT-P**
- If no lidocaine bolus given prior to conversion, give **1-1.5mg/kg Lidocaine IV bolus**, follow with **drip at 2-4mg/min EMT-P**

Note LP 10 SETTING IS 360J

- During CPR: place and secure airway and IV/IO**
- Check For and treat potential causes:**
 - Hypovolemia**
 - Hypoxia**
 - Hydrogen ion acidosis**
 - Hypo-/hyperkalemia**
 - Hypoglycemia**
 - Hypothermia**
 - Toxins**
 - Tamponade-cardiac**
 - Tension pneumothorax**
 - Thrombosis: coronary or pulmonary**
 - Trauma**

Asystole/ PEA

- **Treatment:**

- CPR for 5 cycles **EMT-B, I, P**,
- **Epinephrine 1:10,000 1mg, IV/IO** q 3-5min **EMT-I, P**
- **Atropine 1mg IV/IO**, (for asystole or slow PEA) q 3-5min; max dose 3mg **EMT-I, P**
- Resume CPR for 5 cycles
- Check rhythm and pulse, repeat above sequence PRN (if rhythm change, go to appropriate protocol)
- Consider termination of efforts if no response to ACLS, [contact OLMC for order](#)
- **Postresuscitation: Lidocaine bolus 1-1.5mg/kg IV/IO, follow with drip at 1-4mg/min IV/IO EMT-I,P**

- **During CPR: place and secure airway and IV/IO**
- **Check For and treat potential causes:**
 - Hypovolemia
 - Hypoxia
 - Hydrogen ion acidosis
 - Hypo-/hyperkalemia
 - Hypoglycemia
 - Hypothermia
 - Toxins
 - Tamponade-cardiac
 - Tension pneumothorax
 - Thrombosis: coronary or pulmonary
 - Trauma

Bradycardia

Heart Rate < 60 bpm and inadequate for clinical condition

- **Symptomatic/unstable:** CP, SOB, decreased LOC, hypotension, CHF, AMI, pulmonary edema
- **Treatment:**
 - In a symptomatic pt. with a 2nd degree type 2 or 3rd degree AV heart block prepare for **immediate TCP EMT-P**
 - **Atropine 0.5-1mg to max of 3mg, IV/IO** repeat q 5 min to max dose **EMT-I, P** (consider while awaiting pacer)
 - If pt. is symptomatic do not delay TCP **EMT-P** to get IV
 - Consider pre-medication with **Versed 1-2mg IVP or 2-5 mg IM**, in pt. with BP>100 **EMT-P**. Contact OLMC for repeat dose.
 - **Transcutaneous pacing** per protocol **EMT-P**

Tachycardia, Stable vs. Unstable

- Treatment:
- **Unstable**: CP, SOB, decreased LOC, hypotension, CHF, AMI, pulmonary edema
 - Consider pre - medication with **Versed 2-5mg IV/IO or IM** in alert pt. with BP >100 **EMT-P**. [Contact OLMC for repeat dose.](#)
 - **Synchronized** cardioversion @ 100 joules (see protocol) **EMT-P**
- **Stable**:
 - Identify type of tachycardia and go to appropriate protocol:
 - » Rapid A-fib or A-flutter
 - » Stable narrow complex tachycardia (>150)
 - » Stable V-tach or Stable wide tach, unknown type

Rapid Atrial Fibrillation or Atrial Flutter

- **Treatment:**
 - IV *EMT-I, P*, O2 *EMT-B, I, P*, monitor *EMT-I, P*
 - Attempt Valsalva maneuver (have pt. bear down)
 - DO NOT administer Adenosine or Lidocaine
 - Administer **Diltiazem 20-25mg** IV bolus over 2 minutes (if BP 90 or higher systolic). **May repeat after 15 minutes at 20-25 mg. EMT- P**
 - Consider cardioversion @ 100 joules if pt is unstable **EMT- P** (See protocol)



Stable Narrow Complex Tachycardia (>150 bpm)

- **Treatment:**

- Attempt Valsalva maneuver (have pt. bear down)
- If known SVT, **Adenosine 12mg, peds 0.1-0.2 mg/kg up to 6mg rapid IVP/IO**, via large bore in proximal site, followed by saline flush, (may repeat PRN, 1 minute after initial dose at 12mg) **EMT-P**
- Consider synchronized cardioversion @ 100 joules if pt. is unstable **EMT-P** (see protocol)

Stable Ventricular Tachycardia or Stable wide complex tachycardia of unknown type

- **Treatment:**
 - Consult with OLMC prior to drug administration if pt is stable
 - Consider **Lidocaine 1.0-1.5 mg/kg IV/IO** (may repeat for adults @ 0.5-0.75 mg/kg q 5min to max total dose of 3mg/kg) **EMT-P**
 - Follow with **Lidocaine drip at 2-4mg/min** **EMT-P**
 - Consider **Magnesium Sulfate 2.5 grams IVP** for prolonged Q-T syndrome **EMT-P**
 - Consider synchronized cardioversion @ 100 joules if pt. becomes unstable see Synchronized cardioversion protocol **EMT-P**

(ST elevation myocardial infarction)

STEMI

“CATH ALERT”

- Consult OLMC @ LCH ASAP

SUBJECTIVE:

- Heart equivalent chest discomfort of ≤ 12 hours duration **OR**
- Ventricular fibrillation or ventricular tachycardia converted to stable vital signs
- **AND** Age 85 years or less.

OBJECTIVE:

- Defibrillator 12 lead ECG without LBBB and meeting one of these 2 criteria:
- ST elevation, beginning at the J point:
 - ≥ 1 mm in
 - 2 contiguous lateral leads (I, aVL, V4, V5, & V6)

OR

- 2 contiguous inferior leads (II, III, & aVF)
- ≥ 2 mm ST elevation in two contiguous chest leads (V1, V2, & V3)

OR

- Automatic ECG interpretation of “ST Elevation Myocardial Infarction” or “Acute MI Suspected”

ASSESSMENT:

- rapid transport to a cardiac catheterization center for diagnosis and treatment.

TREATMENT:

- EMT - P:
- Notify GSRMC ED of “Cath Alert” and give estimated time of arrival, patient's name, birthdate, and cardiologist, if any.
- Report criteria for “Cath Alert” (ST elevation in millimeters where on ECG)
- Rapid transport to GSRMC ED with direct admit to cath lab
- Leave a copy of the ECG with the ED or cath lab staff

Pediatric V-Fib/Pulseless V-Tach

- CPR and high-flow O₂
- Give 1 shock at 2J/kg **EMT-I,P**,(AED **EMT-B**)
- 5 cycles of CPR
- Give 1 shock at 4J/kg **EMT-I,P** (AED **EMT-B**)
- Resume CPR and give **1:10,000 Epinephrine 0.01mg/kg IV/IO q 3-5 minutes EMT-I,P**
- Give 1 shock at 4J/kg **EMT-I,P** (AED **EMT-B**)
- Resume CPR and consider **Lidocaine 1mg/kg IV/IO EMT-I,P**
- **Repeat above sequence for refractory V-Fib/V-Tach**
- Consider **Mag Sulfate 25-50mg/kg IV/IO** for Torsades **EMT-P**
- **During CPR: place and secure airway and IV/IO**
- **Check For and treat potential causes:**
 - Hypovolemia
 - Hypoxia
 - Hydrogen ion acidosis
 - Hypo-/hyperkalemia
 - Hypoglycemia
 - Hypothermia
 - Toxins
 - Tamponade-cardiac
 - Tension pneumothorax
 - Thrombosis: coronary or pulmonary
 - Trauma

Pediatric Asystole/PEA

- Resume CPR immediately
- Give **1:10,000 Epinephrine 0.01mg/kg IV/IO q 3-5 minutes EMT-I,P**
- Check for shockable rhythm
 - **During CPR: place and secure airway and IV/IO**
 - **Check For and treat potential causes:**
 - Hypovolemia
 - Hypoxia
 - Hydrogen ion acidosis
 - Hypo-/hyperkalemia
 - Hypoglycemia
 - Hypothermia
 - Toxins
 - Tamponade-cardiac
 - Tension pneumothorax
 - Thrombosis: coronary or pulmonary
 - Trauma

Pediatric Unstable Bradycardia

- High-flow O₂, support ABCs
- CPR (HR<60 with poor perfusion)
- **1:10,000 Epinephrine 0.01mg/kg IV/IO q 3-5 minutes EMT-I,P**
- Primary AV block or increased vagal tone, **Atropine 0.02mg/kg IV/IO** may repeat (min. dose 0.1mg, max **total** dose 1mg) **EMT-I,P**
- Consider Transcutaneous Pacing **EMT-P** (go to TCP protocol)

Pediatric Tachycardia

- Sinus Tachycardia
 - Search for and treat causes
- Narrow Complex
 - Consider vagal maneuvers
 - Consider Adenosine 0.1mg/kg (max of 6mg) IV/IO may repeat once at double the initial dose **EMT-P**
 - Synchronized Cardioversion at 0.5-1J/kg, increase to 2J/kg PRN **EMT-P**, consider sedation with Midazolam 0.1mg/kg IV/IO, IN **EMT-P**
- Wide Complex
 - Synchronized Cardioversion at 0.5-1J/kg, increase to 2J/kg PRN **EMT-P** consider Midazolam 0.1mg/kg IV/IO, IN (do not delay cardioversion) **EMT-P**
 - May attempt Adenosine 0.1mg/kg (max of 6mg) IV/IO (if it does not delay cardioversion) **EMT-P**

Altered Mental Status and Psychiatric Disorders

- Consider need for assistance from police
- Treatment:
 - If blood sugar <60mg/dl
 - D50 25gm, peds 0.5mg/kg slow(for infants use D25)IV/IO EMT-I,P OR
 - Glucose 15-45 grams PO EMT-B,I,P OR
 - Glucagon (PRN) 0.5-1mg, peds 0.1mg/kg SQ or IM EMT-I, P
 - Consider, with anti-hypoglycemics
 - Thiamine 100mg, peds 10-25 mg slow IV/IO EMT-P
 - Consider OD:
 - Naloxone 0.4-2.0mg, peds 0.01mg/kg any route, may repeat to max of 10mg, titrate to effect EMT-I, P
 - Restrain PRN in lateral recumbent position
 - Consider chemical restraint PRN:
 - Droperidol 2.5-5mg IVP,IM EMT-P OR
 - Midazolam 2-5mg, peds 0.1mg/kg up to 2mg slow IVP, IM, IN [Contact OLMC for more](#) EMT-P

Anaphylaxis

- **Treatment:**
 - Administer **Epinephrine 1:1,000 0.3-0.5mg IM** (adult)
 - **PEDS 0.01mg/kg IM q 15-20 min. PRN up to 3 times**
EMT-B, I, P
 - Administer **Diphenhydramine 25-50mg IV or 50mg IM** (preferred) **EMT-P**
 - If pt still unstable:
 - Administer **Epinephrine 1:10,000 0.3-0.5mg IVP** **EMT-P**
 - IV fluids, up to 2 liters A.S.A.P **EMT-I, P**
 - If pt continues to have respiratory distress, **125mg Solu-Medrol slow IV over 1-2 minutes. CONTRAINDICATED FOR PEDS** **EMT-P**
 - Remove injection mechanism if still present

Eclampsia/Pre-eclampsia

- **Eclampsia:**

- Seizures secondary to PIH (pregnancy induced HTN)
- Treatment: [OLMC](#) order required.
Magnesium Sulfate 2.5 grams slow IV push, repeat x 1 PRN (at rate of 1gm/min). **EMT-P**

- **Pre-eclampsia:**

- pregnancy induced hypertension that may lead to seizures (BP 140/90 or higher)
- Treatment: [OLMC](#) order required.
Magnesium Sulfate 2.5 grams slow IV push, repeat x 1 PRN (at rate of 1gm/min). **EMT-P**

Poisoning and Overdose

Contact Poison Control: 1-800-222-1222

- **Poisonings:**
 - Consider personal safety
 - Remove contaminated clothing and remove contaminate from skin
 - O2 as indicated **EMT-B, I, P**
 - Flush contaminated skin and eyes with copious amounts of water PRN
 - **Organophosphates:** If pt. is critical, **Atropine 2-5mg slow IVP q 15-30 min** ([Contact OLMC](#)) **EMT-P**
 - **Lime:** brush off dry lime well before flushing with water
 - **See medication protocols for pediatric dosages**
- **Overdoses:**
 - **Narcotic or Opiate OD**, if pt. Has decreased LOC, **Naloxone 0.4-2mg slow IV, IM, SL, SQ titrated** (max 10mg) **EMT-I, P**
 - **Tricyclic anti-depressant OD**, monitor EKG; if progressive QRS widening, **Sodium Bicarb 1mEq/kg slow IVP** ([Contact OLMC](#)) **EMT-P**
 - **Other OD's** with normal LOC, consider **Activated Charcoal, 25 gm PO** **EMT-P** ([Contact OLMC](#))

Seizures

- **Status Epilepticus:** 2 or more seizures without regaining consc., or > 2 min.
- **Treatment:**
 - **Status:** **Versed 2-5mg IV, IO, IN or 5-10 mg IM** Contact OLMC for repeat doses **EMT-P**
 - **Versed pediatric dose: 0.1mg/kg IV/IN.** Contact OLMC for repeat doses **EMT-P**
 - Airway Management
 - Consider and treat possible causes

Pain Management

- **Indications:**
 - Isolated extremity fracture, or soft-tissue injury, abdominal pain, back pain
 - Pt. must have systolic BP of at least 100mmHg
- **Treatment:**
 - Elevate simple fractures/ dislocations EMT-B,I,P and consider pain control
 - **Morphine 2-5mg IV/IO or IM, max of 20mg. EMT-P [Contact OLMC for additional dosing.](#)**
 - **Fentanyl 1mcg/kg IV/IO or IM, max of 200mcg. EMT-P [Contact OLMC for additional dosing.](#)**
 - Consider **Zofran PRN** for nausea/vomiting **4mg IV/IO or IM** (may repeat x1 after 10 minutes) *EMT-P*
 - **Peds:**
 - **Morphine 0.1-0.2mg/kg IV/IO, IM, SQ EMT-P [Contact OLMC for additional dosing.](#)**
 - **Fentanyl >2 yoa 2-3mcg/kg IV/IO, IM EMT-P [Contact OLMC for additional dosing.](#)**
 - **Zofran 0.1mg/kg over 2 minutes IVP/IM/IO**

Crush Injury

- **Treatment:** extensive area of involvement for > or = 1 hour
- **Prior to release of compression:**
 - Large bore IV(s) with fluid replacement PRN *EMT-I,P*
 - Cardiac monitoring
 - **Sodium Bicarbonate 1mEq/kg peds same dose IV/IO** *EMT-P*
 - Consider c-spine precautions *EMT-B,I,P*
- **After release of compression:**
 - Refer to Needle Decompression protocol for suspected tension pneumothorax *EMT-P*
 - **Consider repeat dose of Sodium Bicarbonate** if significant EKG findings **with OLMC order**
- **Penetrating Trauma:**
 - Impaled objects should be stabilized and left in place *EMT-B,I,P*
 - Open chest wounds should be covered with Vaseline-type occlusive dressing *EMT-B,I,P*

Shock

- **Hypovolemic Shock Treatment:**

- Control bleeding
- Elevate legs
- High-flow O₂, (BVM PRN) *EMT-B,I,P*
- Prevent Heat Loss
- Large Bore IV(s) *EMT-I,P*
- Consider MAST *EMT-B,I,P*
- Monitor Vitals *EMT-B,I,P* and EKG *EMT-I, P*

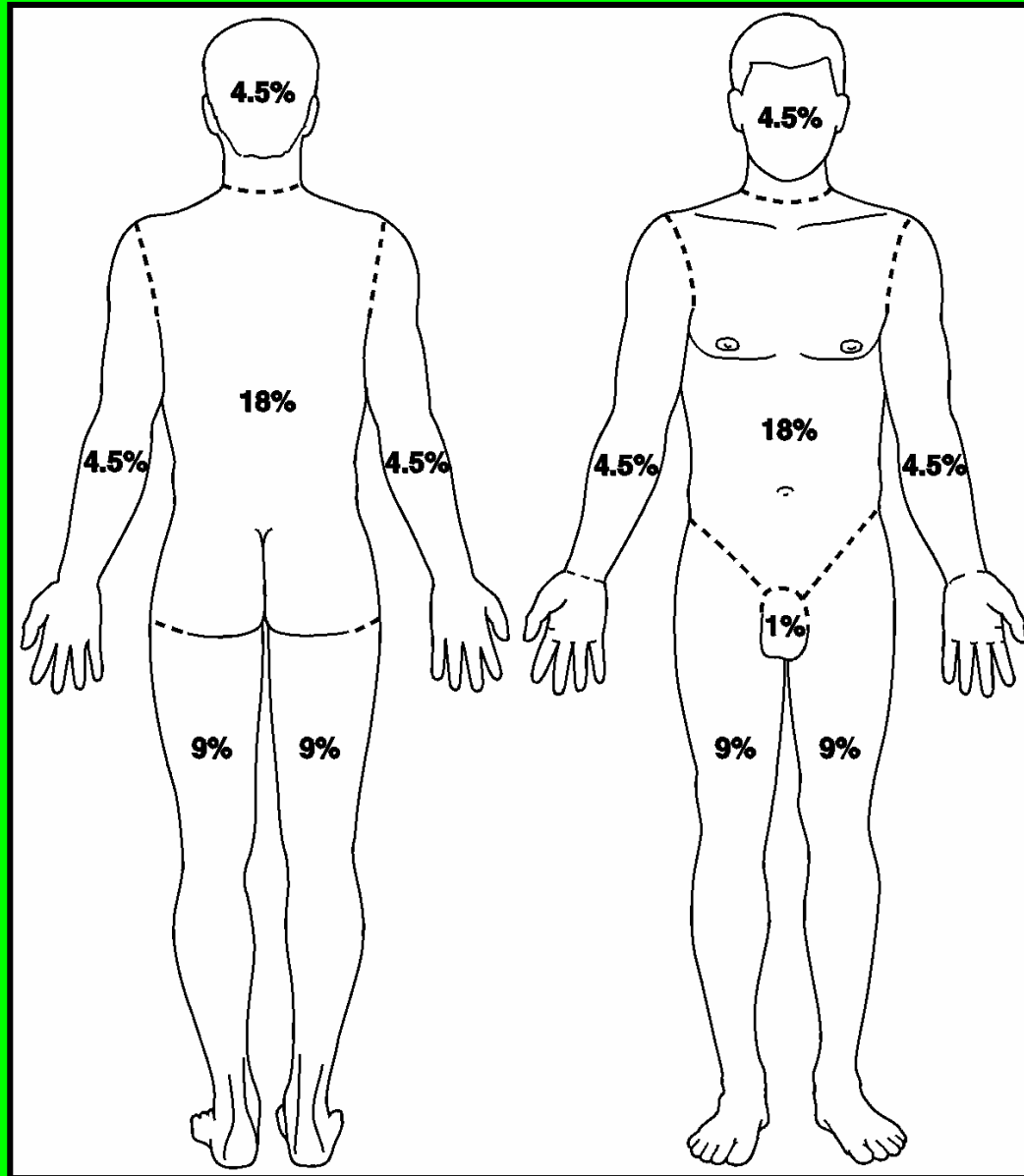
- **Non-Hypovolemic Shock Treatment:**

- High-flow O₂ *EMT-B,I,P*
- Monitor vitals *EMT-B,I,P* and EKG *EMT-I,P*
- Large bore IV(s) *EMT-I,P*
- Consider fluid challenge *EMT-I,P*
- Cardioversion may be necessary *EMT-P*
- Consider Tension Pneumo as cause
- Monitor LOC

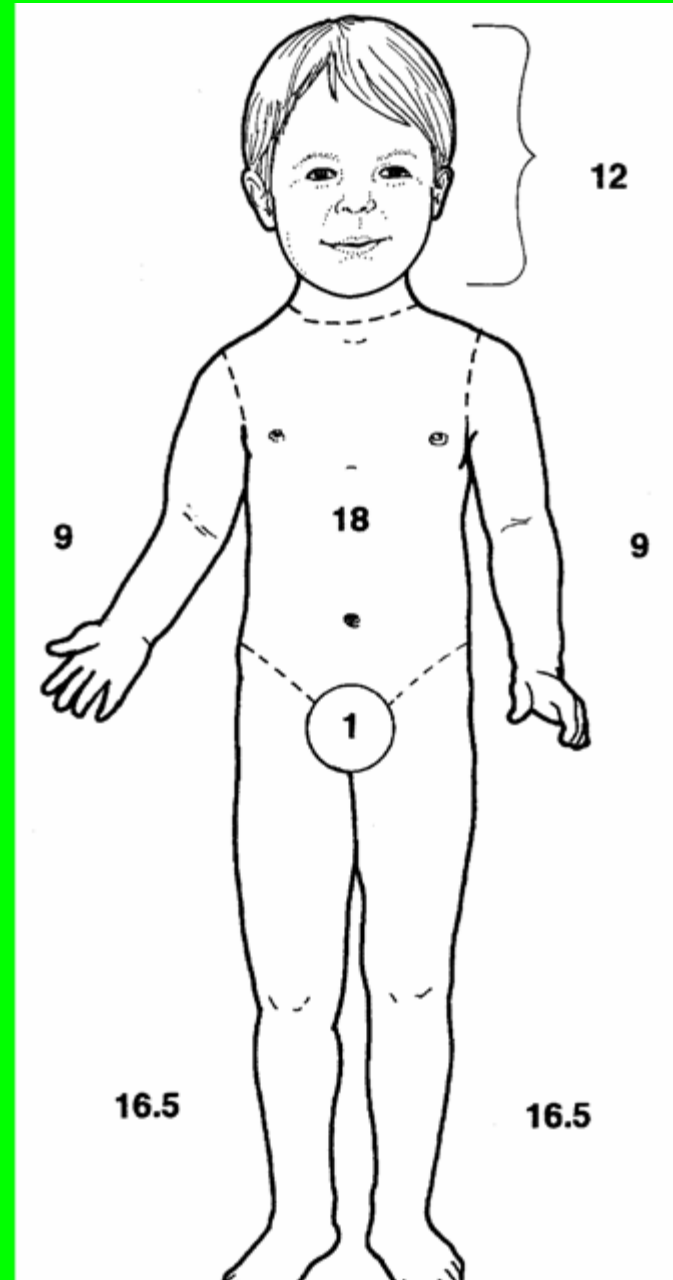
Burns

- **Treatment:**
 - Remove non-adherent clothing and all constricting items
 - High-flow O2 **EMT-B,I,P**
 - Monitor vitals **EMT-B,I,P** and EKG **EMT-I,P**
 - IV fluids per shock protocol for electrical burns **EMT-I,P**
 - Dress burns with dry, sterile dressings or burn sheet
 - Consider Morphine 2-5mg IV, repeat to max 20mg, **OR**
 - Fentanyl 1mcg/kg max of 200mcg. Call OLMC for additional dosing. **EMT-P**
 - Peds: Morphine 0.1-0.2 mg/kg **OR**
 - (>2yoa) Fentanyl 2-3mcg/kg IV/IO or IM Call OLMC for additional dosing. **EMT-P**
- **Special Considerations:**
 - Use the rule of nines to determine % of burn
 - Do not cool pt. With >20% 2nd and 3rd degree burns
 - Pt. with <20% may cool with wet dressings and air movement
 - For Chemical burns, flush contaminated area with copious amounts of water
 - Contact OLMC for transport destination

Adult Rule of Nines



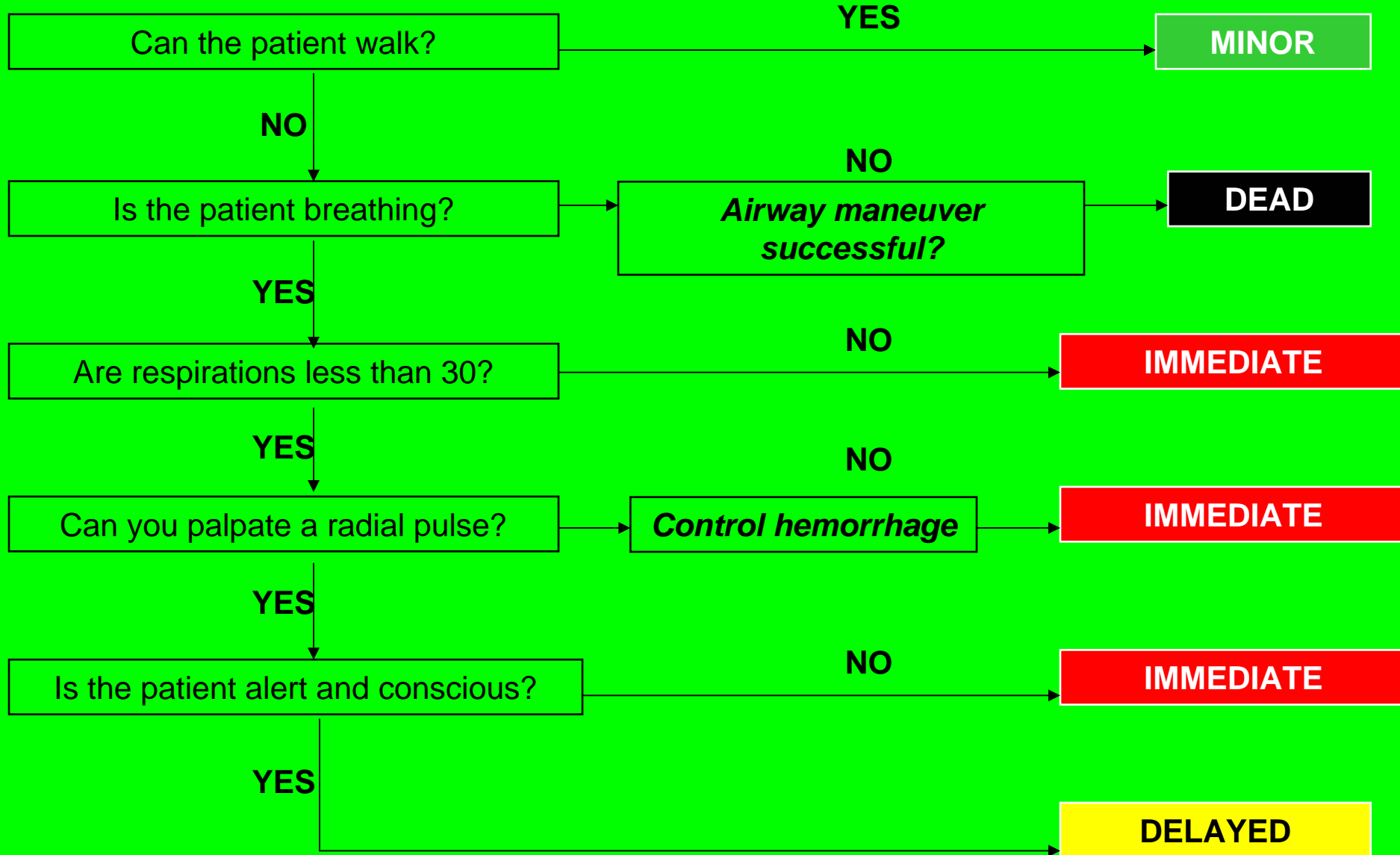
Pediatric Rule of Nines



Environmental Emergencies

- **Hyperthermia:**
- Physical Findings
 - Skin hot, but dry
 - Suspect hyperthermia in pt. with acute psychosis or seizures on a hot day
 - If heat cramps or heat exhaustion are present attempt to cool pt. to prevent hyperthermia
- Treatment
 - Cool with wet sheets (only if good ambient air flow) and apply cold packs to axillary and femoral areas
 - IV titrate to pt condition **EMT-I, P**
- **Hypothermia:**
- **Mild; Core temp. >90° F:**
 - Place pt. in warm environment and remove wet clothes
 - Passive rewarming: apply hot packs to inguinal areas, sides of chest, head and neck
- **Profound; Core temp. <90° F**
 - Maintain airway, high flow O2, heated if poss.
 - Prevent further heat loss
 - CPR PRN **EMT-B, I, P**, attempt defib twice **EMT-P**, start IV, 300cc NS **EMT-I, P**
 - Use caution with cardiac drugs, **do not treat bradycardia.**

START Triage



Consent for Treatment

- Consent may be verbal, but must be confirmed by signature on consent form.
- A conscious adult pt who is alert and rational, may refuse treatment.
- If a conscious adult pt who is irrational or may harm him/herself refuses treatment, [contact OLMC](#) and police if necessary.
- Consent or refusal of pt care for a minor (child <18 yoa) or the mentally incapacitated pt should be obtained from the parent or legal guardian in any emergency not requiring immediate actions for the preservation of life or limb. If contact can not be made with guardian, pt should be transported or left in the care of another agency, who will take responsibility of pt.
- If pt's family, physician, or caregiver refuses treatment for pt, they are responsible and must sign refusal form.
- [When in doubt, contact OLMC.](#)

Determining Death in Medical Cardiac Arrest *EMT-P*

- Consider Withholding Resuscitative Efforts protocol
- If efforts commenced, a victim of a medical cardiac arrest should not be determined to be dead on scene, unless the pt is unresponsive to the initial round of ACLS resuscitative measures.
- OLMC order required for termination of resuscitative efforts.

Withholding Resuscitative Efforts

EMT-B,I,P

- **Determining death in the field without initiating resuscitative efforts should be considered when:**
 - **Asystole with down time of greater than 10 minutes without CPR**
 - **Pt has DNR orders, and they have been produced**
 - **Pt is pulseless and apneic in an MCI**
 - **Pt has been decapitated**
 - **Pt has rigor mortis in a warm environment**
 - **When pt is asystolic and has tympanic temp of < 85 degrees in a warm environment**
 - **Pt has signs of decomposition**
 - **Pt has venous pooling in dependent body parts (dependent lividity)**
 - **Pt is victim of blunt or penetrating trauma and has no initial vital signs after opening airway**

Helicopter Transport

- **When to use a helicopter:**
 - Any time the transport, of a seriously injured pt, to the most appropriate receiving hospital would be more rapid by helicopter than by ground ambulance
 - when, [after consulting OLMC](#), it is determined that transport of a seriously ill medical pt would be more advantageous by helicopter than by ground ambulance
- **Dispatch procedure:**
 - Helicopter ambulance services will be requested through dispatch
 - Ambulance personnel may cancel helicopter if upon arrival on scene, it is determined that pt does not meet criteria

Medical Professionals on Scene

- Physicians at the scene may provide assistance to EMTs and shall be treated with professional courtesy
- Physicians offering assistance must identify themselves and provide proof of identity if they wish to assume or retain pt care after arrival of EMS unit
- M.D.'s and D.O.'s are the only medical professionals who may assume control of pt care. Other medical professionals may provide assistance to EMTs.
- If a physician chooses to assume or retain responsibility of pt care after arrival of EMS, they must accompany pt to receiving hospital and report to the physician at that facility. They must have all equipment and services of the EMS unit made available to them upon request.
- [If a conflict arises about pt care or treatment protocols, the paramedic should contact OLMC for assistance](#)

Interfacility Transfer Protocol

- In addition to the medications and procedures listed in these protocols, paramedics may monitor heparin and nitroglycerin (via venous or arterial lines) on an IV pump and blood products during interfacility transfers.
- Patients with Swan-ganz catheters, ICP probes, and Intra-Aorta Balloon pumps require a R.N. to accompany the patient during the transfer. Patients on mixed gas ventilators require a transport ventilator and a respiratory therapist.
- When patients are transferred with a R.N. on the ambulance he/she retains overall control and responsibility for the patient and will direct any patient care. When a patient is transported with a respiratory therapist, the paramedic will retain overall control and responsibility for the patient.
- The paramedic must be comfortable with the medications, equipment or any necessary procedures prior to accepting an interfacility transport. If drug administration is not covered by paramedic protocol, a copy of the physician orders (including parameters which would change rate of drug administration) shall accompany patient.

Activated Charcoal *EMT-B, I, P*

- **Indications:**
 - Effective in poisoning or overdoses of many substances
- **Contraindications:**
 - Significantly reduced LOC
 - Pt inability to protect airway
 - Pt with aspiration or impending aspiration
- **Administration:**
 - 25 gm PO, NG

Adenosine *EMT-P*

- **Indications:**
 - Supraventricular tachycardia
 - Narrow-complex tachycardia- undetermined rhythm
- **Contraindications:**
 - Second degree and third degree AV block
 - Sick Sinus Syndrome (known)
 - Atrial flutter, atrial fibrillation, v-fib and v-tach
 - Known hypersensitivity to Adenosine
- **Administration:**
 - **Adult:** 12mg rapid IVP, may repeat once after 1-2 minutes
 - **Peds:** 0.1-0.2mg/kg rapid IVP or IO up to 6mg, may repeat after 1-2 minutes at double the initial dose

Adenosine should be given via large bore in proximal site, follow with NS flush

Albuterol

- **Indications:**
 - Acute asthma attack
 - Respiratory distress secondary to COPD
- **Contraindications:**
 - Known hypersensitivity to adrenergic amines.
 - Tachydysrhythmias
- **Administration:**
 - **Adult:** 2.5mg in 3ml via nebulizer @ 6-10L/min may be repeated once **EMT-I,P**
 - **Peds:** 0.03ml/kg nebulized to a max of 1ml **EMT-I,P**
 - MDI 2 puffs, repeat PRN to max 20 puffs **EMT-I,P**
 - MDI assist with pt. prescription **EMT-B**
- **Discontinue if: pulse increases 20bpm, onset of frequent PVCs, onset of tachydysrhythmias**

Aspirin *EMT-B,I,P*

- **Indications:**
 - Unstable angina and AMI
 - Chest pain
 - Pulmonary edema
- **Contraindications:**
 - Known allergy or aspirin induced asthma
 - History of active bleeding disorder (including GI)
 - Current ulcer or GI bleeding
 - Possibility of aortic dissection
- **Administration:**
 - 4 chewable tablets PO (81mg x 4 = 324 mg)

Atropine Sulfate

- **Administration: Adult**

- **Bradycardia:** 0.5-1mg
IV/IO q 3-5 min
(maximum 0.04mg/kg)

- **Asystole/ PEA:** 1mg
IV/IO q 3-5 min.

- (maximum 0.04mg/kg)

- **Organophosphate**

- **poisoning:** 2-5mg IV/IO
q 15-30 min Consult

- OLMC for max

- **Administration: Peds**

- Cardiac: 0.02mg/kg IV/IO

- Organophosphate
poisoning: 0.05mg/kg
IV/IO

- Consult OLMC for max

- **Indications:**

- Symptomatic bradycardia
EMT-I,P

- Organophosphate or
nerve gas poisoning
EMT-P

- Asystole or bradycardic
PEA **EMT-I,P**

- **Contraindications:**

- Hypersensitivity

- Atrial fibrillation and atrial
flutter

Dextrose 50% *EMT-I,P*

- **Indications:**
 - Hypoglycemia
- **Contraindications:**
 - Suspected CNS bleeding
- **Administration:**
 - Adult: 25 gm slow IVP
 - Peds: 0.5 gm/kg slow IVP or IO
- **Note:** Use caution when administering, may cause severe tissue necrosis. Monitor IV site carefully for infiltration.

Diltiazem *EMT-P*

- **Indications:**
 - Used to treat rapid atrial fibrillation and rapid atrial flutter
- **Contraindications:**
 - Second and third degree heart block
 - WPW (Wolfe- Parkinson- White)
 - Severe hypotension
 - Known hypersensitivity
- **Administration:**
 - Initial IV bolus of 20-25 mg over 2 minutes, **may repeat after 15 minutes with OLMC order**
 - Expect transient PVCs after conversion, consider benign

Diphenhydramine HCL *EMT-P*

- **Indications:**

- Used as an adjunct to epinephrine in the treatment of severe allergic reactions and anaphylactic shock
- Acute dystonic reactions to antipsychotic and antiemetic drugs

- **Contraindications:**

- Acute asthma attacks

- **Administration:**

- 25-50mg slow IV/IO or 50mg deep IM

Droperidol *EMT-P*

- **Indications:**
 - Chemical restraint of combative pt.
 - Sedation of head injury pt. for immobilization
- **Contraindications**
 - Known long Q-T syndrome
- **Administration:**
 - Adult: 2.5- 5 mg IV, IO, or IM [Consult OLMC for repeat doses](#)
- **Note:**
 - May cause acute dystonic reaction, see Diphenhydramine
 - Pt. rhythm should be monitored closely with cardiac monitor

Epinephrine

- **Administration: Adult**
 - Cardiac arrest: 1mg of 1:10,000 IVP q 3-5 minutes
 - Anaphylaxis or severe asthma: 0.3-0.5mg SQ, IM, SL injection of 1:1,000, **OR** 0.3-0.5mg 1:10,000 IV/IO
- **Administration Peds:**
 - Cardiac Arrest: 0.01mg/kg of 1:10,000 IV/IO
 - Anaphylaxis or severe asthma: 0.01mg/kg of 1:1,000 SQ, IM, SL injection
- **Indications:**
 - Cardiac arrest **EMT-I,P**
 - Anaphylaxis **EMT-B,I,P**
 - Asthma (caution with cardiac hx) **EMT-I,P**
- **Contraindications:**
 - None for pt. In cardiac arrest
 - Hypersensitivity
 - Hypertension
 - Severe Cardiovascular disease
 - Tachydysrhythmias

Fentanyl *EMT-P*

- **Indications:**
 - For pain management
- **Contraindications:**
 - Use of MAOI in last 2 weeks (see list below)
 - Myasthenia Gravis
 - Respiratory compromise
 - Head injury/ altered level of consciousness
- **Administration:**
 - Chest pain/ ACS: 25-50 mcg
 - Pain management: 1mcg/kg IVP or IM, maximum of 200 mcg

Glucagon *EMT-P*

- **Indications:**

- Hypoglycemia when it is impossible to administer oral glucose or IV dextrose
- If suspected beta-blocker OD, consult OLMC.

- **Note:**

- It is of little or no help in pt. with hepatic dysfunction or adrenal insufficiency

- **Administration:**

- Adult: 0.5-1mg IM or SQ
- Peds: 0.1mg/kg IM or SQ

Lidocaine

- **Indications:**

- Sustained ventricular ectopy (runs of 3 or more pvc's in a row) **EMT-P**
- Stable or pulseless V-tach and recurrent V- fib **EMT-I,P**
- Following successful defibrillation **EMT-P**

- **Contraindications:**

- Hypersensitivity
- Second or Third degree AV block

- **Pediatrics:**

- Dose: 1mg/kg IVP

- **Administration:**

- 1-1.5 mg/kg IV/IO loading dose, repeat doses may be given at half the loading dose, except in cardiac arrest when they should be 1-1.5mg/kg (max of 3mg/kg)
- Doses should be halved if CHF, hypotension, hepatic dysfunction, or >70 years old
- An infusion should be initiated, PRN, at 2-4mg/min immediately after bolus

Magnesium Sulfate 50% *EMT-P*

- **Indications:**

- 1st line antiarrhythmic in suspected Torsades de Pointes
- Eclampsia/ pre-eclampsia

- **Administration:**

- Torsades: 1-2 gm IV/IO
- Eclampsia/ pre-eclampsia: 2.5 gm slow IV/IO (at rate of 1gm/min) OLMC order required
- Maintenance drip OLMC order required

Methylprednisolone *EMT-P*

- **Indications:**
 - Mild to severe Asthma/COPD
 - Anaphylaxis after epinephrine therapy
- **Contraindications:**
 - Known hypersensitivity to corticosteroids
- **Administration:**
 - Adult: 125 mg slow IVP over 1-2 minutes
 - Peds: do not use

Midazolam *EMT-P*

- **Indications:**

- Status epilepticus (2 consecutive seizures without regaining consciousness, or seizure lasting longer than 2 min)
- Chemical restraint for AMS or combative pt
- Sedation for cardioversion or transcutaneous pacing
- Post-intubation sedation

- **Contraindications:**

- Acute narrow-angle glaucoma
- Shock

- **Administration:**

- Adult: 2-5mg IV, IO, IM (over 1-2 min), or IN(5mg/ml concentrate)
- Post-intubation: up to 10 mg IV
- Peds: 0.1mg/kg up to 2mg slow IV/IO, IN, or IM

Morphine Sulfate *EMT-I, P*

- **Indications:**

- Severe chest pain suspected to be cardiac, unresponsive to NTG
- Pulmonary edema
- Traumatic injury
- Pain management

- **Contraindications:**

- Hypersensitivity
- Hypotension

- **Administration:**

- 2-5mg slow IVP q 5-30 min titrate to effect, max of 20mg before contacting OLMC

- **Note:**

- Maintain BP at or above 90 systolic, and respiratory rate at or above 12/min
- Consider 12.5 mg Phenergan if MS causes nausea/vomiting

Naloxone *EMT-I,P*

- **Indications:**
 - Opiate/ narcotic overdose
 - Diagnostic for coma of unknown etiology
- **Contraindications:**
 - Hypersensitivity
- **Administration:**
 - Adult: 0.4-2mg IV,IO, IM, IN, SQ, SL injection, may repeat q 3-5min to max of 10mg
 - Peds: 0.01mg/kg IV, ET, IO, IM, SQ, SL injection

Nitroglycerin

- **Indications:**

- Angina **EMT-I,P**
- Chest pain suspected to be cardiac-related **EMT-I,P**
- Pulmonary edema **EMT-P**
- Assist with pt. prescription NTG **EMT-B**

- **Contraindications:**

- Viagra or Levitra use within last 24 hours, Cialis use in last 48 hours
- Hypersensitivity
- Systolic BP < 90

- **Administration:**

- Cardiac: 0.4mg (1 spray) SL, if initial systolic BP > 100, repeat PRN q 5 minutes if systolic > 90
- Pulmonary Edema: 0.4 mg (1 spray) SL, if initial systolic BP > 140, repeat PRN q 5 min up to three times

- **BP must be taken before and after every dose**

Ondansetron *EMT-P*

- **Indications:**
 - Prevention and control of nausea and vomiting
- **Contraindications:**
 - Hypersensitivity
 - Recent administration of apomorphine (a rarely used Parkinson's med which may cause hypotension)
- **Administration:**
 - 4mg IV/IO or IM (may repeat x1 in 10 minutes)
EMT-P
 - Peds 0.1mg/kg over 2 minutes IVP/IM/IO *EMT-P*

Oral Glucose *EMT-B,I,P*

- **Indications:**
 - Hypoglycemia
- **Contraindications:**
 - Significantly reduced LOC
 - Pt inability to protect airway
- **Administration:**
 - 1 tube PO

Oxygen *EMT-B,I,P*

- **Dose: Low Flow (1-2 L/min via nasal cannula)**
 - Indications: Low priority supplement (mild COPD, nausea, etc.)
- **Dose: Moderate Flow (4-6L/min via nasal cannula)**
 - Indications: Moderate priority supplement (trauma, mild chest pain, dizziness, etc.)
- **Dose: High Flow (10-15L/min via NRB or BVM)**
 - Indications: High priority supplement (severe respiratory distress, respiratory arrest, severe chest pain, etc.)

Sodium Bicarbonate *EMT-P*

- **Indications:**

- To correct acidosis in prolonged cardiac arrest for renal failure pts w/ possible hyperkalemia
- To control dysrhythmias found in Tricyclic Antidepressant overdose
- Crush injuries with suspected Compartment syndrome

- **Contraindications:**

- As an antidote following ingestion of strong mineral acids

- **Administration:**

- Cardiac arrest: 1mEq/kg IVP, repeat at 0.5mEq/kg IVP q 10 min. (dilute 1:1 for peds, dose is the same)
- **Tricyclic overdose: Contact OLMC for orders**

Thiamine HCL *EMT-P*

- **Indications:**

- In suspected alcoholics or chronically malnourished, give Thiamine when administering Dextrose
- Altered level of consciousness

- **Administration:**

- Adult: 100mg slow IVP or IM if necessary
- Peds: 10-25mg slow IVP, or IM if necessary

Airway Adjuncts

- **OPA (oropharyngeal airway): *EMT-B,I,P***
 - To be used to protect airway in unconscious pt, while waiting for intubation.
 - Measure from earlobe to corner of mouth, rotate while placing in oropharynx.
- **NPA (nasopharyngeal airway): *EMT-B,I,P***
 - To be used to protect airway while awaiting intubation, or in pt who is unconscious, but is expected to regain consciousness, or in pt. With intact gag reflex (ie. postictal after sz, hypoglycemic pt, etc.)
 - Measure from earlobe to nostril, lubricate before placement, use larger nostril, bevel towards septum.
- **ETT (endotracheal tube): *EMT-P***
 - To be used as a definitive airway for unconscious pt, apneic pt, or pt who is otherwise unable to protect their airway.
 - Using laryngoscope, open pt airway and displace tongue, using stylet PRN, place tube through vocal cords, inflate cuff, ventilate, and confirm placement. Consider nasal intubation PRN for conscious pt., blind procedure.

Airway Adjunct – King Airway

- **Indications:**
 - To be used to protect airway in pt who cannot protect their own, only in cases where intubation cannot be accomplished.
- **Contraindications:**
 - Pt with an intact gag reflex
 - Pt with known esophageal disease
 - Pt who has ingested caustic substances
- **Do not deflate in field**
- **Procedure: *EMT-I,P,and B with approved training***
 - Preoxygenate with BVM and O2 while checking both cuffs for leaks.
 - Lifting tongue and jaw, insert King to the base of the tongue
 - Without excessive force, advance tube until base of connector is aligned with teeth
 - Inflate the cuffs using line on syringe for a guide for the appropriate airway size
 - Attach BVM to tube and confirm placement, simultaneously withdraw tube until ventilation is easy and free flowing
 - NG tube may be placed through lumen using lubricant

Automated External Defibrillator

EMT-B,I,P and anyone with AED card or HCP CPR card

- **Indications:**
 - Pulseless, apneic pt, only when ALS personnel and/or equipment are unavailable
- **Procedure:**
 - ABCs, and CPR until defibrillator is attached
 - Defibrillate 360 joules
 - Check pulse and continue CPR, PRN
 - Assess after 1 minute, if no pulse, analyze and defibrillate 360 joules
 - Repeat as needed
 - If AED does not advise shock continue CPR PRN
 - If return of spontaneous pulse, assess vital signs, and ABCs, and continue supportive care

Chest Decompression *EMT-P*

- **Indication:**
 - For pt with suspected tension pneumothorax, who has severe respiratory distress, decreased breath sounds, decreased cardiac output/ poor perfusion/ cyanosis. Pt deteriorating or in cardiac arrest.
- **Procedure:**
 - Bare the chest completely
 - Identify the 2nd intercostal space, in the mid-clavicular line on the side of the pneumothorax.
 - Prep the area using betadine and/ or alcohol
 - Attach a 10 gauge over- the- needle catheter very snugly to a syringe (for peds, use 18 gauge)
 - Insert the needle into the skin and direct the needle just over the 3rd rib into the intercostal space.
 - Aspirate while advancing needle until you obtain free air (check for skin plug if no free air movement)
 - Advance catheter off needle, connect one-way valve to catheter
 - Secure catheter in place, intubate unless contraindicated
 - If continuous copious bleeding, remove catheter, apply pressure

Continuous Positive Airway Pressure (CPAP) *EMT-P*

- **Indications:**

- Acute pulmonary edema and/or pt in severe respiratory distress:
 - tachypnea, tachycardia, hypertension
 - SaO₂ <85% on NRB
 - Diffuse bilateral wet lung sounds
 - Obvious increase in work of breathing
 - May use in conjunction with: MS, and NTG

- **Contraindications:**

- Hypotension

- **Procedure:**

- Place mask on pt, turn CPAP adjustment knob until airway pressure gauge remains in green (0-10)
- For non-portable CPAP: place mask on pt., then, using the high pressure O₂ port, turn to 50-70 Lpm

Cricothyrotomy *EMT-P*

- **Indications:**
 - This technique is to be used only when other attempts to establish an airway have failed, and a complete respiratory obstruction exists. Such conditions are most likely to be found with:
 - **Foreign-body airway obstruction**
 - **Facial/ laryngeal trauma**
 - **Inhalation of toxic substances/ steam**
 - **Thermal burns**
 - **Angioneurotic edema**
 - **Upper airway hemorrhage**
 - **Severe epiglottitis/ croup**
- **For procedure, see next two pages**

Cricothyrotomy: Nu-Trake *EMT-P*

- Procedure:
 - Pt supine with neck mildly hyperextended, pad under shoulders
 - Locate the slight depression below notch of thyroid cartilage, this is the cricothyroid membrane
 - Prep the skin as for intravenous catheter placement
 - Incise the skin approx. 1-2cm with the scalpel
 - Insert the needle through the membrane at approx. the same angle as the lower housing, easy movement indicates placement in the trachea
 - Remove the stylet and syringe
 - Gently advance the blunt needle into the trachea until housing rests on the skin, a freely rocking motion confirms proper depth.
 - Insert the airway and obturator together into distal end of housing. Index and middle fingers grasp the housing below the stabilizers, with the thenar eminence resting against cap of obturator
 - PUSH the airway and obturator downward into the needle which will spread to accommodate them.
 - Remove the obturator.
 - If increase in airway size is required, remove airway leaving housing and needle guide in place, and insert larger airways until right size.
 - Secure by threading ties through brackets, ventilate PRN

DOA *EMT-B,I,P*

- **Procedure:**
 - Notify dispatch that pt is deceased, dispatch will notify appropriate law enforcement.
 - Evaluate if this appears to be a natural death, if any doubt exists avoid altering the scene until investigation complete.
 - Personnel may contact medical examiner, if death appears to be of natural causes, give pt: name, age, regular MD, PMH, medications pt is on, circumstances surrounding death, and confirm that police are enroute.
 - Consider contacting TIP or chaplain for family members.

EZ IO (Adult and Pediatric)

- **Indications:**
 - Physiologically unstable pt. (I.e., GCS<12; BP<90, etc) where IV access is not obtainable in a timely manner
- **Contraindications:**
 - Fracture of tibia or femur with vascular compromise
 - Hx of orthopedic procedure
 - Infection or excessive tissue at site
 - Inability to locate anatomical landmarks
- **Anatomical Landmarks:**
 - **Distal tibial site:**
 - Adult- two fingers above medial malleolus
 - Ped- one finger above medial malleolus
 - **Proximal tibial site:**
 - Adult- medial to tibial tuberosity
 - Ped- one finger below and medial to tibial tuberosity
- **Procedure:**
 - **Locate and clean insertion site**
 - **Prepare needle and driver (ensure seal is in place before needle casing is opened)**
 - **Stabilize leg near site and position driver with needle at 90 degree angle**
 - **Insert needle through skin to bone, verify 5mm mark can be seen, if not change needle or site, or abandon procedure**
 - **Apply light and steady pressure as drill is powered, pulling gentle traction on skin**
 - **Stop when flange touches skin or decrease in resistance is felt**
 - **Remove driver from needle, then remove stylet from catheter by unscrewing counter clockwise while stabilizing the hub**
 - **Attach the extension set and flush forcefully with at least 10cc of saline, infusion should then be initiated under moderate pressure**
 - **Bone marrow may be aspirated to confirm placement, NOT past 90 in extension set**
 - **If pt is conscious consider Lidocaine bolus 20mg over 15-20seconds before saline flush**

Intraosseous Access: Manual

EMT-I,P

- **Indications:**
 - Need for urgent vascular access in unconscious pt, under 6 years old, in whom IV access can not be obtained.
- **Procedure:**
 - Position pt so that site is stable and accessible
 - Palpate landmark carefully and note optimal entry point
 - **Proximal tibia (anteriomedial flat surface 1-3cm below tibial tuberosity)**
 - Prep site as for IV access
 - Fill syringe with flush
 - Insert IO needle through skin, periosteum, and cortex at a 45-60 degree angle directed distally towards pts feet. A boring or screwing motion is used until penetration into the marrow. After the needle “pops” into the marrow, remove obturator attach syringe and attempt to aspirate bone marrow
 - Flush, attach IV tubing, and secure

Intravenous Therapy *EMT-I,P*

- **Indications:**
 - For fluid replacement, or medication administration
- **Procedure:**
 - Check for allergy to Betadine/ Iodine
 - Apply constricting band proximal to insertion site
 - Clean site using Betadine and alcohol (if allergy to Betadine, just use alcohol)
 - Insert catheter through skin and into vein
 - When you get flash, advance the catheter off the needle, and remove needle while occluding catheter (if using a butterfly there is no catheter, so needle should be advanced and secured)
 - Connect tubing or plug and release constricting band
 - Confirm patency and adjust flow or flush
 - Secure IV and tubing

Pneumatic Antishock Garment (PASG, or MAST) *EMT-B,I,P*

- **Indications:**
 - Signs/ symptoms of shock with BP < 80-90mmHg
 - In multi-system trauma, may be used to stabilize pelvic and/or multiple lower extremity fractures
- **Contraindications:**
 - Pulmonary edema
 - Relative contraindication in pregnant pt, pt with impaled object in abdomen, evisceration, head injury, and abdominal section should not be inflated in children < 10 years old
- **Procedure:**
 - Check area that will be covered by PASG for sharp objects, any bleeding should be controlled with pressure dressings
 - Inflate legs prior to abdominal section
 - Stopping points: velcro pops, BP > 90
- **Never Deflate PASG In The Field**

Spinal Immobilization *EMT-B,I,P*

- **Indications:**

- Significant mechanism of injury
- Head injury that causes decreased LOC or loss of consciousness
- Injuries which suggest violent sudden movement
- Back or neck pain with or without movement
- Point tenderness
- Paralysis; numbness or tingling
- Deformity to, or guarding of, head, neck, or back
- Assessment of scene; ie. - shattered windshield

- **Procedure:**

- Meet immediate ABC needs without moving if possible
- Manual stabilization and apply c-collar
- Select appropriate immobilization device, the LBB must eventually be included, immobilize with straps and head bed

Synchronized Cardioversion

EMT-P

- **Indications:**
 - Unstable V-tach with a pulse
 - Tachycardia >150 and unstable, including: A-fib, A-flutter, SVT, narrow or wide complex tachycardia
- **Procedure:**
 - Consider sedation with Versed 2-5mg, peds 0.01mg/kg IV/IO,IN
 - Monitor rhythm through quick patches or 3 lead (if using paddles)
 - Push the synchronized button on the Life pack, and charge to 100 joules and shock, may repeat at 200, 300, and 360 peds 1J/kg
- **Note:**
 - It may be necessary to resynchronize between each shock
 - If shocking with paddles, you must apply 25lbs of pressure
 - Use caution in pt with chronic A-fib

Transcutaneous Pacing *EMT-P*

- **Indications:**
 - Symptomatic bradycardia refractory to Atropine, 2nd degree type 2 and 3rd degree AV block
- **Contraindications:**
 - Pt < 25kg
 - Pt with signs of penetrating or blunt trauma
- **Procedure:**
 - Apply adhesive pacing patches to clean, dry skin
 - Select pacing rate at 80 bpm
 - Activate pacemaker current at minimum and adjust current upward until electrical capture (usually evident from wide QRS and tall broad T wave) Mechanical capture evident from palpable pulse
 - Continue to assess pt
 - Conscious pt may require sedation with Versed 2-5mg, peds 0.1mg/kg IV/IO, IN