ANNUAL REVIEW CLASS (ARC)

PURPOSE

To define the eligibility and procedural requirements for the mandatory yearly Annual Review Class (ARC) for the Paramedic (EMT-P) applying for Continuous Accreditation and/or the Mobile Intensive Care Nurse (MICN) applying for Continuous Certification or Inactive MICN status within the ICEMA Region. The Annual Review Class is developed by a multidisciplinary task force and the curriculum approved by the ICEMA Medical Director.

PROCEDURE

1. The authorized class is valid from January 1 through December 31 of each year.

2. It is the responsibility of the individual to take the class during each year of accreditation or certification.

3. Failure to take two (2) different Annual Review Classes during your two (2) years accreditation or certification period will result in the EMT-P or MICN having to successfully pass the ICEMA EMT-P Accreditation/MICN Certification Written Exam with a minimum score of eighty percent (80%). Additionally, financial penalties will apply.

4. The EMT-P or MICN must register and pay the exam fee to ICEMA prior to the scheduled deadline.

CRITERIA FOR TEACHING THE ANNUAL REVIEW CLASS

1. Approved C.E. providers shall request approval from ICEMA to provide the class:

   a. Submit a completed application to be approved as a training program.

   b. Application must include a list of your proposed trainers with copies of their resumes attached.

   c. Pay the ICEMA approved Training Program approval fee.

   d. Approval is granted for a period of one (1) year.

2. ICEMA should be notified thirty (30) days in advance of the class offering in order to be able to post the class dates, times and locations on the ICEMA website and newsletter.

3. Within fifteen (15) days of class completion, the provider will send the original C.E. roster to ICEMA with the Instructor Evaluation and any other material requested. All other course materials and records will be maintained, for a period of four (4) years, by the approved training program per Protocol Reference #3020, policy for CE Provider Requirements.

4. Continuing Education hours will be granted for the class in accordance to Protocol Reference #3020 Continuing Education Provider Requirements.

~~PROCEDURE FOR~~ ADOPTION OF PROTOCOLS AND POLICIES

I. PURPOSE

To establish procedures for the adoption, ~~amendment~~ revision or repeal of ICEMA medical control protocols and/or ~~,~~ policies ~~and procedures~~.

ICEMA recognizes that stakeholder ~~advice and review~~collaboration is an essential component of protocol and policy~~, procedure and protocol~~ development. The EMS stakeholder review process is advisory to ICEMA for the formulation of ~~prehospital care~~these policies and procedures. ~~Policy~~ICEMA accepts protocol or policy ~~/procedure~~ input ~~and/or draft policies are accepted from~~are accepted ~~from~~ standing ICEMA committees, sub-committees, task forces and other individuals and/or interested parties. The ICEMA Medical Director and EMS Administrator are responsible for the development and approval of protocols and/or policies. ~~remain the responsibility of the ICEMA Medical Director and EMS Administrator.~~

II. AUTHORITY

California Health and Safety Code, Sections 1797.220 and 1798.101(1)

California Code of Regulations, Title 22, Division 9, Chapter 4 Article 2, Sections 100145, 100146, 100148, and 100170

III. DEFINITIONS

Medical Advisory Committee (MAC): Primary committee that advises the ICEMA Medical Director on the clinical or medical aspects of Emergency Medical Services (EMS) within the ICEMA region.

Protocols: Medical standards that provide the framework for the medical treatment and care routinely provided to patients within the ICEMA region.

Policy: Non-medical objectives, principal functions and mode of operations for providers and health care facilities within the ICEMA region.

System Advisory Committee (SAC): Primary committee that advises the ICEMA EMS Administrator on the operational aspects of Emergency Medical Services (EMS) within the ICEMA Region.

IV. POLICY

1. ICEMA will review all protocols ~~on a bi-annual basis~~once a year,annually or more often if ~~as~~ necessary, to ensure time critical and appropriate policy changes.

2. ~~Policy Minor changes~~Changes to protocols and/or policies may occur without specific review from the public or specific committees. Changes include, but are not limited to:

   a. Changes in wording necessary to clarify the objective.

   b. Changes in the listed order for clarity or better flow.

   c. Changes to assure protocol or policy continuity and consistency. ~~.~~

   d. Changes required ~~tocomply~~to comply with State and local laws and/or regulations to maintain public health and safety.

   e. Correction of typographical, grammar, spelling or formatting errors.

   ~~e.~~f. Changes required to maintain medical control or system integrity.

3. ICEMA staff shall change, develop, or delete ~~develop an initial~~ protocols and/or policies ~~draft with~~ when needed or requested and/or ~~solicit~~ input from appropriate external agencies, organizations or ~~other~~ from established advisory committees such as those listed below:

   a. Medical Advisory Committee (MAC)

   b. System Advisory Committee (SAC)

   c. ST Elevation Myocardial Infarction QI Committee (STEMI QI)

   d. Neurovascular Stroke QI Committee (Stroke QI)

   e. Trauma System Advisory Committee (TSAC)

   f. Trauma and Air Advisory Committee (TAAC)
   ~~———~~Joint San Bernardino County and Riverside County Quality Improvement committee.
   ~~(i.e TSAC, STEMI, Stroke) as subject matter dictates, and present proposed protocols to the Medical Advisory CommitteeProtocol Education Committee (PEC) for review.~~

~~5~~4. ICEMA may forward protocols and policies to ~~The~~ MAC~~PEC~~ ~~will~~ and/or SAC for additional review prior to public comment. MAC or SAC may

~~provide additional input~~assign ~~to~~ a task force or ad hoc committee ~~and~~ to review and make recommendations on proposed changes to ~~ICEMA~~its authorizing committee. ~~MAC will determine if draft needs further review by taskforce or ad hoc committee. The review will be completed within the timeframe determined by MAC.~~

~~5. If MAC determines no further committee review is required, the protocols will be released for public comment. Following review by appropriate committees, draft protocols will be submitted to the Medical Advisory Committee (MAC).~~

~~6. For protocols that do not have significant changes or impact to training, they will be released for public comment prior to going to MAC. The comments will be collected and presented at the next scheduled MAC meeting. Following MAC review, protocols will be released for public comment period.~~

5. ICEMA shall consider all relevant matter presented to it before accepting, amending or repealing any protocol or policy, but the authority for final determination remains with the Medical Director and EMS Administrator.

6. Policies will be released ~~for fifteen (15) to thirty (30) day public comment period. The public comment period may be shortened to 15 days if ICEMA determines the policy or protocol to be time sensitive.~~for a predetermined public comment period as noted under Section VI - Public Comment Period below.

7. Upon closure of the public comment period, ICEMA will prepare a final draft ~~policies/procedures~~of the protocols/policies (including accepted changes) with a detailed spreadsheet showing the public comment for presentation at ~~the Emergency~~ a subsequent scheduled MAC or SAC meeting for endorsement. ~~Medical Care Committee (EMCC) meetings held in all three counties.~~ Spreadsheet shall include all comments received and ICEMA's response to the comments.

8. Protocols and/or policies that are endorsed by MAC and/or SAC will be presented to the ICEMA Medical Director and EMS Administrator for signature and enactment.

9. Protocols and/or policies, approved by the Medical Director and EMS Administrator, shall become effective no later than thirty (30) days after the date of approval and incorporated into the appropriate protocol/policy manual.

~~10. Following endorsement by the EMCC's, policies will be presented to the ICEMA Medical Director and ICEMA Executive Director for signature.~~

~~11. Protocols and/or policies approved by the Medical Director and Executive Director shall become effective no sooner than thirty (30) days after the date of approval.~~

V. EMERGENCY PROTOCOLS/POLICIES

1. If ICEMA determines that an emergency protocol or policy is necessary for the immediate preservation of the public health and safety or general welfare, a protocol and/or policy may be adopted, amended or repealed as an emergency action.

2. Any finding of an emergency will include a written statement describing the specific facts showing the need for immediate action. The statement and the protocol or policy shall be immediately forwarded to the MAC and/or SAC and EMS providers (as appropriate) ~~Medical Advisory Committee and appropriate EMS provider agencies~~. The emergency protocol and/or policy will become effective ~~immediately unless otherwise specified.~~ no sooner than five (5) days following dissemination to the ICEMA Medical Advisory Committee.

3. Protocols and/or policies adopted under the emergency provision shall remain in effect for approximately one hundred and twenty (120) days to allow for appropriate committee review and public comment period.

VI. PUBLIC COMMENT PERIOD

ICEMA will:

1. Open all changed protocols or policies to public comment for a period of ~~fifteen (15) to~~ thirty (30) days except in instances where the ICEMA ~~Executive Director~~EMS Administrator and ICEMA Medical Director deem it necessary to shorten the period to protect and/or improve public health and safety or maintain medical control and/or operational integrity.

2. Post proposed changes to protocols and/or policies on the ICEMA website at www.ICEMA.net.

3. E-mail proposed changes to ~~voting~~ members of the Emergency Medical Care Committees, Medical Advisory Committee and/or Systems Advisory Committee.

4. E-mail proposed changes to each EMS provider agency.

5. E-mail proposed changes to ~~every~~ any person who~~m~~ has filed a request for notification with ICEMA.

6. Make copies of the proposed protocols and/or policies available to the public and stakeholders ~~which is~~ consistent with a policy of encouraging the widest possible notice distribution to interested persons.

7. Any oversight in notification described above shall not invalidate any action taken by ICEMA pursuant to this policy.

VII. CONTENTS OF PUBLIC COMMENT PERIOD NOTIFICATION

1. The notice of proposed adoption, amendment, or repeal of a protocol or policy shall include:

   a. A statement of the time and place of proceedings for adoption, amendment or repeal of a protocol or policy.

   b. The name and telephone number of the agency contact person to whom inquiries concerning the proposed action may be directed.

   c. A date by which comments submitted must be received in writing in order for them to be considered by ICEMA before it adopts, amends, or repeals a protocol or policy.

   d. The provisions of this section shall not be construed in any manner to invalidate a protocol or policy due to perceived inadequacy of the notice content if there has been substantial compliance with this requirement.

VIII. REQUEST FOR ADOPTION, AMENDMENT OR REPEAL OF PROTOCOL

1. Any ~~interested~~ person may request~~, in writing,~~ the adoption, amendment, or repeal of a protocol or policy as provided in this section.~~.~~ Such petition shall be in writing and ~~state~~ clearly and concisely state:

   a. The substance or nature of the protocol or policy, amendment or repeal requested.

   b. The reason for the request.

   c. Any supporting documentation and/or research that would support the request.

2. Upon receipt of a written request for the adoption, amendment or repeal of a protocol or policy, ICEMA will notify the petitioner or group in writing of the receipt of the request and then shall, within thirty (30) days, either deny the request, in writing, indicating why the agency has reached such a decision or schedule the protocol/policy for review in accordance with this policy.

3. ICEMA may grant or deny such a request or take such other action as it may determine to be warranted and will notify the petitioner in writing of such action.

SMOKE INHALATION/CO EXPOSURE/SUSPECTED CYANIDE TOXICITY
(Expanded Scope Specialty Program)

I. PURPOSE

To identify and treat smoke inhalation and suspected cyanide toxicity.

II. AUTHORITY

California Health and Safety Code, Sections 1797.172 and 1797.185

California Code of Regulations, Title 22, Division 9, Chapter 4

III. FIELD ASSESSMENT/TREATMENT INDICATORS

- Indicators
  - Exposure to fire and smoke particularly in an enclosed-space structure fires.
  - Hydrogen cyanide concentration measured in the air does not accurately correlate to patient's level of exposure and toxicity. Consider possibility of carbon monoxide (CO) and cyanide exposure/toxicity in any patient (or unprotected EMS field personnel) with smoke inhalation.
- Cyanide Toxicity
  - Initial signs and symptoms are non-specific and may include; headache, dizziness, nausea, vomiting, confusion, and syncope.
  - Worsening signs and symptoms may include; altered level of consciousness (ALOC), hypotension, shortness of breath, seizures, cardiac dysrhythmias, and cardiac arrest.
  - The "bitter almond" smell on the breath of a cyanide-poisoned patient is neither sensitive nor specific and should not be considered in making the assessment.
- Carbon Monoxide Poisoning
  - Initial signs and symptoms are non-specific and may include; flu like symptoms, dizziness, severe headache, nausea, sleepiness, weakness and disorientation.

- Worsening signs and symptoms may include; blurred vision, shortness of breath, and altered level of consciousness.

IV. ALS INTERVENTIONS

- Remove patient from exposure area.
- Administer 100% oxygen via non-rebreather mask.
- Monitor pulse oximetry (SpO_2) though values may be unreliable in patients suffering from smoke inhalation.
- Monitor Carboxyhemoglobin (SpCO) levels. (SpCO monitor is required for participation in this Specialty program.)
- IV access, consider fluid bolus of 300cc NS.
- Patients exhibiting signs and symptoms of cyanide toxicity which persist after treatment with 100% oxygen therapy should be treated rapidly with the Cyanokit.
    - Administer Hydroxocobalamin.
        - Dosage: 5 gm IV over 15 minutes. May repeat one (1) time with base hospital orders. Second dose given over 15 minutes to 2 hours depending on the response to the first dose.
        - Reconstitute: Place the vial in an upright position. Add 200 mL of 0.9% Sodium Chloride Injection (not included in the kit) to the vial using the transfer spike. Fill to the line.
        - Mix: The vial should be repeatedly inverted or rocked, not shaken, for at least 60 seconds prior to infusion.
        - Infuse Vial: Use vented intravenous tubing, hang and infuse over 15 minutes.
- Use BVM with airway adjuncts as needed. Consider advanced airway if indicated.
- Refer to ICEMA Reference #11010 - Adult Respiratory Emergencies, for treatment of bronchospasm as indicated by wheezing
- Ensure rapid transport to closest receiving emergency department. In patients with SpCO of > 25% (> 15% if pregnant) or signs and symptoms of worsening CO poisoning, consider transport to a hyperbaric facility.

- Hyperbaric Medicine
  - Arrowhead Regional Medical Center
  - Loma Linda University Medical Center
  - Redlands Community Hospital
  - St. Mary Regional Medical Center

V. REFERENCE

Number	Name
11010	Adult Respiratory Emergencies

BLS/LALS/ALS STANDARD DRUG & EQUIPMENT LIST

Each ambulance and first responder unit ~~will~~shall be equipped with the following functional equipment and supplies. **This list represents mandatory items with minimum quantities** excluding narcotics, which must be kept within the range indicated. All expiration dates must be current. All packaging of drugs or equipment must be intact. No open products or torn packaging may be used.

All ALS (transport and non-transport) and BLS transport vehicles shall be inspected annually.

MEDICATIONS/SOLUTIONS

Exchanged Medications/Solutions	BLS	LALS	ALS Non-Transport	ALS Transport
Adenosine (Adenocard) 6mg			1	1
Adenosine (Adenocard) 12mg			2	2
Albuterol Aerosolized Solution (Proventil) - unit dose 2.5mg		4 doses	4 doses	4 doses
Albuterol MDI with spacer		Specialty programs only 1	Specialty programs only 1	Specialty programs only 1
Aspirin, chewable - 81mg tablet		2	1 bottle	1 bottle
Atropine 1 mg preload			2	2
Calcium Chloride 1gm preload			1	1
Dextrose 25% 2.5gm preload			2	2
Dextrose 50% 25gm preload		2	2	2
Diphenhydramine (Benadryl) 50mg			1	1
Dopamine 400mg			1	1
Epinephrine 1:1000 1mg		2	2	2
Epinephrine 1:10,000 1 mg preload			3	3
Glucagon 1mg		1	1	1
Glucose paste	1 tube	1 tube	1 tube	1 tube
Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5mg			4	4
Irrigating Saline and/or Sterile Water (1000cc)	2	1	1	2
Lidocaine 100mg			3	3
Lidocaine 1gm or 1 bag pre-mixed 1gm/250cc D5W			1	1
Lidocaine 2% (Viscous) bottle			1	1
Magnesium Sulfate 10 gm			1	1
Naloxone (Narcan) 2 mg preload (needle less)		2	2	2
Nitroglycerine - Spray 0.4 mg metered dose and/or tablets (tablets to be discarded 90 days after opening)		2	1	2

Exchanged Medications/Solutions	BLS	LALS	ALS Non-Transport	ALS Transport
Normal Saline for Injection (10 cc)		2	2	2
Normal Saline 100 cc			1	2
Normal Saline 250 cc			1	1
Normal Saline 500 ml and/or 1000 ml		2000 ml	3000 ml	6000 ml
Ondansetron (Zofran) 4 mg Oral Disintegrating Tablets (ODT)			4	4
Ondansetron (Zofran) 4 mg IM/ IV			4	4
Phenylephrine HCL - 0.5 mg per metered dose			1 bottle	1 bottle
Procainamide 1 gm			1	2
Sodium Bicarbonate 50 mEq preload			2	2
Verapamil 5 mg			3	3

CONTROLLED SUBSTANCE MEDICATIONS

Non-Exchange Controlled Substance Medications MUST BE DOUBLE LOCKED	BLS	LALS	ALS Non-Transport	ALS Transport
Midazolam			20-40mg	20-40mg
Morphine Sulfate -vials of 10 mg			20-60mg	30-60mg

AIRWAY/SUCTION EQUIPMENT

Exchanged Airway/Suction Equipment	BLS	LALS	ALS Non-Transport	ALS Transport
BAAM Device			1	2
CPAP circuits - all manufacture's available sizes			1 each	2 each
End Title CO2 device - Pediatric and Adult (may be integrated into bag)			1 each	1 each
Endotracheal Tubes cuffed - 6.0 and/or 6.5, 7.0 and/or 7.5 and 8.0 and/or 8.5 with stylet			2 each	2 each
Endotracheal Tubes, uncuffed - 2.5, 3.0, 3.5 with stylet			2 each	2 each
Endotracheal Tubes, uncuffed - 4.0 or 4.5, 5.0 or 5.5 with stylet			2 each	2 each
ET Tube holders - pediatric and adult		1 each	1 each	2 each
King LTS-D Adult: Size 3 (yellow) Size 4 (red) Size 5 (purple)	SPECIALTY PROGRAMS ONLY 2 each	1 each	1 each	2 each
King Ped: 12-25 kg: Size 2 (green) 25-35 kg: Size 2.5 (orange)	SPECIALTY PROGRAMS ONLY 2 each	1 each	1 each	2 each
Mask - Adult & Pediatric non-rebreather oxygen mask	2 each	2 each	2 each	2 each
Mask - Infant Simple Mask	1	1	1	1
Nasal cannulas - pediatric and adult	2 each	2 each	2 each	2 each

Exchanged Airway/Suction Equipment	**BLS**	**LALS**	**ALS Non-Transport**	**ALS Transport**
Naso/Orogastric feeding tubes - 5fr or 6fr, and 8fr			1 each	1 each
Naso/Orogastric tubes - 10fr or 12fr, 14fr, 16fr or 18fr			1 each	1 each
Nasopharyngeal Airways - (infant, child, and adult)	1 each	1 each	1 each	1 each
Needle Cricothyrotomy Device - Pediatric and adult or Needles for procedure 10, 12, 14 and/or 16 gauge			1 each 2 each	1 each 2 each
One way flutter valve with adapter or equivalent			1	1
Oropharyngeal Airways - (infant, child, and adult)	1 each	1 each	1 each	1 each
Small volume nebulizer with universal cuff adaptor		2	2	2
Suction Canister	1		1	1
Suction catheters - 6fr, 8fr or 10fr, 12fr or 14fr	1 each		1 each	1 each
Ventilation Bags - Infant 250 ml Pediatric 500 ml (or equivalent) Adult	 1 1 1	 1 1 1	 1 1 1	 1 1 1
Water soluble lubricating jelly		1	1	1
Yankauers tonsil tip	1		1	1

Non-Exchange Airway/Suction Equipment	**BLS**	**LALS**	**ALS Non-Transport**	**ALS Transport**
Ambulance oxygen source -10 L /min for 20 minutes	1			1
Flashlight/penlight	1	1	1	1
Laryngeal blades - #0, #1, #2, #3, #4 curved and/or straight			1 each	1 each
Laryngoscope handle with batteries - or 2 disposable handles			1	1
Magill Forceps - Pediatric and Adult			1 each	1 each
Manual powered suction device		1		
Portable oxygen with regulator - 10 L /min for 20 minutes	1	1	1	1
Portable suction device (battery operated)	1		1	1
Pulse Oximetry device	(SEE OPTIONAL EQUIPMENT SECTION, PG. 5)	1	1	1
Stethoscope	1	1	1	1
Wall mount suction device	1			1

IV/NEEDLES/SYRINGES/MONITORING EQUIPMENT

Exchanged IV/Needles/Syringes/Monitor Equipment	BLS	LALS	ALS Non-Transport	ALS Transport
Conductive medium or Pacer/Defibrillation pads			2 each	2 each
Disposable Tourniquets		2	2	2
ECG electrodes			20	20
EZ-IO Needles and Driver 15 mm, 25 mm, and 45 mm			2 each 1 each	2 each 1 each
Glucose monitoring device with compatible strips and OSHA approved single use lancets		1	1	1
3-way stopcock with extension tubing			2	2
IV Catheters - sizes 14, 16, 18, 20, 22, 24		2 each	2 each	2 each
Macrodrip Administration Set (10 drops /cc) Microdrip Administration Set (60 drops /cc)		3 1	3 1	3 2
Mucosal Atomizer Device (MAD) for nasal administration of medication		2	2	4
Pressure Infusion Bag (disposable)		1	1	1
Razors		1	2	2
Safety Needles - 20 or 21gauge and 23 or 25 gauge		2 each	2 each	2 each
Saline Lock Large Bore Tubing Needless		2	2	2
Sterile IV dressing		2	2	2
Syringes w/wo safety needles - 1 cc, 3 cc, 10 cc catheter tip		2 each		
Syringes w/wo safety needles - 1 cc, 3 cc, 10 cc, 20 cc, 60 cc catheter tip			2 each	2 each

Non-Exchange IV/Needles/Syringes/Monitor Equipment	BLS	LALS	ALS Non-Transport	ALS Transport
12-lead ECG Monitor and Defibrillator with TCP and printout			1	1
Blood pressure cuff - large adult or thigh cuff, adult, child and infant	1	1	1	1
Capnography monitor and supplies, may be integrated in the cardiac monitor			1	1
Needle disposal system (OSHA approved)		1	1	1
Thermometer - Mercury Free with covers	1	1	1	1

OPTIONAL EQUIPMENT/MEDICATIONS

Non-Exchange Optional Equipment/Medications	BLS	LALS	ALS Non-Transport	ALS Transport
AED/defib pads	2	2		
Ammonia Inhalants			2	2

Non-Exchange Optional Equipment/Medications	BLS	LALS	ALS Non-Transport	ALS Transport
~~Approved~~ Automatic CPR device (FDA approved)	1	1	1	1
~~Approved~~ Automatic ventilator (ICEMA approved)			1	1
Backboard padding	1	1	1	1
Buretrol			1	1
~~Capnography monitor and supplies, may be integrated in the cardiac monitor~~			~~1~~	~~1~~
Chemistry profile tubes			3	3
CyanoKit (Specialty Program Only)			1	1
EMS Tourniquet	1		1	1
Endotracheal Tubes, cuffed - 2.5, 3.0, 3.5 with stylet			Specialty programs only	Specialty programs only
Endotracheal Tubes, cuffed - 4.0 or 4.5, 5.0 or 5.5 with stylet			Specialty programs only	Specialty programs only
Gum Elastic intubation stylet			2	2
Hemostatic Dressings *	1	1	1	1
IO Needles - Manual, Adult and Pediatric, Optional		Pediatric sizes only or EZ-IO needles and drivers	1 each	1 each
IV infusion pump			1	1
IV warming device		1	1	1
Manual IV Flow Rate Control Device			1	1
Manual powered suction device	1	1	1	1
Multi-lumen peripheral catheter			2	2
Needle Thoracostomy Kit (prepackaged)			2	2
Pitocin			20 units	20 units
Pulse Oximetry device	1			
Translaryngeal Jet Ventilation Device			1	1
Vacutainer			1	1

* Hemostatic Dressings

- Quick Clot®, Z-Medica®
  Quick Clot®, Combat Gauze® LE
  Quick Clot®, EMS Rolled Gauze, 4x4 Dressing, TraumaPad®
- Celox®
  Celox® Gauze, Z-Fold Hemostatic Gauze
  Celox® Rapid, Hemostatic Z-Fold Gauze

Note:

- The above products are “packaged” in various forms (i.e., Z-fold, rolled gauze, trauma pads, 4”x4”pads) and are authorized provided they are comprised of the approved product.
- Hemostatic Celox Granules, or granules delivered in an applicator, are not authorized.

DRESSING MATERIALS/OTHER EQUIPMENT/SUPPLIES

Exchanged Dressing Materials/Other Equipment/Supplies	BLS	LALS	ALS Non-Transport	ALS Transport
Adhesive tape - 1 inch	2	2	2	2
Air occlusive dressing ~~(Vaseline gauze)~~	1	1	1	1
Ankle & wrist restraints, soft ties acceptable	1		0	1
Antiseptic swabs/wipes		10	10	10
Bedpan or fracture pan Urinal	1 1			1 1
Cervical Collars - Rigid Pediatric & Adult all sizes or Cervical Collars - Adjustable Adult & Pediatric	2 each 2 each	2 each 2 each	2 each 2 each	2 each 2 each
Cold Packs	2	2	2	2
Emesis basin or disposable bags & covered waste container	1	1	1	1
Head immobilization device	2	2	2	2
OB Kit	1	1	1	1
Pneumatic or rigid splints capable of splinting all extremities	4	2	2	4
Provodine/Iodine swabs/wipes or antiseptic equivalent		4	10	10
Roller bandages - 4 inch	6	3	3	6
Sterile bandage compress or equivalent	6	2	2	6
Sterile gauze pads - 4x4 inch	4	4	4	4
Sterile Sheet for Burns	2	2	2	2
Universal Dressing 10x30 inches	2	2	2	2

Non-Exchange Dressing Materials/Other Equipment/Supplies	BLS	LALS	ALS Non-Transport	ALS Transport
800 MHz Radio		1	1	1
Ambulance gurney	1			1
Bandage Shears	1	1	1	1
Blood Borne Pathogen Protective Equipment - (nonporous gloves, goggles face masks & gowns meeting OSHA Standards)	2	1	2	2
Drinkable water in secured plastic container or equivalent	1 gallon			1 gallon
Long board with restraint straps	1	1	1	1
Pediatric immobilization board	1	1	1	1
Pillow, pillow case, sheets & blanket	1 set			1 set
Short extrication device	1	1	1	1
Straps to secure patient to gurney	1 set			1 set
Traction splint	1	1	1	1
Triage Tags - CAL Chiefs or ICEMA approved	20	20	20	20

EMS AIRCRAFT STANDARD DRUG & EQUIPMENT LIST

Each Aircraft ~~will~~shall be equipped with the following functional equipment and supplies. This list represents mandatory items with minimum quantities, to exclude narcotics, which must be kept within the range indicated. All expiration dates must be current. All packaging of drugs or equipment must be intact. No open products or torn packaging may be used.

MEDICATIONS/SOLUTIONS	AMOUNT
Adenosine (Adenocard) 6 mg	30 mg
Adrenaline (Epinephrine) 1:1,000	2 mg
Adrenaline (Epinephrine) 1:10,000	3 mg
Albuterol Aerosolized Solution (Proventil) - unit dose 2.5 mg	4 doses
Aspirin, chewable - 81 mg tablet	1 bottle
Atropine 1 mg preload	3 mg
Calcium Chloride	1 gm
Dextrose 25%	5 gm
Dextrose 50%	50 gm
Diphenhydramine (Benadryl) 50 mg	50 mg
Glucagon	1 mg
Glucopaste	1 tube
Intropin (Dopamine)	200 mg
Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5 mg	4
Lidocaine	300 mg
Lidocaine 1 gm or 1 bag pre-mixed 1 gm/250 cc D5W	1 gm
Lidocaine 2% (Viscous)	2 ~~oz~~
Magnesium Sulfate 10 gms ~~mg~~	10 gms
Naloxone (Narcan)	4 mg
Nitroglycerin - Spray 0.4 mg metered dose and/or tablets (tablets to be discarded 90 days after opening.)	1
Normal Saline for Injection (10 cc)	2
Normal Saline 250 ml	1
Normal Saline 500 ml and/or 1000 ml	4000 ml
Ondansetron (Zofran) 4 mg Oral Disintegrating Tablets (ODT)	4
Ondansetron (Zofran) 4 mg IM/ IV	4
Phenylephrine HCL - 0.5 mg per metered dose	1 bottle
Procainamide	1 gm
Sodium Bicarbonate	100 mEq
Verapamil (Isoptin)	15 mg

CONTROLLED SUBSTANCE MEDICATIONS-MUST BE DOUBLE LOCKED	AMOUNT
Midazolam	20-40 mg
Morphine Sulfate - vials 10 mg	20-60 mg

AIRWAY/SUCTION EQUIPMENT	AMOUNT
Aircraft Oxygen source -10 L /min for 20 minutes	1
BAAM Device	1
C-PAP circuits - all manufacture's available sizes	1 each
End-title CO2 device - pediatric and adult (may be integrated into bag)	1 each
Endotracheal tubes, uncuffed - 2.5, 3.0, 3.5 with stylet	2 each
Endotracheal Tubes, uncuffed - 4.0 or 4.5, 5.0 or 5.5 with stylet	2 each
Endotracheal Tubes cuffed - 6.0 and/or 6.5, 7.0 and/or 7.5 and 8.0 and/or 8.5 with stylet	2 each
ET Tube holders - pediatric and adult	1 each
Flashlight/penlight	1
King LTS-D Adult: Size 3 (yellow) Size 4 (red) Size 5 (purple)	1 each
King Ped: 12-25 kg: Size 2 (green) 25-35 kg: Size 2.5 (orange)	1 each
Laryngoscope handle with batteries - or 2 disposable handles	1
Laryngeal blades - #0, #1, #2, #3, #4 curved and/or straight	1 each
Magill Forceps - Pediatric and Adult	1 each
Nasal Cannulas - infant, pediatric and adult	2 each
Naso/Orogastric tubes - 10fr or 12fr, 14fr, 16fr or 18fr	1 each
Naso/Orogastric feeding tubes - 5fr or 6fr, and 8fr	1 each
Nasopharyngeal Airways - infant, child, and adult	1 each
Needle Cricothyrotomy Device (Approved) - Pediatric and adult *or* Needles for procedure 10, 12, 14 and/or16 gauge	1 each 2 each
Non Re-Breather O_2 Mask - Pediatric and Adult, Infant Simple Mask	2 each
One way flutter valve with adapter or equivalent	1
Oropharyngeal Airways - infant, child, and adult	1 each
Portable Oxygen with regulator - 10 L /min for 20 minutes	1
Portable suction device (battery operated) *and/or* Wall mount suction device	1 each
Pulse Oximetry device	1
Small volume nebulizer with universal cuff adaptor	2
Stethoscope	1
Suction catheters - 6fr, 8fr or 10fr, 12fr or 14fr	1 each
Ventilation Bags - Infant 250 ml, Pediatric 500 ml and Adult 1 L	1 each
Water soluble lubricating jelly	1
Yankauers tonsil tip	1

IV/NEEDLES/SYRINGES/MONITORING EQUIPMENT	AMOUNT
12-Lead ECG Monitor and Defibrillator with TCP and printout	1
800 MHz Radio	1
Blood pressure cuff - large adult or thigh cuff, adult, child and infant	1 set
Capnography monitor and supplies, may be integrated in the cardiac monitor	1
Conductive medium *or* Adult and Pediatric Pacer/Defibrillation pads	2 each
ECG - Pediatric and Adult	20 patches
EZ IO Needles and Driver 15 mm, 25 mm, and 45 mm	2 each 1 each
3-way stopcock with extension tubing	2
IO Needles - Manual, Adult and Pediatric, Optional	1 each
IV Catheters - sizes 14, 16, 18, 20, 22, 24	2 each
Glucose monitoring device	1
Macrodrip Administration Set (10 drops/ml) Microdrip Administration Set (60 drops/ml)	3 1
Mucosal Atomizer Device (MAD) for nasal administration of medication	4
Needle disposal system (OSHA approved)	1
Pressure infusion bag	1
Safety Needles - 20 or 21 gauge and 23 or 25 gauge	2 each
Saline Lock	2
Syringes w/wo safety needles - 1 ml, 3 ml, 10 ml, 20 ml, 60 ml catheter tip	2 each
Thermometer - Mercury free with covers	1

OPTIONAL EQUIPMENT/MEDICATIONS	Amount
Ammonia Inhalants	2
Automatic ventilator (Approved)	1
Backboard padding	1
BLS AED/defib pads	1
~~Capnography monitor and supplies, may be integrated in the cardiac monitor~~	~~1~~
Chemistry profile tubes	3
CyanoKit (Specialty Program Only)	Specialty programs only
D5W in bag	1
Endotracheal tubes, cuffed - 2.5, 3.0, 3.5 with stylet	Specialty programs only
Endotracheal Tubes, cuffed - 4.0 or 4.5, 5.0 or 5.5 with stylet	Specialty programs only
Hemostatic Dressing *	1
IV infusion pump	1
IV warming device	1
Manual powered suction device	1
Medical Tourniquet	1
Needle Thoracostomy Kit (prepackaged)	2
Pitocin	2
Translaryngeal Jet Ventilation Device	1

OPTIONAL EQUIPMENT/MEDICATIONS	Amount
Vacutainer	1

* Hemostatic Dressings
  - Quick Clot®, Z-Medica®
    Quick Clot®, Combat Gauze® LE
    Quick Clot®, EMS Rolled Gauze, 4x4 Dressing, TraumaPad®
  - Celox®
    Celox® Gauze, Z-Fold Hemostatic Gauze
    Celox® Rapid, Hemostatic Z-Fold Gauze

Note:
- The above products are "packaged" in various forms (i.e., Z-fold, rolled gauze, trauma pads, 4"x4"pads) and are authorized provided they are comprised of the approved product.
- Hemostatic Celox Granules, or granules delivered in an applicator, are not authorized.

DRESSING MATERIALS/OTHER EQUIPMENT SUPPLIES	AMOUNT
Adhesive tape - 1 inch	2
Air occlusive dressing ~~(Vaseline gauze)~~	1
Aircraft stretcher or litter system with approved FAA straps that allows for Axial Spinal Immobilization	1
Ankle & wrist restraints, soft ties acceptable	1
Antiseptic swabs/wipes	
Bandage Shears	1
Blanket or sheet	2
Blood Borne Pathogen Protective Equipment - (nonporous gloves, goggles face masks & gowns meeting OSHA Standards)	2
Cervical Collars - Rigid Pediatric & Adult all sizes *or* Cervical Collars - Adjustable Adult & Pediatric	2 each 2 each
Emesis basin or disposable bags & covered waste container	1
Head immobilization device	2
OB Kit	1
Pediatric immobilization board	1
Pneumatic or rigid splints capable of splinting all extremities	4
Provodine/Iodine swabs/wipes or antiseptic equivalent	
Roller bandages - 4 inch	3
Short extrication device	1
Sterile bandage compress or equivalent	6
Sterile gauze pads - 4x4 inch	4
Sterile Sheet for Burns	2
Traction splint	1
Universal Dressing 10x30 inches	2

CONTROLLED SUBSTANCE POLICY

I. PURPOSE

To establish minimum requirements and accountability for ICEMA approved ALS providers to procure, stock, transport, and use controlled substances in compliance with the Federal Controlled Substances Act.

II. AUTHORITY

California Code of Regulations Title 22, Division 9, Chapter 4, Article 7, Section 100168

III. POLICY

All ICEMA approved ALS providers shall have a formal agreement with a qualified Medical Director or a drug authorizing physician who agrees to purchase controlled substances using the appropriate DEA registration number and forms. This physician will retain ownership, accountability and responsibility for these controlled substances at all times.

All ALS providers ~~will~~ shall develop policies compliant with The Controlled Substances Act Title 21, United States Code (USC) and California Code of Regulations Title 22, Division 9, Chapter 4, Article 7, Section 100168. ~~, chapter 13 of the Federal Controlled Substance Act.~~ These policies must ensure that security mechanisms and procedures are established for controlled substances, including, but not limited to:~~clearly outline the procedure for procurement, receipt, distribution, waste management and associated record keeping for the controlled substances purchased under their DEA registration number.~~

- Controlled substance ordering and order tracking
- Controlled substance receipt and accountability
- Controlled substance master supply storage, security and documentation
- Controlled substance labeling and tracking
- Vehicle storage and security
- Usage procedures and documentation
- Reverse distribution
- Disposal
- Re-stocking

Additionally, the policies must ensure that mechanisms for investigation and mitigation of suspected tampering or diversion are established, including, but not limited to:

- Controlled substance testing
- Discrepancy reporting
- Tampering, theft and diversion prevention and detection
- Usage audits

The ALS provider's medical director or drug authorizing physician must be a physician licensed to practice medicine in the State of California and must apply and obtain a valid DEA registration number for the ALS provider they propose to purchase controlled substances for. If a physician has agreements with multiple ALS providers, separate DEA registration numbers are required for each individual EMS provider ~~agency~~. Physicians should not use their personal DEA registration number that they use for their clinical practice.

IV. PROCEDURE

All controlled substances ~~will~~shall:

1. Be purchased and stored in tamper evident containers.

2. Be stored in a secure and accountable manner.

3. Be kept under a "double lock" system at all times.

4. Be reconciled~~counted~~ ~~a minimum of daily~~ at a minimum every 24 hours or at any change of shift or change in personnel.

V. REQUIRED DOCUMENTATION

1. ALS providers must maintain a log of all purchased controlled substances for a period of no less than two (2) years.

2. All controlled substance usage will be documented ~~in~~ on all patient care ~~records~~records (PCR) or electronic patient care reports (ePCR).

3. EMS Provider's medical director~~s~~ must determine the manner by which unused and expired controlled substances are discarded. The practice must be in compliance with all applicable local, state, and federal regulations and the process should be clearly stated in the EMS provider's controlled substances policy.~~All wasted portions of controlled substances must be witnessed and documented by at least two (2) licensed EMS field personnelproviders (both providers must sign the log).) and appropriate sections of the PCR or ePCR.~~

4. In the event of breakage of a narcotic container an incident report will be completed and the damage reported to the appropriate supervisor.

5. Discrepancies in the narcotic count will be reported immediately to the appropriate supervisor and a written report must be submitted.

SAMPLE DAILY LOG

Agency: _____

Month: _____Year: ___

Double Lock Shift Change Medic Date In Place Midazolam 5mg **On**

	DATE	**DOUBLE LOCK IN PLACE?**	**MIDAZOLAM 5MG**	**MORPHINE 10MG**	**DRUG ADMINISTERED - AMOUNT GIVEN / WASTED O1A # PATIENT NAME DATE/TIME MEDIC NAME**	**DUTY MEDIC**	**CAPTAIN OR SUPERVISOR**
1		Yes / No	Amount _____	Amount_____		Can Not Be Same Signature	Can Not Be Same Signature
2		Yes / No	Amount _____	Amount_____		Can Not Be Same Signature	Can Not Be Same Signature
3		Yes / No	Amount _____	Amount_____		Can Not Be Same Signature	Can Not Be Same Signature
4		Yes / No	Amount _____	Amount_____		Can Not Be Same Signature	Can Not Be Same Signature
5		Yes / No	Amount _____	Amount_____		Can Not Be Same Signature	Can Not Be Same Signature
6		Yes / No	Amount _____	Amount_____		Can Not Be Same Signature	Can Not Be Same Signature
7		Yes / No	Amount _____	Amount_____		Can Not Be Same Signature	Can Not Be Same Signature
8		Yes / No	Amount _____	Amount_____		Can Not Be Same Signature	Can Not Be Same Signature

SAMPLE - Master Controlled Substance Inventory Log

Date/Time	Lot Number	Midazolam Quantity	Morphine Quantity	Outdated Destroyed	Action Inventory, Restock, Dispensed, Inventory Total	Signatures of Personnel I certify that we have counted and found correct all controlled substances listed.	
						Signature	Signature

MEDICATION - STANDARD ORDERS

Adenosine (Adenocard) - Adult (ALS)

Stable narrow-complex SVT or Wide complex tachycardia:

Adenosine, 6 mg rapid IVP followed immediately by 20 cc NS bolus, and
Adenosine, 12 mg rapid IVP followed immediately by 20 cc NS bolus if patient does not convert. May repeat one (1) time.

Reference #s 7010, 7020, 11050

Albuterol Aerosolized Solution (Proventil) - Adult (LALS, ALS)

Albuterol nebulized, 2.5 mg, may repeat two (2) times.

Reference #s 6090, 7010, 7020, 11010, 11100, 14030

Albuterol Metered-Dose Inhaler (MDI) (Proventil) - Specialty Programs Only Adult (LALS, ALS)

Albuterol MDI, four (4) puffs every ten (10) minutes for continued shortness of breath and wheezing.

Reference #s 6090, 6110, Sheriff's Search and Rescue

Albuterol - Pediatric (LALS, ALS)

Albuterol nebulized, 2.5 mg, may repeat two (2) times.

Reference #s 7010, 7020, 14010, 14030, and 14070

Aspirin, chewable (LALS, ALS)

Aspirin, 325 mg PO chewed (one (1) adult non-enteric coated aspirin) or four (4) chewable 81 mg aspirin

Reference #s 2020, 6090, 6110, 7010, 7020, 11060

Atropine (ALS)

Atropine, 0.5 mg IVP. May repeat every five (5) minutes up to a maximum of 3 mg or 0.04 mg/kg.

Organophosphate poisoning:

Atropine, 2 mg IVP, repeat at 2 mg increments if patient remains symptomatic

Reference #s 6090, 6110, 7010, 7020, 11040, 12020, 13010

Calcium Chloride (ALS)

Calcium Channel Blocker Poisonings:

Calcium Chloride, 1 gm (10 cc of a 10% solution) Base Station Only

Reference #s 2020, 7010, 7020, 13010

Dextrose - Adult (LALS)

Dextrose 50% 25 gm IV of 50%

Reference #s 2020, 6090, 6110, 7010, 7020, 8010, 11050, 11070, 11080, 13020, 13030

Dextrose - Adult (~~LALS,~~ ALS)

Dextrose 50% 25 gm IV/IO of 50%

Reference #s 2020, 6090, 6110, 7010, 7020, 8010, 11050, 11070, 11080, 13020, 13030

Dextrose - Pediatric (LALS, ALS)

For neonates (0 - 4 weeks), if blood glucose < 35 mg/dL:
Dextrose 25% (0.25 gm/ml) Diluted 1:1, give 0.5 gm/kg (4 ml/kg) IV/IO

For patient < 10 kg and > 4 weeks, if blood glucose < 60 mg/dL:
Dextrose 25% (0.25 gm/ml), give 0.5 gm/kg (2 ml/kg) IV/IO

For patient > 10 kg and < 25kg, if glucose less than 60 mg/dL:
Dextrose 50% (0.5 gm/mL) Diluted 1:1, give 0.5 gm/kg (2 ml/kg) IV/IO

For patient > 25 kg, if glucose less than 80 mg/dL:
Dextrose 50% (0.5 gm/mL) Diluted 1:1, give 0.5 gm/kg (2 ml/kg) IV/IO

Reference #s 2020, 7010, 7020, 13020, 13030, 14040, 14050, 14060

Diphenhydramine - Adult (ALS)

Diphenhydramine, 25 mg IV/IO
Diphenhydramine, 50 mg IM

Reference #s 6090, 6110, 7010, 7020, 11010, 13010

Diphenhydramine - Pediatric (ALS)

Diphenhydramine, 1 mg/kg slow IV/IO, not to exceed adult dose of 25 mg, or
Diphenhydramine, 2 mg/kg IM not to exceed adult dose of 50 mg IM

Reference #s 7010, 7020, 14030

Dopamine - Adult (ALS)

Dopamine, infusion of 400 mg in 250 ml of NS, titrated between 5 - 20 mcg/kg/min to sustain a systolic blood pressure greater than 90 mmHG for signs of inadequate tissue perfusion/shock.

Reference #s 7010, 7020, 8010, 8040, 10140, 11070, 11090, 14080

Dopamine - Pediatric (ALS)

Post resuscitation continued signs of inadequate tissue perfusion:

9 to 14 years	Dopamine, 400 mg in 250 ml of NS to infuse at 5 - 20 mcg/kg/min IV titrated to maintain signs of adequate tissue perfusion

Reference #s 7010, 7020, 14040

Epinephrine (1:1000) - Adult (LALS, ALS)

Acute Asthma, Bronchospasm, Allergic reaction, Anaphylaxis:
Epinephrine, 0.3 mg SC

Epinephrine (1:10,000) - Adult (ALS)

For Persistent severe anaphylactic shock:
Epinephrine, 0.1 mg (1:10,000) slow IVP. May repeat as needed to total dosage of 0.5 mg.

Cardiac Arrest, Asystole, PEA:
Epinephrine, 1 mg IV/IO

Reference #s 2020, 6090, 6110, 7010, 7020, 11010, 11070, 12020

Epinephrine (1:1000) - Pediatric (LALS, ALS)

Allergic Reactions:
Epinephrine, 0.01 mg/kg SC not to exceed adult dosage of 0.3 mg

Reference #s 2020, 6090, 7010, 7020, 11010, 14010, 14030

Epinephrine (1:10,000) - Pediatric (~~LALS,~~ ALS)

Anaphylactic Shock (no palpable radial pulse and depressed level of consciousness):

Epinephrine (1:10,000), 0.01 mg/kg IV/IO, no more than 0.1 mg per dose. May repeat to a maximum of 0.5 mg.

Cardiac Arrest:

1 day to 8 years	Epinephrine (1:10,000), 0.01 mg/kg IV/IO (do not exceed adult dosage)
9 to 14 years	Epinephrine (1:10,000), 1.0 mg IV/IO

Post resuscitation continued signs of inadequate tissue perfusion:

1 day to 8 years	Epinephrine (1:10,000), 0.5 mcg/kg/min IV drip

Reference #s 2020, 7010, 7020, 14030, 14040, 14090

Glucose - Oral - Adult (BLS, LALS, ALS)

Glucose - Oral, one (1) tube for patients with an intact gag reflex and hypoglycemia.

Reference #s 7010, 7020, 11080, 11090, 11110, 13020

Glucose - Oral - Pediatric (BLS, LALS, ALS)

Glucose - Oral, one (1) tube for patients with an intact gag reflex and hypoglycemia.

Reference #s 7010, 7020, 14050, 14060

Glucagon - Adult (LALS, ALS)

Glucagon, 1 mg IM/SC/IN, if unable to establish IV. May give one (1) time only.

Betablocker Poisoning:

Glucagon, 1 mg IVP Base Station Only

Reference #s 6090, 6110, 7010, 7020, 11080, 13010, 13030

Glucagon - Pediatric (LALS, ALS)

Glucagon, 0.025 mg/kg IM/IN, if unable to start an IV. May be repeated one (1) time after twenty (20) minutes for a combined maximum dose of 1 mg.

Reference #s 7010, 7020, 13030, 14050, 14060

Ipratropium Bromide Inhalation Solution (Atrovent) - Adult (ALS) use with Albuterol

Atrovent, 0.5 mg

Reference #s 7010, 7020, 11010, 11100

Ipratropium Bromide Metered-Dose Inhaler (MDI) (Atrovent) - Specialty Programs Only Adult (ALS) use with Albuterol

Atrovent MDI, four (4) puffs every ten (10) minutes for continued shortness of breath and wheezing.

Reference #s 6090, 6110, 7010, 7020

Ipratropium Bromide Inhalation Solution (Atrovent) - Pediatric (ALS) use with Albuterol

1 day to 12 months	Atrovent, 0.25 mg
1 year to 14 years	Atrovent, 0.5 mg

Reference #s 7010, 7020, 14010, 14030, 14070

Lidocaine - Adult (ALS)

Intubation, King Airway, NG/OG, for suspected brain injury:
Lidocaine, 1.5 mg/kg IV

VT/VF:
Lidocaine, 1.5 mg/kg
Repeat 0.75 mg/kg every five (5) to ten (10) minutes; maximum total dose of 3 mg/kg

Refractory VF:
Lidocaine, 0.75 mg/kg IV, repeat in five (5) to ten (10) minutes; maximum three (3) doses or total of 3 mg/kg

VT/VF Infusion:
Lidocaine, 1 - 4 mg /min (30 - 50 mcg/kg /min)

V-Tach, Wide Complex Tachycardias:
Lidocaine, 1 mg/kg slow IV, repeat at 0.5 mg/kg every ten (10) minutes until maximum dose of 3 mg/kg given.
Initiate infusion of Lidocaine 2 mg /min.

Reference #s 2020, 6090, 7010, 7020, 8010, 8040, 10030, 10080, 11050, 11070, 15010

Lidocaine - Pediatric (ALS)

Intubation, King Airway, NG/OG, for suspected brain injury:
Lidocaine, 1.5 mg/kg IV

Cardiac Arrest:

1 day to 8 years	Lidocaine, 1.0 mg/kg IV/IO
9 to 14 years	Lidocaine, 1.0 mg/kg IV/IO

May repeat Lidocaine at 0.5 mg/kg after five (5) minutes up to total of 3.0 mg/kg.

Reference #s 2020, 7010, 7020, 14040

Lidocaine 2%

Pain associated with IO insertion:

Lidocaine 2%, 0.5 mg/kg slow IO push not to exceed 50 mg total.

Reference #s 2020, 7010, 7020, 10140

Magnesium Sulfate (ALS)

Polymorphic Ventricular Tachycardia:

Magnesium Sulfate, 2gm in 100 ml of NS over five (5) minutes for polymorphic VT if prolonged QT is observed during sinus rhythm post-cardioversion.

Eclampsia (Seizure/Tonic/Clonic Activity):

Magnesium Sulfate, 4 gm diluted with 20 ml NS, IV/IO slow IV push over three (3) to four (4) minutes.

Magnesium Sulfate 2 gm in 100 cc of NS at 30 cc per hour IV/IO to prevent continued seizures.

Reference #s 2020, 7010, 7020, 8010, 14080

Midazolam - Adult (ALS)

Seizure:

Midazolam, 2.5 mg IN/IV/IO. May repeat in five (5) minutes for continued seizure activity, or

Midazolam, 5 mg IM. May repeat in ten (10) minutes for continued seizure activity.

Assess patient for medication related reduced respiratory rate or hypotension.

Maximum of three (3) doses using any combination of IM/IN/IV/IO may be given for continued seizure activity. Contact Base Station for additional orders and to discuss further treatment options.

Pacing, synchronized cardioversion:

Midazolam, 2 mg slow IV push IV/IN

Reference #s 6090, 6110, 7010, 7020, 10110, 10120, 11080, 13020, 14080

Midazolam - Pediatric (ALS)

Seizures:

Midazolam, 0.1 mg/kg IV/IO with maximum dose 2.5 mg. May repeat Midazolam in five (5) minutes. Do not to exceed adult dosage, or

Midazolam, 0.2 mg/kg IM/IN with maximum dose of 5 mg. May repeat Midazolam in ten (10) minutes for continued seizure. Do not to exceed adult dosage. IN dosage of Midazolam is doubled due to decreased surface area of nasal mucosa resulting in decreased absorption of medication.

Assess patient for medication related reduced respiratory rate or hypotension.

Maximum of three (3) doses using any combination of IM/IN/IV/IO may be given for continued seizure activity. Contact Base Station for additional orders and to discuss further treatment options.

Reference #s 7010, 7020, 14060

Morphine Sulfate - Adult (ALS)

Morphine Sulfate, 2 mg IV. May repeat in 2 mg increments every three (3) minutes, not to exceed 10 mg IV.

Isolated Extremity Trauma, Burns:

Morphine Sulfate, 5 mg IV. May repeat every five (5) minutes to a maximum of 20 mg for adequate tissue perfusion, or

Morphine Sulfate, 10 mg IM.

Pacing, synchronized cardioversion:

Morphine Sulfate, 2 mg IV. May repeat in 2 mg increments every three (3) minutes, titrated to pain, not to exceed 10 mg IV.

Reference #s 2020, 6090, 6110, 7010, 7020, 7030, 9120, 10110 10120, 11060, 11100, 13030, 15010

Morphine Sulfate - Pediatric (ALS)

Morphine Sulfate, 0.1 mg/kg IV not to exceed 2 mg increments, for a total of 5 mg, or
Morphine Sulfate, 0.2 mg/kg IM for a total of 10 mg IM, titrated for pain relief

Burns:

Morphine Sulfate, 0.1 mg/kg IV not to exceed 5 mg increments, for a total of 20 mg, or

Morphine Sulfate, 0.2 mg/kg IM for a total of 10 mg IM, titrated for pain relief

Reference #s 2020, 7010, 7020, 7030, 14070, 15020

Naloxone (Narcan) - Adult (LALS, ALS)

Resolution of respiratory depression related to suspected narcotic overdose:

Naloxone, 0.5 mg IV/IM/IN may repeat Naloxone 0.5 mg IV/IM/IN every two (2) to three (3) minutes if needed.

Do not exceed 10 mg of Naloxone total regardless of route given.

Reference #s 6110, 7010, 7020, 11070, 11080

Naloxone (Narcan) - Pediatric (LALS)

Resolution of respiratory depression related to suspected narcotic overdose:

1 day to 8 years	Naloxone, 0.1 mg/kg IV/IO
9 to 14 years	Naloxone, 0.5 mg IV

Do not exceed the adult dosage of 10 mg IV/IM/IN.

Reference #s 7010, 7020, 14040, 14050

Naloxone (Narcan) - Pediatric (~~LALS,~~ ALS)

Resolution of respiratory depression related to suspected narcotic overdose:

1 day to 8 years	Naloxone, 0.1 mg/kg IV/IO
9 to 14 years	Naloxone, 0.5 mg IV/IO

Do not exceed the adult dosage of 10 mg IV/IM/IN.

Reference #s 7010, 7020, 14040, 14050

Nitroglycerin (LALS, ALS)

Nitroglycerin, 0.4 mg sublingual/transmucosal

One every three (3) minutes as needed. May be repeated as long as patient continues to have signs of adequate tissue perfusion. **If a Right Ventricular Infarction is suspected, the use of nitrates requires Base Station contact.**

Nitroglycerin is contraindicated if there are signs of inadequate tissue perfusion or if sexual enhancement medications have been utilized within the past forty-eight (48) hours.

Reference #s 6090, 6110, 7010, 7020, 11010, 11060

Ondansetron (Zofran) - Patients four (4) years old to Adult (ALS)

Nausea/Vomiting:

Ondansetron, 4 mg slow IV/ODT

All patients four (4) to eight (8) years old: may give a total of 4 mgs of Ondansetron prior to Base Station contact.

All patients nine (9) and older: may give Ondansetron 4 mg and may repeat twice, at ten (10) minute intervals, for a total of 12 mgs prior to Base Station contact.

May be used as prophylactic treatment of nausea and vomiting associated with narcotic administration.

Reference #s 6110, 7010, 7020, 9120, 10100, 15010, 15020

Phenylephrine HCL (ALS)

Phenylephrine, 0.5 mg metered dose may be repeated once prior to additional attempt

Reference #s 7010, 7020, 10050

Procainamide (ALS)

SVT, V-Tach or Wide Complex Tachycardias:

Procainamide, 20 mg /min IV; may repeat until arrhythmia suppressed, symptomatic hypotension, QRS widens by more than 50% or maximum dose of 17 mg/kg given. If arrhythmia suppressed, begin infusion of 2 mg /min.

Reference #s 7010, 7020, 8010, 8040, 11050

Sodium Bicarbonate (ALS)

Tricyclic Poisoning:

Sodium Bicarbonate, 1 mEq/kg IVP

Reference #s 2020, 7010, 7020, 13010

Verapamil (ALS)

SVT if adenosine is ineffective:

Verapamil, 5 mg slow IV over three (3) minutes, may repeat every fifteen (15) minutes to a total dose of 20 mg

Reference #s 7010, 7020, 11050

DESTINATION POLICY

I. PURPOSE

To ensure the transportation of 9-1-1patients to the most appropriate receiving facility that has the staff and resources to deliver definitive care to the patient.

II. AUTHORITY

California Health and Safety Code, Division 2.5, Chapter 4, Section 1797.220

California Code of Regulations, Title 22 Chapters 4, 7 and 8

III. DEFINITIONS

Aircraft Dispatch Center (ADC): An ICEMA designated dispatch center which dispatches and coordinates air ambulance and/or air rescue aircraft response to the scene of a medical emergency within the ICEMA region.

Adult Patient: A person who is or is appearing to be older than 15 years of age.

Burn Patient: Patients meeting ICEMA's burn classifications minor, moderate or major, per ICEMA Reference #11100 - Burn - Adult (15 years of age or older) and #14070 - Burn - Pediatrics.

~~**CME**: Continuous Medical Education.~~

~~**CQI**: Continuous Quality Improvement.~~

Critical Trauma Patient (CTP): Patients meeting ICEMA's trauma triage criteria ~~(anatomic, physiologic, and/or mechanism of injury)~~per ICEMA Reference #15030 – Trauma Triage Criteria and Destination Policy ~~following a traumatic event~~.

~~**EMS:** Emergency Medical Services.~~

~~**Inadequate Tissue Perfusion**: Evidenced by the presence of cold, pale, clammy, mottled skin, and/or capillary refill time greater than two (2) seconds. Pulse rate will increase in an attempt to pump more blood. As the pulse gradually increases (tachycardia), it becomes weak and thready. Blood pressure is one of the last signs to change (hypotension). Altered level of consciousness may also be an indicator to inadequate tissue perfusion, especially in the very young.~~

Neurovascular Stroke Receiving Center (NSRC): A licensed acute care hospital designated by ICEMA's Governing Board as a receiving hospital for patients triaged as having a cerebral vascular event requiring hospitalization for treatment, evaluation and /or management of stroke.

~~**NSRC**~~ **Neurovascular Stroke Base Hospital**: Facilities that have been designated by ICEMA's Governing Board as a Neurovascular Receiving Hospital that also function as a base hospital.

~~**PCI**: Percutaneous Coronary Intervention.~~

Pediatric Patient: A person who is or is appearing to be under 15 years of age.

Pediatric Trauma Center: A licensed acute care hospital which usually treats (but is not limited to) persons under 15 years of age, designated by ICEMA's Governing Board that meets all relevant criteria, and has been designated as a pediatric trauma hospital, according to California Code of Regulations, Title 22, Division 9, Chapter 7, Section 100261.

ST Elevation Myocardial Infarction (STEMI): A medical term for a type of myocardial infarction that results in an elevation of the ST Segment on a 12-lead electro-cardiogram (ECG).

STEMI Base Hospital: Facilities that have emergency interventional cardiac catheterization capabilities that also function as a base hospital.

STEMI Receiving Center (SRC): A licensed general acute care hospital designated by ICEMA's Governing Board as a STEMI Receiving Center that has emergency interventional cardiac catheterization capabilities.

STEMI Referring Hospital: Facilities that do not have emergency interventional cardiac catheterization capabilities.

~~**STEMI**: ST Elevation Myocardial Infarction.~~

Trauma Center: A licensed general acute care hospital designated by ICEMA's Governing Board as a trauma hospital in accordance with State laws and regulations.

IV. POLICY

If the patient's condition is stable, the most appropriate destination may be the facility associated with their healthcare plan and primary care physician.

If a patient requires specialty care at an ICEMA designated STEMI, Stroke, Trauma or other approved specialty center, the EMS provider may bypass closer facilities for another facility having the specialty services needed by the patient. Destination for specialty patients requires contact with an appropriate specialty base hospital.

All destination decisions should be based on patient condition or patient and/or family request. Patients unable to, or without a preference should be taken to the closest hospital unless their condition requires specialty services as described below.

If directed by the base hospital physician, an EMS transport provider may bypass a closer facility.

V. GENERAL CONSIDERATIONS

- Closest Hospital
  - All patients requiring immediate medical attention for life threatening conditions.
  - Patients without destination preference.
- Patient Request
  - Patient requests should be honored if possible and appropriate.
  - Patient requests for specific destination may be accommodated if patient is medically stable and the destination is not outside of the unit's response area.
- Protocol
  - Destination may be determined by considering special care needs such as Trauma, STEMI or Stroke listed in the appropriate protocol.
- Higher Level of Care
  - May be dictated by patient condition and base hospital direction.
  - Allows ALS providers to bypass a closer facility in favor of a facility that has the capability of a specialty response to the patient's condition.
- Base Hospital
  - Final authority for destination determination is the base hospital.
  - Base hospital physician may override prior destination decisions made by the paramedic (EMT-P) or protocol.

VI. PSYCHIATRIC HOLDS

- All patients on a psychiatric hold (5150) who require medical evaluation and treatment shall be transported to the closest ~~facility~~ acute care hospital for medical clearance.

- Any acute care hospital is capable of medically clearing psychiatric patients.

- Patients on a psychiatric hold with no medical complaints or conditions may be released to law enforcement for transport~~ed~~ directly to a psychiatric facility that has the capacity to accept the patient.

VII. DIVERSION (Refer to ICEMA Reference #8060 - Requests for Hospital Diversion Policy - San Bernardino County Only)

- Diversion of ALS ambulances is limited by ICEMA, refer to ICEMA Reference #8060 - Requests for Hospital Diversion Policy (San Bernardino County Only).

- Ambulance diversion to another acute care hospital is not allowed in the ICEMA region based on hospital census or staffing.

- A patient may be directed to a hospital on diversion if it is in the best interest of the patient and the hospital has not declared an internal disaster.

- ~~Final destination of a LALS or ALS ambulance rests with the base hospital.~~

- The base hospital determines final destination of Advanced Life Support (ALS) or Limited Advanced Life Support (LALS) patients.

- Basic Life Support (BLS) ambulances may not be diverted from their intended destination unless the hospital is on internal disaster.

VIII. SPECIALTY SERVICES

- SRCs: ~~ST Elevation Myocardial Infraction (STEMI) Receiving Centers~~Refer to ICEMA Reference #6070 - Cardiovascular STEMI Receiving Centers.

  - A ~~Cardiovascular STEMI Receiving Center (~~SRC~~) will be~~is the preferred destination for patients who access the 9-1-1 system meeting defined criteria and show evidence of a ST elevation myocardial infarction (STEMI) on a 12-lead electrocardiogram (ECG). These patients will benefit from rapid interventions via cardiac catheterization interventions.

  - Once a patient with STEMI has been identified, contact a STEMI base hospital ~~contact should be made~~ for destination decision ~~while~~ and ~~preparing~~ prepare the patient for expeditious transport. In Inyo and Mono

Counties, the assigned base hospital should be contacted for STEMI consultation.

- Consider transporting patients that suffer out-of-hospital cardiac arrest, with or without return of spontaneous circulation (ROSC), to the closest STEMI receiving hospital, after contact with a STEMI base hospital for destination determination.

- ~~Refer to ICEMA Reference #6070 - Cardiovascular STEMI Receiving Centers.~~

- NSRCs: Refer to ICEMA Reference #11110 - Stroke Treatment - Adult (15 years of age and older.

  - A NSRC should be considered as the destination of choice for all patient meeting Stroke triage criteria.

  - Once a patient with a stroke has been identified, contact a NSRC base hospital ~~contact should be made~~ for destination decision ~~while~~ and ~~preparing~~ prepare the patient for expeditious transport. In Inyo and Mono Counties, the assigned base hospital should be contacted for stroke consultation.

  - ~~Refer to ICEMA Reference #11110 - Stroke Treatment - Adult (15 years of age and older).~~

- Trauma: (Refer to ICEMA Reference #15030 -Trauma Triage Criteria and Destination Policy.)

  - Adult patients meeting trauma triage criteria shall be transported to the closest Trauma Center.

  - Transport p~~P~~ediatric patients meeting trauma triage criteria shall be transported to a pediatric Trauma Center when there is less than a twenty (20) minute difference in transport time ~~to~~ between the pediatric Trauma Center ~~versus~~ and the closest Trauma Center.

  - ~~Patients~~ Transport patients meeting the physiologic and/or anatomic criteria ~~will be transported~~ to the closest Trauma Center.

  - Patients meeting the mechanism of injury and either the physiologic or anatomic criteria will be transport to the closest Trauma Center.

  - If there are no associated physiologic or anatomic criteria and the potential trauma patient meets one or more of the mechanisms of injury contact a trauma base hospital to determine patient destination. Patient may be directed to a non-trauma receiving hospital.

- Make trauma base hospital contact to determine if a Trauma Center should be the destination for patients not meeting the trauma triage criteria ~~above~~ but meeting age and/or co-morbid factors.

- Patients with unmanageable airway or traumatic cardiac arrest should be transported to the closest receiving hospital if indicated. Trauma base hospital contact shall be made.

- ~~Trauma triage criteria is established per ICEMA Reference #15030 - Trauma Triage Criteria and Destination Policy.~~

- ~~Hospital trauma diversion status, refer to ICEMA Reference #8060 - Requests for Hospital Diversion Policy (San Bernardino County Only).~~

- ~~Multi-Casualty Incident, refer to ICEMA Reference #5050 – Medical Response to a Multi-Casualty Incident Policy.~~

- ~~When estimated transport to the most appropriate Trauma Center (for patients identified as a CTP) is thirty (30) minutes or less, ground ambulance shall be the primary means of transport. EMS Aircraft transport shall not be used unless ground transport is expected to be greater than thirty (30) minutes and EMS Aircraft transport is expected to be significantly more expeditious than ground transport.~~

- Burn: (Refer to ICEMA Reference #15030 - Trauma Triage Criteria and Destination Policy.)

  - Burn patients meeting the physiologic or anatomic criteria for CTP shall be transported to the closest Trauma Center. ~~Refer to ICEMA Reference #15030 - Trauma Triage Criteria and Destination Policy~~.

  - Burn patients meeting minor or moderate classifications shall be transported to the closest receiving hospital.

  - Burn patients meeting major burn classification may be transported to the closest burn center (in San Bernardino County contact ~~ARMC~~Arrowhead Regional Medical Center).

  - Pediatric burn patients identified as a CTP should always be transported to the closest Trauma Center with or without burn capabilities. When there is less than twenty (20) minutes difference in transport time, a pediatric Trauma Center is the preferred destination.

  - Burn patients with respiratory compromise, or potential for such, will be transported to the closest ~~receiving~~ acute care receiving hospital for airway stabilization.

IX. INTERFACILITY TRANSFER (Refer to ICEMA Reference #8010 - Interfacility Transfer Guidelines)

- Patients will go to the designated destination facility regardless of patients' prior condition. ~~Change of destination to closer facility is warranted only in the event of the~~Patients may only be diverted if ~~the~~ patients' condition ~~deteriorating~~ deteriorates significantly while in the care of EMS.

- ~~If the patient's condition deteriorates, AEMTs~~ Advanced EMTs and EMT-Ps may start prior-to- contact protocols before contacting the base hospital for change of destination if the patient's condition deteriorates significantly,.

- ~~Refer to ICEMA Reference #8010 - Interfacility Transfer Guidelines~~.

X. EMS AIRCRAFT ROTATION AND DESTINATION (San Bernardino County Only)

- All EMS Aircraft requests from the field in San Bernardino County will be dispatched by the ICEMA designated Aircraft Dispatch Center (ADC).

- The destination may be changed by the EMS providers based on patient requirements for specialty centers.

- Refer to ICEMA Reference #8070 - Aircraft Rotation Policy (San Bernardino County Only).

XI. REFERENCE

Number	Name
5050	Medical Response to a Multi-Casualty Incident Policy
6070	Cardiovascular STEMI Receiving Centers.
8010	Interfacility Transfer Guidelines
8060	Requests for Hospital Diversion Policy (San Bernardino County Only).
8070	Aircraft Rotation Policy (San Bernardino County Only)
11100	Burn - Adult (15 years of age or older)
11110	Stroke Treatment - Adult
14070	Burn - Pediatrics
15030	Trauma Triage Criteria and Destination Policy

PATIENT REFUSAL OF CARE - ADULT

I. PURPOSE

To provide ~~guidance~~ direction for EMS field ~~P~~personnel when an individual refuses their advice that treatment and/or transport is indicated. ~~whose advice to an individual for treatment and/or transport is being refused~~

II. AUTHORITY

California Health and Safety Code, Division 2.5, Section 1797.220

III. DEFINITIONS

Against Medical Advice (AMA): A term used to when an individual refuses treatment and/or transport after EMS field personnel advise that it is indicated.

Consent: Consent is defined as the agreement and acceptance as to opinion or course of action.

Emergency: A condition or situation in which an individual has a need for immediate medical attention, or where the potential for such need is perceived by emergency medical personnel or a public safety agency. (California Health and Safety Code, Division 2.5, Section 1797.70) ~~The American Ambulance Association (AAA) defines an "emergency" as "unforeseen condition of a pathophysiological nature, which a prudent layperson, possessing an average knowledge of health and medicine, would judge to require urgent and unscheduled medical attention."~~

IV. PRINCIPLE

If a competent, conscious patient or legal guardian refuses care offered, or requests to be transported to a hospital other than the nearest, medically appropriate facility, the patient's request should be honored, when possible.

All AMAs shall be fully documented to acknowledge that the individual may benefit from assessment, treatment and/or transport refused the advice of EMS field personnel. Documentation shall acknowledge that the advice is to protect the individual and the EMS services and that the decision was that of the individual.

EMS field personnel ~~Providers~~ may refuse a request to transport a patient to a more distant facility that is outside of their service area provided they offer transportation to an appropriate medical facility. In the event the patient or legal guardian insists upon transport and the transporting ambulance agrees to transport to a more distant

facility, the signature of the patient or legal guardian must be obtained on the patient care record and base hospital contact made.

V. CONSENT

1. Immediately required treatment should not be delayed to obtain consent.

2. An individual has the responsibility to consent to or refuse treatment. If he/she is unable to do so, consent is then considered implied.

3. In non-emergency cases, consent should be obtained from the individual.

4. For treatment of minors or a definition of emancipated minors refer to ICEMA ~~Protocol~~ Reference #9080 - Care of Minors in the Field.

VI. ~~MENTAL COMPETENCE~~Medical Decision Making Capacity

1. An individual ~~is mentally competent~~has medical decision making capacity if he or she:

   a. Is capable of understanding the nature and consequences of the proposed treatment and refusal of such treatment.

   b. Has sufficient emotional control, judgment and discretion to manage his or her own affairs~~.~~

2. An individual having an understanding of what may happen if treated or not treated, and is oriented to person, place, time and purpose.

3. An individual with an altered level of consciousness will be unlikely to fulfill these criteria.

4. If the individual is not deemed mentally competent, the person should be treated and transported. Attempt to obtain law enforcement concurrence in these circumstances.

VII. REFUSAL OF CARE DOCUMENTATION

The following information should be carefully documented on the patient care record:

1. The individual's chief complaint, mechanism of injury, level of orientation/level of consciousness.

2. Base hospital~~Station~~ ~~C~~contact per ICEMA ~~Protocol~~ Reference #5040 - Radio Communication Policy.

3. Any medical treatment or evaluation needed and refused.

4. The need for emergency transportation; also if transport by means other than an ambulance could be hazardous due to the individual's injury or illness.

5. Individual advised that potential harm could result without emergency medical treatment and/or transport.

6. Individual provided with a refusal advice sheet, and if he or she would accept the refusal advice sheet.

7. A copy of the patient care record with the individual's signature of refusal will be kept by the EMS provider agency per ICEMA ~~Protocol~~ Reference #2010 - Requirements for Patient Care Records.

~~**DEFINITIONS**~~

~~**AMA:** A term used to designate "against medical advice".~~

~~**Consent:** Consent is defined as the agreement and acceptance as to opinion or course of action.~~

~~**Emergency:** The American Ambulance Association (AAA) defines an "emergency" as "unforeseen condition of a pathophysiological nature, which a prudent layperson, possessing an average knowledge of health and medicine, would judge to require urgent and unscheduled medical attention."~~

V. REFERENCE

Number	Name
2010	Requirements for Patient Care Records
5040	Radio Communication Policy
9080	Care of Minors in the Field

PATIENT REFUSAL OF CARE OR OTHER PATIENT REQUEST

Prehospital personnel should be sensitive to the needs and concerns of the patient and the patient's family. In the event that a competent, conscious patient or legal guardian refuses care offered, or requests to be transported to a hospital other than the nearest, medically appropriate facility, the patient's request should be met.

In the event that a patient refuses treatment, transport, or transport to a medically appropriate destination, the signature of the patient or legal guardian must be obtained on the patient care record. Base Hospital Contact should be made if in the EMT-P's judgment the patient's condition warrants the treatment and/or transport being refused. All patient contacts must be documented on the appropriate patient care record. Patient care records shall be reviewed by the provider agency in accordance with the EMS Quality Improvement Plan and subsequently forwarded to ICEMA.

Providers may refuse a request to transport a patient to a more distant facility if it lies outside of their service area provided they offer transportation to an appropriate medical facility. In the event the patient or legal guardian insists upon transport and the transporting ambulance agrees to transport to a more distant facility, the signature of the patient or legal guardian must be obtained on the patient care record and Base Hospital Contact made.

ICEMA APPROVED SKILLS

I. POLICY

To provide a list of ICEMA approved skills and affected scope of practice.

II. AUTHORITY

California Health and Safety Code, Sections 1797.214

California Code of Regulations, Title 22, Division 9, Chapters 2, 3, and 4

III. SKILLS

12-lead Electrocardiography (EMT-P)

- ECG should be performed prior to medication administration.

Axial Spinal Stabilization (EMT, AEMT and EMT-P)

- Should be placed i~~I~~f patient meets the indicators ~~Neuro deficits present, Spinal Tenderness, Altered Mental status, Intoxication, Distracting Injury (NSAID) criteria~~ , per ICEMA Reference #15010 - Trauma - Adult ~~(15 years of age or older)~~ (Neuro Deficits present, Spinal Tenderness present, Altered Mental status, Intoxication, or Distracting Injury).
- An AEMT and/or EMT-P may remove if placed by BLS crew and it does not meet ~~criteria~~indicators.

Continuous Positive Airway Pressure Device (CPAP) - Adult (EMT, AEMT and EMT-P)

- Start at lowest setting and increase slowly until patient experiences relief or until a maximum of 15 cm H_2O is reached.

External Jugular Vein Access (AEMT and EMT-P)

- Not indicated for patients eight (8) years of age and younger.

Intraosseous Infusion (AEMT pediatric patients only and EMT-P)

- EMT-Ps may administer Lidocaine slowly per ICEMA Reference #7040 - Medication - Standard Orders, for pain control.

King Airway Device (Perilaryngeal) - Adult (EMT Specialty Program, AEMT, EMT-P)

- Patients 15 years or older.
- Anyone over four (4) feet in height.

King Airway Device (Perilaryngeal) - Pediatric (EMT Specialty program, AEMT, EMT-P)

- Patients less than 15 years of age.
- May initially be contraindicated with suspected ALOC.

Nasogastric/Orogastric Tube (EMT-P)

- Use viscous Lidocaine gel per ICEMA Reference #7040 - Medication - Standard Orders, for conscious patients.
- Required for all full arrest patients.

Nasotracheal Intubation (EMT-P)

- Absolute contraindication: Apnea.
- Base hospital contact required: Facial trauma, anticoagulant therapy, airway burns, failed CPAP.
- Prophylactic Lidocaine per ICEMA Reference #7040 - Medication - Standard Orders, for suspected head/brain injury.

Needle Cricothyrotomy (EMT-P)

- Absolute contraindication: Transection of the trachea.

Needle Thoracostomy (EMT-P)

- In blunt chest trauma consider bilateral tension pneumothorax if pulse oximetry (SpO_2) reading remains low with a patent ~~patient~~ airway or with poor respiratory compliance.

Oral Endotracheal Intubation - Adult (EMT-P)

- Consider Lidocaine prophylactically per ICEMA Reference #7040 - Medication - Standard Orders, for head injury.
- Monitor end-tidal ~~title~~ CO_2 with capnography.
- After three (3) unsuccessful attempts consider Needle Cricothyrotomy.

Oral Endotracheal Intubation - Pediatric (EMT-P)

- Uncuffed tubes for patients under eight (8) years old.
- Base hospital contact is required after two (2) failed intubation attempts.
- Monitor end-tidal CO_2 with capnography.

Synchronized Cardioversion (EMT-P)

- Consider medication for pain and anxiety.
- If rhythm deteriorates to v-fib turn off the sync button and defibrillate.

Transcutaneous Cardiac Pacing (EMT-P)

- Consider medication for pain and anxiety.
- Contact the base hospital if rhythm persists.

Vagal Maneuvers (EMT-P)

- Use with caution for patients with hypertension, suspected STEMI, or suspected head/brain injury.

IV. REFERENCE

Number	**Name**
7040	Medication - Standard Orders
15010	Trauma - Adult (15 years of age or older)

CARDIAC ARREST - ADULT

I. FIELD ASSESSMENT/TREATMENT INDICATORS

Cardiac arrest in a non-traumatic setting.

II. BLS INTERVENTIONS

- Assess patient, begin CPR according to current AHA Guidelines, and maintain appropriate airway.
  - Compression rate shall be 100 per minute utilizing 30:2 compression-to-ventilation ratio for synchronous CPR prior to placement of advanced airway.
  - Ventilatory volumes shall be sufficient to cause adequate chest rise.
- If available, place AED~~–~~ per ICEMA Reference #10130 - Automatic External Defibrillation (AED) - BLS. CPR is **not** to be interrupted except briefly for rhythm assessment.

III. LIMITED ALS (LALS) INTERVENTIONS

- Initiate CPR while applying the AED.
- Establish advanced airway when resources are available, with minimal interruption to CPR. After advanced airway established, compressions would then be continued at 100 per minute without pauses during ventilations.
- Establish peripheral intravenous access and administer a 500 ml bolus of normal saline (NS).
- See ICEMA Reference #12010 - Determination of Death on Scene.

~~**Utilize the following treatment modalities while managing the cardiac arrest patient:**~~

- Obtain blood glucose level, if indicated administer:
  - ~~administer~~ Dextrose 50% per ICEMA Reference #7040 - Medication - Standard Orders~~25 g IV~~.

- ➢ May repeat blood glucose level. Repeat Dextrose per ICEMA Reference #7040 - Medication - Standard Orders if indicated.

- If suspected narcotic overdose with severely decreased respiratory drive administer:

  - ➢ Naloxone per ICEMA Reference #7040 - Medication - Standard Orders ~~2.0 mg IM/IN for suspected opiate overdose.~~

NOTE: Base hospital~~Station~~ contact is required to terminate resuscitative measures.

IV. ALS INTERVENTIONS

- Initiate CPR while applying the cardiac monitor.
- Determine cardiac rhythm and defibrillate if indicated. Begin a two (2) minute cycle of CPR.
- Obtain IV/IO access.
- Establish advanced airway when resources are available, with minimal interruption to CPR. After advanced airway established, compressions would then be continued at 100/min without pauses during ventilations. Ventilations should be given at a rate of one (1) breath every six (6) to eight (8) seconds.
- Utilize continuous quantitative waveform capnography, ~~if available,~~ for confirmation and monitoring of endotracheal tube placement and for assessment of ROSC and perfusion status. ~~For agencies with waveform capnography,~~ Dd~~d~~ocument the shape of the wave and the capnography number in mmHG.
- Insert NG/OG Tube to relieve gastric distension per ICEMA Reference #10190~~080~~ - Insertion of Nasogastric/Orogastric Tube.
- Obtain blood glucose level. If indicated administer:

  - ➢ Dextrose per ICEMA Reference #7040 - Medication - Standard Orders.

  - ➢ May repeat blood glucose level. Repeat Dextrose per ICEMA Reference #7040 - Medication - Standard Orders if indicated.

- If suspected narcotic overdose with severely decreased respiratory drive administer:

- Naloxone per ICEMA Reference #7040 - Medication - Standard Orders ~~Naloxone per ICEMA Reference #7040 - Medication - Standard Orders 2.0 mg IV/IO/IM for suspected opiate overdose.~~

- If ROSC is achieved, obtain a 12-lead ECG and contact a STEMI base for destination decision per ICEMA Reference #8130.

- Utilize continuous waveform capnography, ~~if available,~~ to identify loss of circulation.

- For continued signs of inadequate tissue perfusion after successful resuscitation,

  - Dopamine per ICEMA Reference #7040 - Medication - Standard Orders ~~infusion of 400 mg in 250 ml of NS may be initiated at 5 - 10 mcg/kg/min IV~~to maintain signs of adequate tissue perfusion.

- Base hospital physician may order additional medications or interventions as indicated by patient condition.

Ventricular Fibrillation/Pulseless Ventricular Tachycardia

- Defibrillate at 360 joules for monophasic or biphasic equivalent per manufacture. If biphasic equivalent is unknown use maximum available.

- Perform CPR for two (2) minutes after each defibrillation, without delaying to assess the post-defibrillation rhythm.

- Administer Epinephrine per ICEMA Reference #7040 - Medication - Standard Orders ~~1.0 mg IV/IO~~ during each two (2) minute cycle of CPR after every defibrillation unless capnography indicates possible ROSC.

- Reassess rhythm after each two (2) minute cycle of CPR. If VF/VT persists, defibrillate as above.

- After two (2) cycles of CPR, consider administering:

  - Lidocaine per ICEMA Reference #7040 - Medication - Standard Orders~~1.5 mg/kg IV/IO. May repeat at 0.75 mg/kg every five (5) minutes to maximum dose of 3.0 mg/kg~~.

- If patient remains in pulseless VF/VT after five (5) cycles of CPR, consult b~~B~~ase ~~Station~~hospital.

Pulseless Electrical Activity (PEA) or Asystole

- Assess for reversible causes and initiate treatment.

- Continue CPR with evaluation of rhythm every two (2) minutes.

- Administer fluid bolus of 300 ml NS IV, may repeat.

- Administer Epinephrine per ICEMA Reference #7040 - Medication - Standard Orders ~~1.0 mg IV/IO~~ during each two (2) minute cycle of CPR after each rhythm evaluation.

~~**Utilize the following treatment modalities while managing the cardiac arrest patient:**~~

~~1. Insert NG/OG Tube to relieve gastric distension per ICEMA Reference #10080 - Insertion of Nasogastric/Orogastric Tube.~~

~~2. Obtain blood glucose. If indicated, administer Dextrose 50% 25 gms IV.~~

~~3. Naloxone per 2.0 mg IV/IO/IM for suspected opiate overdose.~~

Termination of Efforts in the Prehospital Setting

- The decision to terminate efforts in the field should take into consideration, first, the safety of personnel on scene, and then family and cultural considerations.

- Consider terminating resuscitative efforts in the field if ALL of the following criteria are met:

  - No shocks were delivered.

  - No ROSC after a minimum of ten (10) minutes of advance cardiac life support (ACLS).

- Base hospital ~~Station~~ contact is required to terminate resuscitative measures. A copy of the ECG should be attached to the patient care report for documentation purposes.

~~**NOTE**~~

- ~~If ROSC is achieved, obtain a 12-lead ECG.~~

- ~~Utilize continuous waveform capnography, if available, to identify loss of circulation.~~

- ~~For continued signs of inadequate tissue perfusion after successful resuscitation a Dopamine per infusion of 400 mg in 250 ml of NS may be~~

~~initiated at 5 – 10 mcg/kg/min IV to maintain signs of adequate tissue perfusion.~~

- ~~Base Station physician may order additional medications or interventions as indicated by patient condition.~~

V. REFERENCES

Number	Name
7040	Medication - Standard Orders
10080	Insertion of Nasogastric/Orogastric Tube
10130	Automatic External Defibrillation (AED) - BLS
12010	Determination of Death on Scene

ALTERED LEVEL OF CONSCIOUSNESS/SEIZURES - ADULT

I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Patient exhibiting signs/symptoms of a possible altered level of consciousness.
- Suspected narcotic dependence, overdose, hypoglycemia, traumatic injury, shock and alcoholism.
- Tonic/clonic movements followed by a brief period of unconsciousness (post-ictal).
- Suspect status epilepticus for frequent or extended seizures.

II. BLS INTERVENTIONS

- Oxygen therapy as clinically indicated.
- Position patient as tolerated. If altered gag reflex in absence of traumatic injury, place in left lateral position.
- Place patient in axial spinal stabilization per ICEMA Reference #15010 - Trauma - Adult (15 years of age and older). ~~if trauma is suspected~~.
- If patient history includes insulin or oral hypoglycemic medications, administer Glucose sublingual.

III. LIMITED ALS (LALS) INTERVENTIONS

- Obtain vascular access.
- Obtain blood glucose level. If indicated ~~hypoglycemic~~ administer:
  - Dextrose 50% per ICEMA Reference #7040 - Medication - Standard Orders ~~25 gms (50 cc) IV~~, or
  - Glucagon per ICEMA Reference #7040 - Medication - Standard Orders~~1 mg IM/SC/IN~~, if unable to establish IV. May give one (1) time only.

- May repeat blood glucose level. Repeat Dextrose per ICEMA Reference #7040 - Medication - Standard Orders if indicated.~~May repeat blood glucose. Repeat Dextrose if extended transport time.~~

- If suspected narcotic overdose with severely decreased respiratory drive administer:

  - Naloxone per ICEMA Reference #7040 - Medication - Standard Orders.

  - ~~Do not exceed 10 mgs of Naloxone total regardless of route given.~~

- Assess and document response to therapy.

- Base ~~Station~~hospital may order additional medication dosages and fluid bolus.

IV. ALS INTERVENTIONS

- Obtain vascular access and place on monitor.

- Obtain blood glucose level. If indicated administer ~~hypoglycemic administer~~:

  - Dextrose 50% per ICEMA Reference #7040 - Medication - Standard Orders ~~25 gms (50 cc) IV/IO~~ , or

  - Glucagon per ICEMA Reference #7040 - Medication - Standard Orders~~1 mg IM/SC/IN~~, if unable to establish IV. May give one (1) time only.

  - May repeat blood glucose level. Repeat Dextrose per ICEMA Reference #7040 - Medication - Standard Orders if indicated.~~May repeat blood glucose. Repeat Dextrose if extended transport time.~~

- For tonic/clonic type seizure activity, administer:

  - ~~Midazolam, per ICEMA Reference #7040 - Medication - Standard Orders2.5 mg IN/IV/IO. May repeat in five (5) minutes for continued seizure activity, or~~

  - ~~Midazolam per ICEMA Reference #7040 - Medication - Standard Orders5 mg IM. May repeat in ten (10) minutes for continued seizure activity.~~

  - Assess patient for medication related reduced respiratory rate or hypotension.

- ~~Maximum of three (3) doses using any combination of IM/IN/IV/IO may be given for continued seizure activity. Contact bBase Stationhospital for additional orders and to discuss further treatment options.~~

- If suspected narcotic overdose with severely decreased respiratory drive administer:

  - Naloxone per ICEMA Reference #7040 - Medication - Standard Orders~~2 mg IV/IM/IN~~. ~~May repeat Naloxone per ICEMA Reference #7040 - Medication - Standard Orders2 mg IV/IM/IN every two (2) to three (3) minutes if needed.~~

  - ~~Do not exceed 10 mgs of Naloxone total regardless of route given.~~

- Assess and document response to therapy.

- Base ~~Station~~hospital may order additional medication dosages and fluid bolus.

V. REFERENCES

Number	Name
7040	Medication - Standard Orders
15010	Trauma - Adult (15 years of age and older).

CARDIAC ARREST - PEDIATRIC
(Less than 15 years of age)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

Cardiac arrest in a non-traumatic setting. Consider the potential causes of arrest for age.

II. BLS INTERVENTIONS

- Assess patient, maintain appropriate airway~~,~~; begin CPR according to current AHA Guidelines.
  - Ventilate at rate of 12 to 20 per minute. Ventilatory rate will decrease as patient age increases. Ventilatory volumes shall be the minimum necessary to cause chest rise.
  - Compression rate shall be a minimum of 100 per minute.
- If patient one (1) year of age or older, utilize AED per ICEMA Reference #10130 - Automatic External Defibrillation (AED) - BLS.

III. LIMITED ALS (LALS) INTERVENTIONS

- Initiate CPR while applying the AED.
- Follow the instructions from the AED to determine if shock is needed.
- Obtain IO/IV access (IO is preferred for under nine (9) years of age).
- Establish advanced airway when resources are available, with minimal interruption to CPR.
- For continued signs of inadequate tissue perfusion, administer fluid bolus of NS. Reassess after each bolus. May repeat two (2) times for continued signs of inadequate tissue perfusion. In RCF, may give two (2) additional fluid boluses if indicated.
  - 1 day to 8 years: 20 ml/kg NS
  - 9 to 14 years: 300 ml NS

- Obtain blood glucose level, if indicated administer; ~~Check blood glucose level.~~

  - Dextrose as per ICEMA Reference #7040 - Medication - Standard Orders.

  - ~~For neonates (0 - 4 weeks), if blood glucose < 35 mg/dL: Dextrose 25% (0.25 g/ml) Diluted 1:1 Give 0.5 g/kg (4 ml/kg) IV/IO.~~

  - ~~For patient < 10 kg and > 4 weeks, if blood glucose < 60 mg/dL: Dextrose 25% (0.25 g/ml) Give 0.5 g/kg (2 ml/kg) IV/IO.~~

  - ~~For patient > 10 kg and < 25 kg, if glucose less than 60 mg/dL: Dextrose 50% (0.5 g/mL) Diluted 1:1 Give 0.5 g/kg (2 ml/kg) IV/IO.~~

  - ~~For patient > 25 kg, if glucose less than 80 mg/dL: Dextrose 50% (0.5 g/mL) Diluted 1:1 Give 0.5 g/kg (2 ml/kg) IV/IO.~~

  - May repeat blood glucose level. Repeat Dextrose per ICEMA Reference #7040 - Medication - Standard Orders if indicated.~~May repeat blood glucose. Repeat Dextrose if extended transport time.~~

  - Administer Glucagon per ICEMA Reference #7040 - Medication - Standard Orders, ~~0.025 mg/kg IM/IN,~~ if unable to start an IV. ~~May be repeated one (1) time after twenty (20) minutes for a combined maximum dose of 1 mg.~~

- ~~For suspected narcotic ingestion, may give~~ If suspected narcotic overdose with severely decreased respiratory drive administer:

  - Naloxone per ICEMA Reference #7040 - Medication - Standard Orders.~~Narcan 0.1 mg/kg IV/IM/IN/IO. Do not exceed the adult dosage of 10 mg IV/IM/IN.~~

- Base hospital~~Station~~ physician may order additional medication dosages and additional fluid boluses.

IV. ALS INTERVENTIONS

- Initiate CPR while applying the cardiac monitor.

- Determine the cardiac rhythm and defibrillate at 2 j/kg (or manufacturer's recommended equivalent) if indicated. Begin a two (2) minute cycle of CPR.

- Obtain IO/IV access (IO is preferred).

- Establish advanced airway when resources are available, with minimal interruption to CPR.

- Insert NG/OG tube after ~~After~~ advanced airway is established or if not placed with BLS airway~~, insert NG/OG tube~~.

- Continue CPR with compressions at a minimum of 100 /min without pauses during ventilations. Ventilations should be given at a rate of one (1) breath every six (6) to eight (8) seconds. ~~NG/OG tube should be placed with BLS airway as well if patient not intubated.~~

- Utilize continuous quantitative waveform capnography~~, if available,~~ for confirmation and monitoring of endotracheal tube placement and for assessment of ROSC and perfusion status.

Ventricular Fibrillation/Pulseless Ventricular Tachycardia

- Initial defibrillation is administered at 2 j/kg (or manufacturer's recommended equivalent). Second defibrillation is administered at 4 j/kg. Third and subsequent defibrillation attempts should be administered at 10 j/kg not to exceed the adult dose.

- Perform CPR for two (2) minutes after each defibrillation, without delaying to assess the post-defibrillation rhythm.

- Administer Epinephrine ~~(1:10,000)~~ per ICEMA Reference #7040 - Medication - Standard Orders, during each two (2) minute cycle of CPR after each defibrillation unless capnography indicates possible ROSC.

  - ~~1 day to 8 years: 0.01 mg/kg IO/IV (do not exceed adult dosage).~~
  - ~~9 to 14 years: 1.0 mg IV/IO.~~

- Reassess rhythm after each two (2) minute cycle of CPR. If VF/VT persists, defibrillate as indicated above.

- After two (2) cycles of CPR, consider administering:

- Lidocaine per ICEMA Reference #7040 - Medication - Standard Orders.~~:~~

  - ~~1 day to 8 years: 1 mg/kg IO/IV.~~
  - ~~9 to 14 years: 1 mg/kg IV/IO.~~

- May repeat Lidocaine per ICEMA Reference #7040 - Medication - Standard Orders.~~at 0.5 mg/kg after five (5) minutes up to total of 3.0 mg/kg.~~

- If patient remains in pulseless VF/VT after five (5) cycles of CPR, consult ~~B~~base hospital ~~Station~~.

Pulseless Electrical Activity/Asystole

- Assess for reversible causes and initiate treatment.
- Continue CPR with evaluation of rhythm every two (2) minutes.
- Administer initial fluid bolus of 20 ml/kg NS for all ages, may repeat at:
  - 1 day to 8 years: 20 ml/kg NS
  - 9 to 14 years: 300 ml NS
- Administer Epinephrine ~~(1:10,000)~~ per ICEMA Reference #7040 - Medication - Standard Orders, during each two (2) minute cycle of CPR after each rhythm evaluation.
  - ~~1 day to 8 years: 0.01 mg/kg IO/IV.~~
  - ~~9 to 14 years: 1.0 mg IV/IO.~~

Treatment Modalities for Managing Pediatric Cardiac Arrest Patient

Whenever possible, provide family members with the option of being present during the resuscitation of an infant or a child. For any termination of efforts, b~~B~~ase hospital~~Station~~ contact is required.

- Insert NG/OG tube to relieve gastric distention if the patient has been intubated with an advanced airway or if the patient has a BLS airway, per ICEMA Reference #10190~~080~~ - Insertion of Nasogastric/Orogastric Tube.
- For continued signs of inadequate tissue perfusion, administer fluid bolus of NS. Reassess after each bolus. May repeat twice for continued signs of inadequate tissue perfusion. In RCF, may give two (2) additional fluid boluses if indicated.
  - 1 day to 8 years: 20 ml/kg NS
  - 9 to 14 years: 300 ml NS
- Obtain blood glucose level. If indicated administer:
  - Dextrose per ICEMA Reference #7040 - Medication - Standard Orders~~according to ICEMA Reference #14050 - Pediatric Altered Level of Consciousness.~~
  - May repeat blood glucose level. Repeat Dextrose per ICEMA Reference #7040 - Medication - Standard Orders if indicated.

- Naloxone for suspected opiate overdose per ICEMA Reference #7040 - Medication - Standard Orders.; may repeat once as clinically indicated.

- ~~1 day to 8 years: 0.1 mg/kg IO/IV. Do not exceed adult dosage.~~

- ~~9 to 14 years: 2 mg IV/IO.~~

If ROSC is achieved, obtain a 12-lead ECG.

- Utilize continuous waveform capnography, ~~if available~~, to identify loss of circulation.

- For continued signs of inadequate tissue perfusion **after** successful resuscitation;

  - Epinephrine ~~(1:10,000)~~ per ICEMA Reference #7040 - Medication - Standard Orders. ~~0.5 mcg/kg /min IO/IV push.~~

  - 9 to 14 years: Dopamine per ICEMA Reference #7040 - Medication - Standard Orders. ~~400 mg in 250 ml of NS to infuse at 5 -20 mcg/kg /min IV titrated to maintain signs of adequate tissue perfusion.~~

- Base hospital~~Station~~ physician may order additional medications or interventions as indicated by patient condition.

V. REFERENCES

Number	Name
7040	Medications - Standard Orders
10080	Insertion of Nasogastric/Orogastric Tube
10130	Automatic External Defibrillation (AED) - BLS
~~14050~~	~~Pediatric Altered Level of Consciousness~~

ALTERED LEVEL OF CONSCIOUSNESS - PEDIATRIC
(Less than 15 years of age)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Patient exhibits inappropriate behavior for age.
- History or observation of an Apparent Life Threatening Event (ALTE).

II. BLS INTERVENTIONS

- Assess environment and determine possible causes for illness.
- Axial-spinal stabilization, if clinically indicated.
- Oxygen therapy, if clinically indicated.
- Airway management, as indicated (OPA/NPA, BVM Ventilation).
- Obtain patient temperature. ~~core temperature,~~ Begin cooling measures if temperature is elevated or warming measures if temperature is decreased. ~~if elevated begin passive cooling measures. If decreased begin passive warming measures.~~

III. LIMITED ALS (LALS) INTERVENTIONS

- Establish advanced airway as needed.
- Obtain vascular access.
- For symptomatic hypotension with poor perfusion, consider fluid bolus of 20 ml/kg of NS not to exceed 300 ml NS.
- Obtain blood glucose level, if indicated administer ~~Check blood glucose level.~~
  - ~~Administer~~ Dextrose per ICEMA Reference #7040 - Medication - Standard Orders.
  - ~~For neonates (0 - 4 weeks), if blood glucose < 35 mg/dL: Dextrose 25% (0.25 g/ml) Diluted 1:1 Give 0.5 g/kg (4 ml/kg) IV/IO~~
  - ~~For patient < 10 kg and > 4 weeks, if blood glucose < 60 mg/dL: Dextrose 25% (0.25 g/ml) Give 0.5 g/kg (2 ml/kg) IV/IO~~

- ~~For patient > 10 kg and < 25kg, if glucose less than 60 mg/dL: Dextrose 50% (0.5 g/mL) Diluted 1:1 Give 0.5 g/kg (2 ml/kg) IV/IO~~

- ~~For patient > 25 kg, if glucose less than 80 mg/dL: Dextrose 50% (0.5 g/mL) Diluted 1:1 Give 0.5 g/kg (2 ml/kg) IV/IO~~

- May repeat blood glucose level. Repeat Dextrose per ICEMA Reference #7040 - Medication - Standard Orders if indicated.~~, if extended transport time.~~

- Administer Glucagon per ICEMA Reference #7040 - Medication - Standard Orders, if unable to start an IV.

- ~~Glucagon 0.025 mg/kg IM/IN, , if unable to start an IV. May be repeated one (1) time after twenty (20) minutes for a combined maximum dose of 1 mg.~~

- If suspected narcotic overdose with severely decreased respiratory drive administer:

  - ~~For suspected narcotic ingestion, may give~~ Naloxone, per ICEMA Reference #7040 - Medication - Standard Orders. ~~Narcan 0.1 mg/kg IV/IM/IN. Do not exceed the adult dosage of 10 mg IV/IM/IN.~~

- Base hospital ~~Station~~ physician may order additional medication dosages and additional fluid boluses.

IV. ALS INTERVENTIONS

- Establish advanced airway as needed.

- Obtain vascular access and place on cardiac monitor.

- For symptomatic hypotension with poor perfusion, consider fluid bolus of 20 ml/kg of NS not to exceed 300 ml NS. May repeat twice for continued signs of inadequate tissue perfusion.

- Obtain blood glucose level, if indicated administer: ~~Check blood glucose level.~~

  - ~~Administer~~ Dextrose per ICEMA Reference #7040 - Medication - Standard Orders.

  - May repeat blood glucose level. Repeat Dextrose per ICEMA Reference #7040 - Medication - Standard Orders, if indicated.~~extended transport time.~~

~~➢ For neonates (0 - 4 weeks), if blood glucose < 35 mg/dL: Dextrose 25% (0.25 g/ml) Diluted 1:1 Give 0.5 g/kg (4ml/kg) IV/IO~~

~~➢ For patient < 10 kg and > 4 weeks, if blood glucose < 60 mg/dL: Dextrose 25% (0.25 g/ml) Give 0.5 g/kg (2 ml/kg) IV/IO~~

~~➢ For patient > 10 kg and < 25kg, if glucose less than 60 mg/dL: Dextrose 50% (0.5 g/mL) Diluted 1:1 Give 0.5 g/kg (2 ml/kg) IV/IO~~

~~➢ For patient > 25 kg, if glucose less than 80 mg/dL: Dextrose 50% (0.5 g/mL) Diluted 1:1 Give 0.5 g/kg (2 ml/kg) IV/IO~~

~~➢ May repeat blood glucose. Repeat Dextrose if extended transport time.~~

➢ Administer Glucagon per ICEMA Reference #7040 - Medication - Standard Orders, if unable to start an IV.

~~➢ Glucagon 0.025 mg/kg IM/IN, if unable to start an IV. May be repeated one (1) time after twenty (20) minutes for a combined maximum dose of 1 mg.~~

- If~~For~~ suspected narcotic ingestion with severely decreased respiratory distress administer: ~~, may give~~

  ➢ Naloxone per ICEMA Reference #7040 - Medication - Standard Orders ~~Narcan 0.1 mg/kg IV/IM/IN. Do not exceed the adult dosage of 10 mg IV/IM/IN.~~

- Base hospital ~~Station~~physician may order additional medication dosages and additional fluid boluses.

V. REFERENCES

Number	Name
7040	Medications - Standard Orders

TRAUMA - ADULT
(15 years of age and older)

Any critical trauma patient (CTP) requires effective communication and rapid transportation to the closest trauma center. If not contacted at scene, the receiving trauma center must be notified as soon as possible in order to activate the trauma team.

In Inyo and Mono Counties, the assigned Base Station should be contacted for determination of appropriate destination.

I. FIELD ASSESSMENT/TREATMENT INDICATORS

Refer to ICEMA Reference #15030 - Trauma Triage Criteria and Destination Policy.

II. BLS INTERVENTIONS

- Ensure thorough initial assessment.
- Ensure patent airway, protecting cervical spine.
- Oxygen and/or ventilate as needed, O_2 saturation (if BLS equipped).
- Keep patient warm.
- For a traumatic full arrest, an AED may be utilized, if indicated.
- Transport to ALS intercept or to the closest receiving hospital.

A. Manage Special Considerations

- **Axial Spinal Immobilization**: If the patient meet(s) any of the following indicators using the acronym (NSAID):

  N-euro Deficit(s) present?
  S-pinal Tenderness present?
  A-ltered Mental Status?
  I-ntoxication?
  D-istracting Injury?

  - Consider maintaining spinal alignment on the gurney, or using spinal axial immobilization on an awake, alert and cooperative patient, without the use of a rigid spine board.

  - Penetrating trauma without any NSAID indicators are not candidates for spinal immobilization using long board.

- **Abdominal Trauma**: Cover eviscerated organs with saline dampened gauze. Do not attempt to replace organs into the abdominal cavity.

- **Amputations**: Control bleeding. Rinse amputated part gently with sterile irrigation saline to remove loose debris/gross contamination. Place amputated part in dry, sterile gauze and in a plastic bag surrounded by ice (if available). Prevent direct contact with ice. Document in the narrative who the amputated part was given to.

  Partial Amputation: Splint in anatomic position and elevate the extremity.

- **Bleeding**:

  - Apply direct pressure and/or pressure dressing.

  - To control life-threatening bleeding of a severely injured extremity, consider application of tourniquet when direct pressure or pressure dressing fails.

- **Chest Trauma**: If a wound is present, cover it with an occlusive dressing. If the patient's ventilations are being assisted, dress wound loosely, (do not seal). Continuously reevaluate patient for the development of tension pneumothorax.

- **Flail Chest**: Stabilize chest, observe for tension pneumothorax. Consider assisted ventilations.

- **Fractures**: Immobilize above and below the injury. Apply splint to injury in position found except:

  - **Femur**: Apply traction splint if indicated.

  - **Grossly angulated long bone with distal neurovascular compromise**: Apply gentle unidirectional traction to improve circulation.

  - **Check and document distal pulse before and after positioning**.

- **Genital Injuries**: Cover genitalia with saline soaked gauze. If necessary, apply direct pressure to control bleeding. Treat amputations the same as extremity amputations.

- **Head and Neck Trauma**: Place brain injured patients in reverse Trendelenburg (elevate the head of the backboard 15-20 degrees), if the patient exhibits no signs of shock.

  - **Eye**: Whenever possible protect an injured eye with a rigid dressing, cup or eye shield. Do not attempt to replace a partially torn globe, stabilize it in place with sterile saline soaked gauze. Cover uninjured eye.

  - **Avulsed Tooth**: Collect teeth, place in moist, sterile saline gauze and place in a plastic bag.

- **Impaled Object**: Immobilize and leave in place. Remove object if it interferes with CPR, or if the object is impaled in the face, cheek or neck and is compromising ventilations.

- **Pregnancy**: Where axial spinal stabilization precaution is indicated, the board should be elevated at least 4 inches on the right side for those patients who have a large pregnant uterus, usually applies to pregnant females $\geq$ 24 weeks of gestation.

- **Traumatic Arrest**: CPR if indicated. May utilize an AED if indicated.

- **Determination of Death on Scene**: Refer to ICEMA Reference #12010 - Determination of Death on Scene.

III. LIMITED ALS (LALS) INTERVENTIONS

- Advanced airway (as indicated).

  - Unmanageable Airway: Transport to the closest most appropriate receiving hospital when the patient requires advanced airway and an adequate airway cannot be maintained with a BVM device.

- Apply AED.

- IV Access (warm IV fluids when available).

  - *Unstable:* BP<90mmHG and/or signs of inadequate perfusion, start 2nd IV access.

  - *Stable*: BP>90mmHG and/or signs of adequate tissue perfusion.

Blunt Trauma:

- *Unstable*: IV NS open until stable or 2000 ml maximum is infused
- *Stable*: IV NS TKO

Penetrating Trauma:

- *Unstable*: IV NS 500ml bolus one (1) time.
- *Stable*: IV NS TKO

Isolated Closed Head Injury:

- *Unstable:* IV NS 250ml bolus, may repeat to a maximum of 500 ml.
- *Stable*: IV NS TKO

- Transport to appropriate hospital.

A. <u>Manage Special Considerations</u>

- **Axial Spinal Immobilization**: LALS personnel should remove axial spinal immobilization devices from patients placed in full axial spinal immobilization precautions by first responders and BLS personnel if the patient does not meet any of the following indicators using the acronym (NSAID):

  N-euro Deficit(s) present?
  S-pinal Tenderness present?
  A-ltered Mental Status?
  I-ntoxication?
  D-istracting Injury?

  - Consider maintaining spinal alignment on the gurney, or using spinal axial immobilization on an awake, alert and cooperative patient, without the use of a rigid spine board.
  - Penetrating trauma without any NSAID indicators are not candidates for spinal immobilization using long board.

- **Fractures**

  - **Isolated Extremity Trauma**: Trauma <u>without multisystem mechanism</u>. Extremity trauma is defined as those cases of injury where the limb itself and/or the appendicular skeleton

(shoulder or pelvic girdle) may be injured, e.g., dislocated shoulder, hip fracture or dislocation.

- Administer IV NS 250 ml bolus one (1) time.

- **Impaled Object**: Remove object upon Trauma Base Station physician order, if indicated.

- **Traumatic Arrest**: Continue CPR as appropriate.

  - Apply AED and follow the voice prompts.

B. Determination of Death on Scene: Refer to ICEMA Reference #12010 - Determination of Death on Scene.

- *Severe Blunt Force Trauma Arrest*: If indicated, transport to the closest receiving hospital.

- *Penetrating Trauma Arrest*: If indicated, transport to the closest receiving hospital.

- If the patient does not meet the "Obvious Death Criteria" in ICEMA Reference #12010 - Determination of Death on Scene, contact the Trauma Base Station for determination of death on scene for those patients who suffer a traumatic cardiac arrest in the setting of penetrating trauma and no reported vital signs (palpable pulse and/or spontaneous respirations) during the EMS encounter with the patient.

- Resuscitation efforts on a penetrating traumatic arrest victim are not to be terminated without Trauma Base Station contact.

- **Precautions and Comments**:

  - Electrical injuries that result in cardiac arrest shall be treated as medical arrests.

  - Consider cardiac etiology in older patients in cardiac arrest with low probability of mechanism of injury.

  - If the patient is not responsive to trauma-oriented resuscitation, consider medical etiology and treat accordingly.

  - **Unsafe scene may warrant transport despite low potential for survival.**

- Whenever possible, consider minimal disturbance of a potential crime scene.

- **Base Station Orders**: May order additional fluid boluses.

IV. ALS INTERVENTIONS

- Advanced Airway (as indicated):

  - Unmanageable Airway: If an adequate airway cannot be maintained with a BVM device; **and** the paramedic is unable to intubate or perform a successful needle cricothyrotomy (if indicated), **then**, transport to the closest receiving hospital and follow ICEMA Reference #8120 - Continuation of Care.

- Monitor ECG.

- IV/IO Access (Warm IV fluids when available).

  - *Unstable:* BP <90mmHG and/or signs of inadequate perfusion, start 2nd IV access.

  - *Stable*: BP >90mmHG and/or signs of adequate tissue perfusion.

  Blunt Trauma:

  - *Unstable*: IV NS open until stable or 2000 ml maximum is infused

  - *Stable*: IV NS TKO

  Penetrating Trauma:

  - *Unstable*: IV NS 500 ml bolus one (1) time.

  - *Stable***:** IV NS TKO

  Isolated Closed Head Injury:

  - *Unstable:* IV NS 250 ml bolus, may repeat to a maximum of 500 ml

  - *Stable*: IV NS TKO

- Transport to appropriate hospital.

- Insert nasogastric/orogastric tube as indicated.

A. Manage Special Considerations

- **Axial Spinal Immobilization**: ALS personnel should remove axial spinal immobilization devices from patients placed in full axial spinal immobilization precautions by first responders and BLS personnel if the patient does not meet any of the following indicators using the acronym (NSAID):

  N-euro Deficit(s) present?
  S-pinal Tenderness present?
  A-ltered Mental Status?
  I-ntoxication?
  Distracting Injury?

  - Consider maintaining spinal alignment on the gurney, or using spinal axial immobilization on an awake, alert and cooperative patient, without the use of a rigid spine board.

  - Penetrating trauma without any NSAID indicators are not candidates for spinal immobilization using long board.

- **Chest Trauma**: Perform needle thoracostomy for chest trauma with symptomatic respiratory distress.

- **Fractures**:

  - **Isolated Extremity Trauma**: Trauma without multisystem mechanism. Extremity trauma is defined as those cases of injury where the limb itself and/or the appendicular skeleton (shoulder or pelvic girdle) may be injured, e.g., dislocated shoulder, hip fracture or dislocation.

  - **IV Pain Relief**:

    Morphine Sulfate 5 mg IV slowly. May repeat every five (5) minutes to a maximum of 20 mg, if the patient maintains a BP >90mmHG and shows signs of adequate tissue perfusion. Document BPs every five (5) minutes while medicating for pain and reassess patient.

    Consider Ondansetron 4 mg slow IVP/PO as prophylactic treatment of nausea and vomiting associated with narcotic administration.

    Note: Patients in high altitudes should be hydrated with IV NS prior to IV pain relief to reduce the incidents of nausea,

vomiting, and transient hypotension, which are side effects associated with administering IV Morphine.

Administer IV NS 250ml bolus one (1) time.

➢ **IM Pain Relief**:

Morphine Sulfate 10 mg IM. Document vital signs and reassess patient.

Consider Ondansetron 4 mg ODT ~~IM~~/~~PO~~ as prophylactic treatment of nausea and vomiting associated with narcotic administration.

- **Head and Neck Trauma**: Immediately prior to intubation, consider prophylactic Lidocaine 1.5 mg/kg IV for suspected head/brain injury.

- **Base Station Orders**: When considering Nasotracheal intubation (≥ 15 years of age) and significant facial trauma, trauma to the face or nose and/or possible basilar skull fracture are present, Trauma Base Station contact is required.

- **Impaled Object**: Remove object upon Trauma Base Station physician order, if indicated.

- **Traumatic Arrest**: Continue CPR as appropriate.

  ➢ Treat per ICEMA Reference #11070 - Cardiac Arrest - Adult.

B. **Determination of Death on Scene**: Refer to ICEMA Reference #12010 - Determination of Death on Scene.

➢ *Severe Blunt Force Trauma Arrest*: If indicated, pronounce on scene.

➢ *Penetrating Trauma Arrest*: If indicated, transport to the closest receiving hospital.

- If the patient does not meet the "Obvious Death Criteria" in ICEMA Reference #12010 - Determination of Death on Scene, contact the Trauma Base Station for determination of death on scene for those patients who suffer a traumatic cardiac arrest in the setting of penetrating trauma with documented asystole in at least two (2) leads, and no reported vital signs (palpable pulse and/or spontaneous respirations) during the EMS encounter with the patient.

- Resuscitation efforts on a penetrating traumatic arrest victim are not to be terminated without Trauma Base Station contact.

- **Precautions and Comments**:

  - Electrical injuries that result in cardiac arrest shall be treated as medical arrests.

  - Consider cardiac etiology in older patients in cardiac arrest with low probability of mechanism of injury.

  - **Unsafe scene may warrant transport despite low potential for survival.**

  - Whenever possible, consider minimal disturbance of a potential crime scene.

- **Base Station Orders**: May order additional medications and/or fluid boluses.

V. REFERENCES

Number	**Name**
8120	Continuation of Care
11070	Cardiac Arrest - Adult
12010	Determination of Death on Scene