AMBULANCE REROUTING CRITERIA

(Abbreviated version - see Ambulance Rerouting policy in the Administration Manual for the complete policy)

REASONS FOR REROUTING OF AMBULANCES – Conditions that may necessitate REROUTING are:

- **CT Failure** - When the CT scanner is inoperative, patients demonstrating neurological signs/symptoms of stroke, or acute head injury will be diverted.

- **Trauma Center Overload** - When it has been determined that the hospital is unable to meet the criteria for a Level II Trauma Center in Alameda County (O.R. is full).

- **STEMI Diversion** - STEMI/Cardiac Arrest Receiving Centers may divert due to diagnostic or treatment equipment failure or scheduled maintenance for patients experiencing acute MI or post cardiac arrest.

- **Stroke Center Diversion** - Certified Stroke Centers may divert due to diagnostic or treatment equipment failure or scheduled maintenance for patients exhibiting signs of acute stroke symptoms/stroke alert.

- **Physical Plant Casualty (Internal Disaster)** - An unforeseeable physical or logistical situation/circumstance - (e.g., fire, bomb threat, power outage, etc.) that curtails routine patient care and renders continued routine ambulance delivery unsafe. A receiving hospital or trauma center may divert any patient, including critical trauma patients (CTP) as deemed necessary by the facility during this type of incident. The hospital must come off Physical Plant diversion immediately upon resolution of the issue.

<table>
<thead>
<tr>
<th>Reasons for Rerouting</th>
<th>Maximum time allowed</th>
<th>Condition</th>
<th>Types of patients rerouted</th>
<th>Appropriate facility for rerouted patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computerized Tomography (CT)</td>
<td>Until resolved</td>
<td>CT inoperative</td>
<td>➤ Acute head injury ➤ Acute Stroke by CPSS</td>
<td>➤ Nearest Trauma Center ➤ Closest Stroke Center</td>
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<td>Trauma Center Overload</td>
<td>Until resolved</td>
<td>Trauma resources depleted</td>
<td>Critical Trauma Patients</td>
<td>Designated Trauma Center</td>
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<td>STEMI (equip. failure)</td>
<td>Until resolved</td>
<td>Diagnostic, Equipment failure or Scheduled Maintenance</td>
<td>STEMI/ post cardiac arrest</td>
<td>Closest STEMI/Cardiac Arrest Center</td>
</tr>
<tr>
<td>Stroke Center (equip. failure)</td>
<td>Until resolved</td>
<td>Diagnostic, Equipment failure or Scheduled Maintenance</td>
<td>Stroke patients</td>
<td>Closest Stroke Center</td>
</tr>
<tr>
<td>Physical Plant Casualty</td>
<td>Until resolved</td>
<td>Physical plant breakdown (bomb threat; fire, etc.)</td>
<td>All</td>
<td>Closest appropriate facility</td>
</tr>
</tbody>
</table>

**AREA INTENTIONALLY BLANK**
Hyperkalemia is common in patients with severe renal failure (particularly those on dialysis) and should be suspected when these patients have weakness/fatigue, nausea/vomiting, chest pain, palpitations, shortness of breath, or numbness/tingling. Hyperkalemia can lead to a progression of EKG changes that can ultimately result in life threatening dysrhythmias. Treatment in the prehospital setting is based on the severity of the EKG, is temporizing until definitive treatment is achieved in the hospital, and aims to stabilize patients with the potential to arrest or become unstable.

Typical Signs and Symptoms of Suspected Hyperkalemia
- Weakness/Fatigue
- Nausea/Vomiting
- Chest Pain
- Palpitations
- Shortness of Breath
- Numbness/Tingling

Significant EKG Change Progression?

Yes

- **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 over 60 seconds
- **Albuterol (only)** 10 - 20mg by nebulizer or via BVM

Cautions:
- Albuterol may exacerbate tachycardia
- Sodium Bicarbonate may exacerbate volume overload

No

Reassess as needed
SCOPE OF PRACTICE - LOCAL OPTIONAL

1. Local Optional Scope of Practice – requires authorization from State EMS Authority
   1.1 ALS PERSONNEL:
      1.1.1 Nerve agent exposure drugs:
         - Autoinjectors - for self-administration
         - Pralidoxime chloride (2-PAM) – (patient administration, HazMat trained paramedics only)
         - Atropine – (patient administration, HazMat trained paramedics only)
      1.1.2 Olanzapine (Zyprexa)
      1.1.3 Sodium Thiosulfate
      1.1.4 Tranexamic Acid (TXA)
      1.1.5 Hydroxocobalamin (optional)

2. Approved for use in Alameda County – requires additional training
   2.1 ALS PERSONNEL:
      2.1.1 Pulse-oximetry
      2.1.2 Length-based resuscitation tape
      2.1.3 Meconium aspirator
      2.1.4 End-tidal CO₂ detection (colorimetric or capnographic technologies)
      2.1.5 12-lead EKG – optional for first responder agencies
      2.1.6 King-LTD supraglottic airway device
      2.1.7 Continuous Positive Airway Pressure (CPAP)
      2.1.8 Intraosseous Infusion – Adult and Pediatric

2.2 BLS PERSONNEL:
   2.2.1 King-LTD supraglottic airway device - optional (see “Advanced Airway Management” page 118)
   2.2.2 Aspirin*
   2.2.3 Pulse Oximetry *
   2.2.4 Glucometry *
   2.2.5 Epinephrine *
   2.2.6 Narcan *
   2.2.7 If using King-LTD:
      - End-tidal CO₂ detection (colorimetric or capnographic technologies)

   *Approved for 911 BLS first responders and transport. Optional for interfacility BLS transport.

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
1. **DESCRIPTION** - Tranexamic Acid (TXA) is a Lysine analogue that works to inhibit the formation of plasmin, which is a molecule responsible for clot degradation. It has had multiple medical applications in the past including pre-operative use, menorrhagia, hemophilia and hereditary angioedema. It has recently been shown in multiple studies to reduce mortality in trauma patients meeting specific physiologic criteria or who have obvious signs of massive hemorrhage.

2. **INCLUSION/EXCLUSION CRITERIA**

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Within three hours, the prehospital use of TXA should be considered for all blunt or penetrating trauma patients with signs and symptoms of hemorrhagic shock that meet any one of the following inclusion criteria:</td>
<td>• Any patient &lt;15 years of age</td>
</tr>
<tr>
<td>• SBP &lt; 90 mmHg</td>
<td>• Any patient more than three hours post-injury</td>
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<tr>
<td>• Significant hemorrhage with a HR &gt; 120</td>
<td>• Isolated penetrating cranial injury</td>
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<tr>
<td>• Bleeding not controlled by direct pressure or tourniquet</td>
<td>• Traumatic brain injury with brain matter exposed</td>
</tr>
<tr>
<td>• Major amputation of any extremity above the wrists or ankles</td>
<td>• Documented cervical cord injury with motor deficits</td>
</tr>
</tbody>
</table>

3. **ADMINISTRATION**

3.1 Administer TXA 1 gram in 100ml NS or D₅W IV/IO over 10 minutes

   *Do NOT administer IV push. This will cause hypotension.*

3.2 Place an approved wristband on the patient.

3.3 Follow IV fluid resuscitation guidelines on page 23, “Trauma Patient Care”
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.
• HIVES/ITCHING or FLUSHED SKIN often accompanies anaphylaxis, but is not always present.

**NOTES**
* If patient develops signs of anaphylaxis, go to other arm of this algorithm.
** In elderly, small, or in patients with mild symptoms or history of CAD, consider lower dose (0.3mg IM).
*** 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.
**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

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**CPR**
- (see note above)
- ITD (See page 131)
- \(O_2\) – High Flow Monitor

---

**IV / IO NS**
- Epinephrine 0.1mg/mL
- 1 mg IV/IO

---

**Shockable rhythm?**
- Yes
- Go to:
  - Return of Spontaneous Circulation
  - page 48
  - or
  - Appropriate Dysrhythmia Policy

- No
- *Place advanced airway*

---

**Organized Rhythm and pulse present?**
- Yes
- Consider:
  - ^Discontinue CPR
  - See page 88
  - or
  - Continue CPR
  - Transport

- No
- \^Discontinuation of CPR: If non-shockable rhythm persists, despite appropriate, aggressive ALS interventions for 30 minutes, consider discontinuation of CPR

---

**REVERSIBLE CAUSES**
- Hypovolemia
- Hypoxia
- Hydrogen ions (Acidosis)
- Hypo / Hyperkalemia
- Hypothermia
- Tablets or Toxins
- Tamponade
- Tension pneumothorax
- Thrombosis (MI, CVA)
- Thromboembolism (PE)

---

**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

---

**NOTE:**
- If after 2 minutes of continuous chest compressions and BVM support an immediate endotracheal airway can not be obtained, consider use of supraglottic airway

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*[5/17/18 DRAFT]*
**Defibrillate (see note)**
- Resume CPR
- Place advanced airway
- IV/IO NS

**Note - Defibrillation:**
Refer to manufacturer’s documentation for energy dose recommendations

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**Defibrilla...
AIRWAY OBSTRUCTION

- **Pediatric Routine Medical Care**
  - If airway obstruction is caused by laryngeal trauma, see page 24 “Trauma Patient Care”
  - Do not use a tongue/jaw lift or perform blind finger sweeps
  - Obstruction due to suspected epiglottitis:
    - Do not attempt to visualize the throat or insert anything into the mouth
  - **Note:** Perform endotracheal intubation only if BVM ventilation is unsuccessful or impossible.

- **Rapid Transport**
  - Note: Manage the patient's airway with proper airway positioning, simple airway adjuncts, suctioning and bag valve mask ventilation as necessary. Consider Advanced Airway Management (pg. xx) for patients >= 40 kg if BVM ventilation is not adequate.

```
  Yes
  No

  If the patient is < 1 year old:
  - Deliver 5 back blows followed by 5 chest thrusts.

  If the patient is ≥ 1 year old:
  - Apply abdominal thrusts in rapid sequence.
  - If ineffective, consider chest thrusts.

  If the patient becomes unresponsive:
  Check for F.B.
  Only remove if seen in the pharynx

  Assist Ventilation with Bag-Valve-Mask or Attempt Intubation (see note)

  Able to ventilate adequately?
  Yes
  No

  Maintain airway and Oxygen
  Transport to the closest ED
```

*Signs of severe obstruction*
- Poor air exchange
- Increased breathing difficulty
- Silent cough
- Cyanosis
- Inability to speak or breathe
- Ask the patient “Are you choking”? If patient nods yes, act
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:** 0.15mg IM via Autoinjector or EpiSafe Type Syringe

**ALS:** 0.01 mg/kg IM
- Minimum single dose 0.1 mg
- Maximum single dose 0.5 mg
- May Repeat x1 in 15 min.

**SIGNS OF SHOCK?**

**YES**

- **IV/IO NS FLUID BOLUS** NS 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 q10 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.
NEONATAL RESUSCITATION

**Pediatric Routine Medical Care**
- Resuscitation should be initiated on all premature infants who meet the following criteria:
  - **Weight:** > 500 gms or 1 pound and **Gestational Age:** ≥ 20-24 weeks
  - If naloxone considered for persistent respiratory depression, HR and color must first be restored
  - Avoid naloxone for neonates whose mothers are suspected of long-term exposure to opioids
  - **Note:** Perform endotracheal intubation only if BVM ventilation is unsuccessful or impossible
  - **Use an LBRT to determine pediatric drug doses** (Shown underlined on the algorithm)

Manage the patient's airway with proper airway positioning, simple airway adjuncts, suctioning and bag valve mask ventilation as necessary

**Term Gestation?**
- Amniotic fluid clear?
- Breathing or crying?
- Good muscle tone?

**Breathing & HR > 100?**
- Pink?
- Cyanotic?

**Supplemental O₂**
- Persistent Cyanosis?

**Positive pressure ventilation**
- 40-60 breaths/minute

**Post Resuscitation care**
- Effective ventilation, **HR > 100 & color pink**

**NOTE:** Routine suctioning of vigorous, full term newborns at birth is not indicated. Wiping the face, nose, mouth is preferred

**Yes**
- Provide warmth
- Clear airway if needed
- Dry, stimulate, reposition

**No**
- Apneic or **HR < 100**

**Yes**
- HR < 60?

**Effective ventilation, **HR > 100 & color pink**

**Yes**
- Continue ventilation
- Administer chest compressions compression:ventilation ratio 3:1 (90:30 for a total of 120 combined events/minute)

**Epinephrine 0.1mg/mL**
- 0.01 mg/kg IV/ IO (0.1ml/kg)
- **Fluid bolus** 10 ml/kg – may need to repeat

**Yes**
- HR < 60?
POISONING | INGESTION | OVERDOSE

**Pediatric Routine Medical Care**
- **Protect Yourself!** - See page 157 "Medical Management of Hazardous Materials"
- **Identify substance** – contact the Base Physician regarding other treatment options. Bring any containers, labels or a sample (if safe) into the hospital with the patient
- **Determine type, amount, and time of the exposure**
  - **Base Physician consult** for treatment options if suspecting: organophosphate poisoning, or calcium channel or beta blocker OD. Consider contacting Poison Control for other substances **800-222-1222**
- Remove contaminated clothing. Brush powders off, wash off liquids with large amount of water
- Withhold charcoal if rapidly decreasing level of consciousness a possibility (e.g., tricyclic OD)
- **Note:** Perform endotracheal intubation only if BVM ventilation is unsuccessful or impossible
- **Use an LBRT to determine pediatric drug doses** (Shown underlined on the algorithm)

**Algorithms**

### Ventilating adequately, alert with a good gag reflex?
- Yes
  - If non-acid, non-caustic non-petroleum consider: **Charcoal** 1 gm/kg po
  - If within one hour of ingestion Max dose of 50 grams
  - If tricyclic antidepressant suspected: **Bicarb** 1 mEq/kg IV
  - For late stage seizure go to: **Seizure page 78**

- No
  - **Assist respiration with BVM, or Intubate** (see note above)
  - For patients with suspected narcotic OD go to Respiratory Depression page 74

### Reasses as needed
- Yes
  - **Adequate response?**
  - No
    - **For more than one dose of Naloxone**
  - Yes
    - **Base Physician order**
**Pulseless Arrest: Asystole, PEA**

- **Pediatric Routine Medical Care**
  - In PEA, identify other causes and treat (See CPR page 10)
  - **Note:** Perform endotracheal intubation only if BVM ventilation is unsuccessful or impossible.
  - **Use an LBRT to determine pediatric drug doses** (Shown underlined on the algorithm)

---

**CPR**
- **O₂ – High Flow**
- **Monitor**

- **Shockable rhythm?**
  - Yes: Resume CPR
  - No: Do not interrupt CPR to administer medications

**Resume CPR**
- **IV/ IO NS**
- **Intubate as needed**

**Epinephrine 0.1mg/mL**
- 0.01 mg/kg IV/IO (0.1 ml/kg)
- Repeat q 3-5 minutes
- Q 10 minutes, up to 3 doses

- **2 minutes CPR**
  - 30:2 5 cycles 1 rescuer
  - 15:2 10 cycles 2 rescuers
- Check rhythm

**Base Physician Consult**
- **Non-shockable rhythm continues?**
  - Yes:
    - **Discontinuation of CPR:** if non-shockable rhythm persists, despite appropriate ALS interventions and up to three rounds of drugs, consider discontinuation of CPR
    - Continue CPR and drug administration
    - Transport
  - No: Go to appropriate dysrhythmia protocol

**If pulse present - post resuscitation care**
PULSELESS ARREST: VF/ VT

- **Pediatric Routine Medical Care**
- **Note:** Perform endotracheal intubation only if BVM ventilation is unsuccessful or impossible
- **Use an LBRT to determine pediatric drug doses**

(Shown underlined on the algorithm)

**Note:** Manage the airway with proper airway positioning, simple airway adjuncts, suctioning and bag valve mask ventilation as necessary. For patients > 40 kg, see Advanced Airway Management pg. xx

**Witnessed/Unwitnessed Arrest**
- CPR until defibrillator available/charged
- \( O_2 \) – High Flow Monitor

   - **Shockable rhythm?**
   - Yes: Defibrillate 2 J/kg, Resume CPR, **Intubate as needed**, IV/IO NS
   - No: Continue CPR

   - **2 minutes CPR**
     - 30:2: 5 cycles 1 rescuer
     - 15:2: 10 cycles 2 rescuers
   - Check rhythm
   - **Shockable rhythm?**
   - Yes: CPR while defibrillator charging, Defibrillate 4 J/kg, Resume CPR
   - No: Go to: Pulseless Arrest – Asystole/PEA

   - **Epinephrine 0.1 mg/mL IO/IV:**
   - 0.01 mg/kg (0.1 ml/kg)
   - Q 10 minutes, up to 3 doses

   - **2 minutes CPR**
     - 30:2: 5 cycles 1 rescuer
     - 15:2: 10 cycles 2 rescuers
   - Check rhythm
   - **Shockable Rhythm?**
   - Yes: CPR while defibrillator charging
   - Defibrillate 4 J/kg
   - Resume CPR
   - **Amiodarone** 5 mg/kg bolus IV/IO
   - **Flush tubing with 20 ml NS**

   - **Do not interrupt CPR to administer medications**

   - **If pulse present - post resuscitation care**

Modified On: August 18, 2016
**RESPIRATORY DEPRESSION OR APNEA (SUSPECTED NARCOTIC OD)**

- **Routine Medical Care**
- **SAFETY WARNING!** Naloxone will cause acute withdrawal symptoms in patients who are habituated users of narcotics (whether prescribed or from abuse)
- Use of diluted Naloxone IV and titration with small increments may help decrease adverse effects of naloxone
- Naloxone treatment should only be given to patients with respiratory depression (rate less than 12)
- Patients who are maintaining adequate respirations with decreased level of consciousness do not generally require Naloxone for management
- Naloxone can cause cardiovascular side effects (chest pain, pulmonary edema) or seizures in a small number of patients (1-2%)
- Be prepared for patient agitation or combativeness after naloxone reversal of narcotic overdose

Maintain airway and adequate respirations. 

**O₂ – titrate to 94-99% SpO₂**

Consider IV TKO if indicated

**NALOXONE – 0.1 mg/kg Titrate dose up to 2mg IN/IM/IV**

(BLS may administer IN ROUTE ONLY)

May repeat titrated to maintain adequate ventilations and airway control.

If no response consider AEIOU TIPS

Consider for patients with chronic narcotic use for terminal disease or chronic pain:

Dilute NALOXONE 1:10 with normal saline and administer in 0.1 mg (1 ml) increments - titrate

Reassess as needed

If naloxone is ineffective, manage the patient's airway with proper airway positioning, simple airway adjuncts, suctioning and bag valve mask ventilation as necessary. Consider Advanced Airway Management (pg. xx) for patients >= 40 kg if BVM ventilation is not adequate.

**Consider Advanced Airway when indicated – only if naloxone ineffective and BVM ventilation not adequate**
RESPIRATORY DISTRESS (STRIDOR) – UPPER AIRWAY

- **Pediatric Routine Medical Care**
- **CROUP/EPIGLOTTITIS:**
  - If the patient deteriorates, or becomes completely obstructed, positive pressure ventilation via bag-valve-mask should be attempted
  - **Do not** attempt to visualize the throat or insert anything into the mouth if epiglottitis suspected
  - Allow a parent to hold the child or the O₂ mask if the presence of the parent calms the child
  - Minimize outside stimulation. Keep the patient calm
  - Position of comfort
- **Note:** Perform endotracheal intubation only if BVM ventilation is unsuccessful or impossible
- **Use an LBRT to determine pediatric drug doses**
  (Shown underlined on the algorithm)

---

**Suspect foreign body?**

- **Yes**
  - Go to Airway Obstruction page 62
- **No**

**Suspect allergic reaction?**

- **Yes**
  - Go to Allergic Reaction page 63
- **No**

**Suspect epiglottitis?**

- **Yes**
  - Maintain airway and Oxygen
    - If apneic or near-apneic Consider: **B-V-M or Intubation**
    (see note)
  - **O₂ – titrate to 94-99% SpO₂**
    - via blowby or Non-rebreather Mask
  - Maintain airway and oxygen
    - If decreased LOC or apnea, assist ventilation
    - Consider: **B-V-M or Intubation**
    (see note)
- **No**

---

Note: Manage the patient's airway with proper airway positioning, simple airway adjuncts, suctioning and bag valve mask ventilation as necessary. Consider Advanced Airway Management pg. xx for patients >= 40 kg if BVM ventilation is not adequate.
**RESPIRATORY DISTRESS (WHEEZING) – LOWER AIRWAY**

- **Pediatric Routine Medical Care**
  - Position of comfort
  - Use an LBRT to determine pediatric drug doses
  (Shown underlined on the algorithm)

- **O₂ – titrate to 94-99% SpO₂**
  via blowby or non-rebreather mask

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

**Assist respirations**
and/or
**Intubate** as needed for severe distress (see note)

**Albuterol**
5 mg in 6 ml NS

**Ipratropium**
500 mcg (2.5 ml)
by nebulizer or via BVM

If response inadequate:
**Epinephrine 1mg/mL**
0.01 mg/kg IM
Maximum single dose: 0.3 mg
May repeat x1 in 20 mins.

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

**Maintain airway and oxygen**
If decreased LOC or apnea, assist ventilation
Consider: **B-V-M or Intubation** (see note)

**Mild Respiratory Distress**
- Mild wheezing/SOB
- Cough

**Albuterol**
5 mg in 6 ml NS
via hand-held nebulizer, mask or BVM
May repeat x1

Note: Manage the patient’s airway with proper airway positioning, simple airway adjuncts, suctioning and bag valve mask ventilation as necessary. Consider Advanced Airway Management pg. xx for patients >= 40 kg if BVM ventilation is not adequate.
**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**
5150 Psych Evaluation (*page 113*):
- 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 (≤ 14 y.o.) – Children’s Hospital
- All Others (≥ 15 y.o.) – Highland or Washington

**TREATMENT**

**Advanced Airway Management (page 118):**
- < 40kg – Authorized airway is OPA/NPA and BVM

**CPAP (page 125):**
- < 8 y.o. – Absolute Contraindication

**IO (page 133 adult and page 134 pediatric):**
- ≥ 8 y.o. and ≥ 40 kg – Use EZ-IO adult needle
- < 8 y.o. or < 40 kg – EZ-IO pediatric needle

**Refusal of Care (page 120):**
- ≤ 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).

<table>
<thead>
<tr>
<th>PRIMARY SURVEY</th>
<th>SPECIAL CONSIDERATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish level of responsiveness</td>
<td>AVPU: Alert, Verbal, Painful, Unresponsive</td>
</tr>
<tr>
<td>Evaluate airway and protective airway reflexes</td>
<td>Identify signs of airway obstruction and respiratory distress, including: cyanosis, stridor, drooling, tachypnea, intercostal retractions, absent breath sounds, apnea or bradypnea, choking, grunting, nasal flaring</td>
</tr>
<tr>
<td>Secure airway</td>
<td>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</td>
</tr>
<tr>
<td>Consider Spinal Motion Restraint (SMR)</td>
<td>If cervical spine trauma is suspected, see page 139</td>
</tr>
<tr>
<td>Assess need for ventilatory assistance</td>
<td>CPR as needed (see CPR page 9)</td>
</tr>
<tr>
<td>Evaluate and support circulation. Stop Hemorrhage</td>
<td>Assess perfusion using the following indicators: heart rate, mental status, skin signs, quality of pulse, capillary refill, blood pressure</td>
</tr>
<tr>
<td>Continue with secondary survey</td>
<td>Perform a head-to-toe assessment, including temperature</td>
</tr>
<tr>
<td>Determine appropriate treatment protocols</td>
<td>Obtain a patient history</td>
</tr>
</tbody>
</table>

**For drugs not on the LBRT see page 70 “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
1. **FIRST RESPONDER PERSONNEL** - In Alameda County, First Responder personnel are:

1.1 Public Safety personnel (life guard, firefighter, or peace officer) trained in *First Aid and CPR Standards and Training for Public Safety Personnel*, according to the standards defined in Title 22, Chapter 1.5

1.2 Individuals who are **certified as an EMT** by a California Local EMS Agency, the California State Fire Marshall's Office, or another certifying authority

1.3 California Licensed, Alameda County Accredited Paramedics

2. **MEDICAL MANAGEMENT**

2.1 The **First Responder** is responsible for the care of the patient, once contact with the patient has occurred and continues that responsibility until care of the patient is turned over to the arriving ambulance personnel.

2.2 If it is determined that the incident does not involve illness or injury, the First Responder shall cancel the ambulance response (see page 114 "Responding Units - Canceling/Reducing Code")

2.3 If it is determined that helicopter transport of the patient might be necessary, activate the air ambulance and secure an appropriate landing zone (see page 93 "EMS Aircraft")

2.4 A verbal report **must** be given to the arriving ambulance personnel before the care of the patient may be turned over. The First Responder form should include a chief complaint, physical assessment and emergency care rendered by the First Responder.

2.5 The First Responder must remain on scene until an approved ambulance provider arrives and patient care is transferred. The first responder may return to service once patient care is transferred, or remain on scene and assist as necessary.

2.6 Initiate "START" or "JumpSTART" triage as necessary (see page 159 "Multi-Casualty Incident - EMS Response")

3. **PATIENT CARE**

3.1 The following should be performed for each patient during an emergency response:

3.1.1 A physical assessment and initiation of emergency first aid or basic life support as necessary (see page 49 "Routine Medical Care").

3.1.2 A First Responder form must be completed for every patient (exception: see page 159 "Multi-Casualty Incident - EMS Response" and page 121 "Refusal of Service").

3.2 First Responders are held to the following standards during patient care:

3.2.1 American Heart Association for CPR and Basic Life Support (including airway obstruction and ventilation techniques).

3.2.2 Approved training program curriculum for emergency first aid.

3.2.3 "START" or "JumpSTART" Triage for MCI.

3.2.4 Alameda County Policy “Multi-Casualty Incident - EMS Response” page 159 for medical management at a MCI.

3.2.5 OSHA and CAL-OSHA for infection control.

3.2.6 Alameda County EMS policies for protocols not covered by, or in addition to the above
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).

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), 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
## EQUIPMENT AND SUPPLY SPECIFICATIONS - ALS/BLS

### MINIMUM SUPPLY SPECIFICATIONS

<table>
<thead>
<tr>
<th>AIRWAY EQUIPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Airways:</strong></td>
</tr>
<tr>
<td>• Oropharyngeal (Sizes 0 - 6)</td>
</tr>
<tr>
<td>• Nasopharyngeal (soft rubber)</td>
</tr>
<tr>
<td>» 14 Fr., 18 Fr., 22 Fr., 26Fr.</td>
</tr>
<tr>
<td>» 30 Fr.</td>
</tr>
<tr>
<td>» 32 Fr.</td>
</tr>
<tr>
<td>» 34 Fr.</td>
</tr>
<tr>
<td>▶ Atomizer for intranasal medication administration</td>
</tr>
<tr>
<td>▶ Tongue Blade</td>
</tr>
<tr>
<td>▶ Continuous Positive Airway Pressure Device</td>
</tr>
<tr>
<td>Variable flow generator to allow control of O₂ concentrations from 28 to 100% at flows from 0 to 140 L/min. or disposable, County approved CPAP device.</td>
</tr>
<tr>
<td>▶ Impedance Threshold Device (ResQPOD®)</td>
</tr>
<tr>
<td>▶ Intubation Equipment:</td>
</tr>
<tr>
<td>• County approved video laryngoscopy device</td>
</tr>
<tr>
<td>• Laryngoscope (handle)</td>
</tr>
<tr>
<td>• Batteries (extra)</td>
</tr>
<tr>
<td>• Blades (curved McIntosh):</td>
</tr>
<tr>
<td>• Adult</td>
</tr>
<tr>
<td>» # 4</td>
</tr>
<tr>
<td>» # 3</td>
</tr>
<tr>
<td>• Pediatric</td>
</tr>
<tr>
<td>» # 2</td>
</tr>
<tr>
<td>» # 1</td>
</tr>
<tr>
<td>• Adult (Straight Miller)</td>
</tr>
<tr>
<td>» # 4</td>
</tr>
<tr>
<td>» # 3</td>
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<tr>
<td>• Pediatric</td>
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<tr>
<td>» # 2</td>
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<tr>
<td>» # 1</td>
</tr>
<tr>
<td>• Bulbs syringe (extra)</td>
</tr>
<tr>
<td>• Magill forceps:</td>
</tr>
<tr>
<td>• Adult</td>
</tr>
<tr>
<td>• Pediatric</td>
</tr>
<tr>
<td>• Endotracheal tubes (uncuffed):</td>
</tr>
<tr>
<td>» Size 2.5</td>
</tr>
<tr>
<td>» Size 3.0</td>
</tr>
</tbody>
</table>

Remove sizes 2.5, 3.0, 4.0, 5.0
<table>
<thead>
<tr>
<th>MINIMUM SUPPLY SPECIFICATIONS</th>
<th>BLS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Adult (cuffed with adaptor)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>» Size 6.0</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>» Size 6.5</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>» Size 7.0</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>» Size 7.5</td>
<td>2</td>
<td>2</td>
<td></td>
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<tr>
<td>» Size 8.0</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>● Stylet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>» Adult</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>» Pediatric</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>● King LTD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>» Size 3</td>
<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>» Size 4</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>» Size 5</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>● End-Tidal CO₂ Detectors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>» Adult - colorimetric</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>» Pediatric – colorimetric</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>● Digital Capnograph</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>» Adult</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>● ET Tube Holder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>» Adult</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>» Pediatric</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>● Meconium Aspirator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Tracheal tube introducer (bougie)</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>▼ Nebulizer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Patient Activated</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Hand-held for Inhalation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● In-Line nebulizer equipment with 22 &amp; 24 mm “T-piece”</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>▼ Oxygen equipment and supplies:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● O₂ Tank (portable)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>● Non-rebreather masks (transparent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>» Adult</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>» Pediatric/Infant</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>» Nasal cannula for O₂ administration</td>
<td>2</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>» Portable Pulse-Oximetry</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>» Adult end-tidal CO₂ sampling nasal cannula</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>» Pediatric end-tidal CO₂ sampling nasal cannula</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>▼ Pleural Decompression kit to include:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● 3⅛” 14 gauge decompression needle</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>● One-way vent or drain valve</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Required for BLS 911 Transport. Optional (with EMS Medical Director approval) for BLS IFT.

Require ASA, Epinephrine, Naloxone, Pulse Oximetry, Glucometry on all permitted BLS ambulances -
To be vetted through IFT providers and QC.
## EQUIPMENT AND SUPPLY SPECIFICATIONS - ALS/BLS

<table>
<thead>
<tr>
<th>MINIMUM SUPPLY SPECIFICATIONS</th>
<th>BLS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼Automated External Defibrillator (AED) equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Automated External Defibrillator - pediatric ready</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>● “Hands-off” defib pads</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>» Adult</td>
<td>1-2 sets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>» Pediatric</td>
<td>1-2 sets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▼Blood pressure cuff (portable):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● Adult</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>● Obese</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>● Pediatric</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>● Infant</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>►Blanket Disposable</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>▼Delivery Kit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▼Sterile, prepackaged to include:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● a minimum of two (2) umbilical cord clamps</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>● scissors (may be packaged separately)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● aspirating bulb syringe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● gloves</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● drapes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>● antiseptic solution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▼EMS Field Manual</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>▼Gloves, disposable</td>
<td>1 box</td>
<td>1 box</td>
<td>2 boxes</td>
</tr>
<tr>
<td>▼Glucometer</td>
<td>(1*)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>▼Irrigation Equipment:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>» Saline (sterile) for irrigation (500 mL)</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>» Tubing for irrigation</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>▼EMS Approved Length Based Resuscitation Tape - (LBRT)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>▼Lubricant, water soluble</td>
<td>2 packs</td>
<td>4 packs</td>
<td></td>
</tr>
<tr>
<td>▼County Approved Mechanical CPR Device</td>
<td>1 (Optional)</td>
<td>1 (Optional)</td>
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</tr>
</tbody>
</table>

*Required for BLS 911 Transport. Optional (with EMS Medical Director approval) for BLS IFT.

Require ASA, Epinephrine, Naloxone, Pulse Oximetry, Glucometry on all permitted BLS ambulances - To be vetted through IFT providers and QC.
## Equipment and Supply Specifications - ALS/BLS

<table>
<thead>
<tr>
<th>MINIMUM SUPPLY SPECIFICATIONS</th>
<th>BLS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IV Equipment/Syringes/Needles</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>▼ Armboards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Short</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>• Pediatric</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>▼ Catheters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 14 gauge</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>• 16 gauge</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>• 18 gauge</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>• 20 gauge</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>• 22 gauge</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>• 24 gauge</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>▼ Chlorhexidine</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>▼ Handheld Battery Powered Intraosseous Equipment</td>
<td>1 (optional)</td>
<td>1 (optional)</td>
</tr>
<tr>
<td>• EZ-IO® Driver</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>• 15 mm Needle Set (pink hub, 3kg-39kg)</td>
<td>1 (optional)</td>
<td>2 (optional)</td>
</tr>
<tr>
<td>• 25 mm Needle Set (blue hub, &gt;3kg)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>• 45 mm Needle Set (yellow hub, &gt;40kg with excessive tissue)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>▼ Needles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 18 g x 1&quot;</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>• 20 g x 1&quot;</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>• 25 g x 5/8&quot;</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>• 18 g x 1½&quot; 5 micron filter needle</td>
<td>1 (optional)</td>
<td>2</td>
</tr>
<tr>
<td>▼ Pressure Infusion Bags</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>▼ Saline Lock</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>▼ Syringes (with Luer-Lok™)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• 1 mL &quot;Epi-Safe&quot; or equivalent</td>
<td>1 (optional)</td>
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</tr>
<tr>
<td>• 1 mL</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>• 3 mL</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>• 10 mL</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>• 30 mL</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>▼ T-Connector</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>▼ Tourniquet (for IV start)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>▼ Tubing - Adjustable flow 3-way administration set</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>
## EQUIPMENT AND SUPPLY SPECIFICATIONS - ALS/BLS

<table>
<thead>
<tr>
<th>MEDICATIONS AND SOLUTIONS - preloads preferred</th>
<th>BLS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenosine 6 mg / 2 mL NS</td>
<td>1</td>
<td>3</td>
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</tr>
<tr>
<td>Adenosine 12 mg / 4 mL NS</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Albuterol 2.5 mg / 3 mL NS</td>
<td>3</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Amiodarone 150 mg / 3 mL</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Aspirin 81 mg chewable tablet or 325 mg/5 gr. tablet</td>
<td>1 bottle*</td>
<td>1 bottle</td>
<td>1 bottle</td>
</tr>
<tr>
<td>Atropine Sulfate 1 mg / 10 mL</td>
<td>3 per person</td>
<td>3 per person</td>
<td>3 per person</td>
</tr>
<tr>
<td>Autoinjector antidote kit (optional)</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Calcium Chloride 1 gm / 10 mL</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Charcoal, 25 gms</td>
<td>1 bottle</td>
<td>2 bottles</td>
<td></td>
</tr>
<tr>
<td>Dextrose 10% 10gms / 250mL bags</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Diphenhydramine 50 mg / 1 mL</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Epinephrine 1 mg/mL 1 mg / 1 mL</td>
<td>1 (optional)</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Epinephrine 0.1 mg/mL 1 mg / 10 mL</td>
<td>3</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Epinephrine Auto Injectors Adult 0.3 mg, Pediatric 0.15 mg</td>
<td>1* Each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fenatyl 100 mcg / 2 mL</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Glucagon 1 mg Kit</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Hydroxocobalamin 5g / 250ml</td>
<td>Optional</td>
<td></td>
<td></td>
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<tr>
<td>Oral Glucose - 31 gms</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Ipratropium (Atrovent) 500 mcg (2.5 mL)</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Lidocaine 2% 40 mg / 2 mL</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Midazolam 5 mg / 1 mL</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Naloxone 2 mg / 2 mL</td>
<td>2*</td>
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<td></td>
</tr>
<tr>
<td>Nitroglycerine</td>
<td>1 bottle</td>
<td>1 bottle</td>
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<tr>
<td>Olanzapine (Zyprexa) 20mg oral dissolving tablets</td>
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<td>4</td>
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<tr>
<td>Ondansetron (Zofran) 4mg / 2 mL for IV/IM injection</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Ondansetron (Zofran) 4mg oral dissolving tablets</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Saline, sterile (for injection) 10 mL</td>
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<td></td>
</tr>
<tr>
<td>Sodium Bicarbonate 50mEq / 50 mL</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Sodium Thiosulfate 12.5gms with 10gtt/mL vented tubing</td>
<td>1 (Supervisor or Battalion Chief)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tranexamic Acid</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Bags for infusion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- D5W 100mL</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>- Normal Saline (NS) 1,000mL</td>
<td>2</td>
<td>5</td>
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</tr>
</tbody>
</table>

HazMat medications supply specifications are unchanged and will be placed on page 158 Hazardous Material Incidents
INTERFACILITY TRANSFERS

**Note:** This policy pertains to emergency transfers to a higher level of care that come through the 9-1-1 system. See “Scheduled Interfacility Transfers Using Paramedic Personnel” for more information.

1. All patient care rendered by prehospital care personnel must be within the defined scope of practice according to Title 22 and Alameda County EMS protocols

2. A paramedic may only take orders from a base hospital physician (See 5.2 below). An EMT may not make base contact or accept orders for the patient on behalf of a Paramedic

3. **EMTs** may only transfer a patient without an emergency medical condition; or, with an emergency medical condition that has been stabilized and has no potential (within reasonable probability) to deteriorate en route

4. **Paramedics** (in addition to 3) may only transport a patient who has not been stabilized to a facility that provides a higher level of care. The transferring physician must determine if the care that may be required during transport is within the scope of practice of a paramedic. If not, appropriate hospital staff and/or equipment should be sent with the patient

5. **Base Contact by Paramedics**
   
   5.1 **Base Contact is required prior to transport** if the transferring physician orders any ALS treatment and/or the patient has not been stabilized
   
   5.2 Paramedics may follow transferring physician’s written orders ONLY when 1) the transferring physician speaks to the Base Physician, and they mutually agree on the course of treatment; 2) the proposed treatment plan is within the paramedic’s scope of practice
   
   5.3 **Base Physician contact shall be made:**
   
   ▶ When there is a request to transfer a patient to a higher level of care facility that is not the “closest, most appropriate” higher level of care facility.
   
   5.4 **Base Contact is not required** if the patient is stable and no ALS treatment has been ordered by the transferring physician. If the patient’s condition changes during transport see the appropriate patient care policy and treat accordingly

6. **Base Contact may be made anytime a paramedic has a question regarding patient condition, destination and/or the appropriateness of the transfer**

7. An Alameda County Unusual Occurrence (U.O.) form should be completed for any problem-oriented interfacility transfers. The U.O. form should be sent to the EMS office for review. [See Administration Manual UNUSUAL OCCURRENCES]

8. Refer to “Interfacility Transfer Guidelines” [see Administration Manual INTERFACILITY TRANSFER GUIDELINES] for transfer approval process
RESPONDING UNITS – CANCELING / UPGRADING / DOWNGRADING

1. GENERAL PRINCIPLES: In general, it is better to respond with more personnel and equipment than is needed and cancel excess assigned resources, than fail to dispatch appropriate personnel and equipment. First Responder and transport units should be dispatched in accordance with MPDS-based guidelines as approved by County EMS when there is a report of people who are ill or injured.

2. CANCELING RESPONDING UNITS: Medical personnel first on the scene of an incident:

   2.1 shall cancel a responding ambulance unit upon determination that, in the best judgment of the first responder, the incident does not involve an injury or illness. The ambulance should not be canceled if the patient is requesting care and transport, even if there is no apparent illness or injury.

   2.2 shall cancel the ambulance response if the patient meets the "Determination of Death" criteria or the patient has a valid Alameda County or California Medical Association (CMA) "Do Not Attempt Resuscitation" form (see "Death in the Field" page 88).

   2.3 Ambulance personnel arriving first on the scene of a medical emergency shall cancel the First Responder/Law enforcement response only if assistance is not needed and a potential public safety risk does not exist at the emergency scene.

3. UPGRADING RESPONDING UNITS: Medical personnel first on the scene of an incident may upgrade a responding unit to a “non-divertible” response status:

   3.1 If it is determined by first on-scene medical personnel that the patient’s illness/injury meets any of the time-sensitive conditions requiring expedited transport criteria below:

       3.1.1 Patients found to be experiencing a STEMI by 12-lead ECG
       3.1.2 Patients shown to have findings of an active CVA within the current time treatment window
       3.1.3 Patients who meet “Trauma Patient Criteria” as defined on Page 25-27 of this book

       3.1.4 Patients who have significant compromise to their airway, breathing, circulation and/or vital signs

   3.2 If a life threatening scene safety issue(s) exists

4. DOWNGRADING RESPONDING UNITS: Medical personnel first on the scene of an incident:

   4.1 shall reduce the responding resource(s) from Code 3 to Code 2 upon determination that, in the best judgment of the first medical personnel on-scene, the illness or injury is not immediately life threatening or that the difference in Code 3 and Code 2 response time would not likely have an impact on patient outcome.
PURPOSE
To set standards for reporting of incidents for the purpose of identification of opportunities for improvement in clinical outcomes and/or system structures and processes.

POLICY
Overview of Incident Reporting

<table>
<thead>
<tr>
<th>Level I Peer to Peer Reporting</th>
<th>Level II Unusual Occurrence Reporting</th>
<th>Level III Mandatory Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ For minor interpersonal issues, misunderstandings or operational issues not involving patient care</td>
<td>➢ For patient care issues, complete an EMS Unusual Occurrence Form and email to provider management. <strong>This includes commendations.</strong></td>
<td>Includes, but not limited to incidents involving:</td>
</tr>
<tr>
<td>➢ Resolve as soon as possible after the incident in person or by telephone with supervisors or management representatives</td>
<td>➢ For system issues involving patient care, email an Unusual Occurrence report to EMS <a href="mailto:alco.uo@acgov.org">alco.uo@acgov.org</a></td>
<td>➢ Clinical acts or omissions that may be a threat to public health and safety or considered negligent or contributing to poor patient outcome</td>
</tr>
<tr>
<td>➢ If unsure whether the issue is Level I or II or if the issue cannot be resolved at this level, an Unusual Occurrence Form should be submitted</td>
<td>➢ Reporting party may also call provider management or EMS to verbally report an incident which will be documented on an Unusual Occurrence Form by the provider</td>
<td>➢ Use of intoxicants or impaired ability due to alcohol or drugs while on duty</td>
</tr>
</tbody>
</table>

Investigative reports will not disclose confidential or proprietary information collected during the investigation.

The EMS Agency shall provide a report of the findings and actions to the reporting party.
ADVANCED AIRWAY MANAGEMENT

1. INTRODUCTION: The approved airway management procedure for the adult consists of endotracheal intubation, or insertion of a supraglottic airway device.

***Nasotracheal intubation is NOT an approved skill in Alameda County***

1.1 Manage the patient’s airway with proper airway positioning, simple airway adjuncts, suctioning and bag valve mask ventilation as necessary.

1.2 ALS personnel are authorized to perform the skill of endotracheal intubation for patients ≥ 40 kg

1.3 ALS personnel are authorized to perform the skill of placing a supraglottic airway.
   NOTE: A supraglottic airway is defined as an airway device that rests in the pharynx when properly positioned (e.g. – King-LT®

1.4 BLS personnel are authorized to perform the skill of insertion of a supraglottic airway only after completing an approved training program and with the approval of the EMS medical director. BLS personnel may not perform endotracheal intubation

1.5 Defer advanced airway insertion rather than interrupt chest compressions in the cardiac arrest patient. If after 2 minutes of continuous chest compressions and BVM support an immediate endotracheal airway cannot be obtained, consider use of supraglottic airway

1.6 ALS and BLS personnel must confirm tube placement (ET or supraglottic airway) with capnography/capnometry or a colorimetric ETCO₂ device, auscultation and physical assessment (auscultation, observation of chest rise, visualization of the tube passing through the cords, etc.). See #4 below. NOTE: It is no longer required to use an EDD as a confirmation device. Capnography/capnometry is a far more accurate confirmation tool that negates any value the EDD provided in the past

2. INDICATIONS:

2.1 Non-traumatic cardiac and/or respiratory arrest

2.2 Traumatic cardiac and/or respiratory arrest or severe ventilatory compromise where the airway cannot be adequately maintained by BLS techniques

3. APPROVED ADVANCED AIRWAY MANAGEMENT PROCEDURE:

3.1 Endotracheal intubation - (ALS only)

3.1.1 Definition: An intubation attempt is defined as the insertion of the laryngoscope blade into the patient’s mouth

3.1.2 Make no more than 2 total intubation attempts per patient. Each attempt should not last longer than 30 seconds. Ventilate with 100% oxygen for one minute prior to each attempt

3.1.3 If patient has a Cormack-Lehane* grade of 3 or 4 (epiglottis is not or is barely visible), consider primary use of a supraglottic airway

3.1.4 Pediatric Intubation removed

*Cormack-Lehane scale

<table>
<thead>
<tr>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
<th>Grade 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Image" /></td>
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<td><img src="image3.png" alt="Image" /></td>
<td><img src="image4.png" alt="Image" /></td>
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</tbody>
</table>
Assess and Refer Guidelines

The Assess and Refer process identifies patients whose condition does not require transport by 911 emergency ambulance. All 911 calls for EMS will receive an appropriate response, timely assessment and appropriate patient care.

Paramedic Assess and Refer Decision Making Principles

- Does the patient, parent or guardian have Decision Making Capacity?
- How concerned are you with the patient’s current medical issue?
- How likely is the patient to successfully navigate the provided referral?

Assess and Refer Criteria

The patient, parent or guardian meets all of the following:

- Is an adult (18 or over), or if under 18 legally emancipated
- Is oriented to Person, Place, Time, and Situation
- Exhibits no evidence of:
  - Altered level of consciousness
  - Alcohol or drug ingestion that impairs Decision Making Capacity
- Exhibits evidence of Decision Making Capacity to understand the nature of the medical condition as well as the risks, and consequences of not seeking additional medical care/transport from the provided referral
- The patient would benefit from the provided referral
- The patient is likely to successfully navigate the provided referral

Documentation Requirements

- Physical exam
- Evidence that the patient, parent or guardian was alert, oriented and appropriate for their age
- Indications that there were no signs of significant impairment due to drugs, alcohol, organic causes, or mental illness
- Anything else that made you believe that the patient, parent or guardian had Decision Making Capacity
- The fact that you offered care, treatment and provided a referral
- What you told the patient about the nature of the illness/injury and the specific risks of accepting the provided referral for the medical condition. (Use “quotes” as appropriate)
- The indications that the patient understood these risks
- What the patient specifically said about why he/she is accepting the provided referral
  (Use “quotes” as appropriate)
- Your efforts to encourage the patient to seek care and the provided referral
- The person(s), if any, who remained to look after the patient (the patient’s “support system”)
- The name of the interpreter, if applicable
9. **INTRODUCTION:**

9.1 Competent adults may refuse EMS care and/or transportation

9.2 All potential patients at the scene of an EMS system call must be offered medical care.

9.3 Consent to treat and/or transport may be actual, expressed, or implied (the patient is unable to give consent but is in need of medical attention - e.g., an unconscious patient).

9.4 If the individual consents, treat only according to the scope of the consent. Competent adults can give partial consent, (e.g., transportation without treatment). There is no legal duty to provide unwanted treatment or transportation.

10. **PATIENT DEFINITION:**

10.1 The definition of ‘patient’ is any individual that:

   - Has a complaint suggestive of potential illness or injury
   - Requests evaluation for potential illness or injury
   - Has obvious evidence of illness of injury
   - Has experienced an acute event that could reasonably lead to illness or injury
   - Is in a circumstance or situation that could reasonably lead to illness or injury

---

**NOTE TO BLS PERSONNEL:** If the individual is defined as a patient and is refusing care, the patient requires an assessment by an ALS provider. Treat as necessary while awaiting the arrival of ALS personnel.
CONSENT AND REFUSAL GUIDELINES

11. **REFUSAL OF CARE** - applies to patients who by direct examination, mechanism of injury, or by initiating a patient relationship by dialing 9-1-1 for medical care for themselves, are refusing medical care/transportation. Only ALS personnel may honor a refusal of care

11.1 In order to refuse care, a patient, parent, or guardian must have legal and mental Decision Making Capacity by meeting all of the following criteria:

11.1.1 Is an adult (18 or over), or if under 18 legally emancipated

11.1.2 Understands the nature of the medical condition, and the risks and consequences of refusing care

11.1.3 Exhibits no evidence of:
   - Altered level of consciousness
   - Alcohol or drug ingestion that impairs judgment

11.1.4 Is oriented to Person, Place, Time, and Situation

11.2 **Actions:**

11.2.1 If the patient has the legal and mental Decision Making Capacity for refusing care:
   - Honor the refusal
   - Document thoroughly. Complete a PCR and a “Refusal of Care” form

11.2.2 If the patient cannot legally refuse care or is mentally incapable of refusing care:
   - Document on the PCR to show that the patient required immediate treatment and/or transport, and lacked the mental capacity to understand the risks/consequences of refusal. (implied consent)
   - Treat only as necessary to prevent death or serious disability and transport
   - Do not request a 5150 hold unless the patient requires a psychiatric evaluation

12. **BASE CONTACT:** A refusal of care may be against the advice of the EMS responders and/or the base hospital physician (AMA); however, an adult with Decision Making Capacity has the legal right to refuse care. For patients with acute conditions (see 4.1.2 and 4.1.3 below) every effort should be made to convince the patient to be transported. Be persuasive - get help from:

   - Family members, friends, etc.
   - The Base Physician
   - Consider calling law enforcement especially if the patient is a child

12.1 **Paramedics should contact the Base Physician:**

12.1.1 For any patient being treated and/or transported involuntarily

12.1.2 Whenever the refusal of care and/or transport poses a threat to the patient’s well-being

12.1.3 Additional examples of situations where Base Physician contact should be made include, but are not limited to:

   - Markedly abnormal vital sign
   - Uncontrolled hemorrhage
   - Suspected ischemic chest pain
   - Suspected new onset Acute Stroke
   - Any patient meeting critical trauma criteria

   - Any condition for which field personnel believe that admission to an emergency department/hospital may be necessary

   - Any time medical treatment is begun and then the patient refuses transport
CONSENT AND REFUSAL GUIDELINES

CONSIDER BASE CONTACT FOR PATIENTS WHO REFUSE TRANSPORT (see section 4 above)

Is the person defined as a patient? (see 2.1 above)

YES

Go to Section 3

REFUSAL OF CARE

Note: ALS Personnel only

GO TO SECTION 7

REFUSAL OF SERVICE

Note: BLS and ALS personnel may honor a Refusal of Service

Is the person a patient, guardian, conservator, or PD available?

YES

Go to Section 2

Does the person have mental capacity to refuse care?

NO

Does the person have legal capacity to refuse care?

NO

Mental Capacity

- Understanding of the medical condition and consequences of refusing care
- Ability to choose a medical care provider that best meets their needs
- Ability to understand the risks and benefits of treatment options
- Ability to communicate decisions

Legal Capacity

- 18 years or over
- Married
- Emancipated minor: Declaration of emancipation
- On active military duty

NO

Transport

Note: ALS Personnel only - If the individual is defined as a patient and is refusing care, the patient requires an assessment by an ALS provider. Treat as necessary while awaiting the arrival of ALS personnel.

Does the person have legal capacity to refuse care?

NO

Does the person have mental capacity to refuse care?

NO

Assess and Refer

DRAFT
HEMORRHAGE CONTROL

1. INTRODUCTION: Controlling severe bleeding from an extremity injury can be challenging (especially in the lower limbs). Use of a County approved tourniquet can assist in the care of patients with uncontrollable bleeding in the extremities safely and effectively when the appropriate precautions are taken. Approved for both ALS and BLS.

2. INDICATIONS:

- Amputation
- Failure to stop bleeding with pressure dressing(s)
- Injury does not allow control of bleeding with pressure dressing(s)
- Impaled foreign body with ongoing extremity bleeding
- Under difficult or dangerous situation for responding caregivers
- Mass casualty event
- Significant extremity hemorrhage in the face of any or all of:
  - Need for airway management
  - Need for breathing support
  - Circulatory shock
  - Need for other emergent interventions or assessment
  - Significant bleeding from multiple locations

3. TOURNIQUET: Place county approved tourniquet according to manufacturer's instructions

4. HEMOSTATIC AGENT: After tourniquet placement, and to aid in severe arterial bleeding; or to control severe bleeding where tourniquets are not indicated (trunk, head, neck, etc), use of a hemostatic agent is indicated. The only hemostatic agent approved for use in Alameda County is the QuikClot Combat Gauze. Use of combat gauze is optional. Additional training is required for use of Combat Gauze.

5. INDICATIONS:

- Bleeding that is not controllable with the use of a tourniquet or other means.

6. PROCEDURE: QuikClot Combat Gauze is approved for use in Alameda County

DIRECTIONS FOR USE

1. Open package and remove Combat Gauze. Keep the empty package.

2. Pack Combat Gauze into wound and use it to apply pressure directly over bleeding source. (More than one Combat Gauze may be required).

3. Continue to apply pressure for 3 minutes or until bleeding stops.

4. Wrap and tie bandage to maintain pressure. Seek medical care immediately. Show PRODUCT REMOVAL directions on package to medical personnel.

PRODUCT REMOVAL: 1. Gently remove gauze from wound. 2. Thoroughly irrigate wound.
Olanzapine

Introduction

Olanzapine (Zyprexa) 20 mg sublingual is an atypical antipsychotic with minimal side effects. The major side effect would be minimal sedation that can be worsened by alcohol or other sedatives. Orally disintegrating Olanzapine sublingual allows for rapid absorption with effects within 10-15 minutes.

Indications

Olanzapine is indicated for the cooperative anxious adult patient with a primarily behavioral health presentation and a history of psychiatric disorder. These patients will commonly be hearing voices or having paranoid thoughts after not taking their usual psychiatric medications.

Contraindications

- Age less than 18 or over 65
- Clinical intoxication with other substances
- Agitation requiring restraints
- Pregnant patients

Administration

Olanzapine 20 mg should be handed to the patient for sublingual self-administration. No water is needed for this orally disintegrating tablet.
PSYCHIATRIC AND BEHAVIORAL EMERGENCIES

**Excited Delirium**
- *Paranoia
- *Disorientation
- *Extremely Aggressive or Violent Hallucinations
- *Tachycardia
- *Increased strength
- *Hyperthermia
- *Clearly Danger to Self or Others

**Behavioral Crisis**
- *Audio/Visual Hallucinations
- *Anxiety
- *Depression
- *Manic Behavior
- *Suicidal Ideation
- *Disorganized Thoughts
- *Unpredictable Behavior

**Cognitive Impairment / Developmental Disability**
- *Alzheimer’s
- *Autism
- *Dementia
- *Down Syndrome
- *Developmental Delays
- *Mental Retardation
- *Traumatic Brain Injury

**TREATMENT**
Consider potential medical causes.

**IV ACCESS.**
Consider fluid bolus.

Consider chemical sedation.  
(See page 137)

EKG Monitoring and 12-Lead.  
(See page 127)

CO2 Monitoring.
Consider Hyperthermia.  
(See page 15)

Consider Restraints.  
(See page 115)

Transport to closest most appropriate receiving hospital.

**Calm & Cooperative?**

**Y**

Consider Olanzapine  
(See page XXX).

**N**

Attempt De-escalation if possible.

Consider chemical sedation for combative behavior.  
(See page 137)

Consider Restraints.  
(See page 115)

**Transport**
Transport to closest most appropriate psychiatric facility or receiving hospital per transport policy.  
(See page 113).

**Attempt to discover triggering event.**

Involves caregivers unless they are the trigger.

**Determine level of language and communication.**

**Full Assessment.**
Use simple language, even vocal tone, and be aware of body language and threatening gestures.

**Calm & Cooperative?**

**Y**

**N**

Determine if transport is necessary to closest most appropriate receiving hospital.

*If transporting allow caregiver to ride with patient.
1. INTRODUCTION: Multi-Casualty Incident (MCI) is defined as any incident where the number of injured persons exceeds the day-to-day operating capabilities; requiring additional resources and/or the distribution of patients to multiple hospitals. This will be different for each incident based on time of day, location, resources available etc.

2. NOTIFICATIONS: Provider agencies shall notify ACRECC and should have internal notification procedures.

3. MCI INITIATION AND TERMINATION:
   - The MCI DESCRIPTIONS (including patient # approximations) should be used as guidelines for initiating a specific MCI LEVEL and are not intended as a substitute for sound scene judgment.
   - Initiating a specific MCI LEVEL automatically activates the corresponding MCI RESOURCE RESPONSE PACKAGE and MCI NOTIFICATION(S).
   - Immediately cancel any assigned RESOURCE(S) when no longer required based upon patient care needs of the incident.
   - Terminate the MCI through ACRECC when the appropriate level of care has been rendered to all patients at the scene.

   Any first arriving unit may initiate an MCI through ACRECC
   - When initiating an MCI, provide ACRECC with:
     1. MCI LEVEL (Specify “MCI LEVEL I”, “MCI LEVEL II”, “MCI LEVEL III”, etc…)
     2. Type of Incident
     3. Location
     4. Estimated # of Injured

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<table>
<thead>
<tr>
<th>MCI LEVEL</th>
<th>MCI DESCRIPTION</th>
<th>MCI RESOURCE RESPONSE PACKAGE</th>
<th>MCI NOTIFICATION(S)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Examples: Traffic collision, active shooter</td>
<td>5 – Closest 911 Ambulances 1 - EMS Supervisor</td>
<td>Jurisdictional Fire Battalion Chief County EOA Provider Operations Supervisor LEMSA Duty Officer County Permitted Ambulance Providers</td>
</tr>
<tr>
<td>II</td>
<td>Examples: Mass transit vehicle incident, active shooter, IED</td>
<td>MCI LEVEL I RESOURCES AND: 5 – Closest Ambulances 1 – EMS Supervisor 1 – Battalion Chief 1 – DMSU</td>
<td>MCI LEVEL I NOTIFICATIONS AND: LEMSA Supervisor LEMSA Director All County Fire Duty Chiefs</td>
</tr>
<tr>
<td>III</td>
<td>Examples: Commercial aircraft incident, large structure collapse, active shooter</td>
<td>MCI LEVEL I AND II RESOURCES AND: 5 – Closest Ambulances 1 – EMS Supervisor 1 – Battalion Chief</td>
<td>MCI LEVEL I AND II NOTIFICATIONS</td>
</tr>
<tr>
<td>Additional Levels</td>
<td>Examples: Major earthquake, explosion, flooding, landslide, toxic substance release</td>
<td>For Each ADDITIONAL LEVEL: 5 – Closest Ambulances 1 – EMS Supervisor 1 – Battalion Chief Consider Air Medical Resources</td>
<td></td>
</tr>
</tbody>
</table>
4. MANAGEMENT OF MCI INCIDENTS AND PATIENT DISTRIBUTION

4.1 Once an MCI alert is determined by prehospital personnel, Alameda County Regional Emergency Communications (911 dispatch) will be notified and will “Initiate an MCI” under the Reddinet MCI module. ACRECC will immediately send an “ED Capacity poll and general notification” to the hospitals in Alameda County.

4.2 For MCI Levels II & III, ACRECC will notify the EMS Duty Officer of the incident.

4.3 Emergency responders shall perform triage using one of the following triage methods:
   - The Simple Triage and Rapid Treatment (START) algorithm for adults and JumpSTART for pediatrics.
   - The Sort, Assess, Lifesaving Interventions, Treatment / Transport (SALT) algorithm for patients in all age groups.

4.3.1 Acuity based Triage colors for both Triage Tape and Triage Tags are universally accepted as Black (expectant / deceased), Red (immediate / life threatening), Yellow (delayed / serious non life threatening), and Green (minor / walking wounded). Only Black, Red, Yellow, and green are acceptable triage colors.

4.3.2 The use of colored “Triage Tape” upon initial contact with victims at the crisis site is preferred over Triage Tags to identify initial acuity. Triage tags should be used at the external Casualty Collection Point (CCP) outside the crisis site or applied to patients during transport. Acuity guided transport of all patients shall occur in a coordinated and expedient manner.

4.4 Hospital Poll: For MCI incidents involving 15+ patients, ACRECC will send a “bed capacity” poll to all hospitals in Alameda County to confirm bed availability.

4.5 For the duration of the MCI, the Transportation Unit Leader under ICS will determine transportation methods and destinations.

4.6 Whenever possible, patients should be transported to the most appropriate hospital without overloading one particular facility. Every effort will be made to transport trauma patients to a designated trauma hospital. In a Level II or III MCI, transport to a designated trauma center may not always be possible.

4.7 First Round Destination Procedure may be implemented without prior authorization. All Alameda County receiving hospitals should prepare to receive patients, especially those in close proximity to the incident.

<table>
<thead>
<tr>
<th>First Round Destination Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non-Trauma patients</strong> to each Alameda County receiving hospital (for a total of 6):</td>
</tr>
<tr>
<td>✓ Two (2) “Immediate”</td>
</tr>
<tr>
<td>✓ Four (4) “Delayed” and/or “Minor”</td>
</tr>
<tr>
<td><strong>e.g.: Medical incident, HazMat</strong></td>
</tr>
<tr>
<td><strong>Trauma patients</strong> to each Alameda County Trauma Center (for a total of 7):</td>
</tr>
<tr>
<td>✓ Three “Immediate”</td>
</tr>
<tr>
<td>✓ Four (4) “Delayed” and/or “Minor”</td>
</tr>
</tbody>
</table>
4.8 ACRECC in conjunction with the incident command structure will track patient numbers, acuity and destinations in ReddiNet in as close to real-time as possible. ReddiNet will serve as the primary mechanism notifying receiving facilities of the number and acuity of incoming patients. Receiving hospitals will enter patient names and other relevant information into ReddiNet. This will facilitate patient accountability and reunification. On scene EMS Supervisors may also have the ability to enter information into ReddiNet.

4.9 Verbal notification to hospitals: In a Level I MCI, transporting units should contact the receiving hospital enroute to give an abbreviated report on the patient(s) status and ETA. In a Level II or III MCI, if ReddiNet is unavailable or non-functional, a medical communications coordinator should be designated to notify receiving facilities of the number and acuity of incoming patients.

4.10 Incident Log - The Transportion Unit Leader should maintain an incident log

4.11 The on-scene Incident Commander or designee (ie. Medical Group Supervisor or Transportation Unit Leader) should contact ACRECC during and at the conclusion of the MCI to provide and reconcile patient tracking information to ensure accountability

5. RESOURCE MANAGEMENT - The Incident Commander has the overall responsibility for developing objectives and requesting the necessary resources required to mitigate the incident. There will be no self-dispatching. Clear communications between all involved agencies is imperative

5.1 The following items are MCI Management points to consider

► The three “T’s” ensure that Triage, Treatment and Transport have been addressed
► Request resources through the Incident Commander in the early stages of the incident. Ensure adequate personnel and equipment
► Establish staging areas. Transport Units and/or other units that do not immediately have an assignment should report to the designated staging area and wait for instructions
► Use a one-way traffic pattern. Transport units should be staged to assure good access and egress from Loading Area
► All incoming units drop off required EMS equipment at a designated location
► County Disaster Trailers shall be requested through ACRECC

5.2 Use ICS identification vests. At a minimum the IC, Medical Group Supervisor, Triage and Treatment, and Transportation Unit Leader should be clearly identified with vests