EMERGENCY MEDICAL SERVICES - STAFF DIRECTORY

EMS Office	**618-2050 (main number)** **618-2099 (fax #)**	
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CERTIFICATIONS		
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ASSAULT | ABUSE | DOMESTIC VIOLENCE

- **Routine Medical Care**
- Level of distress - Is patient a trauma victim? If yes, see trauma protocol
- Provide emotional support to the victim and the family
- Contact appropriate law enforcement agencies

1. **CHILD ABUSE / ELDER ABUSE / DOMESTIC VIOLENCE:** In any situation where EMS personnel knows or reasonably suspects a person suffering from any wound or other physical injury inflicted upon the person where the injury is the result of **assaultive or abusive conduct**:
   - 1.1 Immediately notify the appropriate law enforcement agency
   - 1.2 Reasonable effort will be made to transport the patient to a receiving hospital for evaluation. Immediately inform hospital staff of your suspicions
   - 1.3 Document all pertinent observations on the patient care report
   - 1.4 Immediately (or as soon as practical) contact the appropriate agency by telephone and give a verbal report
   - 1.5 A written report for child/elder abuse must be filed within 36 hours

► TO REPORT CHILD ABUSE:

Child Protective Services
24100 Amador St.
Hayward, CA 94544
(510) 259-1800 - 24 hour number

► TO REPORT ELDER OR DEPENDENT ADULT ABUSE:

➔ By staff at a licensed health care facility contact:

Ombudsman (800) 231-4024

➔ At home, or by a visitor or another resident at a licensed health care facility contact:

Adult Protective Services
6955 Foothill Blvd., Suite 300
Oakland, CA 94605
(866) 225-5277 - 24 hour number

After 5 pm M-F and weekends, an operator answers this line and can page a social worker (if needed.) If the patient was assaulted or has suffered serious neglect contact local law enforcement.

APS ONLINE REPORT

bit.ly/aps-report

► TO REPORT DOMESTIC VIOLENCE:

Domestic violence is defined as the willful intimidation, physical assault, battery, sexual assault, and/or other abusive behavior as part of a systematic pattern of power and control perpetrated by one intimate partner against another.

➔ Notify receiving hospital staff

➔ Perform DV Assessment (see section 3)

2. **SEXUAL ASSAULT:** Patients should be transported to the appropriate facility for evaluation regardless of the hospital's diversion status
   - 2.1 **Adult patients:** Alameda County Medical Center or Washington Hospital
   - 2.2 **Pediatric patients:** Children's Hospital (≤13 y.o.) Age modified to <= 13 for Sexual Assault patients only

INFECTION CONTROL AND SCREENING CRITERIA

1. **INTRODUCTION:** The following guidelines are general recommendations to help to protect healthcare personnel by reducing the risk of further disease transmission when they are caring for patients with a potentially infectious disease.

2. PRE-INCIDENT

2.1 Ensure familiarity with organizational policies and procedures related to infection control including, but not limited to proper particulate respirator fit testing.

2.2 Ensure availability and familarity with appropriate PPE and proper donning/doffing procedures for all types of PPE.

2.3 Ensure availablity of appropriate cleaning supplies and their usage along with organizational policies and procedures surrounding their usage.

3. DURING INCIDENT:

3.1 Upon dispatch to an incident, utilize provided information to make an initial determination about the potential risk associated with the call. (i.e. a respiratory distress incident has a potentially higher risk associated vs an acute injury).

3.2 Follow standard universal precautions for all incidents.

3.3 If dispatch or initial information gathered at the scene indicates a potentially increased risk for disease transmission, minimize personnel having contact with the patient.

3.4 Apply a procedure or surgical mask to the patient to contain droplets if possible.

3.5 Use caution when performing aerosol generating procedures or high-risk procedures (e.g., mechanical ventilation, ETI, nebulized medications, and/or suctioning).

3.5.1 If you are performing an aerosol generating or other high-risk procedure on a patient with a suspected infectious disease, you are required to wear a N95, P-100, or equivalent respirator during the procedure(s)

3.5.2 It is recommended that a BVM with a HEPA filter be utilized for ventilation.

3.6 Optimize environmental the vehicle's ventilation to increase the volume of air exchange during transport

3.7 Minimize personnel and/or additional riders during transport.

3.8 Notify the receiving facility early as possible

4. POST INCIDENT

4.1 Follow standard operating procedures for routine cleaning of the emergency vehicle and reusable patient care equipment

4.2 Document all assessment findings and treatments appropriately.

SCOPE OF PRACTICE - LOCAL OPTIONAL

1. **Approved for use in Alameda County** – all items require additional training
   - 1.1 **BLS PERSONNEL:**
     - 1.1.1 Aspirin
     - 1.1.2 Pulse Oximetry
     - 1.1.3 Glucometry
     - 1.1.4 Epinephrine
     - 1.1.5 Narcan
   - 1.2 **ALS PERSONNEL:**
     - 1.2.1 Pulse-oximetry
     - 1.2.2 Length-based resuscitation tape
     - 1.2.3 End-tidal CO_2 detection
     - 1.2.4 12-lead EKG
     - 1.2.5 Continuous Positive Airway Pressure (CPAP)
     - 1.2.6 Intraosseous Infusion – Adult and Pediatric
2. **Local Optional Scope of Practice** – requires authorization from State EMS Authority and additional training
   - 2.1 **ALS PERSONNEL:**
     - 2.1.1 Hydroxocobalamin (optional)
     - 2.1.2 Ketamine (Ketalar) SGA removed, Ketamine added
     - 2.1.3 Ketorolac (Toradol)
     - 2.1.4 Olanzapine (Zyprexa)
     - 2.1.5 Sodium Thiosulfate
     - 2.1.6 Tranexamic Acid
3. Field personnel will not perform any skill that is not a part of his/her scope of practice or has not been authorized by the Alameda County Health Officer and/or EMS Medical Director
4. During an inter-facility transfer or during a mutual aid response into another jurisdiction, a paramedic may utilize the scope of practice for which he/she is trained and accredited
5. Paramedics will not draw blood unless approved in advance by the EMS Medical Director
6. Field personnel are prohibited from carrying any medical equipment or medications that have not been authorized for prehospital use by the Alameda County EMS Medical Director

TRAUMA PATIENT CARE

- **Routine Medical Care**
- **Critical Interventions** - See below
- **Transport Decision** - Determine need for rapid intervention/transport
- **Transport**
- **If traumatic arrest is suspected do not use ACLS medications**

CRITICAL/TIME SENSITIVE INTERVENTIONS:

► Control major external hemorrhage (see **page 126**)

► Control the Airway - Consider **endotracheal intubation or supraglottic airway device if indicated** (See below for patients with closed head trauma)

► Keep patient warm Added

► Determine patient severity (see "Trauma Patient Criteria" - see **page 25**):

Meets Physiologic and/or Anatomic Factors	Meets Mechanism of Injury Criteria
➔ Transport to the Trauma Center In accordance with Transport Guidelines (page 22). ➔ ADULT - Establish one (1) large bore IV/IO with Normal Saline (NS) or Saline Lock (SL). Establish 2nd IV if appropriate. ➔ PEDIATRIC- Establish one (1) appropriate large bore IV/IO with Normal Saline (NS) or Saline Lock (SL).	➔ Transport to the Trauma Center code 2. ➔ ADULT/PEDIATRIC - Establish one (1) large bore IV/IO with Normal Saline (NS) or Saline Lock (SL).
Do NOT delay transport to establish IV/IO access See "Trauma Patient Criteria" (**page 25**) for additional judgment decisions on code 2 transports	

► Consider spinal motion restriction (SMR) for blunt trauma (see **page 139**)

► Administer **Oxygen** - Titrate SpO_2 to 94-99%

► **IV fluid resuscitation:**

➔ SBP < 90 mmHg, NS IV/IO 250 – 500ml bolus

➔ > 90 mmHg, IV/IO TKO or Saline Lock

➔ Reassess BP q 5 minutes

► Consider **TXA** for patients with signs of shock or uncontrolled bleeding (see **page 28**)

► **Care of the patient with a closed head injury** (GCS < 8):

➔ **Advanced airway (ETT or SGA)**

➔ End-tidal CO_2 should be between 30-35 mmHg

➔ Track respirations or ventilate to a rate of approx 12 times/minute with 100% O_2 ***(AVOID HYPERVENTILATION)***

➔ **IV/IO** NS in 500 mL increments to ***maintain mean arterial pressure (MAP) of at least 80 mmHg***. Reassess BP q 5 minutes

IMPORTANT CONSIDERATIONS

► Contact the Base Hospital, if appropriate

► Contact the Trauma Center, as soon as possible

► Consider pain management when appropriate

► Splint fractures and dress wounds ONLY if time permits

FORMULA FOR ESTIMATING MAP

$$\text{MAP} = \text{diastolic} + \frac{(\text{systolic} - \text{diastolic})}{3}$$

ASYSTOLE / PULSELESS ELECTRICAL ACTIVITY

- **Routine Medical Care**
- Consider and treat other possible causes – See CPR **page 10**
- **Note: Use of a mechanical CPR device is required whenever available and appropriate**

Reversible Causes updated per 2020 AHA Guidelines

Note Hypoglycemia is a Reversible Cause in Asystole/PEA for Pediatrics not Adults.

CPR (see note above)
ECG / AED
BLS Airway
BVM ventilation with 10-15 lpm O2
ITD (Placed closest to patient - see page 128)
ETCO2 Monitoring

Do not interrupt CPR to administer medications or perform airway management

If renal failure or hyperkalemia suspected:
Calcium Chloride 1 gm slow IVP (over 2 min.)
Note: flush IV tubing after administering CaCl to avoid precipitation
Sodium Bicarbonate 1 mEq/kg IVP
Note: make sure to have a second IV line as other medications may not be compatible

REVERSIBLE CAUSES
- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

IV/ IO NS

Epinephrine 0.1mg/mL
1 mg IV/IO

(1st dose ASAP – preferably within 5 min from start of CPR)

Q 10 minutes, up to 3 doses

Epinephrine "ASAP" language added to Asystole/PEA (not VF/VT) per 2020 AHA Guidelines

2 minutes or
5 cycles of CPR
Check rhythm

Shockable rhythm?

Yes → To V-fib.V-tach page 57

No

Consider advanced airway

Organized Rhythm and pulse present?

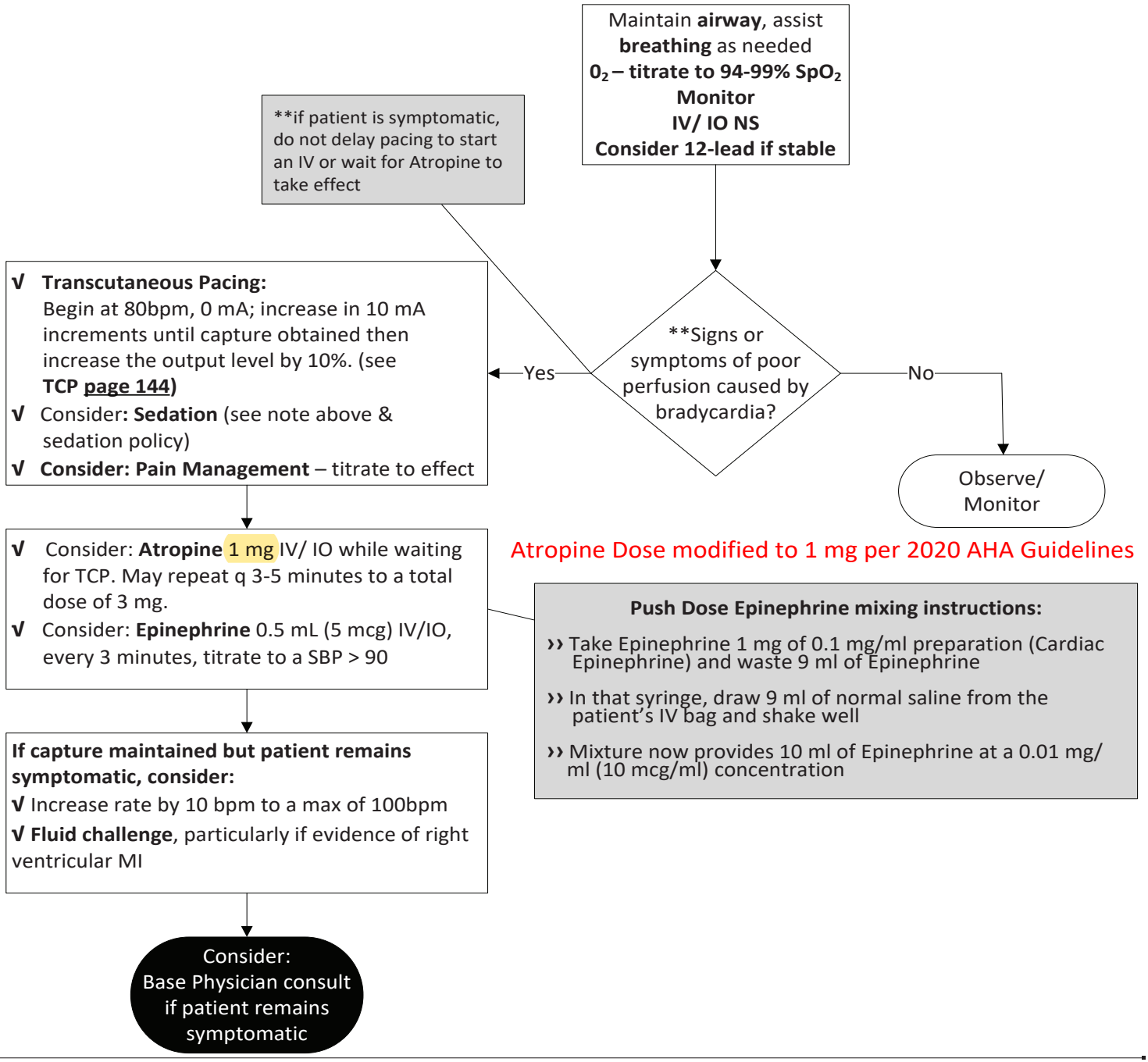
Yes → Go to:
Return of Spontaneous Circulation
page 46
or
Appropriate Dysrhythmia Policy

No → Consider:
^Discontinue CPR
See page 86
or
Continue CPR
Transport

^Discontinuation of CPR:
If non-shockable rhythm persists, despite appropriate, aggressive ALS interventions for 30 minutes (OR if ETCO2 is <10mmHg after 20 minutes in a patient with an advanced airway), consider discontinuation of CPR.

BRADYCARDIA

- **Routine Medical Care**
- **Bradycardia:** < 50 beats/minute, 2nd degree block, 3rd degree block
- **Serious signs and symptoms:**
  - ➔ Acute altered mental status
  - ➔ On-going chest pain
  - ➔ Hypotension
  - ➔ Other signs of shock
- **Note:**
  - ➔ If utilizing Transcutaneous Pacing (TCP), verify mechanical capture and patient tolerance (see **page 144**)
  - ➔ Use sedation with caution in the hypotensive patient (see **page 137**)
  - ➔ If patient symptomatic and pacing not available, consider rapid transport
  - ➔ Consider Hyperkalemia



CHEST PAIN - SUSPECTED CARDIAC/STEMI

- **Routine Medical Care**
- **Signs of Shock** - 2 or more of the following:
  - ➔ Pulse > 120/minute
  - ➔ BP < 90/systolic
  - ➔ Pale, cool and/or diaphoretic skin signs
  - ➔ Altered Mental Status
- If cardiac chest pain is suspected and the patient is able to swallow, give **Aspirin 162 - 324 mg** po as soon as possible (tablet or chewable – not enteric coated)
- NTG may be prioritized as needed based on patient presentation
- Perform 12-Lead EKG, as appropriate, and transport to a STEMI Receiving Center if STEMI is identified. See **page 124** - EKG 12-Lead for EKG transmission and STEMI Receiving Center information
- **Note:** If the patient has taken ***erectile dysfunction (ED) medication within the last 24 hours (Viagra/ Levitra) or 36 hours (Cialis), withhold nitroglycerin***

Patients who have oxygen saturations of greater than 94% without signs or symptoms of hypoxia or impending airway compromise should not receive oxygen.

Monitor
Assess ABC's
O_2 – titrate to 94-99%
Aspirin 162-324 mg
IV/IO NS

↓

12-lead EKG

↓

*** NTG** 0.4 mg
up to 3 doses, q 3-5 minutes for continuing pain/discomfort

If unresponsive to nitrates:
Pain Management
(see **page 43**)

(^^see note)

^^ Note: If **B/P** drops below 90 systolic or drops > 30 mm/Hg from baseline at any point; or, **heart rate** is < 50 or > 120 bpm, **contact the base physician** before administering/continuing NTG and/or Pain Management

↓

STEMI?

Yes → Transmit EKG to STEMI Receiving Center (SRC) (see **page 128**)

Transport to SRC

Establish 2nd IV en-route

Do not delay transport if technical difficulties impede EKG transmisison. Attempt to send en-route whenever possible.

No → If cardiogenic shock, tachycardia, or life threatening dysrhythmia go to appropriate policy

Policy vetted, updated and implemented in 2020

MEDICATIONS – AUTHORIZED | STANDARD INITIAL DOSE

Adenosine	1st dose: 6 mg; 2nd dose: 12 mg (rapid ***IV/IO*** push)
Albuterol	5 mg in 6 ml normal saline
Amiodarone	**Wide complex Tachycardia:** 150 mg ***IV/IO*** over 10 mins **VF/VT:** 1st dose: 300 mg ***IV/IO***; 2nd dose: 150 mg ***IV/IO*** Follow each dose with 20mL NS flush. (two doses only)
Aspirin	162 mg chewable or 324 mg (5gr.) tablet – not enteric coated)
Atropine sulfate	**Bradycardia:** 1 mg ***IV/IO*** - (max total 3 mg)
Calcium chloride 10%	1 gm over 2 minutes ***IV/IO***
Charcoal	1 gm/kg (Max 50 gms) ***PO***
Dextrose 10%	10 gms ***IV/IO***
Diphenhydramine (Benadryl)	**Allergic Reaction:** 1 mg/kg ***IV/IO/IM*** up to 50 mg
Epinephrine 1mg/mL	**Anaphylaxis:** 0.3 mg-0.5 mg ***IM*** **Bronchospasm:** 0.01 mg/kg ***IM*** (max dose 0.5mg)
Epinephrine 0.1mg/mL	**Anaphylactic shock:** 1mL (0.1mg) ***IV/IO*** slowly **Cardiac arrest:** 10mL (1 mg) ***IV/IO*** **Cardiogenic/Distributive Shock:** Diluted to 0.01mg/ml (10mcg/ml), 0.5ml (5mcg) ***slow IV/IO***
Fentanyl	**Pain Management:** 25-100 mcg ***IV/IO/IM/IN*** (max. single dose 100 mcg)
Glucagon	1 mg ***IM***
Oral Glucose	30 gms ***PO***
Ipratropium (Atrovent)	500 mcg (2.5 ml unit dose) ***Via nebulizer***
Lidocaine 2%	40 mg ***IO*** (2 mL) slowly (1 ml over 30 seconds)
Ketamine (Ketalar)	0.3 mg/kg ***IV/IO/IM/IN -*** IV/IO dose to be mixed in 100ml NS/D5W and infused over 10 min
Ketorolac (Toradol)	15 mg ***IM/IV/IO***
Midazolam (Versed)	**Sedation:** ***IV (slowly) / IN (briskly):*** 1-2 mg, ***IM:*** 2-4 mg (if no IV) **Seizure:** ***IM/IN:*** 10 mg, ***IV/IO:*** 0.1 mg/kg - max dose 10 mg
Naloxone (Narcan)	Initial dose: Titrated up to 2 mg ***IV/IM/IN*** BLS Providers may only use IN Route. Max. initial dose is 2 mg
Nitroglycerine spray	0.4 mg metered spray or tablet
Normal saline	250 - 500 ml ***IV/IO*** fluid bolus
Olanzapine (Zyprexa)	10 mg **PO** orally dissolving tablet
Ondansetron (Zofran)	4 mg ***IV*** †Slowly over 30 seconds or 4 mg ***IM/PO (oral dissolving tablets)*** (†rapid IV administration <30 seconds can cause syncope)
Oxygen (titrate to 94%-99% SpO2)	2 - 6 L/nasal cannula | 15 L/non-rebreather mask
Sodium bicarbonate	1 mEq/kg ***IV/IO***

Tranexamic Acid- TXA	1 gram in 100ml NS or D5W ***IV/IO*** over 10 minutes
Hydroxocobalamin	Smoke Inhalation/Cyanide Poisoning: 5g ***IV/IO*** over 15 minutes

Atropine Sulfate	**Nerve agent exposure:** ➔ Patient: 2 mg ***IV/IM*** (for use only by Paramedics or specially-trained EMTs) ➔ Autoinjector antidote kit: 2 mg in 0.7mL 1 - 3 kits depending on exposure (given with Pralidoxime chloride) ► ***Additional atropine may be needed until a positive response is achieved***
Pralidoxime Chloride (2-PAM)	**Nerve agent exposure:** ➔ Patient: 1 - 2 grams ***IV/IM*** (for use only by Paramedics or specially-trained EMTs) ➔ Autoinjector antidote kit: 600 mg in 2 ml's 1 - 3 kits depending on exposure (given with atropine)

PAIN MANAGEMENT

- **Routine Medical Care**
- Pain management should be initiated as early as possible and before transport in the stable patient. Consider pain management prior to the manipulation of suspected fractures
- Document the level of pain prior to and after any interventions

BLS Interventions:
Positioning
Cold Pack(s)
Splinting
Coaching

Minor-Moderate Pain:

Ketorolac - IM/IV/IO 15 mg x 1 - (No repeat dose)

Preferred first-line medication for minor-moderate pain and for patients with suspected kidney stones or chronic pain conditions. (May start with Fentanyl or Ketamine if appropriate or if Ketorolac is contraindicated)

Moderate-Severe Pain:

Fentanyl
IV/IO: 1 mcg/kg (50-100 mcg) Slow push. Repeat q 5min PRN to a max. cumulative dosage of 200 mcg

IM/IN: 1 mcg/kg (50-100 mcg) Repeat q 10min PRN to a max. cumulative dosage of 200 mcg

Base contact required if contraindications are present or >200 mcg is needed

OR

Ketamine added, single dose 0.3 mg/kg all routes

Ketamine
IV/IO: 0.3 mg/kg in 100ml of NS/D5W Slow IV Infusion over 10 minutes. (max. dose is 30 mg, no repeat)

IM/IN 0.3 mg/kg (max. dose is 30 mg, no repeat)

Recommended Ketamine Dosing Guide:
Concentration = 50 mg/ml

Weight	Dose	Volume
50-69 kg	15 mg	0.3 ml
70-89 kg	20 mg	0.4 ml
>90 kg	30 mg	0.6 ml

Ketorolac Considerations:

- **Contraindications:** Age and asthma contraindications removed
  ■ Patients who meet Trauma Criteria ■ NSAID Allergy (e.g. Ibuprofen, Naproxen, Aspirin)
  ■ Pregnancy ■ History of: GI Bleed, Ulcers, Renal disease ■ Current anticoagulant use
- **Note:**
  Standards doses of Fentanyl OR Ketamine may be administered if Ketorolac is ineffective

"Use a lower dose of Fentanyl if Ketorolac is ineffective" modified to "Standard doses of Fentanyl OR Ketamine may be administered if Ketorolac is ineffective".

Fentanyl & Ketamine Considerations:

- **DO NOT CO-ADMINISTER FENTANYL AND KETAMINE**
- **Patient Monitoring**
  Continuous monitoring of the patient's LOC and respiratory status via direct observation/ETCO2/SpO2, etc is required.
- **Contraindications:**
  ■ Decreased respiratory rate ■ Altered mental status/LOC ■ Suspected Traumatic Brain Injury
- **Notes:**
  Consider lower doses of Fentanyl for older adults
  Have Naloxone readily available when administering Fentanyl
  Ketorolac may be administered if Fentanyl or Ketamine is ineffective

PULMONARY EDEMA / CHF

- **Routine Medical Care**
- **Consider ASA**, 162 – 324 mg po, for acute coronary syndrome patients
- Perform 12-Lead EKG, and transport to a STEMI Receiving Center if STEMI is identified. (See **page 124** - EKG 12-Lead) for STEMI Receiving Center information
- **Rapid transport** if on scene stabilization is unlikely

***Note #1:**
Consult the base physician if the B/P drops below 90/ systolic **at any point**, before continuing NTG, or for any questions regarding dosage

O_2 – titrate to 94-99% SpO_2
IV NS

*B/P > 90 systolic?

Yes

CPAP page 126

NTG 0.4 mg
q 5 minutes
for continuing symptoms

If the patient's B/P is >150/systolic, double **^NTG** to 0.8 mg q 5 minutes.
Maximum total dose: 8.0 mg

Reassess as needed

No

Go to:
Cardiogenic Shock
page 54

^ Note #2:
- ✓ Repeat vital signs between doses.
- ✓ Only increase **NTG** dose to 0.8 mg while the B/P is ≥ 150/systolic.
- ✓ If B/P drops below 150/systolic resume 0.4 mg dose.

CPAP moved up in box and "*Consider* CPAP" modified to "CPAP" to emphasize the importance of CPAP administration.

RESPIRATORY DISTRESS

- **Routine Medical Care**
  - ➔ Asthma
  - ➔ Bronchospasm
  - ➔ COPD
  - ➔ Pulmonary edema (see **page 43**)
- Limit physical exertion, reduce patient anxiety

O_2 – titrate to 94-99% SpO_2
IV NS

Moderate to Severe Distress
any of the following:
- Cyanosis
- Accessory muscle use
- Inability to speak > 2 syllables
- Severe wheezing/SOB

CPAP
or
Assist respirations

Intubate as needed for severe distress

CPAP moved up in box and "Consider CPAP" modified to "CPAP" to emphasize the importance of CPAP administration.

Albuterol
5 mg in 6 mL NS
and
Ipratropium
500 mcg (2.5 mL)
by nebulizer, CPAP, or BVM

Epinephrine 1mg/mL
0.01 mg/kg IM
max dose 0.5 mg
Pt must have no history of coronary artery disease or hypertension

If respiratory distress continues
Albuterol (only)
5 mg in 6 mL NS
by nebulizer or via BVM
May repeat x1 if respiratory distress continues

Mild Respiratory Distress
- Mild wheezing/SOB
- Cough

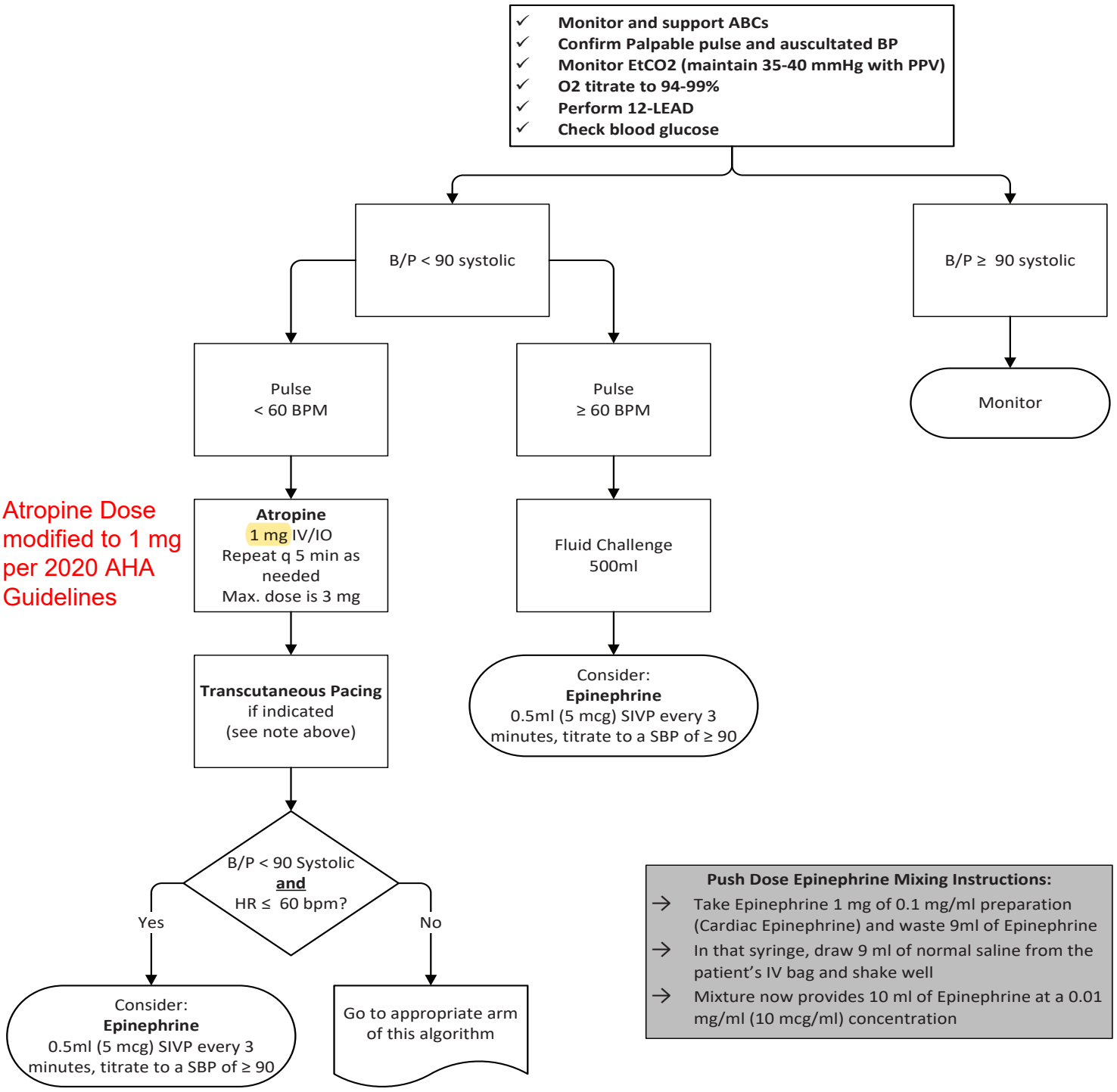
Albuterol (only)
5 mg in 6 mL NS
by nebulizer

If respiratory distress continues, may repeat **Albuterol**

NOTE: For patients with COPD, oxygen supplementation should be given to achieve an oxygen saturation of 88%-92%. Higher oxygen saturations in COPD patients have been shown to be harmful.

RETURN OF SPONTANEOUS CIRCULATION - ROSC

- **Routine Medical Care**
- **Remove Impedance Threshold Device (ITD)**
- Monitor for reoccurrence of arrest rhythm
- Transport patients with ROSC at any time to STEMI Center (except critical trauma patients)
- *If appropriate, transport pediatric patients to Children's Hospital*
- **Note: Transcutaneous Pacing (page 144):** Begin at 80 bpm, 0 mA; increase in increments of 10 mA until capture obtained then increase the output level by 10% If capture maintained but patient remains symptomatic consider increasing the rate by 10 bpm, to a maximum of 100 bpm



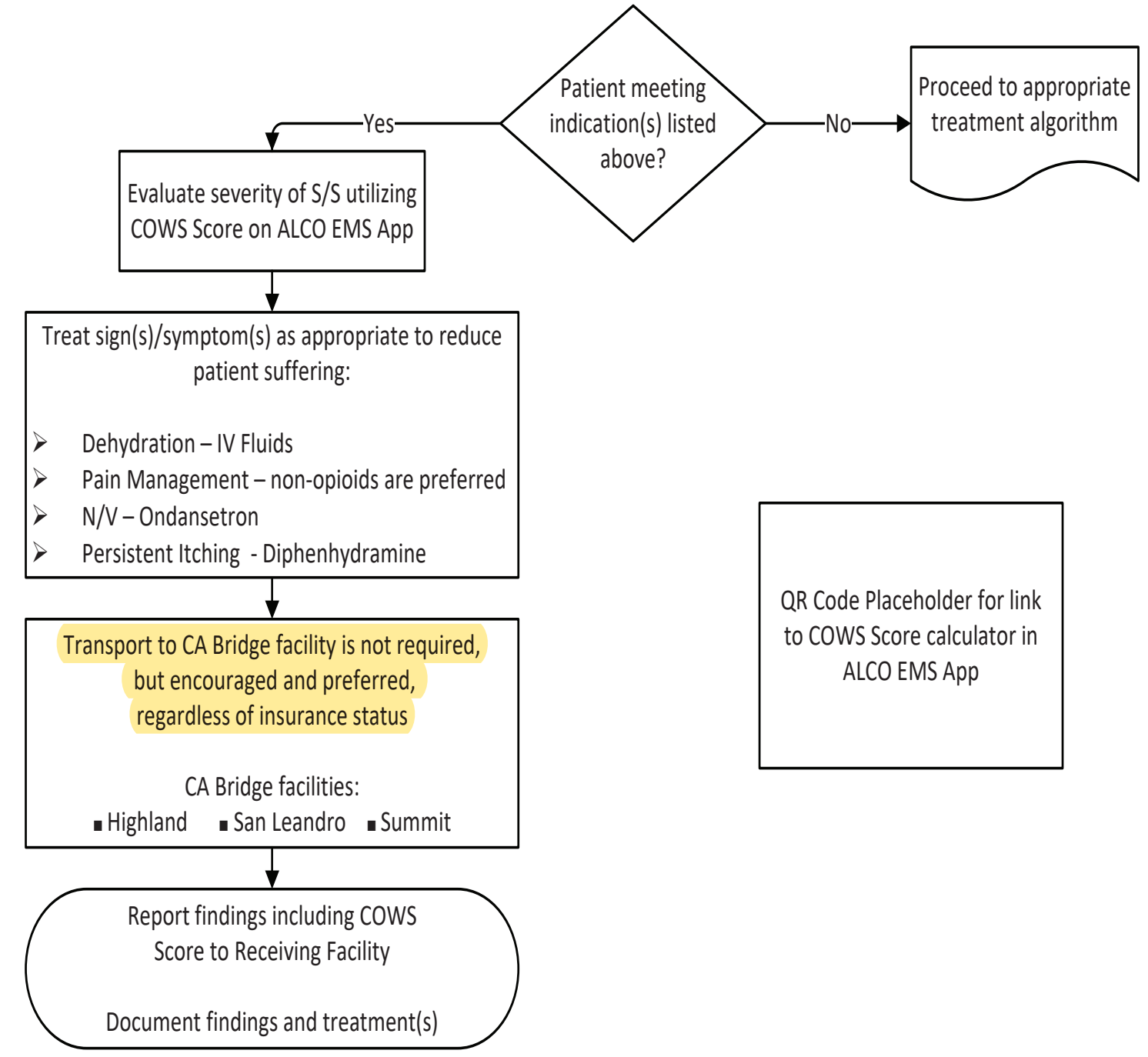
Atropine Dose modified to 1 mg per 2020 AHA Guidelines

Push Dose Epinephrine Mixing Instructions:

- → Take Epinephrine 1 mg of 0.1 mg/ml preparation (Cardiac Epinephrine) and waste 9ml of Epinephrine
- → In that syringe, draw 9 ml of normal saline from the patient's IV bag and shake well
- → Mixture now provides 10 ml of Epinephrine at a 0.01 mg/ml (10 mcg/ml) concentration

SUSPECTED OPIOID WITHDRAWAL

- **Routine Medical Care**
- **Indications:**
  - ➔ Post Naloxone Administration
  - ➔ Patient stated complaint of opioid withdrawals or seeking assistance for Opioid Use Disorder (OUD)
  - ➔ Patient presenting with signs/symptoms consistent with any positive score on the Clinical Opiate Withdrawal Scale (COWS)
- **Goals:**
  - ➔ Reduce patient suffering and;
  - ➔ Patient entry into a CA Bridge Program (www.cabridge.org) for treating Opioid Use Disorder



ANAPHYLAXIS / ALLERGIC REACTION

- **Epinephrine IM** is the cornerstone of treatment of anaphylaxis and should be given as early as possible. It is best absorbed from an injection in the lateral thigh
- If the patient is in severe distress, **administer Epinephrine IM** and consider immediate transport
- **SIGNS OF ANAPHYLAXIS (Systemic Reaction)** – wheezing, repetitive cough, tightness in chest, stridor, difficulty swallowing or tightness in throat, change in voice, dizziness or feeling faint, abdominal complaints (pain, repeated vomiting, diarrhea or incontinence), anxiety, lethargy
- **SIGNS OF ANAPHYLACTIC SHOCK** – pallor, hypotension, cool, clammy mottled skin, altered sensorium
- **FACIAL/ORAL SWELLING (Angioedema)** can accompany anaphylaxis, but is not always present
- **Use a length-based resuscitation tape (LBRT) to determine pediatric drug doses and fluid bolus**

ANAPHYLAXIS
(Systemic Reaction)

OXYGEN
If Any Distress

***ALLERGIC REACTION**
(Skin or mucous membrane symptoms only without signs of anaphylaxis or airway obstruction)

EPINEPHRINE 1mg/ml
BLS Providers: 0.15mg IM
ALS Providers: 0.01 mg/kg IM
Minimum single dose 0.1 mg
Maximum single dose 0.5 mg
May Repeat x 1 in 15 min.

Consider for Urticaria (Hives/Itching)
DIPHENHYDRAMINE
1 mg/kg IV/IM
up to **50mg**

Fluid bolus modified to 10-20 ml/kg

** **SIGNS OF SHOCK?**

YES

IV/IO Access
FLUID BOLUS NS
10-20 ml/kg
Assist ventilations with BVM as required

Reassess 5-10 mins. after IM epi. If VS not improved with fluid bolus:
EPINEPHRINE 0.1mg/mL
0.01 mg/kg IV/IO slowly***
- Max single dose 0.1 mg
- May repeat q 10 minutes

If no response Base Physician consult

NO

For persistent wheezing or respiratory distress
ALBUTEROL
5 mg in 6 ml NS via hand-held nebulizer, mask, or BVM
Consider for Urticaria (Hives/Itching)
DIPHENHYDRAMINE
1 mg/kg IV/IO/IM
up to **50mg**

NOTES

* If patient develops signs of anaphylaxis, go to other arm of this algorithm

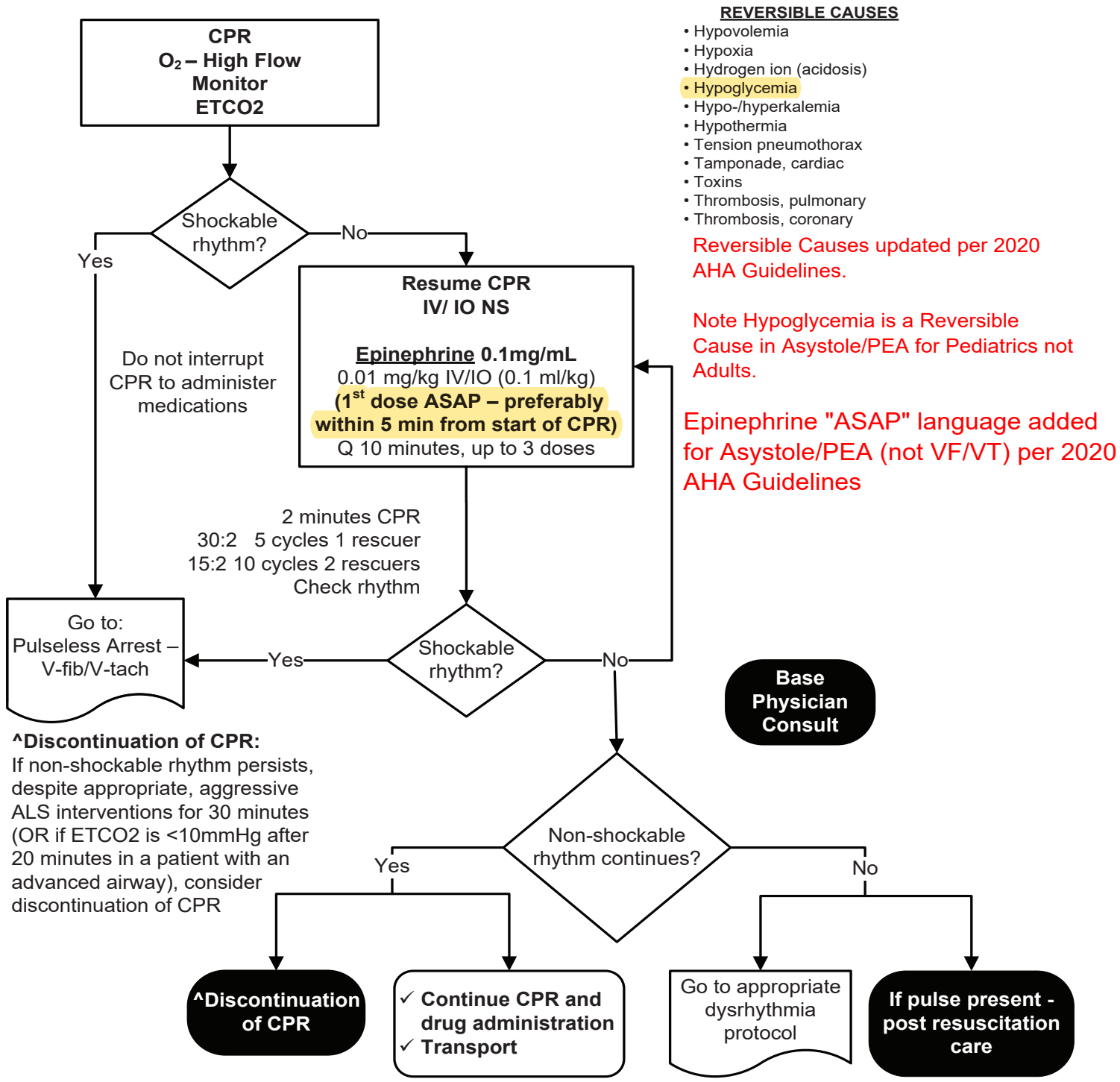
**Shock in children may be subtle and hard to recognize. BP readings may be difficult to determine or inaccurate and may be a late sign of shock.

***IV/IO epinephrine should only be used if symptoms are unresponsive to IM epinephrine and patient has signs of profound shock

§ Diphenhydramine may lessen discomfort from rash/itching but is not an essential treatment of anaphylaxis. Consider reduced dosage if patient has taken diphenhydramine in the past 1-2 hrs.

PULSELESS ARREST: ASYSTOLE, PEA

- **Pediatric Routine Medical Care**
- In PEA, identify other causes and treat (See CPR **page 9**)
- **Note:** Manage the patient's airway with proper airway positioning, simple airway adjuncts, suctioning, and BVM ventilation as necessary. Consider Advanced Airway Management (page 114) if BVM ventilation is not adequate.
- **Use an LBRT to determine pediatric drug doses** (Shown underlined on the algorithm)



ROUTINE MEDICAL CARE - PEDIATRIC

The defined age of a pediatric patient is **14 years old or less**, and unless specified otherwise, pediatric protocols should be used to treat these patients. Note: An infant is considered to be < 1 year old. A child is considered to be ≥ 1 year old. Specified ages for transport or treatment other than 14 years old include:

TRANSPORT	TREATMENT
5150 Psych Evaluation (page 133): ➔ Children (≤ 11 y.o.) – Children's Hospital ➔ Adolescents (≥ 12 y.o. & ≤ 17 y.o.) – Willow Rock **Trauma Destination (page 26):** ➔ ≤ 14 y.o. – Children's Hospital ➔ ≥ 15 y.o. – Closest Adult Trauma Center **Sexual Assault (page 3):** ➔ Children (≤ 13 y.o.) – Children's Hospital ➔ All Others (≥ 14 y.o.) – Highland or Washington	**Advanced Airway Management (page 114):** ➔ <40kg- authorized airway is OPA/NPA, BVM, or SGA **CPAP (page 122):** ➔ < 8 y.o. – Absolute Contraindication **IO Access (page 130 or page 131):** **Refusal of Care (page 117):** ➔ ≤ 17 y.o. may not refuse transport or treatment unless legally emancipated

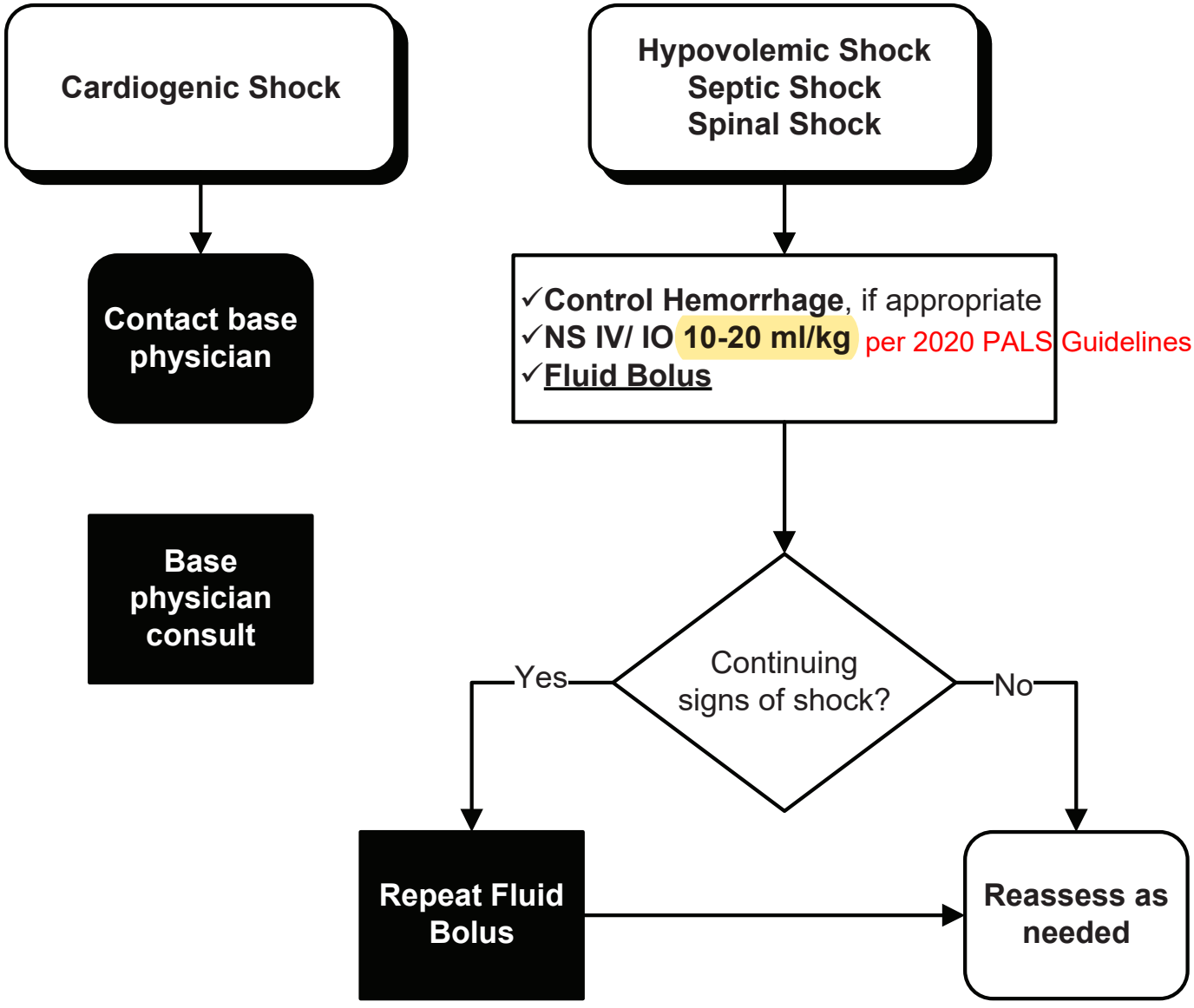
A pediatric **LBRT** will be used to determine drug doses, fluid volumes, defibrillation settings and equipment sizes. The tape is designed to estimate a child's weight based on length (head to heel).

PRIMARY SURVEY	SPECIAL CONSIDERATIONS
Establish level of responsiveness	▶ AVPU: **A**lert, **V**erbal, **P**ainful, **U**nresponsive
Evaluate airway and protective airway reflexes	▶ Identify signs of airway obstruction and respiratory distress, including: ➔ cyanosis ➔ intercostal retractions ➔ choking ➔ stridor ➔ absent breath sounds ➔ grunting ➔ drooling ➔ apnea or bradypnea ➔ nasal flaring ➔ tachypnea
Secure airway	▶ Open airway using jaw-thrust and chin-lift (and/or head tilt if no suspected spinal trauma). Suction as needed. Consider placement of an oral or nasal airway adjunct if the child is unconscious ▶ If cervical spine trauma is suspected, see **page 139**
Consider Spinal Motion Restriction (SMR)	▶ Use chest rise as an indicator of ventilation ▶ Use pulse oximetry
Assess need for ventilatory assistance	▶ CPR as needed (see CPR **page 9**) ▶ Assess perfusion using the following indicators: ➔ heart rate ➔ mental status ➔ skin signs ➔ quality of pulse ➔ capillary refill ➔ blood pressure
Evaluate and support circulation. Stop Hemorrhage	▶ Perform a head-to-toe assessment, including temperature ▶ Obtain a patient history ▶ Do environmental assessment, consider possibility of intentional injury
Continue with secondary survey	▶ Perform a head-to-toe assessment, including temperature ▶ Obtain a patient history ▶ Do environmental assessment, consider possibility of intentional injury
Determine appropriate treatment protocols	▶ Provide family psychosocial support ▶ For drugs not on the LBRT see **page 69** "Pediatric Drug Chart" ▶ When starting an IV/IO/saline lock, use chlorhexidine as a skin prep ▶ Label insertion site with "PREHOSPITAL IV – DATE and TIME" ▶ Pediatric patients are subject to rapid changes in body temperature. Steps should be taken to prevent loss of or increase in body temperature ▶ Compared to the adult patient, a small amount of fluid, lost from or administered to, a pediatric patient can result in shock or pulmonary edema ▶ Scene time for treatment of pediatric patients should be kept at a minimum. Most treatment should be done en route

SHOCK AND HYPOTENSION

- **Pediatric Routine Medical Care**
- **NOTE:** Shock in children may be subtle and hard to recognize. Determining BP may be difficult and readings may be inaccurate
- **IMPORTANT SIGNS OF SHOCK:**
  - ➔ Cool, clammy, mottled skin
  - ➔ Pallor - due to decreased skin perfusion
  - ➔ Altered level of consciousness - due to decreased perfusion to the brain
  - ➔ BP < 70 systolic
- **Initiate early transport and treat en route, if appropriate**
  - ➔ Go to Trauma Patient Care (**page 24**) if trauma suspected
  - ➔ Go to Allergic Reaction (**page 62**) if anaphylaxis suspected
- **Use an LBRT to determine pediatric drug doses**

(Shown underlined on the algorithm)



END OF LIFE CARE

- **Routine Medical Care**
- **Indications:**
  - ➔ Patient has a life limiting or terminal illness, prefers comfort-focused treatment, and has one of the following:
    - POLST form specifying DNAR and comfort-focused treatment **and/or:**
    - Patient is enrolled in hospice care
- **Goals:**
  - ➔ Reduce patient symptom distress and;
  - ➔ Maintain patient dignity by aligning care with stated end-of-life preferences

This new policy will be inserted before Death in the Field in th Field Manual.

All interventions should be minimally invasive with the goal to maintain patient comfort

- Airway – Position/Suction PRN
- Breathing – Oxygen PRN
- Circulation – Control hemorrhage
- Position of comfort
- Review and verify POLST/DNAR Documentation

↓

Discuss home care and/or transport options with patient or person holding legal authority to make medical decisions for the patient

↓

Is the patient on hospice care?

Yes → Contact hospice service and discuss care plan along with the patient/family

If there are any unresolvable issues regarding an appropriate care plan – contact the Base MD

No ↓

Naloxone administration is not advised

↓

Pain Management – Opioids are preferred
See Pain Management Protocol

↓

Initiate Assess and Refer to Hospice Care/Primary Care Provider if transport is declined or transport per agreed upon care plan

DEATH IN THE FIELD

1. INTRODUCTION

1.1 EMTs and paramedics do not pronounce death but rather determine death based on predetermined criteria. **An assessment by paramedics and consultation with the base hospital physician is required for determination of field death not covered by this policy**

1.2 Prehospital personnel are **not** required to initiate resuscitative measures when death has been determined or the patient has a valid "Prehospital Do Not Resuscitate" directive. Paramedics should contact the Base Physician anytime support in the field is needed

1.3 If a DNR directive is not present at the scene, but a person who is present and who can be identified as an immediate family member or spouse requests no resuscitation and has the full agreement of any others who are present on scene, resuscitation may be withheld or stopped if it has already been initiated

1.4 If **any** doubt exists, begin CPR immediately. Once initiated, CPR should be continued unless it is determined the patient meets determination of death criteria (section 2), a valid DNR form is presented (section 3) or the patient meets criteria to discontinue CPR (section 4), or criteria listed in section 1.3

Added

1.5 Multi-casualty incidents are an exception to this policy

1.6 The local public safety agency having jurisdiction will be responsible for the body once death has been determined. **A dead body may not be moved or disturbed until a disposition has been made by the coroner's bureau**

2. DETERMINATION OF DEATH

2.1 CRITERIA FOR DETERMINATION OF DEATH IN THE FIELD:

2.1.1 Apnea

2.1.2 Pulselessness - No heart tones ***and*** no carotid or femoral pulses.

2.1.3 Documented non-shockable rhythm:

- ▶ EMTs: A non-shockable rhythm on the monitor for one minute
- ▶ Paramedics: non-shockable rhythm on the monitor screen for one minute documented in 2 leads

2.2 Only the following patients who exhibit *all* of the above criteria for determination of death *and* one or more of the following conditions may be determined dead:

2.2.1 PATIENTS WHO ARE OBVIOUSLY DEAD ***Documentation of all Determination of Death criteria may not be necessary or possible in these patients*

- ▶ Decomposition of body tissues**
- ▶ Total decapitation**
- ▶ Total incineration**
- ▶ Total separation or destruction of the heart or brain**
- ▶ Any degree of rigor
- ▶ Lividity (dependant pooling of blood resulting in skin discoloration)

2.2.2 PATIENTS WHO ARE IN ARREST

- ▶ **Medical (Cardiac) Arrest** - Discontinuation of CPR: if non-shockable rhythm persists, despite appropriate, aggressive ALS interventions for 30 minutes (OR if ETCO2 is <10mmHg after 20 minutes in a patient with an advanced airway), consider discontinuation of CPR.
- ▶ **Trauma Arrest:** Adults only. (only paramedics may determine death using trauma arrest criteria)
- ▶ Blunt trauma arrest
- ▶ Penetrating trauma arrest
- ▶ Prolonged extrication (> 15 minutes) with no resuscitation possible during extrication

➔ **Exception:** Patients with **suspected hypothermia** will be resuscitated and transported to the closest most appropriate emergency department

2.3 **Actions**

2.3.1 Immediately notify the coroner and appropriate public safety agency (if not already done) and remain on the scene until they arrive

2.3.2 Complete an Electronic Health Record (EHR) documenting the above and assure that the EHR is sent to the Coroner's Bureau

2.3.3 Search for a donor card (see **page 91**)

2.3.4 Attach ECG readings to the EHR, if available

3. DO NOT RESUSCITATE (DNR)

3.1 ***Authority: Health and Safety Code, Division 2.5, Section 1798. Information contained in this policy is based on "Guidelines for EMS Personnel regarding Do Not Resuscitate Directives", Published by Emergency Medical Services Authority***

3.2 **Purpose:** To establish criteria for field personnel to determine the appropriateness of withholding or discontinuing resuscitative measures based on the wishes of the patient

3.3 **Philosophy:** Despite pre-planning, 9-1-1 is frequently activated when death is imminent. It is the intent of this policy to honor the wishes of the patient not to perform an unwanted resuscitation by establishing procedures whereby legitimate DNR directives are honored

3.4 **Definition:** Do Not Resuscitate (DNR) means **no**:

- ► assisted ventilation
- ► chest compressions
- ► defibrillation
- ► endotracheal intubation
- ► cardiotonic drugs

3.5 **Approved Prehospital DNR Directives:** - The Prehospital DNR form **may be an original or a copy**. All forms require the patient's signature (or signature of appropriate surrogate) and the signature of the patient's physician to be valid. Field personnel may withhold or discontinue resuscitative measures, if presented with **any one** of the following:

- ► A Physician Orders for Life-Sustaining Treatment (POLST) Program form.
- ► An approved medallion (e.g. “Medic-Alert”) inscribed with the words: "Do Not Resuscitate-EMS". Call the 800 number on the medallion for access to advance healthcare directives, including living wills, durable power of health care attorney documents, and organ, tissue, and anatomical gift donation information
- ► The patient's physician is present on scene and issues a DNR order, or issues a DNR order verbally over the phone to field personnel
- ► A DNR order signed by a physician in the patient's chart at a licensed health facility.
- ► An EMSA/CMA “Prehospital Do Not Resuscitate” form

3.6 **Medical Treatment of the patient with a DNR or End of Life Act directive:** If the patient requests treatment, including resuscitation, the request should be honored. The patient should receive treatment for pain, dyspnea, major hemorrhage, relief of choking or other medical conditions.

- ► However, if the patient is in cardiac arrest, the DNR directive should be honored
- ► Resuscitation should be witheld if there are DNR orders or evidence (e.g. - Final Attestation Form) that the patient is exercising their rights under the End of Life Act.

3.7 **Patient Identification:** Correct identification of the patient is crucial, but after a good faith attempt

to identify the patient, the presumption should be that the identity is correct if proper documentation is present and the circumstances are consistent. A reliable witness may be used to identify the patient, if available

3.8 **PROCEDURE - With an approved prehospital DNR directive (The POLST form is preferred) or meets criteria in section 1.3 of this protocol:** Added

3.8.1 Field personnel should not start resuscitation. If CPR or other resuscitative measures were initiated prior to the discovery of the DNR directive, discontinue resuscitation immediately

3.8.2 First Responders should cancel the ambulance response

3.8.3 If the patient is transported, a copy of the DNR directive should go with the patient

3.8.4 If the patient arrests en route: 1) do not start resuscitation and 2) continue to the original destination

3.9 **Documentation:**

3.9.1 If resuscitation was started and then discontinued, document the time on the EHR

3.9.2 A copy of the DNR directive should be attached to the EHR. If a copy is unavailable, document the following:

- ► The type of DNR directive (e.g.: written in the patient chart at a licensed care facility, issued verbally over the phone)
- ► The date the order was issued
- ► The name of the physician

3.9.3 If the patient's physician issued the DNR order verbally while **on scene**, document the name of the physician and have the physician sign the EHR

3.9.4 **Other forms or directives:** Advanced Health Care Directive (AHCD) (enacted in 2000) replaces the California Durable Power of Attorney for Health Care, the California Natural Death Act and living wills; although all of these forms are considered valid. The AHCD contains a section called "Health Care Instructions" that has specific information regarding options selected by the patient regarding resuscitation

4. DISCONTINUATION OF CPR

4.1 CPR may be discontinued:

- ► If CPR was started prior to the discovery of an approved DNR directive
- ► Upon further examination the patient meets the determination of death criteria
- ► Following an unsuccessful resuscitation - paramedics only
- ► Upon request of an immediate family member or spouse (as specified in section 1.3)

4.2 **Once CPR has been discontinued:** all therapeutic modalities initiated during the resuscitation must be left in place until it has been determined by the coroner's bureau that the patient will not be a coroner's case. This includes equipment such as: airways, endotracheal tubes, IV catheters, monitor electrodes, and personal items including clothing, jewelry etc.

4.3 **If the coroner's bureau releases the body while field personnel are still on scene:**

- ► Document the name and badge number of the coroner's investigator on the EHR
- ► Remove and properly dispose of all medical equipment used during the resuscitation attempt

5. **SEARCH FOR A DONOR CARD** *(Authority: § 7152.5 Health & Safety Code)*

5.1 The following persons shall make a reasonable search for a document of gift or other information identifying the bearer as a donor or as an individual who has refused to make an anatomical gift:

- **A law enforcement officer** upon finding an individual who the officer believes is dead or near death
- **Ambulance or emergency medical personnel**, upon providing emergency medical services to an individual, when it appears that death of that individual may be imminent. This requirement shall be secondary to the requirement that ambulance or emergency medical personnel provide emergency medical services to the patient

5.2 If a document of gift or evidence of refusal to make an anatomical gift is located by the search required above, the hospital and/or coroner's bureau (as applicable) shall be notified of the contents and the document or other evidence shall be sent with the patient

5.3 The above search and the results of the search must be documented on the EHR

5.4 A person who fails to discharge the duties imposed by this section is not subject to criminal or civil liability but is subject to appropriate administrative sanctions

HIPAA PERMITS DISCLOSURE OF POLST TO OTHER HEALTH CARE PROVIDERS AS NECESSARY

Physician Orders for Life-Sustaining Treatment (POLST)

EMSA #111 B
(Effective 1/1/2016)*

First follow these orders, then contact Physician/NP/PA. A copy of the signed POLST form is a legally valid physician order. Any section not completed implies full treatment for that section. **POLST complements an Advance Directive and is not intended to replace that document.**

Patient Last Name:	Date Form Prepared:
Patient First Name:	Patient Date of Birth:
Patient Middle Name:	Medical Record #: *(optional)*

A — CARDIOPULMONARY RESUSCITATION (CPR): *If patient has no pulse and is not breathing. If patient is NOT in cardiopulmonary arrest, follow orders in Sections B and C.*

Check One

☐ **Attempt Resuscitation/CPR** (Selecting CPR in Section A **requires** selecting Full Treatment in Section B)

☐ **Do Not Attempt Resuscitation/DNR** (Allow Natural Death)

B — MEDICAL INTERVENTIONS: *If patient is found with a pulse and/or is breathing.*

Check One

☐ **Full Treatment – primary goal of prolonging life by all medically effective means.**
In addition to treatment described in Selective Treatment and Comfort-Focused Treatment, use intubation, advanced airway interventions, mechanical ventilation, and cardioversion as indicated.

☐ ***Trial Period of Full Treatment.***

☐ **Selective Treatment – goal of treating medical conditions while avoiding burdensome measures.**
In addition to treatment described in Comfort-Focused Treatment, use medical treatment, IV antibiotics, and IV fluids as indicated. Do not intubate. May use non-invasive positive airway pressure. Generally avoid intensive care.

☐ ***Request transfer to hospital only if comfort needs cannot be met in current location.***

☐ **Comfort-Focused Treatment – primary goal of maximizing comfort.**
Relieve pain and suffering with medication by any route as needed; use oxygen, suctioning, and manual treatment of airway obstruction. Do not use treatments listed in Full and Selective Treatment unless consistent with comfort goal. ***Request transfer to hospital only if comfort needs cannot be met in current location.***

Additional Orders: _____

_____

C — ARTIFICIALLY ADMINISTERED NUTRITION: *Offer food by mouth if feasible and desired.*

Check One

☐ Long-term artificial nutrition, including feeding tubes. Additional Orders: _____

☐ Trial period of artificial nutrition, including feeding tubes. _____

☐ No artificial means of nutrition, including feeding tubes. _____

D — INFORMATION AND SIGNATURES:

Discussed with: ☐ Patient (Patient Has Capacity) ☐ Legally Recognized Decisionmaker

☐ Advance Directive dated _____, available and reviewed →
☐ Advance Directive not available
☐ No Advance Directive

Health Care Agent if named in Advance Directive:
Name: _____
Phone: _____

Signature of Physician / Nurse Practitioner / Physician Assistant (Physician/NP/PA)
My signature below indicates to the best of my knowledge that these orders are consistent with the patient's medical condition and preferences.

Print Physician/NP/PA Name:	Physician/NP/PA Phone #:	Physician/PA License #, NP Cert. #:
Physician/NP/PA Signature: *(required)*		Date:

Signature of Patient or Legally Recognized Decisionmaker
I am aware that this form is voluntary. By signing this form, the legally recognized decisionmaker acknowledges that this request regarding resuscitative measures is consistent with the known desires of, and with the best interest of, the individual who is the subject of the form.

Print Name:		Relationship: *(write self if patient)*
Signature: *(required)*	Date:	**FOR REGISTRY USE ONLY**
Mailing Address (street/city/state/zip):	Phone Number:	

SEND FORM WITH PATIENT WHENEVER TRANSFERRED OR DISCHARGED

Grief Support will be integrated with Death in the Field Policy

DEATH IN THE FIELD - GRIEF SUPPORT

1. **PHILOSOPHY**

1.1 The intent of this policy is to provide grief support to the families of deceased individuals who are not transported from the field. Grief Support will be available to assist families in dealing with the death of a family member.

1.2 Field personnel should identify the need for grief support **as soon as possible**, especially for an unexpected death or if considering discontinuation of CPR in the field.

1.3 Field personnel should follow their agency/department procedure for initiating grief support

2. **RESPONSIBILITIES**

2.1 Assist the family in dealing with the death, or anticipated death, of the patient.

2.2 If resuscitation is in progress determine if the family wants the patient transported to the hospital.

2.3 Once death has been determined:

- ► remain on scene with the family to provide support and assist with decisions
- ► contact all appropriate agencies (e.g. Police, Coroner) if not already done
- ► remove all medical equipment used during the resuscitation if cleared by the Coroner's bureau (see "Death in the Field - Discontinuation of CPR" **page 90**).
- ► assist with the notification of clergy, if requested
- ► provide information regarding the disposition of the remains

3. **GRIEF SUPPORT GUIDELINES:**

Breaking the News. . .

- Physically join the family.
- Introduce yourself.
- Go over with the family what has been done, what interventions have been tried.
- *"The paramedics (we) found your [husband, wife, daughter, etc.] not breathing. We began CPR. I am very sorry to tell you but your [husband, wife, daughter, etc.] has died."*
- Give the family time to react don't leave.

Grief Support Skills

- Ask the family if there is someone they would like you to call. Find a neighbor.
- Things to say:
  - ► *"Mrs. Smith, tell me what happened today"*
  - ► *"I am sorry Joe has died."*
  - ► *"This is a difficult time, it is OK to cry"*
  - ► *"You may not remember all I have said right now and that's OK."*
  - ► *"I will be available later to talk to you"*
  - ► *"I don't know but I will find out"*
- Remember: You cannot fix grief. Just give it an honest and safe place to exist.
- Give the family the grief support brochure.

Tell the family what happens next

- The coroner must be notified (Paramedics and/or police to do this)
- Ask if the family has selected a mortuary.
- Get the private doctors name and as much patient history as possible (including medications that indicate specific medical conditions)

Coroner's Case

- Cause of death must be investigated.
- Investigator can explain more.
- Police must stay if a coroner's case. (may choose to stay until mortuary arrives if not a coroner's case)
- Mortuary will pick up at coroner's office.
- Explain scene preservation nothing may be moved or disturbed.

Mortuary Case

- Family should choose and call a mortuary.
- Ask family/friends/church for suggestion.
- Mortuary will come to the scene.
- Remove and dispose of all medical equipment.
- Body may be left with family if they are OK and not a coroner's case. Ask how they feel.

Knowing when to Leave

- Tell them it is time for you to go *"is there anything else I can do?"*
- Go through the grief support brochure, point out referral numbers. Give them your card or how they can reach you.
- Offer your condolences shake hands or touch if appropriate.
- Leave

EQUIPMENT AND SUPPLY SPECIFICATIONS - ALS/BLS

▶MINIMUM SUPPLY SPECIFICATIONS	BLS	ALS Non-Transport	ALS Transport
AIRWAY EQUIPMENT			
▼Airways:			
• Oropharyngeal (Sizes 0 - 6).....	1 each	1 each	2 each
• Nasopharyngeal (soft rubber)			
»14 Fr., 18 Fr., 22 Fr., 26Fr.	1 each	1 each	1 each
»30 Fr.	1	1	1
»32 Fr.	1	1	2
»34 Fr.	1	1	1
▶Atomizer for intranasal medication administration	1	1	3
▶County Approved Continuous Positive Airway Pressure (CPAP) Device		1	1
▶Impedance Threshold Device (ResQPOD® ITD-16).....ITD-16 specified		1	1
▼Intubation Equipment:			
• County approved video laryngoscopy device	.....	1 (optional)	1 (optional)
• Laryngoscope (handle)	.....	1	1
• Batteries (extra)	.....	1 set	1 set
• Blades (curved McIntosh):			
• Adult			
»# 4	.....	1	1
»# 3	.....	1	1
• Pediatric			
»# 2	.....	1	1
»# 1	.....	1	1
• Adult (Straight Miller)			
»# 4	.....	1	1
»# 3	.....	1	1
• Pediatric			
»# 2	.....	1	1
»# 1	.....	1	1
• Magill forceps:			
»Adult	.....	1	1
»Pediatric	.....	1	1
• Adult (cuffed with adaptor)			
»Size 6.0	.....	1	2
»Size 6.5	.....	1	2
»Size 7.0	.....	1	2
»Size 7.5	.....	1	2
»Size 8.0	.....	1	2
• Stylet			
»Adult	.....	1	1

EQUIPMENT AND SUPPLY SPECIFICATIONS - ALS/BLS

MINIMUM SUPPLY SPECIFICATIONS	BLS	ALS Non-Transport	ALS Transport
• i-gel Supraglottic Airway			
» Size 1.0		1 (optional)	1 (optional)
» Size 1.5		1	1
» Size 2.0		1	1
» Size 2.5		1	1
» Size 3		1	1
» Size 4		1	1
» Size 5		1	1
• Disposable Waveform Capnography	2 (optional)	2	5
• ET Tube Holder			
» Adult		2	3
• Tracheal tube introducer (bougie)		1	2
▼Nebulizer			
• Patient Activated		1	2
• Hand-held for Inhalation		1	2
• In-Line nebulizer equipment with 22 & 24 mm “T-piece”		1	2
▼Oxygen equipment and supplies:			
• O_2 Tank (portable)	1	1	1
• Non-rebreather masks (transparent)			
» Adult	2	1	2
» Pediatric/Infant	1	1	1
» Nasal cannula for O_2 administration	2	1	2
» Portable Pulse-Oximetry	1	1	1
» Adult end-tidal CO_2 sampling nasal cannula		1	1
» Pediatric end-tidal CO_2 sampling nasal cannula		1	1
▶County-approved pleural decompression kit		1	2
▼BVM with O_2 reservoir and facemask Reworded, par levels unchanged			
• Adult	1	1	1
• Pediatric	1	1	1
• Infant	1	1	1
▼Suction equipment and supplies:			
• Rigid Suction Catheter	1	1	2
• Suction apparatus (portable)	1	1	1
• Suction catheters, pediatric:			
» 6 Fr	1	1	1
» 10 Fr	1	1	1
» 18 Fr	1	1	1
• Suction Canisters	1	1	1

EQUIPMENT AND SUPPLY SPECIFICATIONS - ALS/BLS

MINIMUM SUPPLY SPECIFICATIONS	BLS	ALS Non-Transport	ALS Transport
DRESSING MATERIALS			
▶ **County Approved Chest Seals**		2	3
▶ **Adhesive bandages (Assorted)**	1 container	1 container	1 container
▶ **Cold Pack**	2	2	2
▼ **Dressing Materials**			
• 4” by 4” gauze	12	6	12
• 10 by 30” or larger universal dressings	2	2	3
• ABD pad (9 x 5”)	2	2	2
• Roller bandages Reworded, par levels unchanged			
»2”	2	1	2
»3”	2	1	2
»4"	2	2	2
• QuikClot® Combat Gauze™		1 (Optional)	1 (Optional)
▶ **Elastic Bandage 3”** (ACE Style Bandage)	1	1	1
▶ **Scissors** (heavy duty)	1	1	1
▼ **Splints** - cardboard splint with a soft or cushioned surface, flexible, form-fitting splint (e.g. SAM or vacuum splint):			
• Adult Arm	1	1	2
• Adult Leg	1	1	2
• Traction Splint Required for 911 BLS	1 (optional for IFT)	1	1
▼ **Tape**			
• 1”	1 roll	1 roll	1 roll
• 2”	1 roll	1 roll	1 roll
▶ **Triangular Bandage**	1	1	2
▶ **County Approved Tourniquet (for hemorrhage control)**	1	1	1
EQUIPMENT AND SUPPLIES			
▼ **Automated External Defibrillator (AED) equipment**			
• Automated External Defibrillator - pediatric ready	1		
• “Hands- off” defib pads			
»Adult	1 set		
»Pediatric	1 set		
▶ **Blanket Disposable**	1	1	1
▼ **Blood pressure cuff (portable):**			
• Adult	1	1	1
• Obese		1	1
• Pediatric	1	1	1
• Infant		1	1
▶ **Bulb Syringe** (optional if supplied in Delivery Kit)	1	1	1
▶ **Burn Sheets (sterile)**	1	1	1
▶ **CO Monitor**		1 (Optional)	1 (Optional)

EQUIPMENT AND SUPPLY SPECIFICATIONS - ALS/BLS

MINIMUM SUPPLY SPECIFICATIONS	BLS	ALS Non-Transport	ALS Transport
▼**Delivery Kit** **Sterile, prepackaged to include:** • a minimum of two (2) umbilical cord clamps • scissors (may be packaged separately) • aspirating bulb syringe • gloves • drapes • antiseptic solution	1	1	1
ALCO EMS will continue to provide printed manuals for each apparatus			
▶**EMS Field Manual** (may be print or digital copy)	1	1	1
▶**Gloves, disposable**	1 box	1 box	2 boxes
▶**Glucometer**	1	1	1
▼**Irrigation Equipment:** Added			
»Sterile Saline or Sterile Water for irrigation	2	1 (Optional)	2
»Tubing for irrigation	.....		1
▶**EMS Approved Length Based Resuscitation Tape - (LBRT)**		1	1
▶**Lubricant, water soluble**	2 packs	2 packs	2 packs
▶**County Approved Mechanical CPR Device**		1 (Optional)	1 (Optional)
▼**Monitor/defibrillator equipment:** • Defibrillator Must have strip recorder, synchronized cardioversion and transcutaneous pacing capability, and be portable & operational. Both monophasic and biphasic waveform defibrillators are acceptable; however, biphasic is preferred. Energy level dependent upon manufacturer.		1	1
• Batteries, extra (if available)	.....	1 set	1 set
• "Hands-off" defib pads			
»Adult	.....	1 set	1 set
»Pediatric	.....	1 set	1 set
• EKG electrodes.....	.....	3 packs	6 packs
• 12-lead EKG capability	.....	1	1
▶**Pen Light**	1	1	1
▶**Point of Wounding (POW) Kit** (Items located in this kit may be counted towards minimums of other items in this table)	1	1	1
Optional removed for BLS. ALCO EMS will provide initial required POW kits			
▶**Radio unit(s)** Must be able to function with all facets of the current EBRCS radio system	1	1	1
▶**Thermometer - patient safe**	1	1 (optional)	1
▶**Triage Tags**	20	20	20
▶**Triage Tape**	1 roll ea. - red, yellow, green, black		
▶**Scoop Stretcher or equivalent**	1 (optional for IFT)		1

EQUIPMENT AND SUPPLY SPECIFICATIONS - ALS/BLS

▶MINIMUM SUPPLY SPECIFICATIONS	BLS	ALS Non-Transport	ALS Transport
▶**Flexible multi-positional patient carrying device** (optional)	1	1	1
▶**Stethoscope**	1	1	1
▶**Stretcher**	1		1
IMMOBILIZATION EQUIPMENT			
▶**Cervical collars - Rigid:** Sizes to fit all patients over one year old	1 each size	1 each size	2 each size
▶**Head immobilizer** that provides lateral and built-in occipital support	1	1	2
▼**Spine boards** (rigid)			
• Long board (72" x 14") with removable 5-strap adjustable immobilization device	1	1	1
• Pediatric with velcro straps and head harness	1 (optional for IFT)	1	1
(LBRT holder optional)			
▶**Vacuum Mattress**	1 (optional)	1	1
▶**Athletic helmet face mask removal tool (optional)**	1	1	1
IV EQUIPMENT/SYRINGES/NEEDLES			
▼**Armboards**			
• Short			1
• Pediatric		1	1
▼**Catheters**			
• 16 gauge		1 (optional)	2
• 18 gauge		2	2
• 20 gauge		2	2
• 22 gauge		2	2
• 24 gauge		2	2
▶**Chlorhexidine**		6	12
▼**Handheld Battery Powered Intraosseous Equipment**			
• EZ-IO® Driver		1	1
• 15 mm Needle Set (pink hub, 3kg-39kg)		1 (optional)	2 (optional)
• 25 mm Needle Set (blue hub, >3kg)		1	2
• 45 mm Needle Set (yellow hub, >40kg with excessive tissue)		1	2
• Vascular access pack		1	2
▼**Needles**			
• 22 g x 1.5"		1	4
• 23 g x 1"		1	2
• 18 g x 1½" 5 micron filter needle (optional)		1	2
▶**Pressure Infusion Bags**		1	1
▶**Saline Lock**		2	2
▼**Syringes - Luer-Lock type**			
• 1 mL	1	1	2

EQUIPMENT AND SUPPLY SPECIFICATIONS - ALS/BLS

MINIMUM SUPPLY SPECIFICATIONS	BLS	ALS Non-Transport	ALS Transport
• 3 mL		1	2
• 10 mL		2	2
• 30 mL		1	2
▶ **T-connector**		1	2
▶ **Tourniquet (for IV start)**		1	1
▶ **Tubing -** Adjustable flow 3-way administration set		1	2
MEDICATIONS AND SOLUTIONS - preloads preferred			
▶ **Adenosine 6 mg / 2 mL NS**		1	2
▶ **Adenosine 12 mg / 4 mL NS**		1	2
▶ **Albuterol 2.5 mg in 3 mL NS**		2	4
▶ **Amiodarone 150 mg in 3 mL or 150 mg in 100 ml premixed bag** Added premixed bag		2	3
▶ **Aspirin 81 mg chewable tablet or 325 mg/5 gr. tablet**	1 bottle	1 bottle	1 bottle
▶ **Atropine Sulfate 1 mg / 10 mL** Modified par levels		3	3
▶ **Autoinjector antidote kit (optional)** (atropine 2mg in 0.7mL's & pralidoxime chloride 600mg in 2 mL's)	3 per person	3 per person	3 per person
▶ **Calcium Chloride 1 gm / 10 mL**		1	1
▶ **Charcoal, 25 grams**		1 bottle	2 bottles
▶ **Dextrose 10% in 250mL bags**		1	2
▶ **Diphenhydramine 50 mg / 1 mL**		1	2
▶ **Epinephrine 1mg / mL 1 mg / 1 mL**		2	2
▶ **Epinephrine 0.1mg/mL 1 mg / 10 mL**		3	3
▶ **Epinephrine Auto-Injectors** Adult 0.3mg, Pediatric 0.15mg ▶ **Epinephrine 1mg / mL 1 mg / 1 mL**	1 of each Auto-injector or 1 vial		
▶ **Fentanyl 100 mcg / 2 mL**		2	2
▶ **Glucagon 1 mg Kit**		1	1
▶ **Glucose (Oral) - 31 gms**	2	2	2
▶ **Hydroxocobalamin 5g / 250ml**		Optional	
▶ **Ipratropium (Atrovent) 500 mcg (2.5 mL)**		1	2
▶ **Ketamine (Ketalar) 500 mg / 10 ml (50 mg / ml)** Added		1	1
▶ **Ketorolac (Toradol) 15mg / 1ml**		1	1
▶ **Lidocaine 2% 40 mg / 2 mL**		1	1
▶ **Midazolam 10 mg / 2 mL**		2	2
▶ **Naloxone 2 mg / 2 mL**	2	2	2
▶ **Nitroglycerine**		1 bottle	1 bottle
▶ **Olanzapine (Zyprexa) 10mg oral dissolving tablets**		2	2
▶ **Ondansetron (Zofran) 4mg / 2 mL for IV/IM injection**		1	2
▶ **Ondansetron (Zofran) 4mg oral dissolving tablets**		2	4

EQUIPMENT AND SUPPLY SPECIFICATIONS - ALS/BLS

▶MINIMUM SUPPLY SPECIFICATIONS	BLS	ALS Non-Transport	ALS Transport
▶**Saline, sterile (for injection) 10 mL**		2	2
▶**Sodium bicarbonate 50 mEq / 50 mL**		1	2
▶**Sodium Thiosulfate 12.5 gms with 10 gtt/mL vented tubing**	1 (Supervisor or Battalion Chief)		
▶**Tranexamic Acid**		1	1
▼**Bags for infusion**			
• D_5W or Normal Saline 100mL		1	2
• Normal Saline (NS)- May use 500mL or 1000mL bags		1,000mL	2,000mL

RESTRAINTS

1. Patient restraints are to be utilized only when necessary and in those situations where the patient is exhibiting behavior deemed to present danger to him/herself or to the field personnel. When restraints are used:

    1.1 The minimum restraint necessary, to accomplish necessary patient care and safe transportation, should be utilized

    1.2 Circulation to the extremities (distal to the restraints) will be evaluated q 5 minutes

    1.3 Leather or soft-restraints, designed specifically for patient restraint, are the only authorized method of restraining patients. **Added**

    1.4 The restraints must not be placed in such a way as to preclude evaluation of the patient's medical status (e.g. airway, breathing, circulation) necessary patient care activities, or in any way jeopardize the patient medically

2. If the patient is under arrest and handcuffs are applied by law enforcement officers:

    2.1 The patient will not be cuffed to the stretcher and a law enforcement officer shall accompany the patient in the ambulance, if the handcuffs are to remain applied

    2.2 A law enforcement officer may elect to follow the ambulance in a patrol car to the receiving facility if the patient has been restrained on the gurney using leather restraints

INTRAOSSEOUS ACCESS PROCEDURE

1. **PURPOSE:** To obtain rapid circulatory access to provide necessary intravenous fluids or medications

2. **INDICATIONS:**
   - ▶ Consider for use in any unconscious or seriously ill or injured patient in whom IV access cannot be established in a very timely fashion
   - ▶ Any medications or fluids that can be given in a peripheral vein can be given intraosseous

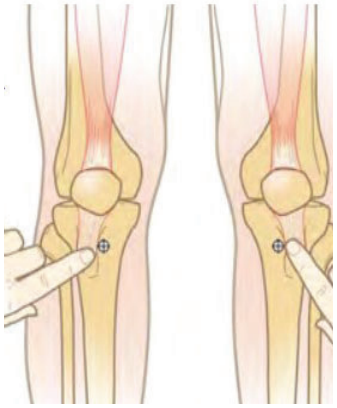
3. **CONTRAINDICATIONS:**
   - ▶ Fracture in target bone
   - ▶ Previous, significant orthopedic procedure at the site, prosthetic limb or joint
   - ▶ IO catheter use in past 48 hours of the target bone
   - ▶ Infection at the area of insertion
   - ▶ Excessive tissue (severe obesity) and/or absence of adequate anatomical landmarks

4. **APPROVED IO ACCESS SITES (see addtional references below):**
   - 4.1 Proximal Tibial Tuberosity
   - 4.2 Proximal Humerus
   - 4.3 Distal Femur (≤10 y/o) Site Added

5. **NEEDLE SIZING REFERENCE**
   - ▶ 15 mm Needle Set (pink hub, 3kg-39kg)
   - ▶ 25 mm Needle Set (blue hub, >3kg)
   - ▶ 45 mm Needle Set (yellow hub, >40kg with excessive tissue)

6. **IO ACCESS SITE PAIN MANAGEMENT**
   - 6.1 If the patient is responsive to pain, consider Pain Management Adult **page 41**, Pediatric **page 66**. Also, consider use of 2% Lidocaine for anesthetic effect. Prime EZ-Connect extension set with lidocaine *Note that the priming volume of the EZ-Connect is approximately 1.0mL*
     - ▶ ADULT - 40mg (2 mL) 2% Lidocaine *slowly over 120 seconds*. Let Lidocaine dwell for 60 seconds. Flush with 5 to 10ml NS. Slowly administer an additional 20mg of lidocaine IO over 60 seconds. Repeat PRN
     - ▶ PEDIATRIC - 0.5mg/kg (not to exceed 40mg) 2% Lidocaine *slowly over 120 seconds*. Let Lidocaine dwell

Proximal Tibia



Proximal Humerus

Distal Femur (≤10 y/o)