



Medical Directive

Directive Number	<u>18-01</u>
Publish Date	<u>27 February 2018</u>
Effective Date	<u>13 March 2018</u>
Subject	<u>Spring Updates including Ketamine IM dose change</u>
Update to Clinical Operating Guidelines v 03.08.17	

Credentialed System Responder	Action
Credentialed EMT	Action
Credentialed EMT-Intermediate	Action
Credentialed EMT-Paramedic	Action
Credentialed EMD	Information

Over the past several months we have collected Performance Improvement data that indicated a need to change our IM dosing for Ketamine. Also, we reviewed pending updates that have been deferred for a period of time. We have decided to release some of those pending updates at this time.

We are continuing to review and reformat the current COG document based upon initial physician, provider and responder feedback. Currently we anticipate additional rounds of review and discussions. We will establish a new version number for the COGs later this year; upon publishing the new document for System use.

Included with this Medical Directive you will find a table of the changes and updated COG pages for your reference and information. The updates contained in this Medical Directive become effective on **March 13, 2018 at 0700 hours**.

Thanks for all you do. Questions relating specifically to the COGs can be sent to cogs@austintexas.gov

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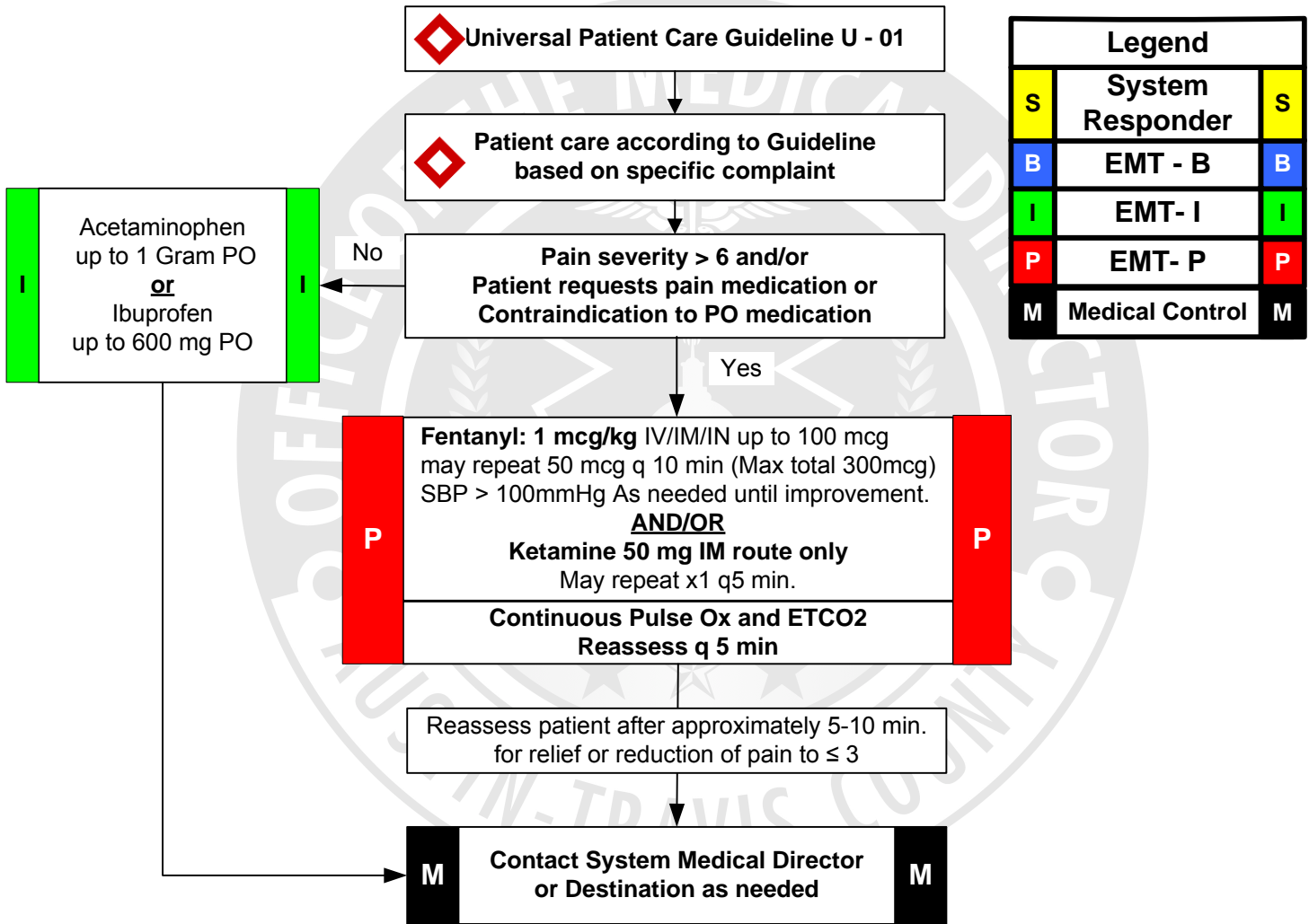


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Proposed COG Change	Affected Documents
Ketamine dose change for Pain & "IM route only" nomenclature	Guidelines M-16, T-02, Dosing Chart CR-35 & CR-37, Drug Formulary DF-34
Change O ₂ delivery from 100% to: BVM with "Air" add O ₂ if neonate CPR or neonate deteriorates	Guideline OB-03
Update Current System Organizations List	OMDR 19
Change contraindication language : "None in the setting of Cardiac Arrest"	Drug Formulary DF-08
Correct reversed CP reference numbers	Guideline R-01

Pain Management

History: <ul style="list-style-type: none"> • Age • Location • Duration • Severity (1-10) • Past Medical History • Medications • Drug allergies • Medications taken prior to arrival 	Signs and Symptoms: <ul style="list-style-type: none"> • Severity (pain scale) • Quality • Radiation • Relation to movement, respiration • Increased with palpation of area. 	Differential: <ul style="list-style-type: none"> • Per the specific protocol • Musculoskeletal • Visceral (abdominal) • Cardiac • Pleural / Respiratory • Neurogenic • Renal (colic)
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Pearls:

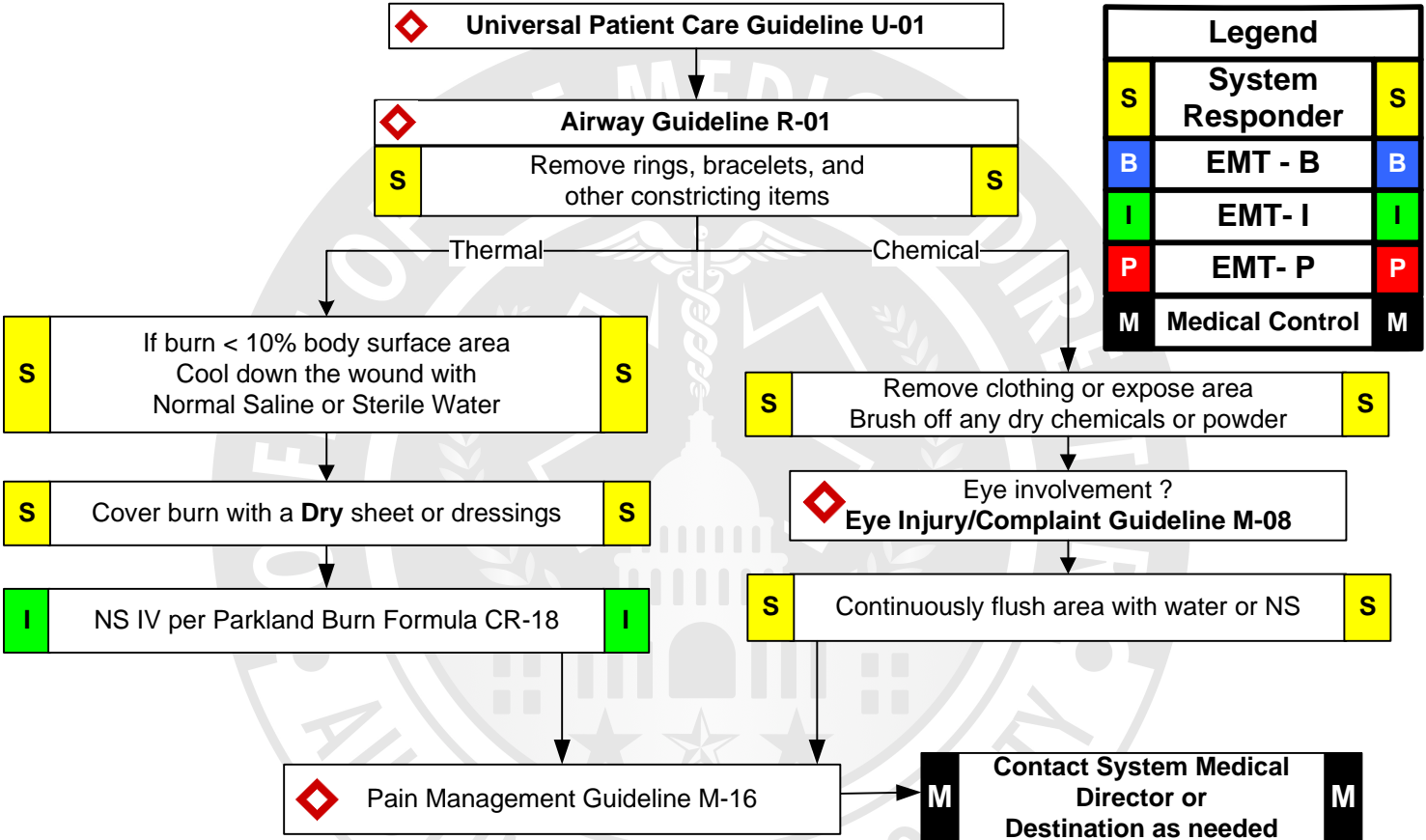
- Pain severity (0-10) is a vital sign to be recorded pre and post IV or IM medication delivery and at disposition.
- Vital signs should be obtained pre, 5 minutes post, and at disposition with all pain medications.
- Monitor patient closely for over sedation - refer to Overdose Guideline M-15 if needed.
- Head injury patients should not receive pain medication
- Do not administer Acetaminophen to patients with history of liver disease.

Severe Injuries:

- Traumatic Limb Amputation/near Amputation
- Angulated Limb/ Limb Joint Fracture/Dislocation
- De-gloving injury
- Severe abrasions ≥ 9% Body Surface Area (Refer to CR-32 for BSA calc.)

Burns

History: <ul style="list-style-type: none"> Type of exposure (heat, gas, chemical) Inhalation injury Time of Injury Past medical history and Medications Other trauma Loss of Consciousness Tetanus/Immunization status 	Signs & Symptoms: <ul style="list-style-type: none"> Burns, pain, swelling Dizziness Loss of consciousness Hypotension/shock Airway compromise/distress singed facial or nasal hair, hoarseness / wheezing 	Differential: <ul style="list-style-type: none"> Superficial (1°) red and painful Partial thickness (2°) blistering Full thickness (3°) painless and charred or leathery skin Chemical Thermal Electrical Radiation
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Pearls:

- Evaluate BSA : Use chart or use one side of patients hand = 1% BSA
- Critical Burns:**
 - >20% 2° and 3° body surface area (BSA) age > 10;
 - >10% BSA age < 10 or > 50;
 - 3° burns >5% BSA;
 - 2° and 3° burns to face, eyes, hands or feet or genitalia; electrical burns; respiratory burns; deep chemical burns;
 - Burns with extremes of age or chronic disease; and burns with associated major traumatic injury.
- Minor burns (< 5% BSA 2nd and 3rd) not complicated by airway compromise or trauma do not require transport to a trauma center.
- Potential CO exposure should be treated with 100% oxygen.
- Circumferential burns to extremities are dangerous due to potential vascular compromise 2° to soft tissue swelling.
- Burn patients are prone to hypothermia - Never apply ice or cool burns that involve >10% body surface area.
- Do not overlook the possibility of multiple system trauma or child abuse with burn injuries.
- 2nd or 3rd degree burn >10% BSA – Fluid therapy following Parkland Burn Formula.
- Parkland Formula = NS 2 mL/kg x % TBSA 2nd or 3rd burn over the first 8 hours.
- ETCO2 if multiple doses of Narcotic Medication administered

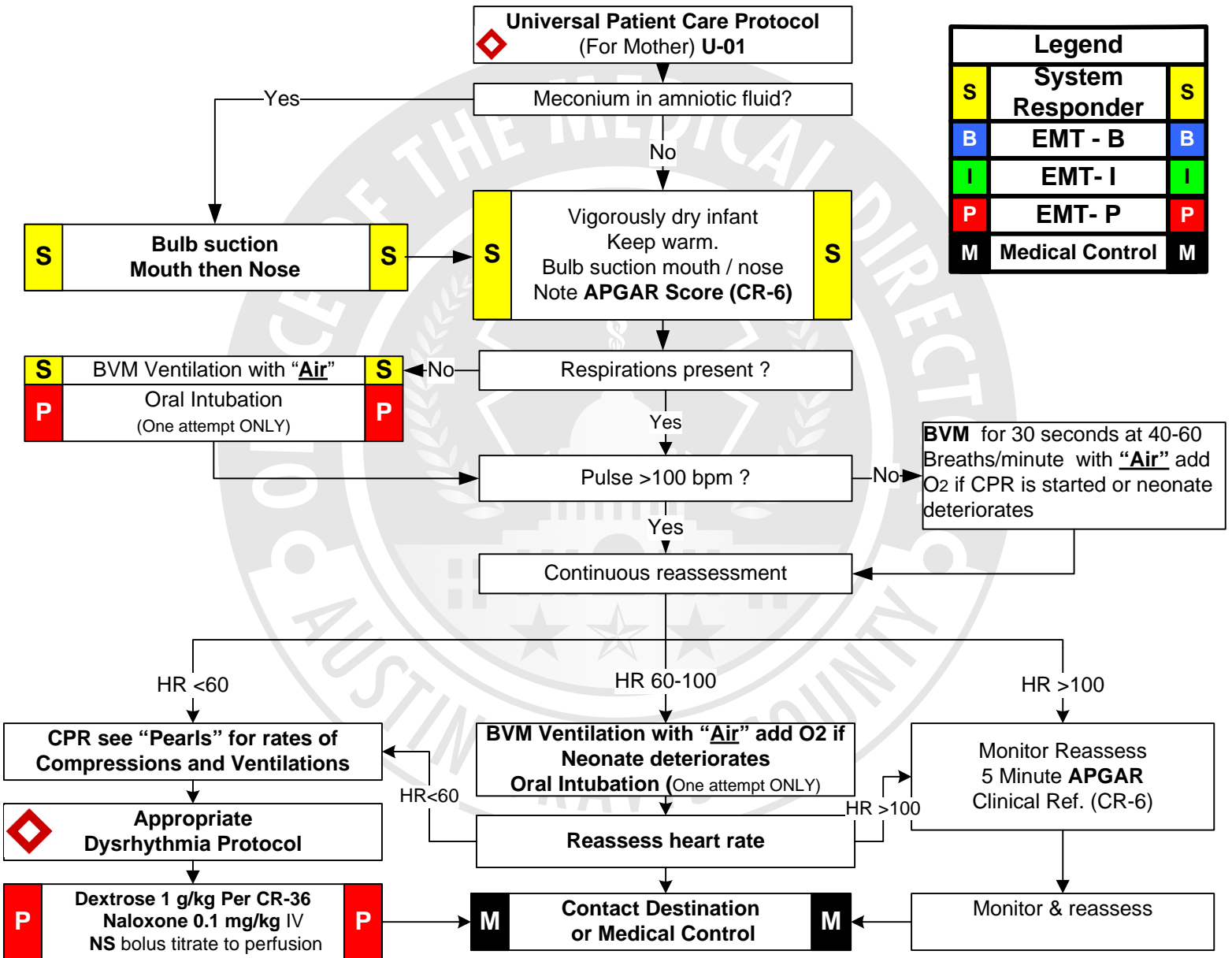


Ketamine

- Class** Ketamine hydrochloride is a rapid-acting general anesthetic.
- Action** The anesthetic state produced by ketamine hydrochloride has been termed "dissociative anesthesia" in that it appears to selectively interrupt association pathways of the brain before producing somesthetic sensory blockade. It may selectively depress the thalamoneocortical system before significantly obtunding the more ancient cerebral centers and pathways (reticular-activating and limbic systems).
- Pharmacokinetics** Intramuscular doses will take effect within 3 to 4 minutes following injection, with the anesthetic effect usually lasting 12 to 25 minutes.
- Contraindications** Ketamine hydrochloride is contraindicated in those in whom a significant elevation of blood pressure would constitute a serious hazard and in those who have shown hypersensitivity to the drug.
- Precaution** Laryngospasms and other forms of airway obstruction have occurred during ketamine hydrochloride anesthesia.
- Adverse effects** Respiratory depression may occur with over dosage or too rapid a rate of administration of ketamine hydrochloride, in which case supportive ventilation should be employed. Mechanical support of respiration is preferred.
- Indications** System indications are for use in Adult Guidelines for Burns, Pain and Excited Delirium
- Dosing (IM route only)** .. **Per Clinical Guidelines: M-07, M-16**
Clinical Reference: CR – 35 (Adult)

Newly Born

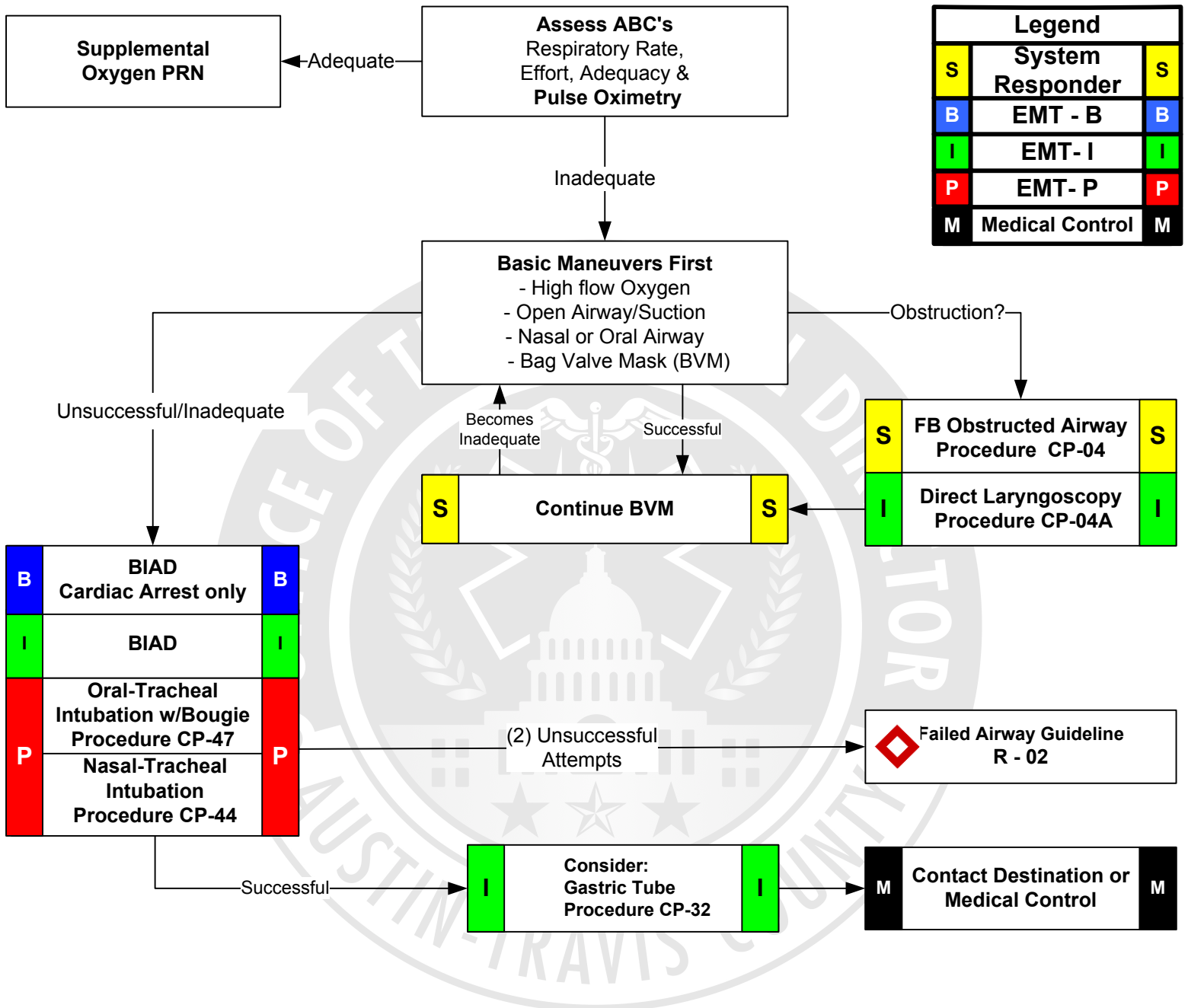
History: <ul style="list-style-type: none"> • Due date and gestational age • Multiple gestation (twins etc.) • Meconium • Delivery difficulties • Congenital disease • Medications (maternal) • Maternal risk factors <ul style="list-style-type: none"> - substance abuse - smoking 	Signs and Symptoms: <ul style="list-style-type: none"> • Respiratory distress • Peripheral cyanosis or mottling (normal) • Central cyanosis (abnormal) • Altered level of responsiveness • Bradycardia 	Differential: <ul style="list-style-type: none"> • Airway failure • Secretions • Respiratory drive • Infection • Maternal medication effect • Hypovolemia • Hypoglycemia • Congenital heart disease • Hypothermia
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Pearls:

- Non vigorous infant as evidenced by poor muscle tone, poor/absent respiration and heart rate < 100 bpm
- **If power suction is used, negative pressure must not exceed 100mmHg.**
- **CPR: Birth to 5 days 120 compressions with asynchronous ventilations at 30 per minute.**
- It is extremely important to keep infant warm
- Maternal sedation or narcotics will sedate infant (Naloxone effective but may precipitate seizures).
- Consider hypoglycemia in infant and administer **Dextrose with BGL < 50, use volume control device (IV Burette) for Infusion.**
- Document 1 and 5 minute Apgar in PCR. (Clinical Reference CR-06)

Airway



- Pearls:**
- This Guideline is only for use in patients ≥ 10 yrs old or ≥ 37 Kg or patients longer than the PEDIA Tape.
 - Capnometry (EtCO₂) and pulse oximetry is mandatory with all methods of intubations. Colorimetric(EZ Cap) may be used for initial CO₂ detection when continuous capnometry is not immediately available. Document Results.
 - If an airway is being maintained by BVM with Pulse Oximetry $\geq 90\%$ advanced airway is not required.
 - If difficult intubation is anticipated consider early use of BIAD, or assisted intubation with Bougie, Sellicks/BURP maneuver.
 - If intubation attempt fails CHANGE something: different blade, smaller tube size, or use adjunctive maneuver.
 - An intubation attempt is when the laryngoscope blade passes the plane of the teeth or the tube is inserted into the nares.
 - Ventilatory rate should be 10 - 12 per minute OR to maintain ET/CO₂ or 35-45 (when appropriate).
 - Maintain SMR in those patients with suspected spinal injury.
 - Hyperventilation in head trauma patients when herniation is suspected should be done to maintain ET/CO₂ of 30-35
 - For advanced airways secure airway.



Calcium Chloride

- Inotropic Agent (electrolyte)
- Action** Replaces elemental calcium, which is essential for regulating excitation threshold of nerves and muscles. Calcium is also essential for blood clotting mechanisms, maintenance of renal function, and bone tissues. Calcium increases myocardial contractile force and ventricular automaticity.
- Additionally serves as an antidote for magnesium sulfate and calcium channel blocker toxicity. Calcium chloride has three times as much elemental calcium than calcium gluconate.
- Pharmacokinetics** Onset and peak are immediate
- Contraindications** None in the setting of Cardiac Arrest
- Adverse effects** Arrhythmias including bradycardia or cardiac arrest, Syncope, N/V, Hypotension, Necrosis with extravasation. Calcium chloride will precipitate when used in conjunction with sodium bicarbonate, Toxicity with digitalis, and may antagonize the effects of calcium channel blockers.
- Indications** Calcium channel blocker toxicity/overdose, Acute hyperkalemia, Acute hypocalcemia, Acute hypermagnesemia
- Dosing** **Per Clinical Guidelines: C-02, CA-02, CA-03, CA-06, M-15**
- Clinical References: CR-36**



System Approved Medication Dosing List (Adult Medications)

1. Verify that the **CONCENTRATION** listed here is the drug concentration you currently have and are about to administer.
2. Estimate weight (weight in kg = weight in pounds/2.2), Determine dose volume for the approximate weight.
3. Use Medication Cross-Check Clinical Procedure CP-02

** In this chart, a "!" indicates a maximum or minimum dosage or volume that may not correlate to weight **

** This reference may include minimal "rounding" of doses and/or volumes for weight ranges and drug safety **

****Evaluation Medications or Medications not currently available on units****

Volume in mL to Administer by Approximate Weight at Given Concentration

DRUG CONCENTRATION CURRENTLY AVAILABLE	DRUG NAME	40kg (88lbs)	50kg (110lbs)	60kg (132lbs)	70kg (154lbs)	80kg (176lbs)	90kg (198lbs)	100kg (220lbs)	110kg (242lbs)	120kg (264lbs)	130 kg (286lbs)
50mcg/1ml (1mcg/kg)	Fentanyl 1 st dose	! 1mL Min. Dose	1mL	1.2mL	1.4mL	1.6mL	1.8mL	! 2mL	! 2mL	! 2mL	! 2mL
1mg/1ml	Vecuronium	4mL	5mL	6mL	7mL	8mL	9mL	! 10mL	! 10mL	! 10mL	! 10mL
5mg/1mL	Diltiazem 1 st dose	2mL	2.5mL	3mL	3.5mL	! 4mL	! 4mL	! 4mL	! 4mL	! 4mL	! 4mL
5mg/1mL	Diltiazem (OLMC) 2 nd dose	2.8mL	3.5mL	4.2mL	! 5mL	! 5mL	! 5mL	! 5mL	! 5mL	! 5mL	! 5mL



System Approved Medication Dosing List (Adult Medications)

DRUG CONCENTRATION CURRENTLY AVAILABLE	DRUG NAME	40kg (88lbs)	50kg (110lbs)	60kg (132lbs)	70kg (154lbs)	80kg (176lbs)	90kg (198lbs)	100kg (220lbs)	110kg (242lbs)	120kg (264lbs)	130 kg (286lbs)
20mg/1mL	Lidocaine	3mL	3.8mL	4.5mL	5.3mL	6mL	6.8mL	7.5mL	8.3mL	9mL	9.8mL
1mEq/1mL	Sodium Bicarbonate	40mL	50mL	60mL	70mL	80mL	90mL	100mL	110mL	120mL	130mL
100mg/1mL Excited Delirium	Ketamine IM only	1.6mL	2.0mL	2.4mL	2.8mL	3.2mL	3.6mL	4.0mL	4.4mL	4.8mL	! 5 mL
10mg/1ml	Rocuronium	4mL	5mL	6mL	7mL	8mL	9mL	! 10mL	! 10mL	! 10mL	! 10mL



Medications Quick Reference Chart

Medication & COG or Document used in:	Adult Dose ≥ 37 Kg	Pedi Dose < 37 Kg
Acetaminophen (APAP) (Tylenol): Adult Fever/Infection M-09, Adult Pain M-16, Pedi Fever/Infection PM-03, Pedi Pain PM-06, Pedi Seizure PM-07, Clinical Reference: (Pedi) CR - 36	Up to 1 Gram PO (M-09, M-16)	15 mg/kg PO (max dose 500mg) (PM-03, PM-06, PM-07, CR-27)
Adenosine: Adult SVT C-04, Pedi SVT PC-02 Clinical Reference:(Pedi)CR-36	12 mg IV/IO may repeat x1 (max 24 mg total) (C-04)	0.2mg/kg, IV/IO (max of 12 mg per dose) may repeat X1 (PC-02)
Albuterol: Adult Allergic Reaction M-02, Adult Respiratory Distress R-04, Adult Respiratory Distress Spcl. Ops.SO-01 Adult and Pedi Drowning T-04 Pedi Allergic Reaction PM-01, Pedi Respiratory Distress PR-03 Clinical Standard CS-20	2.5 mg single dose Neb. (T-04) 2.5 mg continuous Neb. (M-02, R-04) Assist with "Patients MDI" (R-04) 2 "puffs" MDI unit doses q5 x3 prn (SO-01)	2.5 mg single dose Neb. (T-04) 2.5 mg continuous Neb. (PM-01, PR-03) Assist with "Patients MDI" x 6 (PR-03)
Amiodarone: Adult Wide Complex Tachycardia C-05, Adult Pulseless VF/VT CA-03, Pedi Wide Complex Tachycardia PC-03, Pedi Pulseless VF/VT PCA-03 Clinical References: (Adult Infusion Charts) CR-01, CR-02, (Pedi Infusion Chart) CR-36	150mg IV/IO over 10 minutes. May repeat x2 150 mg q10 min (max. total dose 450 mg) (C-05) 300mg IV/IO push Repeat in 4min at 150 mg IV push x 1 (CA-03)	5mg/kg IV/IO over 20 min. (max. dose of 150 mg) (PC-03) 5 mg/kg IV/IO (max 300mg) may repeat x1 (max 2nd dose 150 mg) (PCA-03)
Aspirin: Adult Chest Pain/Suspected ACS (C-01)	324 mg PO (C-01)	∅
Atropine Sulfate: Adult Organophosphate Exposure (M-14) Adult Bradycardia Algorithm (C-02) Pedi Bradycardia Algorithm (PC-01) Clinical Reference: (Pedi Dose Chart) CR-36	0.8 mg q3 up to 0.04mg/kg IV/IO (C-02) 2 mg up to 6 mg atropine IV/IO/IM. May repeat every 3 to 5 mins until symptoms improve (M-14)	0.02 mg/kg (Min 0.1 mg--Max 1 mg) IV/IO May repeat x1 in 5 min. (PC-01)
Calcium Chloride: Adult Bradycardia C-02 (OLMC), Adult Asystole/PEA CA-02, Adult Pulseless VF/VT CA-03, Adult Persistent Pulseless DSED CA-06 Adult Overdose M-15 (OLMC), Clinical References: (Pedi Infusion Charts) CR-36 (OLMC)	1 gram IV/IO (CA-02,CA-03, CA-06) 1 gram IV/IO over 10 minutes (C-02, M-15)	∅
Chlorohexadine: Wound site preparation Clinical Procedures: CP-05, CP-10, CP-17, CP-28, CP-34, CP-37, CP-38, CP-61	Unit dose (packet)	Unit dose (packet) if ≥ 6 months old



Medications Quick Reference Chart

<p>Dextrose: Adult Asystole/PEA CA-02, Adult Altered Mental Status M-03, Newly Born OB-03, Pedi Bradycardia PC-01, Pedi Altered mental Status PM-02, Pedi Asystole/PEA PCA-02 Clinical Reference: (Pedi Dose Chart) CR-36 Clinical Standard CS-20</p>	<p>IV Infusion of 10% Dextrose in 250mL premixed bag of Sterile Water (CA-02, M-03) Titrate to patient's response/condition.</p>	<p>1g/kg IV Infusion of 10% Dextrose in 250mL premixed bag of Sterile Water Max dose 25 grams (OB-03, PC-01, PM-02, PCA-02, CR-21) Must use volume control device (IV Burette) for infusion. Titrate to patient's response/condition.</p>
<p>Diltiazem: Narrow Complex Tachycardia with Pulse C-03 Clinical Reference:(Adult)CR-35</p>	<p>1st dose 0.25 mg/kg (max 20 mg) May repeat in 15 min: 2nd dose 0.35 mg/kg (max 25 mg) (C-03,) (2nd dose OLMC)</p>	<p>∅</p>
<p>Diphenhydramine (Benadryl): Adult Allergic Reaction M-02, Adult Behavioral M-05, Pedi Allergic Reaction PM-01, Pedi Overdose PM-09 Clinical Reference:(Pedi)CR-36</p>	<p>25 mg IM/IV/PO (M-02) 50 mg IV/IM (M-02, M-05)</p>	<p>1 mg/kg IV/IM x1 dose (PM-01, PM-09) Do Not administer if < 5kg PO dosing per CR-36 only Do Not administer if < 5kg</p>
<p>Enalapril (Vasotec): Adult Pulmonary Edema R-03</p>	<p>1.25 mg IV if SBP ≥ 140 mmHg (R-03)</p>	<p>∅</p>
<p>Epinephrine: Adult Bradycardia C-02 (OLMC), Adult Asystole/PEA CA-02, Adult Pulseless VF/VT CA-03, Adult Allergic Reaction M-02, Adult Respiratory Distress R-04 Adult Respiratory Distress Spcl. Ops.SO-01 Pedi Bradycardia PC-01, Pedi Allergic Reaction PM-01, Pedi Overdose PM-09, Pedi Respiratory Distress PR-03, Pedi Asystole/PEA PCA-02, Pedi Pulseless VF/VT PCA-03, Pedi Hypotension PM-04 (OLMC), Pedi Multi. Trauma PT-03 (OLMC), Clinical References: (Adult Infusion) CR-4, (Pedi Infusion) CR-23 Clinical Standard CS-20 Clinical Reference:(Pedi)CR-36</p>	<p>0.3 mg (1mg/mL) IM per dose x 4 q5min (max total 1.2 mg) (M-02) EMT-B and ILS Providers single dose of 0.3 mg IM (1mg/mL) if ≥ 30 kg (M-02) Epi Pin ≥ 30 kg (M-02) 0.3 mg (1mg/mL) IM per dose x 1 (S0-01) 2 mg (1mg/mL) Neb.(mixed with 1ml NS) (R-04) 1 mg (0.1mg/mL) IV/IO per dose q4 min (CA-02, CA-03) 2-10 mcg/min IV Infusion titrated to MAP ≥ 65 (C-02 OLMC)</p>	<p>0.01mg/kg (1mg/mL) IM per dose (max single dose 0.3mg) x 1 (PR-03) Do Not administer if < 8kg 0.01mg/kg (1mg/mL) IM per dose (max single dose 0.3mg) x 4 q5min (max total 1.2 mg) (PM-01) Do Not administer if < 8kg EMT-B and ILS Providers single dose of 0.15 mg IM (1mg/mL) if < 30 kg (PM-01) Do Not administer if < 8kg Epi Pin Jr. < 30 kg (PM-01) Do Not administer if < 8kg 0.5 mg (0.1mg/mL) (5 ml) Neb (PR-03) Epinephrine 0.01 mg/kg IV/IO (max 1mg) (0.1 mL/kg of (0.1mg/mL)) Repeat every 3-5 min (PCA -02, PCA-03, PC-01) 0.1-1 mcg/kg/min infusion (PC-01, PM-04, PT-03) 0.1 mcg/kg/min infusion (PCA-02, PM-09)</p>



Medications Quick Reference Chart

<p>Fentanyl Citrate: Adult Pain Management M – 16, Adult Chest Pain/Suspected ACS C – 01, Adult Burns T – 02, Adult Constant Crush Injury > 4 hrs. SO-11, Pedi Pain Management PM – 06, Pedi Burns PT – 01 Clinical Reference:(Adult)CR-35(Pedi)CR-36</p>	<p>1 mcg/kg IV/IM/IN up to 100 mcg may repeat 50 mcg q 10 min (Max total 300 mcg) SBP > 100mmHg As needed until improvement. (M-16, C-01, SO-11)</p> <p>1 mcg/kg (per dose) q5min with SBP > 100 mmHg (max total up to 400 mcg) (T-02)</p>	<p>1 mcg/kg IV/IM/IN Repeat 0.5 mcg/kg PRN q 5 min(Max total 2 mcg/kg) with SBP >70 + (age in years x 2) mmHg (PM-06) Do Not administer 2nd dose if < 6kg</p> <p>Fentanyl 1 mcg/kg IV every 5 min (Max total 200 mcg) with SBP >70 + (age in years x 2) mmHg (PT-01) Do Not administer 2nd dose if < 6kg</p>
<p>Glucagon: Adult Altered Mental Status M-03, Pedi Bradycardia PC-01, Pedi Altered Mental Status PM-02, Pedi Overdose PM-09, Pedi Asystole/PEA PCA-02 Clinical Reference:(Pedi)CR-36</p>	<p>1 mg IM (M-03)</p>	<p>0.1 mg/kg (max dose 1 mg) (PC-01, PM-02, PM-09, PCA-02)</p>
<p>Haloperidol (Haldol): Adult Behavioral M-05</p>	<p>5 mg IM, May repeat X 1 dose q 10 min. (M-05)</p>	<p style="text-align: center;">Ø</p>
<p>Hurricane/Cetacaine Spray: Nasotracheal Intubation Procedure CP-44</p>	<p>1 metered spray (may repeat x 1)</p>	<p style="text-align: center;">Ø</p>
<p>Hydroxocobalamin (Vitamin B₁₂) Adult Cyanide M-21 Pedi Cyanide PM-11 Clinical Reference:(Pedi)CR-36</p>	<p>5 grams IV over 15 min (M-21)</p>	<p>70 mg/kg IV at 15mL/min (Max dose 5 grams) (PM-11)</p>
<p>Ibuprofen (Motrin): Adult Fever/Infection M-09 Adult Pain Management M-16</p>	<p>Up to 600 mg PO (M-09, M-16)</p>	<p style="text-align: center;">Ø</p>
<p>Ipratropium Bromide (Atrovent): Adult Respiratory Distress R-04 Adult & Pedi Drowning T-04 Pedi Respiratory Distress PR-03</p>	<p>0.5 mg (unit dose) Neb. X 1 (mixed with Albuterol) (R-04, T-04)</p>	<p>0.5 mg (unit dose) Neb. X 1 (mixed with Albuterol) (T-04)</p> <p>0.5 mg (unit dose) Neb. X 3 (mixed with Albuterol) (PR-03)</p>
<p>Ketamine: Excited Delirium, Adult M – 07 Pain Management, Adult M – 16 Clinical Reference:(Adult) CR-35</p>	<p>50 mg IM, May repeat x1 q5 min. (M-16)</p> <p>4 mg/kg IM, May repeat x1 q5 min. (M-07)</p>	<p style="text-align: center;">Ø</p>
<p>Lidocaine: Adult Wide Complex Tachycardia C-05, Adult Pulseless VF/VT CA-03, Adult Persistent Pulseless DSED CA-06 Adult Eye Injury/Complaint M-08, Pedi Pulseless VF/VT PCA-03, Pedi Wide Complex Tachycardia PC-03 Universal IV Access U-02 Clinical Procedure (IO) CP-38 Clinical References: (Pedi Infusion) CR-25 Clinical Reference:(Adult)CR-35 (Pedi)CR-36</p>	<p>1.5 mg/kg IV/IO q5min (max 3mg/kg) (CA-03, CA-06, C-05) If converts, OLMC for additional bolus doses of 1.5 mg/kg.</p> <p>100mg in each bag of NS for eye irrigation (M-08)</p> <p>40 mg for pain of IO infusion (U-02, CP-38)</p>	<p>1mg/kg IV/IO q 5 min (Max 3 mg/kg) (PC-03)</p> <p>1 mg/kg (max total dose 100 mg) May repeat x 2 (PCA-03)</p> <p>20-50 mcg/kg/min infusion (PC-03, CR-25)</p>



Medications Quick Reference Chart

<p>Magnesium Sulfate 50%: Adult Respiratory Distress R-04, Adult Wide Complex Tachycardia C-05, Adult Pulseless VF/VT CA-03, Adult Persistent Pulseless DSED CA-06, Obstetrical Emergency OB-02, Pedi Respiratory Distress PR-03, Pedi Pulseless VF/VT PCA-03, Pedi Wide Complex PC-03, Clinical Reference: (Pedi Infusion) CR-36</p>	<p>2 grams IV place into 50ml/NS and infuse over 20 min (R-04)</p> <p>2 grams IV slow push (CA-03, CA-06 may use IO for CA) (Push over 5 min for C-05)</p> <p>4 grams IV place into 50ml/NS and infuse over 5 minutes (OB-02)</p>	<p>50mg/kg IV over 20 minutes (max dose 2 grams) (PR-03, PC-03, CR-26)</p> <p>50 mg/kg slow IV/IO May repeat same dose q- 5 minutes until a maximum total dose of 2 grams. (PCA-03)</p>
<p>Methylprednisolone (Solu-Medrol): Adult Allergic Reaction M-02, Adult Respiratory Distress R-04, Adult Respiratory Distress Spcl. Ops. SO-01 Pedi Allergic Reaction PM-01, Pedi Respiratory Distress PR-03 Clinical Reference:(Pedi)CR-36</p>	<p>125 mg IV (M-02, R-04, SO-01)</p>	<p>2 mg/kg IV (PM-01, PR-03 IV/IM route)</p>
<p>Midazolam: Adult Induced Hypothermia CA-04, Adult Bradycardia C-02, Adult Atrial Fib. with RVR C-03, Adult SVT C-04, Adult Wide Complex Tachycardia C-05, Adult Behavioral M-05, Adult Excited Delirium M-07, Adult Hyperthermia, Environmental M-10, Adult Overdose M-15, Adult Seizure M-17, Pedi SVT PC-02, Pedi Wide Complex Tachycardia PC-03, Pedi Seizure PM-07, Pedi Overdose PM-09 Clinical References:(Pedi)CR-36</p>	<p>Anti Convulsant: 5 mg IM/IN/IO/IV May repeat PRN max total dose 10 mg with SBP > 100 mmHg (M-17)</p> <p>Sedation: 2.5 – 5.0 mg IV/IO May repeat PRN max total dose 10 mg with SBP > 100 mmHg</p> <p style="text-align: center;">-OR-</p> <p>5 mg IM/IN May repeat PRN max total dose 10 mg with SBP > 100 mmHg (CA-04, C-02, C-03, C-04, C-05, M-05, M-07, M-10, M-15)</p>	<p>Anti Convulsant: 0.1mg/kg IV/IO/IM/IN (max total 5 mg) titrated to effect with SBP >70 + (age in years x 2) mmHg (PM-07) Do Not administer if < 5kg</p> <p>Sedation: 0.05 mg/kg IV/IO (max total 5 mg) titrated to effect with SBP >70 + (age in years x 2) mmHg (PC-02, PC-03, PM-09) Do Not administer if < 5kg</p>
<p>Naloxone (Narcan): Adult Overdose M-15, Newly Born OB-03, Pedi Overdose PM-09 Clinical Standard CS-20 Clinical Reference:(Pedi)CR-36</p>	<p>Up to 2 mg slow IV/IN/IM (M-15) If respirations depressed</p>	<p>0.1 mg/kg IV(OB-03, PM-09 may also use IN route in OD) If respirations depressed</p>
<p>Nitroglycerin: Adult Chest Pain/Suspected ACS C-01 Adult Pulmonary Edema R-03</p>	<p>0.4 mg SL continuous with SBP ≥ 100 mmHg (R-03, C-01 and/or pain free with ACS)</p> <p>1" topical paste with SBP ≥ 100 mmHg (R-03, C-01)</p>	<p>∅</p>
<p>Norepinephrine (Levophed): Adult Induced Hypothermia CA-04, Adult Hypotension M-11, Adult Multi. Trauma T-07, Clinical References: (Adult Infusion) CR-03</p>	<p>2 – 12 mcg/minute Titrated to MAP ≥ 65 (CA-04, M-11, T-07, CR-03)</p>	<p>∅</p>



Medications Quick Reference Chart

Ondansetron (Zofran): Adult Eye Injury/Complaint M-08, Adult Nausea/Vomiting M-13, Adult Hyperthermia, Environmental M-10, Pedi Nausea/Vomiting/Diarrhea PM-05, Pedi Hyperthermia, Environmental PM-08 Clinical Reference:(Pedi)CR-36	4 mg ODT single dose PO may repeat x1 q15 min. (M-08, M-10, M-13) 4 mg IV/IM single (undiluted) dose given over > 30 sec. may repeat x1 q 15 min. (M-10, M-08, M-13)	0.1 mg/kg IV single (undiluted) dose given over > 30 sec.(max dose 4 mg) (PM-05, PM-08) Do Not administer if < 6kg PO, ODT dosing per CR-36 only Do Not administer if < 12kg
Oral Glucose: Adult Altered Mental Status M-03 Pedi Altered Mental Status PM-02 Clinical Standard CS-20	15 grams if patient is not obtunded. May repeat x1 q 15min (M-03)	7.5 grams if Pt. able to protect Airway (PM-02)
Otrivin (Afrin) nasal spray: Epistaxis M-22, Nasotracheal Intubation Procedure CP-44	2 sprays per effected nostril (M-22, CP-44)	Ø
Rocuronium Bromide: Adult Induced Hypothermia CA-04 Clinical Reference:(Adult)CR-35	1 mg/kg x 1 IV/IO to max of 100mg (with Advanced Airway only) (CA-04)	Ø
Sodium Bicarbonate: Adult Wide Complex Tachycardia C-05, Adult Asystole/PEA CA-02, Adult Pulseless VF/VT CA-03, Adult Persistent Pulseless DSED CA-06, Adult Overdose M-15, Pedi Bradycardia PC-01, Pedi Asystole/PEA PCA-02, Pedi Overdose PM-09, Toxic Exposure Chlorine SO-04, Adult Constant Crush > 4 hours SO-11 Clinical Reference:(Adult)CR-35(Pedi)CR-36	1 meq/kg x 1 IV (C-05, CA-02, CA-03, CA-06 may use IO route in CA) 50 mEq (1 amp) IV followed by a maintenance drip of 100 mEq (2 amps) in 1000 mL of NS and run at 100mL/hr (M-15) 50 mEq (1 amp) in 1000 mL NS wide open IV (SO-11) <u>Nebulized:</u> Place 2 ml sodium bicarbonate 8.4% (standard sodium bicarbonate) into 2 ml of sterile water administered by hand-held nebulizer. May be repeated every 20 minutes. Max dose total of 2 times. (SO-04)	1meq/kg IV/IO (PC-01, PCA-02, PM-09)
Terbutaline Sulfate: Adult Respiratory Distress Spcl. Ops. SO-01	0.25 mg SQ may repeat q15min x 2 prn (SO-01)	Ø
Vecuronium Bromide: Adult Induced Hypothermia CA-04 Clinical Reference:(Adult)CR-35	0.1 mg/kg to max of 10 mg (with Advanced Airway only) (CA-04)	Ø
Xylocaine gel: Nasotracheal Intubation Procedure CP-44 Gastric Tube Insertion Procedure CP-32 (nasal application without intubation)	1 unit dose (packet) (CP-32, CP-44)	Ø



System Registered Organizations

Tier 2 Designated Organizations

City of Austin Fire Department #227016	City of Austin-Travis County EMS Department #227007 (Provider)
ESD 3 Oak Hill Fire Department #300371	ESD 5 Manchaca Fire Department #300505
ESD 6 Lake Travis Fire Rescue #227014	ESD 8 Pedernales Emergency Services #227017
ESD 9 Westlake Fire Department #227024	ESD 10 CE-BAR Fire Department #227035
ESD 12 Manor Fire Department #800106	ESD 14 Volente Fire Department #246009
<ul style="list-style-type: none">• Travis County Search and Rescue #300526	<ul style="list-style-type: none">• Travis County Parks #300589

Tier 1 Designated Organizations

- One Texas Center Emergency Response Team #300153
- 3M Austin Center and Research #300103
- Flextronics #300099
- Texas Department of State Health Services #227044
- City of Austin HSEM #800102
- ARL UT Emergency Team #227020
- Dell Computer Company #300349
- Texas Comptroller of Public Accounts #227010
- Winters Medical Assistance Team #227036
- Bastrop/Travis Counties (BAT 1) #800709