Inland Counties Emergency Medical Agency

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Serving San Bernardino, Inyo, and Mono Counties
Tom Lynch, EMS Administrator
Reza Vaezazizi, MD, Medical Director

DATE: September 24, 2020

TO: EMS Providers - ALS, LALS, BLS, EMS Aircraft
Hospital CEOs, ED Directors, Nurse Managers and PLNs
EMS Training Institutions and Continuing Education Providers
Inyo, Mono and San Bernardino County EMCC Members
Medical Advisory Committee (MAC) Members
Systems Advisory Committee (SAC) Members

FROM: Tom Lynch, EMS Administrator; Reza Vaezazizi, MD, Medical Director

SUBJECT: IMPLEMENTATION OF POLICIES/PROTOCOLS EFFECTIVE OCTOBER 1, 2020

The policies/protocols listed below are effective October 1, 2020.

ICEMA Reference Number	Name
4060R1	Fireline EMT-P
4080R1	Tactical Medicine for Special Operations
7010R1	Standard Drug and Equipment List - BLS/LALS/ALS
7020R1	Standard Drug and Equipment List - EMS Aircraft
11020R2	Procedure - Standard Orders
14070R1	Burns - Adult (15 years of age and older)
14090R2	Trauma - Adult (15 years of age and older)
14180R2	Trauma - Pediatric (Less than 15 years of age)

Please insert and replace the enclosed policies/protocols and the Table of Contents in the Policy and Protocol Manual with the updated documents. The ICEMA policies and protocols can also be found on ICEMA's website at www.ICEMA.net under the Policy and Protocol Manual (2020) section.

If you have any questions, please contact Loreen Gutierrez, RN, Specialty Care Coordinator, at (909) 388-5803 or via e-mail at loreen.gutierrez@cao.sbcounty.gov.

TL/RV/jlm

Enclosures

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POLICIES/PROTOCOLS CHANGES EFFECTIVE OCTOBER 1, 2020

Reference #	Name	Changes
DELETIONS		
None		
NEW		
None		
CHANGES		
4060R1	Fireline EMT-P	Removal of King airway.
4080R1	Tactical Medicine for Special Operations	Removal of King airway.
7010R1	Standard Drug and Equipment List - BLS/LALS/ALS	Removal of King airway and Lidocaine drip.
7020R1	Standard Drug and Equipment List - EMS Aircraft	Removal of King airway.
11020R2	Procedure - Standard Orders	Removal of King airway.
14070R1	Burns - Adult (15 years of age and older)	Removal of King airway.
14090R2	Trauma - Adult (15 years of age and older)	Updated to include IO placement by ALS providers; correct SBP to less than 90.
14180R2	Trauma - Pediatric (Less than 15 years of age)	Updated to include IO placement by ALS providers.

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

FIRELINE EMT-P

I. PURPOSE

To provide guidance and medical oversight for an ICEMA paramedic (EMT-P) deployed to function as a fireline paramedic (FEMP).

This protocol is for use by authorized FEMPs during fire suppression activities and treatment of fire suppression personnel only.

II. REQUIREMENTS

- Must be a currently licensed EMT-P in California.
- Must be currently accredited EMT-P in the ICEMA region.
- Must be currently employed by an ICEMA approved ALS provider.
- The FEMP will follow FIRESCOPE FEMP ICS 223-11 Position Manual and all other ICS protocols.
- The FEMP will check in and obtain briefing from the Logistics Section Chief or the Medical Unit Leader, if established. Briefing will include current incident situation, anticipated medical needs, and local emergency medical system orientation.
- The FEMP will provide emergency medical treatment to personnel operating on the fireline.
- The FEMP will follow ICEMA prior to contact protocols if unable to contact the assigned base hospital.
- The FEMP may not perform skills outside of the ICEMA scope of practice.

III. PROCEDURE

- The EMS provider will notify ICEMA of the deployment of the FEMP to an incident. Use the Fireline Paramedic (FEMP) Deployment Notification form, which is on the ICEMA website at ICEMA.net.
- The FEMP will carry inventory in the advanced life support (ALS) pack as per the below inventory list (see Section IV. Fireline EMT-P (ALS) Pack Inventory. Inventory will be supplied and maintained by the employing ALS provider. Additional items for restock should also be maintained and secured in a vehicle or in the Medical Unit trailer.
- Incident Medical Units may not have the capability of resupplying controlled substances (narcotics). EMS providers should stock sufficient quantities of medical supplies and medications, especially controlled substance medications, to assure adequate supplies and medications.
- Narcotics must be under double lock and maintained on the FEMP person or secured in his/her vehicle at all times as per the ICEMA Drug and Equipment List.

- FEMP may carry an inventory of controlled substances (i.e., Fentanyl, Ketamine and Midazolam) if authorized by the employing ALS provider's Medical Director. The authorizing Medical Director is responsible to assure full compliance with all federal and state laws relating to purchase, storage and transportation of controlled substances. Only controlled substances approved for use in the ICEMA region may be carried and their use must be in accordance with current ICEMA patient care protocols.

- Radio communication failure protocols will not be used. Prior to base hospital contact protocols will be followed. If further treatment is needed, radio contact with the base hospital should be established as soon as possible.

- Documentation of patient care must follow ICEMA protocol utilizing the electronic patient care report (ePCR), if available, or a paper O1A form. All PCRs will be reviewed by the ALS provider and ICEMA for quality improvement (QI) purposes.

- A FEMP will be paired with a fireline EMT (FEMT) or another FEMP who will assist with basic life support (BLS) treatment and supplies.

IV. FIRELINE EMT-P (ALS) PACK INVENTORY

Minimum Requirements: The weight of the pack will dictate if the EMT-P chooses to carry additional ALS supplies.

MEDICATIONS/SOLUTIONS

Medications/Solutions	ALS
Albuterol Solution 2.5 mg Handheld Nebulizer or Multidose Inhaler	4
Atropine Sulfate 1 mg	2
Ipratropium Bromide Solution 0.5 mg Handheld Nebulizer or Multidose Inhaler	4
Lidocaine 100 mg IV pre-load	2
Aspirin 80 mg chewable	1 bottle
Dextrose 10%/250 ml (D10W 25 gm) IV/IO Bolus	1
Diphenhydramine 50 mg	4
Epinephrine 1: 10,000 1 mg	2
Epinephrine 1: 1000 1 mg	4
Glucagon 1 mg	1
Nitroglycerin - Spray 0.4 metered dose and/or tablets (tablets to be discarded 90 days after opening)	1 (equivalent of 10 patient doses)
Saline 0.9% IV 1000 ml may be divided in two 500 ml bags or four 250 ml bags.	
Tranexamic Acid (TXA) 1 gm	1

CONTROLLED SUBSTANCE MEDICATIONS

Controlled Substance Medications MUST BE DOUBLED LOCKED	ALS
Midazolam	20 mg
Fentanyl (amount determined by the medical director)	200 - 400 mcg
Ketamine	120 - 1000 mg

ALS AIRWAY EQUIPMENT

Airway Equipment	ALS
Endotracheal Tubes - 6.0, 7.0 and/or 7.5 cuffed with stylet	1 each
Laryngeal blades - #0, #1, #2, #3, #4 curved and/or straight	1 each
Laryngoscope handle with batteries - or 2 disposable handles	1 each
ET Tube holder	1
End Tidal CO2 Detector	1
Needle Cricothyrotomy Kit	1
Needle Thoracostomy Kit	1

IV/MEDICATION ADMINISTRATION SUPPLIES

IV/Medication Administration Supplies	ALS
IV administration set macro drip	2
Venaguard	2
Alcohol preps	6
Betadine swabs	4
Tourniquet	2
Razor	1
Tape	1
IV catheters - 14, 16, 18 and 20 gauge	2
10 cc syringe	2
1 cc TB syringe	2
18 gauge needle	4
25 gauge needle	2

MISCELLANEOUS EQUIPMENT

Miscellaneous	ALS
Sharps container	1
Narcotic storage per protocol	
FEMP pack inventory sheet	1
Patient care report or ePCR (Toughbook)	
AMA forms	3

Equipment	ALS
Compact AED or compact monitor defibrillator combination	
Appropriate cardiac pads	
Pulse oximetry (optional)	
Glucometer, test strips and lancets	4

The BLS pack and supplies will be carried by the FEMT or accompanying FEMP. Personal items and supplies cannot be carried in either the ALS pack or the BLS pack.

TACTICAL MEDICINE FOR SPECIAL OPERATIONS

I. PURPOSE

To provide medical oversight and continuous quality improvement and establish policies and procedures for Tactical Medicine for Special Operations first responders who respond as an integral part of a Special Weapons and Tactics (SWAT) operations.

II. POLICY

- Tactical Medicine for Special Operations shall be developed and utilized in accordance with the "California POST/EMSA Tactical Medicine Operational Programs and Standardized Training Recommendations" document that can be located on the EMSA website at emsa.ca.gov.

- Tactical Medicine for Special Operations and Tactical Medics/Tactical TEMS Specialists (Emergency Medical Technicians (EMTs), Advanced EMTs (AEMTs), Paramedics (EMT-Ps), and Registered Nurses (RNs)) shall be integrated into the local EMS system, in coordination with ICEMA, the local Emergency Medical Services (EMS) Agency (POST, 2010).

- Tactical Medicine for Special Operations shall be reviewed and approved by ICEMA.

- Administration of this policy applies to EMTs, AEMTs, EMT-Ps, and RNs providing medical services within an established EMS Agency and as part of a recognized Tactical Medicine Program.

  - The medical scope of practice for EMTs, AEMTs and EMT-Ps is consistent with California Code of Regulations, Title 22, Division 9 and all ICEMA protocols.

- Tactical Medicine for Special Operations should designate a Tactical Medicine Program Director as defined within POST and EMSA guidelines.

- Tactical Medicine for Special Operations should designate a physician as a Tactical Medicine Medial Director "to provide medical direction, continuous quality improvement, medical oversight, and act as a resource for medical contingency planning" (POST, 2010).

- Tactical Medicine for Special Operations should have components pertaining to planning, medical oversight, quality improvement and training as defined in *Tactical Medicine Operational Programs and Standardized Training Recommendations* (POST, 2010; Section 2.2.1-7) and *California Tactical Casualty Care Training Guidelines* (EMSA #370, June 2017).

- Tactical Medicine for Special Operations should include tactical medical personnel in mission planning and risk assessment to ensure appropriate assets are available for the identified mission as defined in *Tactical Medicine Operational Programs and Standardized Training Recommendations* (POST, 2010; Section 2.2.2).

III. PROCEDURE

- All agencies that intend to provide a Tactical Medicine for Special Operations that include EMTs, AEMTs, EMT-Ps and RNs, will:
  - Submit an original application indicating the type of program. The Specialty and Optional Scope Program Application is available on the ICEMA website at ICEMA.net.
  - Submit a copy of the proposed program to include all information as listed on the application.
  - Provide a list of all EMTs, AEMTs, EMT-Ps and RNs assigned to the Tactical Medicine for Special Operations.
  - Tactical medicine personnel must be:
    - EMTs and AEMTs must be California certified.
    - EMT-Ps must be California licensed and accredited by ICEMA.
    - RNs must be licensed as a Registered Nurse in California and an authorized Flight Nurse or MICN within the ICEMA region.
  - Participate in ICEMA approved Continuous Quality Improvement process.

IV. TRAINING

Designated Tactical Emergency Medical Support (TEMS) personnel shall successfully complete all initial and ongoing recommended training provided by an approved tactical medicine training program as listed in the California POST/EMSA *Tactical Medicine Operational Programs and Standardized Training Recommendations* (March 2010) or *California Tactical Casualty Care Training Guidelines* (EMSA #370, June 2017).

V. DRUG AND EQUIPMENT LISTS

Equipment and supplies carried and utilized by Tactical Emergency Medical Support (TEMS) personnel shall be consistent with the items listed in the California POST/EMSA *Tactical Medicine Operational Programs and Standardized Training Recommendations* document. Equipment and supplies shall be based on the appropriate level of personnel utilized for the particular Tactical Medicine for Special Operations (TEMS BLS or TEMS ALS).

The Tactical Medicine for Special Operations standard list of drugs and equipment carried by TEMS BLS or TEMS ALS medical personnel must be reviewed and approved by ICEMA prior to issue or use by EMT or EMT-P personnel.

TACTICAL MEDICINE OPERATIONAL EQUIPMENT RECOMMENDATIONS

Medications	BLS	ALS
Albuterol 2.5 mg with Atrovent 0.5 mg MDI		1
Aspirin 81 mg		1 bottle
Atropine Sulfate 1 mg preload		1
Dextrose 50% 25 gm preload		1
Diphenhydramine 50 mg		2
Epinephrine (1:1000) 1 mg		2
Epinephrine (1:10,000)1 mg preload		2
Glucagon 1 mg		1

Naloxone 2 mg preload		2
Nerve Agent Antidote (DuoDote)		1
Nitroglycerine 0.4 metered dose or tablets (tablets to be discarded 90 days after opening)		1
Normal Saline 500 ml		2
Ondansetron 4 mg IV/IM/oral tabs		4
Tranexamic Acid (TXA) 1 gm		1

CONTROLLED SUBSTANCE MEDICATIONS

Controlled Substance Medications MUST BE DOUBLED LOCKED	**BLS**	**ALS**
Midazolam		20 mgs
Fentanyl		200 - 400 mcg
Ketamine		120 - 1000 mg

AIRWAY EQUIPMENT

Airway Equipment	**BLS**	**ALS**
Chest seal and Flutter Valve		1
End Tidal CO2 (device may be integrated into bag)		1
Endotracheal Tubes - 6.0 and/or 6.5, 7.0 and/or 7.5, and 8.0 and/or 8.5 with stylet		1 each
ET Tube holder		1
Laryngoscope Kit		1
Nasopharyngeal Airways Adult	1 set	1 set
Needle Cricothyrotomy Device		1
Needle Thoracostomy Kit		1
Suction (hand held)	1	1
Ventilation Bag collapsible (BVM)	1	1

IV/MONITORING EQUIPMENT

IV/Needle/Syringes	**BLS**	**ALS**
AED (with waveform monitoring preferred)	1	1
AED Pads	1	1
Blood Pressure Cuff	1	1
IO Device and Needles		1
IV Needles 14-20 Gauge		1 of each
IV Start Kit		1
IV Tubing		1
Pulse Oximeter (optional)		1
Saline Flush		2
Saline Lock		2
Stethoscope	1	1
Syringes 3 cc, 5 cc, 10 cc		1 each

DRESSING AND SPLINTING

Dressing/Splints	BLS	ALS
CoTCCC - Recommended tourniquet system	1	1
Elastic compression dressing	1	1
Latex free gloves	1	1
N95 Mask	1	1
Occlusive dressing	1	1
Roller bandage	1	1
Splint - semi-ridged moldable	1	1
Sterile gauze pads	1	1
Tape	1	1
Trauma dressing	1	1
Trauma shears	1	1
Triangle bandage	1	1
Hemostatic impregnated gauze non-exothermic, i.e., Combat Gauze (optional)	2	2

MISCELLANEOUS EQUIPMENT

Miscellaneous Equipment	BLS	ALS
Litter	1	1
Patient care record	1	1
Personal protection equipment (PPE)	1	1
Triage tags	10	10
Tactical light	1	1
Eyeware	1	1
Rescue blanket	1	1
Self-heating blanket	1	1

STANDARD DRUG AND EQUIPMENT LIST - BLS/LALS/ALS

Each ambulance and first responder unit 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) 6 mg			1	1
Adenosine (Adenocard) 12 mg			2	2
Albuterol Aerosolized Solution (Proventil) - unit dose 2.5 mg		4 doses	4 doses	4 doses
Albuterol MDI with spacer		1 SPECIALTY PROGRAMS ONLY	1 SPECIALTY PROGRAMS ONLY	1 SPECIALTY PROGRAMS ONLY
Aspirin, chewable - 81 mg tablet		2	1 bottle	1 bottle
Atropine 1 mg preload			2	2
Calcium Chloride 1 gm preload			1	1
Dextrose 10% in 250 ml Water (D10W)		2	2	2
Diphenhydramine (Benadryl) 50 mg			1	1
Epinephrine 1 mg/ml 1 mg		2	2	2
Epinephrine 0.1 mg/ml 1 mg preload			4	4
Glucagon 1 mg		1	1	1
Glucose paste	1 tube	1 tube	1 tube	1 tube
Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5 mg			4	4
Irrigating Saline and/or Sterile Water (1000 cc)	2	1	1	2
Lidocaine 100 mg			3	3
Lidocaine 2% Intravenous solution			1	1
Magnesium Sulfate 10 gm			1	1
Naloxone (Narcan) 2 mg preload	2	2	2	2
Nitroglycerine (NTG) - Spray 0.4 mg metered dose and/or tablets (tablets to be discarded 90 days after opening)		2	1	2
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
Sodium Bicarbonate 50 mEq preload			2	2
Tranexamic Acid (TXA) 1 gm			2	2

Non-Exchange Controlled Substance Medications MUST BE DOUBLE LOCKED	**BLS**	**LALS**	**ALS Non-Transport**	**ALS Transport**
Fentanyl			200-400 mcg	200-400 mcg
Midazolam			20-40 mg	20-40 mg
Ketamine			120-1000 mg	120-1000 mg

AIRWAY/SUCTION EQUIPMENT

Exchanged Airway/Suction Equipment	**BLS**	**LALS**	**ALS Non-Transport**	**ALS Transport**
CPAP circuits - all manufacture's available sizes			1 each	2 each
End-tidal 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
ET Tube holders - adult		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
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
Rigid tonsil tip suction	1		1	1
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

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
Laryngoscope 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 (BLS TRANSPORT ONLY)			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 Driver			1 each	1 each
EZ-IO Needles: 25 mm 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	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 Microdrip Administration Set (60 drops / cc)		3 1	3 1	3 2
Mucosal Atomizer Device (MAD) for nasal administration of medication	2	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	2 each
Saline Lock Large Bore Tubing Needleless		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 (one of each size)	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	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 - Adult (1), Pediatric (1)	1 each	1 each		
Automatic CPR device (FDA approved)	1	1	1	1
Automatic transport ventilator (Specialty Program Only - ICEMA approved device)			1	1
Backboard padding	1	1	1	1
Buretrol			1	1
Chemistry profile tubes			3	3
CPAP - (must be capable of titrating pressure between 2 and 15 cm H_2O)			1	1
Nerve Agent Antidote Kit (NAAK) - DuoDote or Mark I	3	3	3	3
EMS Tourniquet	1		1	1
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
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
- HemCon ChitoFlex Pro Dressing

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	1	1	1	1
Ankle and wrist restraints, soft ties acceptable	1		1	1
Antiseptic swabs/wipes	10	10	10	10
Bedpan or fracture pan Urinal	1 (BLS TRANSPORT UNITS ONLY) 1 (BLS TRANSPORT UNITS ONLY)			1 1
Cervical Collars - Rigid Pediatric and Adult all sizes or Cervical Collars - Adjustable Adult and 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 and 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 (BLS TRANSPORT UNITS ONLY			1
Bandage shears	1	1	1	1
Blood Borne Pathogen Protective Equipment - (nonporous gloves, goggles face masks and gowns meeting OSHA Standards)	2	1	2	2
Pediatric Emergency Measuring Tape (Broselow, etc.)		1	1	1

Non-Exchange Dressing Materials/Other Equipment/ Supplies	**BLS**	**LALS**	**ALS Non-Transport**	**ALS Transport**
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 and blanket	1 set (BLS TRANSPORT UNITS ONLY			1 set
Short extrication device	1	1	1	1
Straps to secure patient to gurney	1 set (BLS TRANSPORT UNITS ONLY			1 set
Traction splint	1	1	1	1
Triage Tags - ICEMA approved	20	20	20	20

STANDARD DRUG AND EQUIPMENT LIST - EMS AIRCRAFT

Each Aircraft 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	1
Adenosine (Adenocard) 12 mg	2
Albuterol Aerosolized Solution (Proventil) - unit dose 2.5 mg	3 doses
Aspirin, chewable - 81 mg tablet	1 bottle
Atropine 1 mg preload	2
Calcium Chloride 1 gm preload	1
Dextrose 10% in 250 ml Water (D10W) *	2
Diphenhydramine (Benadryl) 50 mg	1
Epinephrine 1 mg/ml 1 mg	2
Epinephrine 0.1 mg/ml 1mg preload	3
Glucagon 1 mg	1
Glucopaste	1 tube
Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5 mg	3
Lidocaine 100 mg	3
Lidocaine 2% Intravenous solution	1
Magnesium Sulfate 10 gms	1
Naloxone (Narcan) 2 mg preload	2
Nitroglycerin (NTG) - 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	2000 ml
Ondansetron (Zofran) 4 mg Oral Disintegrating Tablets (ODT)	4
Ondansetron (Zofran) 4 mg IM/ IV	4
Sodium Bicarbonate 50 mEq preload	2
Tranexamic Acid (TXA) 1 gm	2

CONTROLLED SUBSTANCE MEDICATIONS-MUST BE DOUBLE LOCKED	AMOUNT
Fentanyl	200-400 mcg
Midazolam	20-40 mg
Ketamine	120-1000 mg

AIRWAY/SUCTION EQUIPMENT	AMOUNT
Aircraft Oxygen source -10 L /min for 20 minutes	1
C-PAP circuits - all manufacture's available sizes	1 each
End-tidal CO2 device - pediatric and adult (may be integrated into bag)	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
ET Tube holders - adult	1 each
Flashlight/penlight	1
Laryngoscope handle with batteries - or 2 disposable handles	1
Laryngoscope 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

AIRWAY/SUCTION EQUIPMENT	AMOUNT
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	1
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
Ridged tonsil tip suction	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 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 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	2 each
Syringe - 60 ml catheter tip	2
Thermometer - Mercury free with covers	1

DRESSING MATERIALS/OTHER EQUIPMENT SUPPLIES	AMOUNT
Adhesive tape - 1 inch	2
Air occlusive dressing	1
Aircraft stretcher or litter system with approved FAA straps that allows for Axial Spinal Immobilization	1
Ankle and 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 and gowns meeting OSHA Standards)	2
Cervical Collars - Rigid Pediatric & Adult all sizes *or* Cervical Collars - Adjustable Adult and Pediatric	1 each 1 each
Emesis basin or disposable bags and covered waste container	1
Head immobilization device	1
OB Kit	1
Pediatric Emergency Measuring Tape (Broselow, etc.)	1
Pneumatic or rigid splints capable of splinting all extremities	4
Provodine/Iodine swabs/wipes or antiseptic equivalent	
Roller bandages - 4 inch	3
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

OPTIONAL EQUIPMENT/MEDICATIONS	Amount
Automatic ventilator (Approved)	1
Backboard padding	1
BLS AED/defib pads	1
Chemistry profile tubes	3
Nerve Agent Antidote Kit (NAAK) - DuoDote or Mark I	3
D5W in bag	1
Hemostatic Dressing *	1
IV infusion pump	1
IV warming device	1
Manual powered suction device	1
Medical Tourniquet	1
Needle Thoracostomy Kit (prepackaged)	2
Pediatric immobilization board	1
Translaryngeal Jet Ventilation Device	1
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, and 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.

12-lead Electrocardiography (EMT-P)

- ECG should be performed prior to medication administration.
- ECG should be performed on any patient whose medical history and/or presenting symptoms are consistent with acute coronary syndrome including typical or atypical chest pain, syncopal episode, prior AMI, heart disease, or other associated risk factors.

Capnography (EMT-P)

- Utilize capnography in patients with respiratory distress, respiratory failure, cardiac arrest, and critically ill patients
- Perform capnography prior to pain medication administration.
- Perform capnography after administration of Midazolam for behavioral emergencies.
- Monitor waveform, numerical value and document in ePCR.

Continuous Positive Airway Pressure Device (CPAP) - Adult (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.
- Patient condition requires IV access and other peripheral venous access attempts are unsuccessful.

Blood Glucose Check (EMT, AEMT, and EMT-P)

- Should be assessed if the patient meets key indicators consistent with high or low blood sugar.

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

- EMT-Ps may administer Lidocaine slowly per ICEMA Reference #7040 - Medication - Standard Orders, to control infusion pain.
- Approved insertion sites:
  - Eight (8) years of age or younger (LALS and ALS):
    - Proximal Tibia - Anterior medial surface of tibia, 2 cm below tibial tuberosity.

- Nine (9) years of age and older (ALS only):
  - Proximal Tibia - Anterior medial surface of tibia, 2 cm below tibial tuberosity.
  - Distal Tibia - Lower end of tibia, 2 cm above the medial malleolus.
  - Humeral Head (EZ IO only).
  - Anterior distal femur, 2 cm above the patella - Base hospital contact only.

- Leave site visible and monitor for extravasation.

Nasogastric/Orogastric Tube (EMT-P)

- Use a water soluble lubricating jelly.
- Required for all full arrest patients.

Needle Cricothyrotomy (EMT-P)

- Absolute contraindication: Transection of the distal trachea.
- Monitor end-tidal CO_2 and wave form capnography.
- Monitor pulse oximetry.
- Contact base hospital if unable to ventilate adequately and transport immediately to the closest hospital for airway management.

Needle Thoracostomy (EMT-P)

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

Oral Endotracheal Intubation - Adult (EMT-P)

- Oral endotracheal intubation is permitted only in patients who are taller than the maximum length of a pediatric emergency measuring tape (Broselow, etc.) or equivalent measuring from the top of the head to the heal of the foot.
- Monitor end-tidal CO_2 and wave form capnography.
- Monitor pulse oximetry.
- If unable to place ET after a maximum of three (3) intubation attempts (defined as placement of the laryngoscope in the mouth). If unsuccessful, continue with BLS airway management and transport to the nearest receiving hospital.
- Document verification of tube placement (auscultation, visualization, capnography).

Spinal Motion Restriction (EMT, AEMT and EMT-P)

- Should be placed if patient meets the indicators, per ICEMA Reference #15010 - Trauma - Adult (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 indicators.

Synchronized Cardioversion (EMT-P)

- For anxiety prior to cardioversion, consider Midazolam per ICEMA Reference #7040 - Medication - Standard Orders.
- For pain, consider Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.
- If rhythm deteriorates to v-fib, turn off the sync button and defibrillate.
- Select initial energy level setting at 100 joules or a clinically equivalent biphasic energy level per manufacture guidelines. Procedure may be repeated at 200, 300 and 360 joules or a clinically equivalent biphasic energy level per manufacture guidelines.
- With base hospital order, repeated cardioversion attempts at 360 joules or clinically equivalent biphasic energy level per manufacturer's guidelines may be attempted.

Transcutaneous Cardiac Pacing (EMT-P)

- Start at a rate of 60 and adjust output to the lowest setting to maintain capture. Assess peripheral pulses and confirm correlation with paced rhythm.
- Reassess peripheral pulses. Adjust output to compensate for loss of capture.
- Increase rate **(not to exceed 100)** to maintain adequate tissue perfusion.
- For anxiety, consider Midazolam per ICEMA Reference #7040 - Medication - Standard Orders.
- For pain, consider Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.
- Contact the base hospital if rhythm persists or for continued signs of inadequate tissue perfusion.

Vagal Maneuvers (EMT-P)

- Relative contraindications for patients with hypertension, suspected STEMI, or suspected head/brain injury.
- Reassess cardiac and hemodynamic status. Document rhythm before, during and after procedure.
- If rhythm does not covert within ten (10) seconds, follow ICEMA Reference #11050 - Tachycardias - Adult.

BURNS - ADULT (15 years of age and older)

Burn patient requires effective communication and rapid transportation to the closest receiving hospital.

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

I. FIELD ASSESSMENT/TREATMENT INDICATORS

Refer to ICEMA Reference #9030 - Destination policy.

II. BLS INTERVENTIONS

- Break contact with causative agent (stop the burning process).
- Remove clothing and jewelry quickly, if indicated.
- Keep patient warm.
- Estimate % TBSA burned and depth using the “Rule of Nines”.
  - An individual’s palm represents 1% of TBSA and can be used to estimate scattered, irregular burns.
- Transport to ALS intercept or to the closest receiving hospital.

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

- **Thermal Burns**: Stop the burning process. Do not break blisters. Cover the affected body surface with dry, sterile dressing or sheet.
- **Chemical Burns**: Brush off dry powder, if present. Remove any contaminated or wet clothing. Irrigate with copious amounts of saline or water.
- **Tar Burns**: Cool with water, do not remove tar.
- **Electrical Burns**: Remove from electrical source (without endangering self) with a nonconductive material. Cover the affected body surface with dry, sterile dressing or sheet.
- **Eye Involvement**: Continuous flushing with NS during transport. Allow patient to remove contact lenses if possible.
- **Determination of Death on Scene**: Refer to ICEMA Reference #14250 - Determination of Death On Scene.

III. LIMITED ALS (LALS) INTERVENTIONS

- Advanced airway as indicated.

- Airway Stabilization:

  Burn patients with respiratory compromise or potential for such, will be transported to the closest most appropriate receiving hospital for airway stabilization.

- IV access (warm IV fluids when available).

  - *Unstable:* BP less than 90 mm HG and/or signs of inadequate tissue perfusion, start 2nd IV access.

    IV NS 250 ml boluses, may repeat to a maximum of 1000 ml.

  - *Stable*: BP more than 90 mm HG and/or signs of adequate tissue perfusion.

    IV NS 500 ml per hour.

- Transport to appropriate facility.

  - *Minor Burn Classification*: Transport to the closest most appropriate receiving hospital.

  - *Moderate Burn Classification*: Transport to the closest most appropriate receiving hospital.

  - *Major Burn Classification*: Transport to the closest most appropriate Burn Center (San Bernardino County contact ARMC).

  - *Critical Trauma Patient (CTP) with Associated Burns:* Transport to the most appropriate Trauma Center.

- Burn patients with associated trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.

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

- **Electrical Burns**: Place AED on patient.

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

- **Respiratory Distress**: Use BVM as needed and transport to the nearest facility for airway control. Contact receiving hospital ASAP. Albuterol with Atrovent per ICEMA Reference #11010 -Medication - Standard Orders.

- **Deteriorating Vital Signs:** Transport to the closest most appropriate receiving hospital. Contact base hospital.

- **Pulseness and Apneic**: Transport to the closest most appropriate receiving hospital and treat according to ICEMA policies. Contact base hospital.

- **Determination of Death on Scene**: Refer to ICEMA Reference #14250 - Determination of Death on Scene.

- **Precautions and Comments**:
  - High flow oxygen is essential with known or potential respiratory injury. Beware of possible smoke inhalation.
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces, as additional injury will result.

IV. ALS INTERVENTIONS

- Advanced airway (as indicated).
- Airway Stabilization:

  Burn patients with respiratory compromise or potential for such, will be transported to the closest most appropriate receiving hospital for airway stabilization.
- Monitor ECG.
- IV/IO Access (Warm IV fluids when available).
  - *Unstable:* BP less than 90 mm HG and/or signs of inadequate tissue perfusion, start 2nd IV access.

    IV/IO NS 250 ml boluses, may repeat to a maximum of 1000 ml.
  - *Stable*: BP more than 90 mm HG and/or signs of adequate tissue perfusion.

    IV/IO NS 500 ml per hour.
- Treat pain as indicated.

  Pain Relief: Administer an appropriate analgesic per ICEMA Reference #14100 - Pain Management - Adult. Document vital signs and pain scales every five (5) minutes until arrival at destination.
- Transport to appropriate facility:
  - *CTP with associated burns,* transport to the closest Trauma Center.
  - Burn patients with associated trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.
- Insert nasogastric/orogastric tube as indicated.
- Refer to Section V - Burn Classifications below.

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

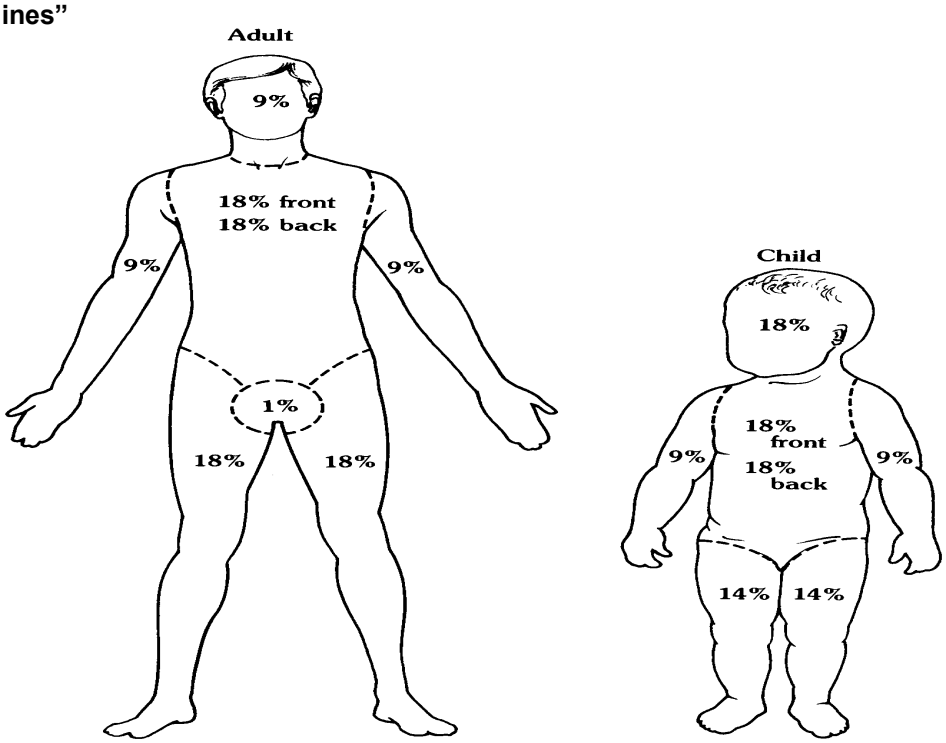
- **Electrical Burns**: Monitor for dysrhythmias, treat according to ICEMA protocols.
  - Electrical injuries that result in cardiac arrest shall be treated as medical arrests.
- **Respiratory Distress**: Intubate patient if facial/oral swelling are present or if respiratory depression or distress develops due to inhalation injury.
  - Albuterol with Atrovent per ICEMA Reference #11010 - Medication - Standard Orders.
  - Administer humidified oxygen, if available.
  - Apply capnography.
  - Awake and breathing patients with potential for facial/inhalation burns are not candidates for nasal tracheal intubation. CPAP may be considered, if indicated, after consultation with base hospital.
- **Deteriorating Vital Signs**: Transport to the closest receiving hospital. Contact base hospital.
- **Pulseness and Apneic**: Transport to the closest receiving hospital and treat according to ICEMA policies. Contact base hospital.
- **Determination of Death on Scene**: Refer to ICEMA Reference #14250 - Determination of Death on Scene.
- **Precautions and Comments**:
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces, as additional injury will result.
- **Base Hospital Orders**: May order additional medications, fluid boluses and CPAP.

V. BURN CLASSIFICATIONS

ADULT BURN CLASSIFICATION CHART	**DESTINATION**	
<u>MINOR -</u> ADULT • Less than 10% TBSA • Less than 2% Full Thickness	**CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL**	

<u>MODERATE</u> - ADULT • 10 - 20% TBSA • 2 - 5% Full Thickness • High Voltage Injury • Suspected Inhalation Injury • Circumferential Burn • Medical problem predisposing to infection (e.g., diabetes mellitus, sickle cell disease)	**CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL**	
<u>MAJOR</u> - ADULT • More than 20% TBSA burn in adults • Less than 5% Full Thickness • High Voltage Burn • Known Inhalation Injury • Any significant burn to face, eyes, ears, genitalia, or joints	**CLOSEST MOST APPROPRIATE BURN CENTER** In San Bernardino County, contact: Arrowhead Regional Medical Center (ARMC)	

"Rule of Nines"



VI. REFERENCES

Number	Name
9030	Destination
11010	Medication - Standard Orders
14100	Pain Management - Adult
14250	Determination of Death on Scene

TRAUMA - ADULT (15 years of age and older)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Any trauma patient meeting Trauma Triage Criteria requiring rapid transportation to the closest Trauma Center.
- Refer to ICEMA Reference #9040 - Trauma Triage Criteria and ICEMA Reference #9030 - Destination.
- Contact the Trauma Center as soon as possible in order to activate the trauma team.
  - ➢ If the closest Trauma Center is outside ICEMA region, and no base orders or consult is needed, EMS field personnel may contact the hospital they will be transporting the patient to.
  - ➢ In Inyo and Mono Counties, the assigned base hospital shall be contacted for determination of appropriate destination.

NOTE: EMS field personnel are not authorized to evaluate patients with suspected concussion for purpose of return to play clearance.

II. BLS INTERVENTIONS

- Ensure thorough initial assessment.
- Ensure patent airway, protecting cervical spine.
- Obtain oxygen saturation (if BLS equipped).
- Administer oxygen and/or ventilate as needed.
- Keep patient warm.
- For a traumatic full arrest, provide CPR, utilize the AED if indicated and transport to the closest most appropriate hospital.
- Transport to ALS intercept or to the closest receiving hospital.

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

- **Spinal Motion Restriction**: 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 motion restriction 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 motion restriction.

NOTE: The long backboard (LBB) is an extrication tool, whose purpose is to facilitate the transfer of a patient to a transport stretcher and is not intended, or appropriate for achieving spinal motion restriction. Judicious application of the LBB for purposes other than extrication necessitates that EMS field personnel ensure the benefits outweigh the risks. If a LBB is applied for any reason, patients should be removed as soon as it is safe and practical. LBB does not need to be reapplied on interfacility transfer (IFT) patients.

- **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.

  - When direct pressure or pressure dressing fails, control life threatening bleeding of a severely injured extremity with the application of a tourniquet.

- **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.
- **Determination of Death on Scene**: Refer to ICEMA Reference #14250 - Determination of Death on Scene.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform identified BLS interventions and additional 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.
- Establish IV access.
  - *Unstable*: If BP less than 90 mm Hg and/or signs of inadequate perfusion, start 2nd IV access.
  - *Stable*: Maintain IV if BP more than 90 mm Hg and/or signs of adequate tissue perfusion.

Blunt Trauma:

- *Unstable*: Establish IV NS administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml.
- *Stable*: Saline lock only, do not administer IV fluids.

Penetrating Trauma:

- Saline lock only, do not administer IV fluids.

Isolated Closed Head Injury:

- *Unstable:* Establish IV NS, administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml.
- *Stable*: Saline lock only, do not administer IV fluids.

Isolated Extremity Trauma:

- *Unstable:* Establish IV NS, administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml.

- *Stable*: Saline lock only, do not administer IV fluids.

- Transport to appropriate hospital.

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

- **Spinal Motion Restriction**: LALS personnel should remove LBB devices from patients placed in full spinal motion restriction 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?

- **Impaled Object**: Remove object upon Trauma base hospital physician order, if indicated.

B. <u>Determination of Death on Scene</u>: Refer to ICEMA Reference #14250 - 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" per ICEMA Reference #14250 - Determination of Death on Scene, contact the Trauma base hospital 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 hospital 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.

IV. ALS INTERVENTIONS

- Perform identified BLS and LALS intervention and the additional 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 #9010 - Continuation of Care (San Bernardino County Only).
- Monitor ECG.
- Establish IV/IO access.
  - *Unstable*: If BP less than 90 mm Hg and/or signs of inadequate perfusion, start 2nd IV access.
  - *Stable*: Maintain IV/IO if BP more than 90 mm Hg and/or signs of adequate tissue perfusion.

Blunt Trauma:

- *Unstable*: Establish IV/IO NS administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml.
- *Stable*: Saline lock only, do not administer IV fluids.

Penetrating Trauma:

- Saline lock only, do not administer IV fluids.

Isolated Closed Head Injury:

- *Unstable:* Establish IV/IO NS, administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml.
- *Stable*: Saline lock only, do not administer IV fluids.

Isolated Extremity Trauma:

- *Unstable:* Establish IV/IO NS, administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml (avoid placement on injured extremity).
- *Stable*: Saline lock only, do not administer IV fluids.

- Tranexamic Acid (TXA) administration for blunt or penetrating traumas:
  - Must be within three (3) hours of injury and must have either:
    - Signs and symptoms of hemorrhagic shock with SBP less than 90 mm Hg.
    - Significant hemorrhage with heart rate greater than or equal to 120.
    - Pediatric administration is not indicated.

- **Blunt Trauma**:
  - For signs of hemorrhagic shock meeting inclusion criteria above, administer TXA per ICEMA Reference #11010 - Medication - Standard Orders.
- **Penetrating Trauma**:
  - For signs of hemorrhagic shock meeting inclusion criteria above, administer TXA per ICEMA Reference #11010 - Medication - Standard Orders.

- Transport to appropriate Trauma Center.
- Insert nasogastric/orogastric tube as indicated.

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

- **Chest Trauma**: Perform needle thoracostomy for chest trauma with symptomatic respiratory distress.
- **Pain Relief for Acute Traumatic Injuries**:
  - Administer an appropriate analgesic per ICEMA Reference #14100 - Pain Management - Adult. Document vital signs and pain scales every five (5) minutes until arrival at destination
  - Consider Ondansetron per ICEMA Reference #11010 - Medication - Standard Orders.

B. <u>Determination of Death on Scene</u>: Refer to ICEMA Reference #14250 - 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" per ICEMA Reference #14250 - Determination of Death on Scene, contact the Trauma base hospital 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.

V. REFERENCES

Number	Name
9010	Continuation of Care (San Bernardino County Only)
9030	Destination
9040	Trauma Triage Criteria
11010	Medication - Standard Orders
14050	Cardiac Arrest - Adult
14100	Pain Management - Adult
14250	Determination of Death on Scene

TRAUMA - PEDIATRIC (Less than 15 years of age)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

Any pediatric trauma patient less than 15 years of age meeting trauma triage criteria requiring rapid transportation to the closest pediatric trauma center.

- Refer to ICEMA Reference #9040 - Trauma Triage Criteria and ICEMA Reference #9030 - Destination.
- Contact the receiving pediatric trauma center as soon as possible in order to activate the pediatric trauma team.
  - ➢ Inyo and Mono Counties contact the assigned base hospital for determination of appropriate destination.

NOTE: EMS field personnel are not authorized to evaluate patients with suspected concussion for the purpose of return to play clearance.

II. BLS INTERVENTIONS

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

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

- **Spinal Motion Restriction**: Using age appropriate assessments, 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 motion restriction 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 spine board.

- **Spinal Motion Restriction with use of a Rigid Spine Board**: If the use of a rigid, spine board is indicated, and the level of the patient's head is greater than that of the torso, use approved pediatric spine board with a head drop or arrange padding on the board so that the ears line up with the shoulders and keep the entire lower spine and pelvis in line with the cervical spine and parallel to the 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.

- **Blunt 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 re-evaluate 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.

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

- **Determination of Death on Scene**: Refer to ICEMA Reference #14250 - Determination of Death on Scene.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform identified BLS interventions and additional LALS interventions.

  - Unmanageable Airway: When an adequate airway cannot be maintained by a BVM device, transport to the closest most appropriate receiving hospital.

- IV Access (warm IV fluids when available).

  - *Unstable:* Vital signs (age appropriate) and/or signs of inadequate tissue perfusion, start 2nd IV access.

    Administer 20 ml/kg NS bolus IV.

  - *Stable*: Vital signs (age appropriate) and/or signs of adequate tissue perfusion.

    Saline lock only, do not administer IV fluids.

- Transport to appropriate hospital. Pediatric patients identified as CTP will be transported to a Pediatric Trauma Center when there is less than a 20 minute difference in transport time to the Pediatric Trauma Center versus the closes Trauma Center.

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

- **Spinal Motion Restriction** : LALS personnel should remove LBB devices from patients placed in full spinal motion restriction precautions by first responders and BLS personnel if the patient does not meet any of the following indicators while considering age-appropriate assessments when using the acronym (NSAID):

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

- **Impaled Object**: Remove object upon trauma base hospital physician order, if indicated.

B. Determination of Death on Scene

Determination of Death on Scene: Refer to ICEMA Reference #14250 - 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 #14250 - Determination of Death on Scene, contact the Trauma base hospital 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 hospital contact.

- **Precautions and Comments**:

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

  - Confirm low blood sugar in children and treat as indicated with altered level of consciousness.

  - Suspect child maltreatment when physical findings are inconsistent with the history. Remember reporting requirements for suspected child maltreatment.

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

IV. ALS INTERVENTIONS

- Perform identified BLS and LALS interventions and the additional ALS interventions.

- Establish advanced airway as indicated per ICEMA Reference #11020 -Procedure - Standard Orders.

  - 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 #9010 - Continuation of Care (San Bernardino Only).

- Establish IV/IO Access (warm IV fluids when available).

  - *Unstable:* Vital signs (age appropriate) and/or signs of inadequate tissue perfusion, start 2nd IV access.

    Administer 20 ml/kg NS bolus IV.

  - *Stable*: Vital signs (age appropriate) and/or signs of adequate tissue perfusion.

    Saline lock only, do not administer IV fluids.

- Monitor ECG.

- Insert nasogastric/orogastric tube as indicated.

A. Manage Special Considerations

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

- **Fractures**

  - **Pain Relief**:

    - Fentanyl per ICEMA Reference #11010 - Medication - Standard Orders.
    - For patients four (4) years old and older, consider Ondansetron per ICEMA Reference #11010 - Medication - Standard Orders.

- **Impaled Object**: Remove object upon Trauma base hospital physician order, if indicated.

B. Determination of Death on Scene: Refer to ICEMA Reference #14250 - 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 #14250 - Determination of Death on Scene, contact the Trauma base hospital 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 hospital contact.

V. REFERENCES

Number	Name
9010	Continuation of Care (San Bernardino County Only)
9030	Destination
9040	Trauma Triage Criteria
11010	Medication - Standard Orders
11020	Procedure - Standard Orders
14150	Cardiac Arrest - Pediatric (Less than 15 years of age)
14250	Determination of Death on Scene

FIRELINE EMT-P

I. PURPOSE

To provide guidance and medical oversight for an ICEMA paramedic (EMT-P) deployed to function as a fireline paramedic (FEMP).

This protocol is for use by authorized FEMPs during fire suppression activities and treatment of fire suppression personnel only.

II. REQUIREMENTS

- Must be a currently licensed EMT-P in California.
- Must be currently accredited EMT-P in the ICEMA region.
- Must be currently employed by an ICEMA approved ALS provider.
- The FEMP will follow FIRESCOPE FEMP ICS 223-11 Position Manual and all other ICS protocols.
- The FEMP will check in and obtain briefing from the Logistics Section Chief or the Medical Unit Leader, if established. Briefing will include current incident situation, anticipated medical needs, and local emergency medical system orientation.
- The FEMP will provide emergency medical treatment to personnel operating on the fireline.
- The FEMP will follow ICEMA prior to contact protocols if unable to contact the assigned base hospital.
- The FEMP may not perform skills outside of the ICEMA scope of practice.

III. PROCEDURE

- The EMS provider will notify ICEMA of the deployment of the FEMP to an incident. Use the Fireline Paramedic (FEMP) Deployment Notification form, which is on the ICEMA website at ICEMA.net.
- The FEMP will carry inventory in the advanced life support (ALS) pack as per the below inventory list (see Section IV. Fireline EMT-P (ALS) Pack Inventory. Inventory will be supplied and maintained by the employing ALS provider. Additional items for restock should also be maintained and secured in a vehicle or in the Medical Unit trailer.
- Incident Medical Units may not have the capability of resupplying controlled substances (narcotics). EMS providers should stock sufficient quantities of medical supplies and medications, especially controlled substance medications, to assure adequate supplies and medications.
- Narcotics must be under double lock and maintained on the FEMP person or secured in his/her vehicle at all times as per the ICEMA Drug and Equipment List.

- FEMP may carry an inventory of controlled substances (i.e., Fentanyl, Ketamine and Midazolam) if authorized by the employing ALS provider's Medical Director. The authorizing Medical Director is responsible to assure full compliance with all federal and state laws relating to purchase, storage and transportation of controlled substances. Only controlled substances approved for use in the ICEMA region may be carried and their use must be in accordance with current ICEMA patient care protocols.

- Radio communication failure protocols will not be used. Prior to base hospital contact protocols will be followed. If further treatment is needed, radio contact with the base hospital should be established as soon as possible.

- Documentation of patient care must follow ICEMA protocol utilizing the electronic patient care report (ePCR), if available, or a paper O1A form. All PCRs will be reviewed by the ALS provider and ICEMA for quality improvement (QI) purposes.

- A FEMP will be paired with a fireline EMT (FEMT) or another FEMP who will assist with basic life support (BLS) treatment and supplies.

IV. FIRELINE EMT-P (ALS) PACK INVENTORY

Minimum Requirements: The weight of the pack will dictate if the EMT-P chooses to carry additional ALS supplies.

MEDICATIONS/SOLUTIONS

Medications/Solutions	ALS
Albuterol Solution 2.5 mg Handheld Nebulizer or Multidose Inhaler	4
Atropine Sulfate 1 mg	2
Ipratropium Bromide Solution 0.5 mg Handheld Nebulizer or Multidose Inhaler	4
Lidocaine 100 mg IV pre-load	2
Aspirin 80 mg chewable	1 bottle
Dextrose 10%/250 ml (D10W 25 gm) IV/IO Bolus	1
Diphenhydramine 50 mg	4
Epinephrine 1: 10,000 1 mg	2
Epinephrine 1: 1000 1 mg	4
Glucagon 1 mg	1
Nitroglycerin - Spray 0.4 metered dose and/or tablets (tablets to be discarded 90 days after opening)	1 (equivalent of 10 patient doses)
Saline 0.9% IV 1000 ml may be divided in two 500 ml bags or four 250 ml bags.	
Tranexamic Acid (TXA) 1 gm	1

CONTROLLED SUBSTANCE MEDICATIONS

Controlled Substance Medications MUST BE DOUBLED LOCKED	ALS
Midazolam	20 mg
Fentanyl (amount determined by the medical director)	200 - 400 mcg
Ketamine	120 - 1000 mg

ALS AIRWAY EQUIPMENT

Airway Equipment	ALS
Endotracheal Tubes - 6.0, 7.0 and/or 7.5 cuffed with stylet	1 each
Laryngeal blades - #0, #1, #2, #3, #4 curved and/or straight	1 each
Laryngoscope handle with batteries - or 2 disposable handles	1 each
~~King Airway - Size 3, 4, and 5~~	~~1 each~~
ET Tube holder	1
End Tidal CO2 Detector	1
Needle Cricothyrotomy Kit	1
Needle Thoracostomy Kit	1

IV/MEDICATION ADMINISTRATION SUPPLIES

IV/Medication Administration Supplies	ALS
IV administration set macro drip	2
Venaguard	2
Alcohol preps	6
Betadine swabs	4
Tourniquet	2
Razor	1
Tape	1
IV catheters - 14, 16, 18 and 20 gauge	2
10 cc syringe	2
1 cc TB syringe	2
18 gauge needle	4
25 gauge needle	2

MISCELLANEOUS EQUIPMENT

Miscellaneous	ALS
Sharps container	1
Narcotic storage per protocol	
FEMP pack inventory sheet	1
Patient care report or ePCR (Toughbook)	
AMA forms	3

Equipment	ALS
Compact AED or compact monitor defibrillator combination	
Appropriate cardiac pads	
Pulse oximetry (optional)	
Glucometer, test strips and lancets	4

The BLS pack and supplies will be carried by the FEMT or accompanying FEMP. Personal items and supplies cannot be carried in either the ALS pack or the BLS pack.

TACTICAL MEDICINE FOR SPECIAL OPERATIONS

I. PURPOSE

To provide medical oversight and continuous quality improvement and establish policies and procedures for Tactical Medicine for Special Operations first responders who respond as an integral part of a Special Weapons and Tactics (SWAT) operations.

II. POLICY

- Tactical Medicine for Special Operations shall be developed and utilized in accordance with the "California POST/EMSA Tactical Medicine Operational Programs and Standardized Training Recommendations" document that can be located on the EMSA website at emsa.ca.gov.

- Tactical Medicine for Special Operations and Tactical Medics/Tactical TEMS Specialists (Emergency Medical Technicians (EMTs), Advanced EMTs (AEMTs), Paramedics (EMT-Ps), and Registered Nurses (RNs)) shall be integrated into the local EMS system, in coordination with ICEMA, the local Emergency Medical Services (EMS) Agency (POST, 2010).

- Tactical Medicine for Special Operations shall be reviewed and approved by ICEMA.

- Administration of this policy applies to EMTs, AEMTs, EMT-Ps, and RNs providing medical services within an established EMS Agency and as part of a recognized Tactical Medicine Program.

  - The medical scope of practice for EMTs, AEMTs and EMT-Ps is consistent with California Code of Regulations, Title 22, Division 9 and all ICEMA protocols.

- Tactical Medicine for Special Operations should designate a Tactical Medicine Program Director as defined within POST and EMSA guidelines.

- Tactical Medicine for Special Operations should designate a physician as a Tactical Medicine Medial Director "to provide medical direction, continuous quality improvement, medical oversight, and act as a resource for medical contingency planning" (POST, 2010).

- Tactical Medicine for Special Operations should have components pertaining to planning, medical oversight, quality improvement and training as defined in *Tactical Medicine Operational Programs and Standardized Training Recommendations* (POST, 2010; Section 2.2.1-7) and *California Tactical Casualty Care Training Guidelines* (EMSA #370, June 2017).

- Tactical Medicine for Special Operations should include tactical medical personnel in mission planning and risk assessment to ensure appropriate assets are available for the identified mission as defined in *Tactical Medicine Operational Programs and Standardized Training Recommendations* (POST, 2010; Section 2.2.2).

III. PROCEDURE

- All agencies that intend to provide a Tactical Medicine for Special Operations that include EMTs, AEMTs, EMT-Ps and RNs, will:

  - Submit an original application indicating the type of program. The Specialty and Optional Scope Program Application is available on the ICEMA website at ICEMA.net.

  - Submit a copy of the proposed program to include all information as listed on the application.

  - Provide a list of all EMTs, AEMTs, EMT-Ps and RNs assigned to the Tactical Medicine for Special Operations.

  - Tactical medicine personnel must be:

    - EMTs and AEMTs must be California certified.
    - EMT-Ps must be California licensed and accredited by ICEMA.
    - RNs must be licensed as a Registered Nurse in California and an authorized Flight Nurse or MICN within the ICEMA region.

  - Participate in ICEMA approved Continuous Quality Improvement process.

IV. TRAINING

Designated Tactical Emergency Medical Support (TEMS) personnel shall successfully complete all initial and ongoing recommended training provided by an approved tactical medicine training program as listed in the California POST/EMSA *Tactical Medicine Operational Programs and Standardized Training Recommendations* (March 2010) or *California Tactical Casualty Care Training Guidelines* (EMSA #370, June 2017).

V. DRUG AND EQUIPMENT LISTS

Equipment and supplies carried and utilized by Tactical Emergency Medical Support (TEMS) personnel shall be consistent with the items listed in the California POST/EMSA *Tactical Medicine Operational Programs and Standardized Training Recommendations* document. Equipment and supplies shall be based on the appropriate level of personnel utilized for the particular Tactical Medicine for Special Operations (TEMS BLS or TEMS ALS).

The Tactical Medicine for Special Operations standard list of drugs and equipment carried by TEMS BLS or TEMS ALS medical personnel must be reviewed and approved by ICEMA prior to issue or use by EMT or EMT-P personnel.

TACTICAL MEDICINE OPERATIONAL EQUIPMENT RECOMMENDATIONS

Medications	BLS	ALS
Albuterol 2.5 mg with Atrovent 0.5 mg MDI		1
Aspirin 81 mg		1 bottle
Atropine Sulfate 1 mg preload		1
Dextrose 50% 25 gm preload		1
Diphenhydramine 50 mg		2
Epinephrine (1:1000) 1 mg		2
Epinephrine (1:10,000)1 mg preload		2
Glucagon 1 mg		1

Naloxone 2 mg preload		2
Nerve Agent Antidote (DuoDote)		1
Nitroglycerine 0.4 metered dose or tablets (tablets to be discarded 90 days after opening)		1
Normal Saline 500 ml		2
Ondansetron 4 mg IV/IM/oral tabs		4
Tranexamic Acid (TXA) 1 gm		1

CONTROLLED SUBSTANCE MEDICATIONS

Controlled Substance Medications MUST BE DOUBLED LOCKED	**BLS**	**ALS**
Midazolam		20 mgs
Fentanyl		200 - 400 mcg
Ketamine		120 - 1000 mg

AIRWAY EQUIPMENT

Airway Equipment	**BLS**	**ALS**
Chest seal and Flutter Valve		1
End Tidal CO2 (device may be integrated into bag)		1
Endotracheal Tubes - 6.0 and/or 6.5, 7.0 and/or 7.5, and 8.0 and/or 8.5 with stylet		1 each
ET Tube holder		1
~~King LTS-D Size 4 and 5~~	~~1 each if approved~~	~~1 each~~
Laryngoscope Kit		1
Nasopharyngeal Airways Adult	1 set	1 set
Needle Cricothyrotomy Device		1
Needle Thoracostomy Kit		1
Suction (hand held)	1	1
Ventilation Bag collapsible (BVM)	1	1

IV/MONITORING EQUIPMENT

IV/Needle/Syringes	**BLS**	**ALS**
AED (with waveform monitoring preferred)	1	1
AED Pads	1	1
Blood Pressure Cuff	1	1
IO Device and Needles		1
IV Needles 14-20 Gauge		1 of each
IV Start Kit		1
IV Tubing		1
Pulse Oximeter (optional)		1
Saline Flush		2
Saline Lock		2
Stethoscope	1	1
Syringes 3 cc, 5 cc, 10 cc		1 each

DRESSING AND SPLINTING

Dressing/Splints	BLS	ALS
CoTCCC - Recommended tourniquet system	1	1
Elastic compression dressing	1	1
Latex free gloves	1	1
N95 Mask	1	1
Occlusive dressing	1	1
Roller bandage	1	1
Splint - semi-ridged moldable	1	1
Sterile gauze pads	1	1
Tape	1	1
Trauma dressing	1	1
Trauma shears	1	1
Triangle bandage	1	1
Hemostatic impregnated gauze non-exothermic, i.e., Combat Gauze (optional)	2	2

MISCELLANEOUS EQUIPMENT

Miscellaneous Equipment	BLS	ALS
Litter	1	1
Patient care record	1	1
Personal protection equipment (PPE)	1	1
Triage tags	10	10
Tactical light	1	1
Eyeware	1	1
Rescue blanket	1	1
Self-heating blanket	1	1

STANDARD DRUG AND EQUIPMENT LIST - BLS/LALS/ALS

Each ambulance and first responder unit 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) 6 mg			1	1
Adenosine (Adenocard) 12 mg			2	2
Albuterol Aerosolized Solution (Proventil) - unit dose 2.5 mg		4 doses	4 doses	4 doses
Albuterol MDI with spacer		1 SPECIALTY PROGRAMS ONLY	1 SPECIALTY PROGRAMS ONLY	1 SPECIALTY PROGRAMS ONLY
Aspirin, chewable - 81 mg tablet		2	1 bottle	1 bottle
Atropine 1 mg preload			2	2
Calcium Chloride 1 gm preload			1	1
Dextrose 10% in 250 ml Water (D10W)		2	2	2
Diphenhydramine (Benadryl) 50 mg			1	1
Epinephrine 1 mg/ml 1 mg		2	2	2
Epinephrine 0.1 mg/ml 1 mg preload			4	4
Glucagon 1 mg		1	1	1
Glucose paste	1 tube	1 tube	1 tube	1 tube
Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5 mg			4	4
Irrigating Saline and/or Sterile Water (1000 cc)	2	1	1	2
Lidocaine 100 mg			3	3
~~Lidocaine 1 gm or 1 bag pre-mixed 1 gm /250 cc D5W~~			~~1~~	~~1~~
Lidocaine 2% Intravenous solution			1	1
Magnesium Sulfate 10 gm			1	1
Naloxone (Narcan) 2 mg preload	2	2	2	2
Nitroglycerine (NTG) - Spray 0.4 mg metered dose and/or tablets (tablets to be discarded 90 days after opening)		2	1	2
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
Sodium Bicarbonate 50 mEq preload			2	2
Tranexamic Acid (TXA) 1 gm			2	2

Non-Exchange Controlled Substance Medications MUST BE DOUBLE LOCKED	**BLS**	**LALS**	**ALS Non-Transport**	**ALS Transport**
Fentanyl			200-400 mcg	200-400 mcg
Midazolam			20-40 mg	20-40 mg
Ketamine			120-1000 mg	120-1000 mg

AIRWAY/SUCTION EQUIPMENT

Exchanged Airway/Suction Equipment	**BLS**	**LALS**	**ALS Non-Transport**	**ALS Transport**
CPAP circuits - all manufacture's available sizes			1 each	2 each
End-tidal 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
ET Tube holders - adult		1 each	1 each	2 each
~~King LTS-D Adult: Size 3 (yellow) Size 4 (red) Size 5 (purple)~~	~~2 each SPECIALTY PROGRAMS ONLY~~	~~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
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
Rigid tonsil tip suction	1		1	1
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

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
Laryngoscope 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 (BLS TRANSPORT ONLY)			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 Driver			1 each	1 each
EZ-IO Needles: 25 mm 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	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 Microdrip Administration Set (60 drops / cc)		3 1	3 1	3 2
Mucosal Atomizer Device (MAD) for nasal administration of medication	2	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	2 each
Saline Lock Large Bore Tubing Needleless		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 (one of each size)	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	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 - Adult (1), Pediatric (1)	1 each	1 each		
Automatic CPR device (FDA approved)	1	1	1	1
Automatic transport ventilator (Specialty Program Only - ICEMA approved device)			1	1
Backboard padding	1	1	1	1
Buretrol			1	1
Chemistry profile tubes			3	3
CPAP - (must be capable of titrating pressure between 2 and 15 cm H_2O)			1	1
Nerve Agent Antidote Kit (NAAK) - DuoDote or Mark I	3	3	3	3
EMS Tourniquet	1		1	1
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
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
- HemCon ChitoFlex Pro Dressing

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	1	1	1	1
Ankle and wrist restraints, soft ties acceptable	1		1	1
Antiseptic swabs/wipes	10	10	10	10
Bedpan or fracture pan Urinal	1 (BLS TRANSPORT UNITS ONLY) 1 (BLS TRANSPORT UNITS ONLY)			1 1
Cervical Collars - Rigid Pediatric and Adult all sizes or Cervical Collars - Adjustable Adult and 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 and 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 (BLS TRANSPORT UNITS ONLY			1
Bandage shears	1	1	1	1
Blood Borne Pathogen Protective Equipment - (nonporous gloves, goggles face masks and gowns meeting OSHA Standards)	2	1	2	2
Pediatric Emergency Measuring Tape (Broselow, etc.)		1	1	1

Non-Exchange Dressing Materials/Other Equipment/ Supplies	**BLS**	**LALS**	**ALS Non-Transport**	**ALS Transport**
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 and blanket	1 set (BLS TRANSPORT UNITS ONLY			1 set
Short extrication device	1	1	1	1
Straps to secure patient to gurney	1 set (BLS TRANSPORT UNITS ONLY			1 set
Traction splint	1	1	1	1
Triage Tags - ICEMA approved	20	20	20	20

STANDARD DRUG AND EQUIPMENT LIST - EMS AIRCRAFT

Each Aircraft 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	1
Adenosine (Adenocard) 12 mg	2
Albuterol Aerosolized Solution (Proventil) - unit dose 2.5 mg	3 doses
Aspirin, chewable - 81 mg tablet	1 bottle
Atropine 1 mg preload	2
Calcium Chloride 1 gm preload	1
Dextrose 10% in 250 ml Water (D10W) *	2
Diphenhydramine (Benadryl) 50 mg	1
Epinephrine 1 mg/ml 1 mg	2
Epinephrine 0.1 mg/ml 1mg preload	3
Glucagon 1 mg	1
Glucopaste	1 tube
Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5 mg	3
Lidocaine 100 mg	3
Lidocaine 2% Intravenous solution	1
Magnesium Sulfate 10 gms	1
Naloxone (Narcan) 2 mg preload	2
Nitroglycerin (NTG) - 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	2000 ml
Ondansetron (Zofran) 4 mg Oral Disintegrating Tablets (ODT)	4
Ondansetron (Zofran) 4 mg IM/ IV	4
Sodium Bicarbonate 50 mEq preload	2
Tranexamic Acid (TXA) 1 gm	2

CONTROLLED SUBSTANCE MEDICATIONS-MUST BE DOUBLE LOCKED	AMOUNT
Fentanyl	200-400 mcg
Midazolam	20-40 mg
Ketamine	120-1000 mg

AIRWAY/SUCTION EQUIPMENT	AMOUNT
Aircraft Oxygen source -10 L /min for 20 minutes	1
C-PAP circuits - all manufacture's available sizes	1 each
End-tidal CO2 device - pediatric and adult (may be integrated into bag)	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
ET Tube holders - adult	1 each
Flashlight/penlight	1
~~King LTS-D Adult: Size 3 (yellow)~~ ~~Size 4 (red)~~ ~~Size 5 (purple)~~	~~1 each~~
Laryngoscope handle with batteries - or 2 disposable handles	1
Laryngoscope blades - #0, #1, #2, #3, #4 curved and/or straight	1 each

AIRWAY/SUCTION EQUIPMENT	AMOUNT
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	1
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
Ridged tonsil tip suction	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 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 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	2 each
Syringe - 60 ml catheter tip	2
Thermometer - Mercury free with covers	1

DRESSING MATERIALS/OTHER EQUIPMENT SUPPLIES	AMOUNT
Adhesive tape - 1 inch	2
Air occlusive dressing	1
Aircraft stretcher or litter system with approved FAA straps that allows for Axial Spinal Immobilization	1
Ankle and 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 and gowns meeting OSHA Standards)	2
Cervical Collars - Rigid Pediatric & Adult all sizes *or* Cervical Collars - Adjustable Adult and Pediatric	1 each 1 each
Emesis basin or disposable bags and covered waste container	1
Head immobilization device	1
OB Kit	1
Pediatric Emergency Measuring Tape (Broselow, etc.)	1
Pneumatic or rigid splints capable of splinting all extremities	4
Provodine/Iodine swabs/wipes or antiseptic equivalent	
Roller bandages - 4 inch	3
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

OPTIONAL EQUIPMENT/MEDICATIONS	Amount
Automatic ventilator (Approved)	1
Backboard padding	1
BLS AED/defib pads	1
Chemistry profile tubes	3
Nerve Agent Antidote Kit (NAAK) - DuoDote or Mark I	3
D5W in bag	1
Hemostatic Dressing *	1
IV infusion pump	1
IV warming device	1
Manual powered suction device	1
Medical Tourniquet	1
Needle Thoracostomy Kit (prepackaged)	2
Pediatric immobilization board	1
Translaryngeal Jet Ventilation Device	1
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, and 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.

12-lead Electrocardiography (EMT-P)

- ECG should be performed prior to medication administration.
- ECG should be performed on any patient whose medical history and/or presenting symptoms are consistent with acute coronary syndrome including typical or atypical chest pain, syncopal episode, prior AMI, heart disease, or other associated risk factors.

Capnography (EMT-P)

- Utilize capnography in patients with respiratory distress, respiratory failure, cardiac arrest, and critically ill patients
- Perform capnography prior to pain medication administration.
- Perform capnography after administration of Midazolam for behavioral emergencies.
- Monitor waveform, numerical value and document in ePCR.

Continuous Positive Airway Pressure Device (CPAP) - Adult (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.
- Patient condition requires IV access and other peripheral venous access attempts are unsuccessful.

Blood Glucose Check (EMT, AEMT, and EMT-P)

- Should be assessed if the patient meets key indicators consistent with high or low blood sugar.

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

- EMT-Ps may administer Lidocaine slowly per ICEMA Reference #7040 - Medication - Standard Orders, to control infusion pain.
- Approved insertion sites:
  - Eight (8) years of age or younger (LALS and ALS):
    - Proximal Tibia - Anterior medial surface of tibia, 2 cm below tibial tuberosity.

- Nine (9) years of age and older (ALS only):
  - Proximal Tibia - Anterior medial surface of tibia, 2 cm below tibial tuberosity.
  - Distal Tibia - Lower end of tibia, 2 cm above the medial malleolus.
  - Humeral Head (EZ IO only).
  - Anterior distal femur, 2 cm above the patella - Base hospital contact only.

- Leave site visible and monitor for extravasation.

~~**King Airway Device (Perilaryngeal) - Adult (AEMT and EMT-P)**~~

- ~~Use of King Airway device may be performed only on those patients who meet **all** of the following criteria:~~
  - ~~Unresponsive, agonal respirations (less than six (6) breaths per minute) or apneic.~~
  - ~~Patients 15 years or older.~~
  - ~~Patients over four (4) feet in height.~~
- ~~Additional considerations:~~
  - ~~Medications may **not** be given via the King Airway device.~~
  - ~~King Airway device should not be removed unless it becomes ineffective.~~

Nasogastric/Orogastric Tube (EMT-P)

- Use a water soluble lubricating jelly.
- Required for all full arrest patients.

Needle Cricothyrotomy (EMT-P)

- Absolute contraindication: Transection of the distal trachea.
- Monitor end-tidal CO_2 and wave form capnography.
- Monitor pulse oximetry.
- Contact base hospital if unable to ventilate adequately and transport immediately to the closest hospital for airway management.

Needle Thoracostomy (EMT-P)

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

Oral Endotracheal Intubation - Adult (EMT-P)

- Oral endotracheal intubation is permitted only in patients who are taller than the maximum length of a pediatric emergency measuring tape (Broselow, etc.) or equivalent measuring from the top of the head to the heal of the foot.
- Monitor end-tidal CO_2 and wave form capnography.
- Monitor pulse oximetry.
- If unable to place ET after a maximum of three (3) intubation attempts (defined as placement of the laryngoscope in the mouth). If unsuccessful, continue with BLS airway management and transport to the nearest receiving hospital.
- Document verification of tube placement (auscultation, visualization, capnography).

Spinal Motion Restriction (EMT, AEMT and EMT-P)

- Should be placed if patient meets the indicators, per ICEMA Reference #15010 - Trauma - Adult (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 indicators.

Synchronized Cardioversion (EMT-P)

- For anxiety prior to cardioversion, consider Midazolam per ICEMA Reference #7040 - Medication - Standard Orders.
- For pain, consider Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.
- If rhythm deteriorates to v-fib, turn off the sync button and defibrillate.
- Select initial energy level setting at 100 joules or a clinically equivalent biphasic energy level per manufacture guidelines. Procedure may be repeated at 200, 300 and 360 joules or a clinically equivalent biphasic energy level per manufacture guidelines.
- With base hospital order, repeated cardioversion attempts at 360 joules or clinically equivalent biphasic energy level per manufacturer's guidelines may be attempted.

Transcutaneous Cardiac Pacing (EMT-P)

- Start at a rate of 60 and adjust output to the lowest setting to maintain capture. Assess peripheral pulses and confirm correlation with paced rhythm.
- Reassess peripheral pulses. Adjust output to compensate for loss of capture.
- Increase rate **(not to exceed 100)** to maintain adequate tissue perfusion.
- For anxiety, consider Midazolam per ICEMA Reference #7040 - Medication - Standard Orders.
- For pain, consider Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.

- Contact the base hospital if rhythm persists or for continued signs of inadequate tissue perfusion.

Vagal Maneuvers (EMT-P)

- Relative contraindications for patients with hypertension, suspected STEMI, or suspected head/brain injury.
- Reassess cardiac and hemodynamic status. Document rhythm before, during and after procedure.
- If rhythm does not covert within ten (10) seconds, follow ICEMA Reference #11050 - Tachycardias - Adult.

BURNS - ADULT (15 years of age and older)

Burn patient requires effective communication and rapid transportation to the closest receiving hospital.

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

I. FIELD ASSESSMENT/TREATMENT INDICATORS

Refer to ICEMA Reference #9030 - Destination policy.

II. BLS INTERVENTIONS

- Break contact with causative agent (stop the burning process).
- Remove clothing and jewelry quickly, if indicated.
- Keep patient warm.
- Estimate % TBSA burned and depth using the “Rule of Nines”.
  - An individual’s palm represents 1% of TBSA and can be used to estimate scattered, irregular burns.
- Transport to ALS intercept or to the closest receiving hospital.

A. Manage Special Considerations

- **Thermal Burns**: Stop the burning process. Do not break blisters. Cover the affected body surface with dry, sterile dressing or sheet.
- **Chemical Burns**: Brush off dry powder, if present. Remove any contaminated or wet clothing. Irrigate with copious amounts of saline or water.
- **Tar Burns**: Cool with water, do not remove tar.
- **Electrical Burns**: Remove from electrical source (without endangering self) with a nonconductive material. Cover the affected body surface with dry, sterile dressing or sheet.
- **Eye Involvement**: Continuous flushing with NS during transport. Allow patient to remove contact lenses if possible.
- **Determination of Death on Scene**: Refer to ICEMA Reference #14250 - Determination of Death On Scene.

III. LIMITED ALS (LALS) INTERVENTIONS

- Advanced airway as indicated.
- ~~King Airway contraindicated in airway burns.~~

- Airway Stabilization:

  Burn patients with respiratory compromise or potential for such, will be transported to the closest most appropriate receiving hospital for airway stabilization.

- IV access (warm IV fluids when available).

  - *Unstable:* BP less than 90 mm HG and/or signs of inadequate tissue perfusion, start 2nd IV access.

    IV NS 250 ml boluses, may repeat to a maximum of 1000 ml.

  - *Stable*: BP more than 90 mm HG and/or signs of adequate tissue perfusion.

    IV NS 500 ml per hour.

- Transport to appropriate facility.

  - *Minor Burn Classification*: Transport to the closest most appropriate receiving hospital.

  - *Moderate Burn Classification*: Transport to the closest most appropriate receiving hospital.

  - *Major Burn Classification*: Transport to the closest most appropriate Burn Center (San Bernardino County contact ARMC).

  - *Critical Trauma Patient (CTP) with Associated Burns:* Transport to the most appropriate Trauma Center.

- Burn patients with associated trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.

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

- **Electrical Burns**: Place AED on patient.

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

- **Respiratory Distress**: Use BVM as needed and transport to the nearest facility for airway control. Contact receiving hospital ASAP. Albuterol with Atrovent per ICEMA Reference #11010 -Medication - Standard Orders.

- **Deteriorating Vital Signs:** Transport to the closest most appropriate receiving hospital. Contact base hospital.

- **Pulseness and Apneic**: Transport to the closest most appropriate receiving hospital and treat according to ICEMA policies. Contact base hospital.

- **Determination of Death on Scene**: Refer to ICEMA Reference #14250 - Determination of Death on Scene.

- **Precautions and Comments**:
  - High flow oxygen is essential with known or potential respiratory injury. Beware of possible smoke inhalation.
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces, as additional injury will result.

IV. ALS INTERVENTIONS

- Advanced airway (as indicated).
- Airway Stabilization:

  Burn patients with respiratory compromise or potential for such, will be transported to the closest most appropriate receiving hospital for airway stabilization.
- Monitor ECG.
- IV/IO Access (Warm IV fluids when available).
  - *Unstable:* BP less than 90 mm HG and/or signs of inadequate tissue perfusion, start 2nd IV access.

    IV/IO NS 250 ml boluses, may repeat to a maximum of 1000 ml.
  - *Stable*: BP more than 90 mm HG and/or signs of adequate tissue perfusion.

    IV/IO NS 500 ml per hour.
- Treat pain as indicated.

  Pain Relief: Administer an appropriate analgesic per ICEMA Reference #14100 - Pain Management - Adult. Document vital signs and pain scales every five (5) minutes until arrival at destination.
- Transport to appropriate facility:
  - *CTP with associated burns,* transport to the closest Trauma Center.
  - Burn patients with associated trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.
- Insert nasogastric/orogastric tube as indicated.
- Refer to Section V - Burn Classifications below.

A. Manage Special Considerations

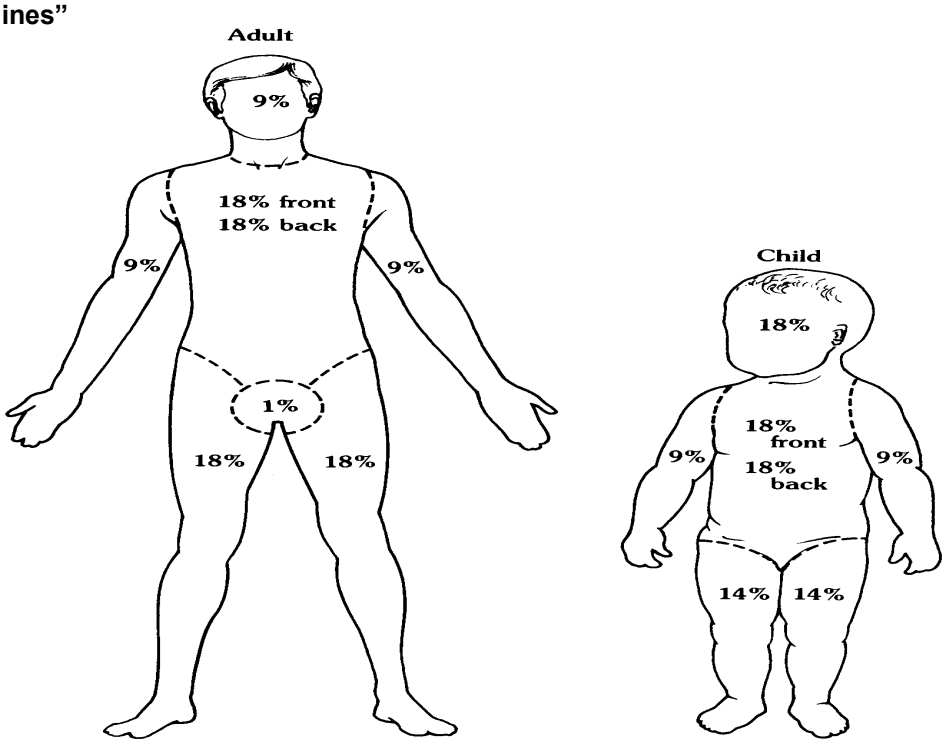
- **Electrical Burns**: Monitor for dysrhythmias, treat according to ICEMA protocols.
  - Electrical injuries that result in cardiac arrest shall be treated as medical arrests.
- **Respiratory Distress**: Intubate patient if facial/oral swelling are present or if respiratory depression or distress develops due to inhalation injury.
  - Albuterol with Atrovent per ICEMA Reference #11010 - Medication - Standard Orders.
  - Administer humidified oxygen, if available.
  - Apply capnography.
  - Awake and breathing patients with potential for facial/inhalation burns are not candidates for nasal tracheal intubation. CPAP may be considered, if indicated, after consultation with base hospital.
- **Deteriorating Vital Signs**: Transport to the closest receiving hospital. Contact base hospital.
- **Pulseness and Apneic**: Transport to the closest receiving hospital and treat according to ICEMA policies. Contact base hospital.
- **Determination of Death on Scene**: Refer to ICEMA Reference #14250 - Determination of Death on Scene.
- **Precautions and Comments**:
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces, as additional injury will result.
- **Base Hospital Orders**: May order additional medications, fluid boluses and CPAP.

V. BURN CLASSIFICATIONS

ADULT BURN CLASSIFICATION CHART	DESTINATION	
MINOR - ADULT • Less than 10% TBSA • Less than 2% Full Thickness	**CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL**	

MODERATE - ADULT • 10 - 20% TBSA • 2 - 5% Full Thickness • High Voltage Injury • Suspected Inhalation Injury • Circumferential Burn • Medical problem predisposing to infection (e.g., diabetes mellitus, sickle cell disease)	**CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL**	
MAJOR - ADULT • More than 20% TBSA burn in adults • Less than 5% Full Thickness • High Voltage Burn • Known Inhalation Injury • Any significant burn to face, eyes, ears, genitalia, or joints	**CLOSEST MOST APPROPRIATE BURN CENTER** In San Bernardino County, contact: Arrowhead Regional Medical Center (ARMC)	

"Rule of Nines"



VI. REFERENCES

Number	Name
9030	Destination
11010	Medication - Standard Orders
14100	Pain Management - Adult
14250	Determination of Death on Scene

TRAUMA - ADULT (15 years of age and older)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Any trauma patient meeting Trauma Triage Criteria requiring rapid transportation to the closest Trauma Center.
- Refer to ICEMA Reference #9040 - Trauma Triage Criteria and ICEMA Reference #9030 - Destination.
- Contact the Trauma Center as soon as possible in order to activate the trauma team.
  - ➢ If the closest Trauma Center is outside ICEMA region, and no base orders or consult is needed, EMS field personnel may contact the hospital they will be transporting the patient to.
  - ➢ In Inyo and Mono Counties, the assigned base hospital shall be contacted for determination of appropriate destination.

NOTE: EMS field personnel are not authorized to evaluate patients with suspected concussion for purpose of return to play clearance.

II. BLS INTERVENTIONS

- Ensure thorough initial assessment.
- Ensure patent airway, protecting cervical spine.
- Obtain oxygen saturation (if BLS equipped).
- Administer oxygen and/or ventilate as needed.
- Keep patient warm.
- For a traumatic full arrest, provide CPR, utilize the AED if indicated and transport to the closest most appropriate hospital.
- Transport to ALS intercept or to the closest receiving hospital.

A. Manage Special Considerations

- **Spinal Motion Restriction**: 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 motion restriction 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 motion restriction.

NOTE: The long backboard (LBB) is an extrication tool, whose purpose is to facilitate the transfer of a patient to a transport stretcher and is not intended, or appropriate for achieving spinal motion restriction. Judicious application of the LBB for purposes other than extrication necessitates that EMS field personnel ensure the benefits outweigh the risks. If a LBB is applied for any reason, patients should be removed as soon as it is safe and practical. LBB does not need to be reapplied on interfacility transfer (IFT) patients.

- **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.

  - When direct pressure or pressure dressing fails, control life threatening bleeding of a severely injured extremity with the application of a tourniquet.

- **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.
- **Determination of Death on Scene**: Refer to ICEMA Reference #14250 - Determination of Death on Scene.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform identified BLS interventions and additional 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.
- Establish IV access.
  - *Unstable*: If BP less than 90 mm Hg and/or signs of inadequate perfusion, start 2nd IV access.
  - *Stable*: Maintain IV if BP more than 90 mm Hg and/or signs of adequate tissue perfusion.

Blunt Trauma:

- *Unstable*: Establish IV NS administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml.
- *Stable*: Saline lock only, do not administer IV fluids.

Penetrating Trauma:

- Saline lock only, do not administer IV fluids.

Isolated Closed Head Injury:

- *Unstable:* Establish IV NS, administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml.
- *Stable*: Saline lock only, do not administer IV fluids.

Isolated Extremity Trauma:

- *Unstable:* Establish IV NS, administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml.

- *Stable*: Saline lock only, do not administer IV fluids.

- Transport to appropriate hospital.

A. Manage Special Considerations

- **Spinal Motion Restriction**: LALS personnel should remove LBB devices from patients placed in full spinal motion restriction 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?

- **Impaled Object**: Remove object upon Trauma base hospital physician order, if indicated.

B. Determination of Death on Scene: Refer to ICEMA Reference #14250 - 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" per ICEMA Reference #14250 - Determination of Death on Scene, contact the Trauma base hospital 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 hospital 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.

IV. ALS INTERVENTIONS

- Perform identified BLS and LALS intervention and the additional 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 #9010 - Continuation of Care (San Bernardino County Only).
- Monitor ECG.
- Establish IV/IO access.
  - *Unstable*: If BP less than 90 mm Hg and/or signs of inadequate perfusion, start 2nd IV access.
  - *Stable*: Maintain IV/IO if BP more than 90 mm Hg and/or signs of adequate tissue perfusion.

Blunt Trauma:

  - *Unstable*: Establish IV/IO NS administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml.
  - *Stable*: Saline lock only, do not administer IV fluids.

Penetrating Trauma:

  - Saline lock only, do not administer IV fluids.

Isolated Closed Head Injury:

  - *Unstable:* Establish IV/IO NS, administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml.
  - *Stable*: Saline lock only, do not administer IV fluids.

Isolated Extremity Trauma:

  - *Unstable:* Establish IV/IO NS, administer 250 ml bolus. May repeat one (1) time to a maximum of 500 ml (avoid placement on injured extremity).
  - *Stable*: Saline lock only, do not administer IV fluids.

- Tranexamic Acid (TXA) administration for blunt or penetrating traumas:
  - Must be within three (3) hours of injury and must have either:
    - Signs and symptoms of hemorrhagic shock with SBP less than 90~~9~~ mm Hg.
    - Significant hemorrhage with heart rate greater than or equal to 120.
    - Pediatric administration is not indicated.

- **Blunt Trauma**:
  - For signs of hemorrhagic shock meeting inclusion criteria above, administer TXA per ICEMA Reference #11010 - Medication - Standard Orders.
- **Penetrating Trauma**:
  - For signs of hemorrhagic shock meeting inclusion criteria above, administer TXA per ICEMA Reference #11010 - Medication - Standard Orders.

- Transport to appropriate Trauma Center.
- Insert nasogastric/orogastric tube as indicated.

A. **Manage Special Considerations**

- **Chest Trauma**: Perform needle thoracostomy for chest trauma with symptomatic respiratory distress.
- **Pain Relief for Acute Traumatic Injuries**:
  - Administer an appropriate analgesic per ICEMA Reference #14100 - Pain Management - Adult. Document vital signs and pain scales every five (5) minutes until arrival at destination
  - Consider Ondansetron per ICEMA Reference #11010 - Medication - Standard Orders.

B. **Determination of Death on Scene**: Refer to ICEMA Reference #14250 - 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" per ICEMA Reference #14250 - Determination of Death on Scene, contact the Trauma base hospital 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.

V. REFERENCES

Number	Name
9010	Continuation of Care (San Bernardino County Only)
9030	Destination
9040	Trauma Triage Criteria
11010	Medication - Standard Orders
14050	Cardiac Arrest - Adult
14100	Pain Management - Adult
14250	Determination of Death on Scene

TRAUMA - PEDIATRIC (Less than 15 years of age)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

Any pediatric trauma patient less than 15 years of age meeting trauma triage criteria requiring rapid transportation to the closest pediatric trauma center.

- Refer to ICEMA Reference #9040 - Trauma Triage Criteria and ICEMA Reference #9030 - Destination.
- Contact the receiving pediatric trauma center as soon as possible in order to activate the pediatric trauma team.
  - ➢ Inyo and Mono Counties contact the assigned base hospital for determination of appropriate destination.

NOTE: EMS field personnel are not authorized to evaluate patients with suspected concussion for the purpose of return to play clearance.

II. BLS INTERVENTIONS

- Ensure thorough initial assessment.
- Ensure patient airway, protecting cervical spine.
- Oxygen and/or ventilate as needed, O_2 saturation (if BLS equipped).
- Keep patient warm and reassure.
- 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

- **Spinal Motion Restriction**: Using age appropriate assessments, 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 motion restriction 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 spine board.

- **Spinal Motion Restriction with use of a Rigid Spine Board**: If the use of a rigid, spine board is indicated, and the level of the patient's head is greater than that of the torso, use approved pediatric spine board with a head drop or arrange padding on the board so that the ears line up with the shoulders and keep the entire lower spine and pelvis in line with the cervical spine and parallel to the 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.

- **Blunt 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 re-evaluate 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.

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

- **Determination of Death on Scene**: Refer to ICEMA Reference #14250 - Determination of Death on Scene.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform identified BLS interventions and additional LALS interventions.

  - Unmanageable Airway: When an adequate airway cannot be maintained by a BVM device, transport to the closest most appropriate receiving hospital

- IV Access (warm IV fluids when available).

  ➢ *Unstable:* Vital signs (age appropriate) and/or signs of inadequate tissue perfusion, start 2nd IV access.

  Administer 20 ml/kg NS bolus IV.

  ➢ *Stable*: Vital signs (age appropriate) and/or signs of adequate tissue perfusion.

  Saline lock only, do not administer IV fluids.

- Transport to appropriate hospital. Pediatric patients identified as CTP will be transported to a Pediatric Trauma Center when there is less than a 20 minute difference in transport time to the Pediatric Trauma Center versus the closes Trauma Center.

A. Manage Special Considerations

- **Spinal Motion Restriction** : LALS personnel should remove LBB devices from patients placed in full spinal motion restriction precautions by first responders and BLS personnel if the patient does not meet any of the following indicators while considering age-appropriate assessments when using the acronym (NSAID):

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

- ~~**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.~~

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

- **Impaled Object**: Remove object upon trauma base hospital physician order, if indicated.

B. Determination of Death on Scene: Refer to ICEMA Reference #14250 - 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 #14250 - Determination of Death on Scene, contact the Trauma base hospital 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 hospital contact.
- **Precautions and Comments**:
  - Electrical injuries that result in cardiac arrest shall be treated as medical arrests.
  - Confirm low blood sugar in children and treat as indicated with altered level of consciousness.
  - Suspect child maltreatment when physical findings are inconsistent with the history. Remember reporting requirements for suspected child maltreatment.
  - Unsafe scene may warrant transport despite low potential for survival.

IV. ALS INTERVENTIONS

- Perform identified BLS and LALS interventions and the additional ALS interventions.
- Establish advanced airway as indicated per ICEMA Reference #11020 -Procedure - Standard Orders.
  - 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 #9010 - Continuation of Care (San Bernardino Only).
- Establish IV/IO Access (warm IV fluids when available).
  - *Unstable:* Vital signs (age appropriate) and/or signs of inadequate tissue perfusion, start 2nd IV access.

    Administer 20 ml/kg NS bolus IV.
  - *Stable*: Vital signs (age appropriate) and/or signs of adequate tissue perfusion.

    Saline lock only, do not administer IV fluids.

- Monitor ECG.
- Insert nasogastric/orogastric tube as indicated

A. Manage Special Considerations

- **Blunt Chest Trauma**: Perform needle thoracostomy for chest trauma with symptomatic respiratory distress.
- **Fractures**
  - **Pain Relief**:
    - Fentanyl per ICEMA Reference #11010 - Medication - Standard Orders.
    - For patients four (4) years old and older, consider Ondansetron per ICEMA Reference #11010 - Medication - Standard Orders.
- **Impaled Object**: Remove object upon Trauma base hospital physician order, if indicated.

B. Determination of Death on Scene: Refer to ICEMA Reference #14250 - 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 #14250 - Determination of Death on Scene, contact the Trauma base hospital 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 hospital contact.

V. REFERENCES

Number	Name
9010	Continuation of Care (San Bernardino County Only)
9030	Destination
9040	Trauma Triage Criteria
11010	Medication - Standard Orders
11020	Procedure - Standard Orders
14150	Cardiac Arrest - Pediatric (Less than 15 years of age)
14250	Determination of Death on Scene