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: October 1, 2018

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 PROTOCOLS/POLICIES EFFECTIVE NOVEMBER 1, 2018

The protocols/policies listed below are effective November 1, 2018.

ICEMA Reference Number and Name

7010	BLS/LALS/ALS Standard Drug and Equipment List
7020	EMS Aircraft Standard Drug and Equipment List
7040	Medication - Standard Orders
9010	General Patient Care Guidelines
9070	Applying Patient Restraints Guidelines
11130	Psychiatric/Behavioral Emergencies - Adult (NEW)
15010	Trauma - Adult (15 years of age and older)
15020	Trauma - Pediatric (less than 15 years of age)

On August 23, 2018, the ICEMA Medical Advisory Committee (MAC) discussed the minimal use of Lidocaine drips/premix bags and the many difficulties replacing expired supplies due to the long-term national shortage of this medication. At the recommendation of MAC, ICEMA decided to permanently remove Lidocaine drips/premix bags from the ICEMA paramedic (EMT-P) scope of practice. EMT-Ps are no longer authorized to administer Lidocaine drips/premix bags on 9-1-1 responses, but may monitor medication infusions during interfacility transfers.

Please insert and replace the attached protocols/policies and the Table of Contents in the EMS Policy, Procedure and Protocol Manual with the updated documents and ensure every station or facility has a reference copy. The ICEMA policies and protocols can also be found on ICEMA's website at www.ICEMA.net under Emergency Medical Services Information and select the EMS Policy, Procedure and Protocol Manual section.

If you have any questions, please contact Suzee Kolodzik, EMS Specialist, at (909) 388-5820 or via e-mail at susan.kolodzik@cao.sbcounty.gov.

TL/RV/SK/jlm

Enclosures

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POLICIES/PROTOCOLS CHANGES EFFECTIVE NOVEMBER 1, 2018

Reference #	Name	Changes
DELETIONS		
None		
NEW		
11130	Psychiatric/Behavioral Emergencies - Adult	New protocol for psychiatric/behavioral emergencies.
CHANGES		
1000 CERTIFICATION, ACCREDITATION AND AUTHORIZATION		
None		
2000 DATA COLLECTION		
None		
3000 EDUCATION		
None		
4000 QUALITY IMPROVEMENT		
None		
5000 MISCELLANEOUS SYSTEM POLICIES		
None		
6000 SPECIALTY PROGRAM/ PROVIDER POLICIES		
None		
7000 STANDARD DRUG & EQUIPMENT LISTS		
7010	BLS/LALS/ALS Standard Drug and Equipment List	Removal of Lidocaine drip.
7020	EMS Aircraft Standard Drug and Equipment List	Removal of Lidocaine drip.
7040	Medication - Standard Orders	Addition of Midazolam for behavioral emergencies. Removal of Lidocaine drip.
8000 TRANSPORT/TRANSFERS AND DESTINATION POLICIES		
None		
9000 GENERAL PATIENT CARE POLICIES		
9010	General Patient Care Guidelines	Addition of Narcan and blood glucose check for BLS Interventions.
9070	Applying Patient Restraints Guidelines	Clarification of protocol.
10000 SKILLS		
None		

POLICIES/PROTOCOLS CHANGES EFFECTIVE NOVEMBER 1, 2018

Reference #	Name	Changes
11000 ADULT EMERGENCIES		
None		
12000 END OF LIFE CARE		
None		
13000 ENVIRONMENTAL EMERGENCIES		
None		
14000 PEDIATRIC EMERGENCIES		
None		
15000 TRAUMA		
15010	Trauma - Adult (15 years of age and older)	Removal of Nasotracheal intubation.
15020	Trauma - Pediatric (less than 15 years of age)	Removal of Nasotracheal intubation.

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BLS/LALS/ALS STANDARD DRUG AND EQUIPMENT LIST

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			3	3
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
Lidocaine 2% (Viscous) dose			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

Exchanged Medications/Solutions	BLS	LALS	ALS Non-Transport	ALS Transport
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			20-40mg	20-40mg

AIRWAY/SUCTION EQUIPMENT

Exchanged Airway/Suction Equipment	BLS	LALS	ALS Non-Transport	ALS Transport
CPAP circuits - all manufacture's available sizes	1 (if CPAP is carried)	1 (if CPAP is carried)	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
King Ped: 12-25 kg: Size 2 (green) 25-35 kg: Size 2.5 (orange)	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

Exchanged Airway/Suction Equipment	BLS	LALS	ALS Non-Transport	ALS Transport
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	1	1	1	1
Pediatric 500 ml (or equivalent)	1	1	1	1
Adult	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			2 each	2 each
45 mm			1 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

Exchanged IV/Needles/Syringes/Monitor Equipment	BLS	LALS	ALS Non-Transport	ALS Transport
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		
Ammonia Inhalants			2	2
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 (optional)	1 (optional)	1	1
CyanoKit (Specialty Program Only)			1	1
Nerve Agent Antidote Kit (NAAK) - DuoDote or Mark I	3	3	3	3
EMS Tourniquet	1		1	1

Non-Exchange Optional Equipment/Medications	BLS	LALS	ALS Non-Transport	ALS Transport
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
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

Non-Exchange Dressing Materials/Other Equipment/Supplies	**BLS**	**LALS**	**ALS Non-Transport**	**ALS Transport**
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

EMS AIRCRAFT STANDARD DRUG AND EQUIPMENT LIST

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	2
Glucagon 1 mg	1
Glucopaste	1 tube
Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5 mg	3
Lidocaine 100 mg	3
~~Lidocaine 1 gm or 1 bag pre-mixed 1 gm/250 cc D5W~~	~~1 gm~~
Lidocaine 2% Intravenous solution	1
Lidocaine 2% (Viscous)	1 dose
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

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
King Ped: 12-25 kg: Size 2 (green) 25-35 kg: Size 2.5 (orange)	1 each
Laryngoscope handle with batteries - or 2 disposable handles	1
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
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/NEEDLES/SYRINGES/MONITORING EQUIPMENT	AMOUNT
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
Ammonia Inhalants	2
Automatic ventilator (Approved)	1
Backboard padding	1
BLS AED/defib pads	1

OPTIONAL EQUIPMENT/MEDICATIONS	**Amount**
Chemistry profile tubes	3
CyanoKit (Specialty Program Only)	SPECIALTY PROGRAMS ONLY
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
- HemCon ChitoFlex Pro Dressing

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.

MEDICATION - STANDARD ORDERS

Medications listed in this protocol may be used only for the purposes referenced by the associated ICEMA Treatment Protocol. Any other use, route or dose other than those listed, must be ordered in consultation with the Base Hospital physician.

For Nerve Agent Antidote Kit (NAAK) or medications deployed with the ChemPack see Appendix I (Page 11).

Adenosine (Adenocard) - Adult (ALS)

Stable narrow-complex SVT or Wide complex tachycardia:

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

Reference #s 7010, 7020, 11050

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

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

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

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

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

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Albuterol (Proventil) - Pediatric (LALS, ALS)

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

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

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

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

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Aspirin, chewable (LALS, ALS)

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

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

Atropine (ALS)

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

Organophosphate poisoning:
Atropine, 2 mg IV/IO, repeat at 2 mg increments every five (5) minutes if patient remains symptomatic.

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

Calcium Chloride (ALS)

Calcium Channel Blocker Poisonings:
Calcium Chloride, 1 gm (10 cc of a 10% solution) IV/IO, base hospital order only.

Reference #s 2020, 7010, 7020, 13010

Dextrose - Adult (LALS, ALS)

Hypoglycemia - Adult with blood glucose < 80 mg/dL:
Dextrose 10% /250 ml (D10W 25 gm) IV/IO Bolus

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

Dextrose - Pediatric (LALS, ALS)

Hypoglycemia - Neonates (0 - 4 weeks) with blood glucose < 35 mg/dL or pediatric patients (greater than 4 weeks) with glucose < 60 mg/dL:
Dextrose 10%/250 ml (D10W 25 gm) 0.5 gm/kg (5 ml/kg) IV/IO

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

Diphenhydramine - Adult (ALS)

Diphenhydramine, 25 mg IV/IO

Diphenhydramine, 50 mg IM

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

Diphenhydramine - Pediatric (ALS)

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

Diphenhydramine, 2 mg/kg IM not to exceed adult dose of 50 mg IM

Reference #s 7010, 7020, 14030

Epinephrine (1 mg/ml) - Adult (LALS, ALS)

Severe Bronchospasm, Asthma Attack, Pending Respiratory Failure, Anaphylactic Shock/Severe Allergic Reactions:

Epinephrine, 0.3 mg IM. May repeat after fifteen (15) minutes one (1) time if symptoms do not improve.

Reference # 11010

Epinephrine (0.1 mg/ml) - Adult (ALS)

For Persistent severe anaphylactic shock:

Epinephrine (0.1 mg/ml), 0.1 mg slow IVP/IO. May repeat every five (5) minutes as needed to total dosage of 0.5 mg.

Cardiac Arrest, Asystole, PEA:

Epinephrine (0.1 mg/ml), 1 mg IV/IO. Repeat after every two (2) minute cycle of CPR.

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

Epinephrine (1 mg/ml) - Pediatric (LALS, ALS)

Severe Bronchospasm, Asthma Attack, Pending Respiratory Failure, Anaphylactic Shock/Severe Allergic Reactions:

Epinephrine, 0.01 mg/kg IM not to exceed adult dosage of 0.3 mg.

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

Epinephrine (0.1 mg/ml) - Pediatric (ALS)

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

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

Cardiac Arrest:

1 day to 8 years	Epinephrine (0.1 mg/ml), 0.01 mg/kg IV/IO (do not exceed adult dosage)
9 to 14 years	Epinephrine (0.1mg/ml), 1.0 mg IV/IO

Newborn Care:

Epinephrine (0.1 mg/ml), 0.01mg/kg IV/IO if heart rate is less than 60 after one (1) minute after evaluating airway for hypoxia and assessing body temperature for hypothermia.

Epinephrine (0.1 mg/ml), 0.005 mg/kg IV/IO every ten (10) minutes for persistent hypotension as a base hospital order or in radio communication failure.

Post resuscitation continued signs of inadequate tissue perfusion:

1 day to 8 years Epinephrine (0.1 mg/ml), 0.5 mcg/kg/min IV/IO drip

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

Fentanyl - Adult (ALS)

Chest Pain (Presumed Ischemic Origin):

Fentanyl, 50 mcg slow IV/IO over one (1) minute. May repeat every five (5) minutes titrated to pain, not to exceed 200 mcg.

Fentanyl, 100 mcg IM/IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Isolated Extremity Trauma, Burns:

Fentanyl, 50 mcg slow IV/IO push over one (1) minute. May repeat every five (5) minutes titrated to pain, not to exceed 200 mcg IV/IO, **or**

Fentanyl, 100 mcg IM/IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Pacing, synchronized cardioversion:

Fentanyl, 50 mcg slow IV/IO over one (1) minute. May repeat in five (5) minutes titrated to pain, not to exceed 200 mcg.

Fentanyl, 100 mcg IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Reference #s 2020, 6090, 6110, 7010, 7020, 7030, 10190, 11060, 11100, 13030, 15010

Fentanyl - Pediatric (ALS)

Fentanyl, 0.5 mcg/kg slow IV/IO over one (1) minute. May repeat in five (5) minutes titrated to pain, not to exceed 100 mcg.

Fentanyl, 1 mcg/kg IM/IN, may repeat every ten (10) minutes titrated to pain not to exceed 200 mcg.

Reference #s 2020, 6110, 7010, 7020, 7030, 11060, 13030, 14070, 15020

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

Adult with blood glucose < 80 mg/dL:

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

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

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

Hypoglycemia - Neonates (0 - 4 weeks) with blood glucose < 35 mg/dL or pediatric patients (greater than 4 weeks) with glucose < 60 mg/dL:

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

Reference #s 7010, 7020, 14050, 14060

Glucagon - Adult (LALS, ALS)

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

Beta blocker Poisoning:

Glucagon, 1 mg IV/IO (base hospital order only)

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

Glucagon - Pediatric (LALS, ALS)

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

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

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

Atrovent, 0.5 mg nebulized. Administer one (1) dose only.

Reference #s 7010, 7020, 11010, 11100

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

When used in combination with Albuterol MDI use Albuterol MDI dosing.

Reference #s 6090, 6110, 7010, 7020, 11010, 11100

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

1 day to 12 months	Atrovent, 0.25 mg nebulized. Administer one (1) dose only.
1 year to 14 years	Atrovent, 0.5 mg nebulized. Administer one (1) dose only.

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

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

When used in combination with Albuterol MDI use Albuterol MDI dosing.

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Lidocaine - Adult (ALS)

Intubation, King Airway, NG/OG, for suspected increased intracranial pressure (ICP):
Lidocaine, 1.5 mg/kg IV/IO

VT (pulseless)/VF:
Initial Dose: Lidocaine, 1.5 mg/kg IV/IO

For refractory *VT (pulseless)/VF*, may administer an additional 0.75 mg/kg IV/IO, repeat one (1) time in five (5) to ten (10) minutes~~.~~; maximum total dose of 3 mg/kg.

~~*VT/VF Infusion:*~~
~~Lidocaine, 2 mg/min IV/IO drip~~

V-Tach, Wide Complex Tachycardia - with Pulses:
Lidocaine, 1.5 mg/kg slow IV/IO

May administer an additional 0.75 mg/kg slow IV/IO; maximum total dose of 3 mg/kg.~~Initiate infusion of Lidocaine 2 mg/min IV/IO drip.~~

Reference #s 2020, 6090, 7010, 7020, 8010, 10190, 11050, 11070, 15010

Lidocaine - Pediatric (ALS)

King Airway, NG/OG, for suspected increased intracranial pressure (ICP):
Lidocaine, 1.5 mg/kg IV/IO

Cardiac Arrest:

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

May repeat Lidocaine at 0.5 mg/kg after five (5) minutes~~ up to total of 3.0 mg/kg.~~; maximum total dose of 3 mg/kg.

Reference #s 2020, 7010, 7020, 14040

Lidocaine 2% (Intravenous Solution) - Pediatric and Adult (ALS)

Pain associated with IO infusion:

Lidocaine, 0.5 mg/kg slow IO push over two (2) minutes, not to exceed 40 mg total.

Reference #s 2020, 7010, 7020, 10140, 10190

Lidocaine 2% Gel (Viscous) - Pediatric and Adult (ALS)

Pain associated with Nasogastric/Orogastric Tube insertion.

Reference # 10190

Magnesium Sulfate (ALS)

Polymorphic Ventricular Tachycardia:

Magnesium Sulfate, 2 gm IV/IO bolus over five (5) minutes for polymorphic VT if prolonged QT is observed during sinus rhythm post-cardioversion.

Eclampsia (Seizure/Tonic/Clonic Activity):

Magnesium Sulfate, 4 gm IV/IO slow IV push over three (3) to four (4) minutes.

Magnesium Sulfate, 10 mg/min IV/IO drip to prevent continued seizures.

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

Midazolam (Versed) - Adult (ALS)

Behavioral Emergencies, with suspected excited delirium:

Midazolam, 5 mg IM/IN or IV/IO push. May repeat once for a total dosage of 10 mg.

Reference # 11130

Seizure:

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

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

Assess patient for medication related reduced respiratory rate or hypotension.

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

Pacing, synchronized cardioversion:

Midazolam, 2 mg slow IV/IO push or IN

Reference #s 6090, 6110, 7010, 7020, 10190, 11080, 13020, 14080

Midazolam (Versed) - Pediatric (ALS)

Seizures:

Midazolam, 0.1 mg/kg IV/IO with maximum dose 2.5 mg. May repeat Midazolam in five (5) minutes, **or**

Midazolam, 0.2 mg/kg IM/IN with maximum dose of 5 mg. May repeat Midazolam in ten (10) minutes for continued seizure.

Assess patient for medication related reduced respiratory rate or hypotension.

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

Reference #s 7010, 7020, 14060

Naloxone (Narcan) - Adult (BLS)

For resolution of respiratory depression related to suspected opiate overdose:

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

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

Reference #s 7010, 7020, 8050 11080

Naloxone (Narcan) - Adult (LALS, ALS)

For resolution of respiratory depression related to suspected opiate overdose:

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

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

Reference #s 6110, 7010, 7020, 11080

Naloxone (Narcan) - Pediatric (BLS)

For resolution of respiratory depression related to suspected opiate overdose:

1 day to 8 years	Naloxone, 0.1 mg/kg IM/IN (do not exceed the adult dose of 0.5 mg per administration)
9 to 14 years	Naloxone, 0.5 mg IM/IN

May repeat every two (2) to three (3) minutes if needed. Do not exceed the adult dosage of 10 mg total IM/IN.

Reference #s 7010, 7020, 8050, 14040, 14050

Naloxone (Narcan) - Pediatric (LALS, ALS)

For resolution of respiratory depression related to suspected opiate overdose:

1 day to 8 years	Naloxone, 0.1 mg/kg IV/IO/IM/IN (do not exceed the adult dose of 0.5 mg per administration)
9 to 14 years	Naloxone, 0.5 mg IV/IO/IM/IN

May repeat every two (2) to three (3) minutes if needed. Do not exceed the adult dosage of 10 mg total IV/IO/IM/IN.

Reference #s 7010, 7020, 14040, 14050

Nitroglycerin (NTG) (LALS, ALS)

Nitroglycerin, 0.4 mg sublingual/transmucosal.

One (1) every three (3) minutes as needed. May be repeated as long as patient continues to have signs of adequate tissue perfusion. **If a Right Ventricular Infarction is suspected, the use of nitrates requires base hospital contact.**

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

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

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

Nausea/Vomiting:

Ondansetron, 4 mg slow IV/IO/ODT

All patients four (4) to eight (8) years old: May administer a total of 4 mgs of Ondansetron prior to base hospital contact.

All patients nine (9) and older: May administer Ondansetron 4 mg; may repeat two (2) times, at ten (10) minute intervals, for a total of 12 mgs prior to base hospital contact.

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

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

Oxygen (non-intubated patient per appropriate delivery device)

General Administration (Hypoxia):

Titrate Oxygen at lowest rate required to maintain SPO_2 at 94%. Do not administer supplemental oxygen for SPO_2 > 95%.

Chronic Obstructive Pulmonary Disease (COPD):

Titrate Oxygen at lowest rate required to maintain SPO_2 at 90%. Do not administer supplemental oxygen for SPO_2 > 91%.

Reference #s 6140, 9010, 9120, 11010, 11020, 11040, 11050, 11060, 11080, 11090, 11100, 13010, 13020, 13030, 14010, 14020, 14030, 14050, 14060, 14070, 14080, 14090, 15010, 15020

Sodium Bicarbonate (ALS) (base hospital order only)

Tricyclic Poisoning:

Sodium Bicarbonate, 1 mEq/kg IV/IO

Reference #s 2020, 7010, 7020, 13010

Tranexamic Acid (TXA) - Patients 15 years of age and older (ALS)

Signs of hemorrhagic shock meeting inclusion criteria:

Administer TXA 1 gm in 50 - 100 ml of NS via IV/IO over ten (10) minutes. Do not administer IVP as this will cause hypotension.

Reference #s 7010, 7020, 15010

APPENDIX I

Medications for self-administration or with deployment of the ChemPack.

Medications listed below may be used only for the purposes referenced by the associated ICEMA Treatment Protocol. Any other use, route or dose other than those listed, must be ordered in consultation with the Base Hospital physician.

Atropine - Pediatric (BLS, AEMT-Auto-injector only with training, ALS)

Known nerve agent/organophosphate poisoning with deployment of the ChemPack using:

Two (2) or more mild symptoms: Administer the weight-based dose listed below as soon as an exposure is known or strongly suspected. If severe symptoms develop after the first dose, two (2) additional doses should be repeated in rapid succession ten (10) minutes after the first dose; do not administer more than three (3) doses. If profound anticholinergic effects occur in the absence of excessive bronchial secretions, further doses of atropine should be withheld.

One (1) or more severe symptoms: Immediately administer (3) three weight-based doses listed below in rapid succession.

Weight-based dosing:

< 6.8 kg (< 15 lbs):	0.25 mg, IM using multi-dose vial
6.8 to 18 kg (15 to 40 lbs):	0.5 mg, IM using AtroPen auto-injector
18 to 41 kg (40 to 90 lbs):	1 mg, IM using AtroPen auto-injector
> 41 kg (> 90 lbs):	2 mg, IM using multi-dose vial

Symptoms of insecticide or nerve agent poisoning, as provided by manufacturer in the AtroPen product labeling, to guide therapy:

Mild symptoms: Blurred vision, bradycardia, breathing difficulties, chest tightness, coughing, drooling, miosis, muscular twitching, nausea, runny nose, salivation increased, stomach cramps, tachycardia, teary eyes, tremor, vomiting, or wheezing.

Severe symptoms: Breathing difficulties (severe), confused/strange behavior, defecation (involuntary), muscular twitching/generalized weakness (severe), respiratory secretions (severe), seizure, unconsciousness, urination (involuntary).

NOTE: Infants may become drowsy or unconscious with muscle floppiness as opposed to muscle twitching.

Reference #s 7040, 13010, 13040

Diazepam (Valium) - Adult (ALS)

For seizures associated with nerve agent/organophosphate exposure ONLY with the deployment of the ChemPack:

Diazepam 10 mg (5 mg/ml) auto-injector IM (if IV is unavailable), **or**
Diazepam 2.5 mg IV

Reference # 13040

Diazepam (Valium) - Pediatric (ALS)

For seizures associated with nerve agent/organophosphate exposure ONLY with the deployment of the ChemPack:

Diazepam 0.05 mg/kg IV

Reference # 13040

Nerve Agent Antidote Kit (NAAK)/Mark I or DuoDote (containing Atropine/Pralidoxime Chloride for self-administration or with deployment of the ChemPack) - Adult

Nerve agent exposure with associated symptoms:

One (1) NAAK auto-injector IM into outer thigh. May repeat up to two (2) times every ten (10) to fifteen (15) minutes if symptoms persist.

Reference #s 7010, 7020, 13010, 13040

GENERAL PATIENT CARE GUIDELINES

I. PURPOSE

To establish guidelines for the minimum standard of care and transport of patients.

II. DEFINITIONS

Patient: An individual with a complaint of pain, discomfort or physical ailment. An individual regardless of complaint, with signs and/or symptoms of pain, discomfort, physical ailment or trauma. These signs or symptoms include, but are not limited to:

- ~~1.~~ Altered level of consciousness.
- ~~2.~~ Skeletal or soft tissue injuries.
- ~~3.~~ Acute or chronic injury or disease process.
- ~~4.~~ Altered ability to perceive illness or injury due to the influence of drug, alcohol or other mental impairment.
- ~~5.~~ Evidence that the individual was subject to force that may cause injury.
- ~~6.~~ Other condition that warrants evaluation and care at an acute care hospital.

Patient Contact: Determined to occur when any on duty BLS, LALS, or ALS field personnel (EMT, AEMT, EMT-P, RN) comes into the presence of a patient as defined above.

III. BLS INTERVENTIONS

- ~~1.~~ Obtain a thorough assessment of the following:
  - ~~a.~~ Airway, breathing and circulatory status.
  - ~~b.~~ Subjective assessment of the patient's physical condition and environment.
  - ~~c.~~ Objective assessment of the patient's physical condition and environment.
  - ~~d.~~ Vital signs (blood pressure, pulse, respiration, GCS, skin signs, etc.).

- ~~e.~~ Prior medical history and current medications.
- ~~f.~~ Any known medication allergies or adverse reactions to medications, food or environmental agents.

~~2.~~ Initiate care using the following tools as clinically indicated or available:

- ~~a.~~ Axial spinal immobilization.
- ~~b.~~ Airway control with appropriate BLS airway adjunct.
- ~~c.~~ Oxygen as clinically indicated.
- ~~d.~~ Assist the patient into a physical position that achieves the best medical benefit and maximum comfort.
- ~~e.~~ Automated External Defibrillator (AED).
- Administer Naloxone by intranasal and/or intramuscular routes.
- Blood glucose monitoring.
- ~~f.~~ Consider the benefits of early transport and/or intercept with ALS personnel if clinically indicated.

~~3.~~ Assemble necessary equipment for ALS procedures or treatment under direction of EMT-P.

- ~~a.~~ Cardiac monitoring.
- ~~b.~~ IV/IO.
- ~~c.~~ Endotracheal intubation.

~~4.~~ Under EMT-P supervision, assemble pre-load medications as directed (excluding controlled substances).

IV. LIMITED ALS (LALS) INTERVENTIONS

~~1.~~ Evaluation and continuation of all initiated BLS care.

~~2.~~ Augment BLS assessment with an advanced assessment including, but not limited to the following:

- ~~a.~~ Qualitative lung assessment.

- b. Blood glucose monitoring.

3. Augment BLS treatment measures with LALS treatments as indicated by LALS protocols.

4. Initiate airway control as needed with the appropriate LALS adjunct.

5. Initiate vascular access as clinically indicated.

V. ALS INTERVENTIONS

1. Evaluation and continuation of all initiated BLS and/or LALS care when indicated by patient's condition.

2. Augment BLS and/or LALS assessment with clinically indicated advanced assessments including but not limited to the following:

   - a. Cardiac monitor and/or 12-lead ECG.

   - b. Capnography.

   - c. Blood glucose monitoring.

3. Augment BLS and/or LALS treatment with advanced treatments as clinically indicated.

   - a. Initiate airway control using an appropriate airway adjunct to achieve adequate oxygenation and ventilation.

   - b. Initiate airway control only when clinically indicated for the appropriate administration of medications and/or fluids.

4. Review and evaluate treatments initiated by BLS, LALS, or ALS personnel.

   - a. Consider discontinuing treatments not warranted by patient's clinical condition. Intermittent monitoring may be used instead of continuous monitoring when clinically indicated.

APPLYING PATIENT RESTRAINTS GUIDELINES

I. PURPOSE

To provide guidelines on the use of restraints in the field or during transport for patients who are violent or potentially violent, or who may harm themselves or others.

~~**AUTHORITY**~~

~~California Code of Regulations, Title 22, Sections 1000075 and 10000159. Welfare and Institutions Code 5150. California Administrative Code, Title 13, Sections 1103.2 Health and Safety Code, Section 1798.6.~~

II. FIELD ASSESSMENT/TREATMENT INDICATORS~~PRINCIPLES~~

- ~~1.~~ The safety of the patient, community and responding personnel is of paramount concern when following this policy.

- ~~2.~~ Restraints are to be used only when necessary in situations where the patient is potentially violent and is exhibiting behavior that is dangerous to self or others.

- ~~3.~~ EMS field personnel must consider that aggressive or violent behavior may be a symptom of medical conditions such as head trauma, alcohol, drug-related problems, metabolic disorders, stress and psychiatric disorders.

- ~~4.~~ The method of restraint used shall allow for adequate monitoring of vital signs and shall not restrict the ability to protect the patient's airway or compromise neurological or vascular status.

- ~~5.~~ Restraints should be applied by law enforcement whenever possible. If applied, an officer is required to remain available at the scene or during transport to remove or adjust the restraints for patient safety.

- ~~6.~~ This policy is not intended to negate the need for law enforcement personnel to use appropriate restraint equipment that is approved by its~~their~~ respective agency to establish scene-management control.

III. PROCEDURE

The following procedures should guide EMS field personnel in the application of restraints and the monitoring of the restrained patient:

- ~~1.~~ Restraint equipment must be either padded leather restraints or soft restraints (e.g., posey, Velcro or seat-belt type). Both methods must allow for quick release.

- ~~2.~~ EMS field personnel shall **not** apply following forms of restraint:

  - ~~a.~~ Hard plastic ties, any restraint device requiring a key to remove, hand cuffs or hobble restraints.

  - ~~b.~~ Backboard, scoop stretcher or flat as a "sandwich" restraint.

  - ~~c.~~ Restraining a patient's hands and feet behind the patient (e.g., hog-tying).

  - ~~d.~~ Methods or other materials applied in a manner that could cause vascular or neurological compromise.

- ~~3.~~ Restraint equipment applied by law enforcement (handcuffs, plastic ties or "hobble" restraints) must provide sufficient slack in the restraint device to allow the patient to straighten the abdomen and chest, and to take full tidal volume breaths.

- ~~4.~~ Restraint devices applied by law enforcement require the officer's continued presence to ensure patient and scene-management safety. The officer shall accompany the patient in the ambulance or follow by driving in tandem with the ambulance on a predetermined route. A method to alert the officer of any problems that may develop during transport should be discussed prior to leaving the scene.

- ~~5.~~ ~~Patients should be transported in a supine position if at all possible.~~ Transport patients in low to high fowler's position. Transportation of a patient supine or prone, while restrained, can affect respiratory function and constant monitoring of respiratory status is required. EMS field personnel must ensure that the patient's position does not compromise respiratory/circulatory systems, or does not preclude any necessary medical intervention to protect the patient's airway should vomiting occur.

- ~~6.~~ Restrained patients shall be transported to the most appropriate receiving facility within the guidelines per ICEMA Reference #9030 - Responsibility for Patient Management Policy.~~of Protocol Reference #9030, Responsibility for Patient Management.~~ The only allowable exception is a 5150 order presented when direct admission to a psychiatric facility has been arranged.

IV~~II~~. DOCUMENTATION

Documentation on the Electronic P~~p~~atient C~~c~~are Report (ePCR) ~~form~~ shall include:

- ~~1.~~ The reasons restraints were needed.
- ~~2.~~ Which agency applied the restraints (e.g., EMS, law enforcement).
- ~~3.~~ Restrained extremities should be evaluated for pulse quality, capillary refill, color, nerve and motor function every fifteen (15) minutes. It is recognized that the evaluation of nerve and motor status requires patient cooperation, and may be difficult to monitor. Documentation on ePCR is essential.
- ~~4.~~ Respiratory status should be evaluated for rate and quality every fifteen (15) minutes or more often as clinically indicated while restrained.

~~I~~V. REFERENCE

Number	Name
9030	Responsibility for Patient Management Policy

TRAUMA - ADULT
(15 years of age and older)

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

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

I. FIELD ASSESSMENT/TREATMENT INDICATORS

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

II. BLS INTERVENTIONS

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

A. Manage Special Considerations

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

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

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

- Penetrating trauma without any NSAID indicators are not candidates for axial spinal immobilization.

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 stabilization. Judicious application of the LBB for purposes other than extrication necessitates that healthcare providers 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.

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

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

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

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

- **Femur**: Apply traction splint if indicated.
- **Grossly angulated long bone with distal neurovascular compromise**: Apply gentle unidirectional traction to improve circulation.
- **Check and document distal pulse before and after positioning**.

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

- **Head and Neck Trauma**: Place brain injured patients in reverse Trendelenburg (elevate the head of the backboard 15 - 20 degrees), if the patient exhibits no signs of shock.
  - **Eye**: Whenever possible protect an injured eye with a rigid dressing, cup or eye shield. Do not attempt to replace a partially torn globe, stabilize it in place with sterile saline soaked gauze. Cover uninjured eye.
  - **Avulsed Tooth**: Collect teeth, place in moist, sterile saline gauze and place in a plastic bag.

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

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

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

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

III. LIMITED ALS (LALS) INTERVENTIONS

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

- Apply AED.
- Establish IV access (administer warm IV fluids when available).
  - *Unstable*: If BP < 90 mm Hg and/or signs of inadequate perfusion, start 2nd IV access.
  - *Stable*: Maintain IV if BP > 90 mm Hg and/or signs of adequate tissue perfusion.

  Blunt Trauma:

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

  Penetrating Trauma:

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

  Isolated Closed Head Injury:

  - *Unstable:* Establish IV NS, administer 250 ml bolus. May repeat to a maximum of 500 ml.
  - *Stable*: Maintain IV NS, TKO.
- Transport to appropriate hospital.

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

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

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

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

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

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 stabilization. Judicious application of the LBB for purposes other than extrication necessitates that healthcare providers 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.

- **Fractures**:

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

  - Establish IV NS, administer 250 ml bolus one (1) time.

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

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

  - Apply AED and follow the voice prompts.

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

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

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

- If the patient does not meet the "Obvious Death Criteria" in ICEMA Reference #12010 - Determination of Death on Scene, contact the trauma base 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.**

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

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

IV. ALS INTERVENTIONS

- Advanced Airway (as indicated):

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

- Monitor ECG.

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

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

  - *Stable*: Maintain IV if BP > 90 mm Hg and/or signs of adequate tissue perfusion.

- For Tranexamic Acid (TXA) administration for blunt or penetrating traumas meeting inclusion and exclusion criteria below:

Inclusion Criteria	**Exclusion Criteria**
Within three (3) hours of injury, the prehospital use of TXA should be considered for all blunt or penetrating trauma patients with signs and symptoms of hemorrhagic shock that meet **any** one (1) of the following inclusion criteria: • Systolic blood pressure of < 90 mm Hg at any time during patient encounter. • Significant blood loss and a heart rate > 120. • Bleeding not controlled by direct pressure or tourniquet.	• Any patient < 15 years of age. • Any patient more than three (3) hours post-injury. • Penetrating cranial injury. • Traumatic brain injury with brain matter exposed. • Documented cervical cord injury with motor deficits.

Blunt Trauma:

➢ *Unstable*: Administer IV NS until stable or 2000 ml maximum is infused.

➢ For signs of hemorrhagic shock meeting inclusion criteria above, administer TXA per ICEMA Reference #7040 - Medication - Standard Orders.

➢ *Stable*: Maintain IV NS, TKO.

Penetrating Trauma:

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

➢ For signs of hemorrhagic shock meeting inclusion criteria above, administer TXA per ICEMA Reference #7040 - Medication - Standard Orders.

➢ *Stable*: Maintain IV NS, TKO.

Isolated Closed Head Injury:

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

➢ *Stable*: Maintain IV NS, TKO.

- Transport to appropriate hospital.

- Insert nasogastric/orogastric tube as indicated.

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

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

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

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

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

  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 stabilization. Judicious application of the LBB for purposes other than extrication necessitates that healthcare providers 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.

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

- **Fractures**:

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

- **Pain Relief**:
  - Administer Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.
  - Consider Ondansetron per ICEMA Reference #7040 - Medication - Standard Orders.
  - Patients in high altitudes should be hydrated with IV NS prior to IV pain relief to reduce the incidents of nausea, vomiting, and transient hypotension, which are side effects associated with administering IV Fentanyl. Administer IV NS 250 ml bolus one (1) time.

- **Head and Neck Trauma**: Immediately prior to intubation, consider prophylactic Lidocaine per ICEMA Reference #7040 - Medication - Standard Orders.

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

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

- **Traumatic Arrest**: Continue CPR as appropriate.
  - Treat per ICEMA Reference #11070 - Cardiac Arrest - Adult.

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

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

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

- If the patient does not meet the "Obvious Death Criteria" per ICEMA Reference #12010 - 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.

- **Precautions and Comments**:

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

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

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

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

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

V. REFERENCES

Number	**Name**
7040	Medication - Standard Orders
8120	Continuation of Care
11070	Cardiac Arrest - Adult
12010	Determination of Death on Scene

TRAUMA - PEDIATRIC
(Less than 15 years of age)

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

Inyo and Mono Counties do not have trauma center designations and the assigned base hospital should be contacted for determination of appropriate destination.

I. FIELD ASSESSMENT/TREATMENT INDICATORS

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

II. BLS INTERVENTIONS

- Ensure thorough initial assessment.
- Ensure 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

- **Axial Spinal Immobilization**: 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 axial immobilization on an awake, alert and cooperative patient, without the use of a rigid spine board.

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

- **Axial Spinal Immobilization 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 #12010 - Determination of Death on Scene.

III. LIMITED ALS (LALS) INTERVENTIONS

- Advanced airway (as indicated).

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

- Apply AED.

- 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. May repeat once.

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

    Maintain IV NS rate at TKO.

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

A. Manage Special Considerations

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

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

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

- **Axial Spinal Immobilization 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.

- **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.

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

  - Apply AED and follow the instructions.

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

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

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

- If the patient does not meet the "Obvious Death Criteria" in ICEMA Reference #12010 - Determination of Death on Scene, contact the Trauma base 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**.

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

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

IV. ALS INTERVENTIONS

- Advanced airway (as indicated).

  - Unmanageable Airway: If an adequate airway cannot be maintained with a BVM device; **and** the paramedic is unable to intubate or perform a successful needle cricothyrotomy (if indicated), **then**

transport to the closest receiving hospital and follow ICEMA Reference #8100 - Continuation of Trauma Care.

- Monitor ECG.

- 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/IO, may repeat once.

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

    Maintain IV NS rate at TKO.

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

- Insert nasogastric/orogastric tube as indicated

A. Manage Special Considerations

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

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

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

- **Axial Spinal Immobilization 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.

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

- **Fractures**

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

  - **Pain Relief**:
    - Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.
    - For patients four (4) years old and older, consider Ondansetron per ICEMA Reference #7040 - Medication - Standard Orders.
    - Patients in high altitudes should be hydrated with IV NS prior to IV pain relief to reduce the incidents of nausea, vomiting, and transient hypotension, which are side effects associated with administering IV Fentanyl. Administer 20 ml/kg NS bolus IV/IO one time.

- **Head and Neck Trauma**: Immediately prior to intubation, consider prophylactic Lidocaine per ICEMA Reference #7040 - Medication - Standard Orders for suspected head/brain injury.

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

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

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

  - Treat per ICEMA Reference #14040 - Cardiac Arrest - Pediatric.

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

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

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

- If the patient does not meet the "Obvious Death Criteria" in ICEMA Reference #12010 - Determination of Death on Scene, contact the Trauma base 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.

- **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**.

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

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

V. REFERENCES

Number	**Name**
7040	Medication - Standard Orders
12010	Determination of Death on Scene
14040	Cardiac Arrest - Pediatric
15030	Trauma Triage Criteria and Destination Policy

BLS/LALS/ALS STANDARD DRUG AND EQUIPMENT LIST

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			3	3
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
Lidocaine 2% (Viscous) dose			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

Exchanged Medications/Solutions	BLS	LALS	ALS Non-Transport	ALS Transport
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			20-40mg	20-40mg

AIRWAY/SUCTION EQUIPMENT

Exchanged Airway/Suction Equipment	BLS	LALS	ALS Non-Transport	ALS Transport
CPAP circuits - all manufacture's available sizes	1 (if CPAP is carried)	1 (if CPAP is carried)	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
King Ped: 12-25 kg: Size 2 (green) 25-35 kg: Size 2.5 (orange)	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

Exchanged Airway/Suction Equipment	BLS	LALS	ALS Non-Transport	ALS Transport
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	1	1	1	1
Pediatric 500 ml (or equivalent)	1	1	1	1
Adult	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			2 each	2 each
45 mm			1 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

Exchanged IV/Needles/Syringes/Monitor Equipment	BLS	LALS	ALS Non-Transport	ALS Transport
Macrodrip Administration Set		3	3	3
Microdrip Administration Set (60 drops /cc)		1	1	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		
Ammonia Inhalants			2	2
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 (optional)	1 (optional)	1	1
CyanoKit (Specialty Program Only)			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

Non-Exchange Optional Equipment/Medications	BLS	LALS	ALS Non-Transport	ALS Transport
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
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

Non-Exchange Dressing Materials/Other Equipment/Supplies	**BLS**	**LALS**	**ALS Non-Transport**	**ALS Transport**
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

EMS AIRCRAFT STANDARD DRUG AND EQUIPMENT LIST

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	2
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
Lidocaine 2% (Viscous)	1 dose
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

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
King Ped: 12-25 kg: Size 2 (green) 25-35 kg: Size 2.5 (orange)	1 each
Laryngoscope handle with batteries - or 2 disposable handles	1
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
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

IV/NEEDLES/SYRINGES/MONITORING EQUIPMENT	AMOUNT
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
Ammonia Inhalants	2
Automatic ventilator (Approved)	1
Backboard padding	1

OPTIONAL EQUIPMENT/MEDICATIONS	**Amount**
BLS AED/defib pads	1
Chemistry profile tubes	3
CyanoKit (Specialty Program Only)	SPECIALTY PROGRAMS ONLY
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
- HemCon ChitoFlex Pro Dressing

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.

MEDICATION - STANDARD ORDERS

Medications listed in this protocol may be used only for the purposes referenced by the associated ICEMA Treatment Protocol. Any other use, route or dose other than those listed, must be ordered in consultation with the Base Hospital physician.

For Nerve Agent Antidote Kit (NAAK) or medications deployed with the ChemPack see Appendix I (Page 11).

Adenosine (Adenocard) - Adult (ALS)

Stable narrow-complex SVT or Wide complex tachycardia:

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

Reference #s 7010, 7020, 11050

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

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

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

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

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

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Albuterol (Proventil) - Pediatric (LALS, ALS)

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

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

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

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

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Aspirin, chewable (LALS, ALS)

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

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

Atropine (ALS)

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

Organophosphate poisoning:
Atropine, 2 mg IV/IO, repeat at 2 mg increments every five (5) minutes if patient remains symptomatic.

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

Calcium Chloride (ALS)

Calcium Channel Blocker Poisonings:
Calcium Chloride, 1 gm (10 cc of a 10% solution) IV/IO, base hospital order only.

Reference #s 2020, 7010, 7020, 13010

Dextrose - Adult (LALS, ALS)

Hypoglycemia - Adult with blood glucose < 80 mg/dL:
Dextrose 10% /250 ml (D10W 25 gm) IV/IO Bolus

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

Dextrose - Pediatric (LALS, ALS)

Hypoglycemia - Neonates (0 - 4 weeks) with blood glucose < 35 mg/dL or pediatric patients (greater than 4 weeks) with glucose < 60 mg/dL:
Dextrose 10%/250 ml (D10W 25 gm) 0.5 gm/kg (5 ml/kg) IV/IO

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

Diphenhydramine - Adult (ALS)

Diphenhydramine, 25 mg IV/IO

Diphenhydramine, 50 mg IM

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

Diphenhydramine - Pediatric (ALS)

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

Diphenhydramine, 2 mg/kg IM not to exceed adult dose of 50 mg IM

Reference #s 7010, 7020, 14030

Epinephrine (1 mg/ml) - Adult (LALS, ALS)

Severe Bronchospasm, Asthma Attack, Pending Respiratory Failure, Anaphylactic Shock/Severe Allergic Reactions:

Epinephrine, 0.3 mg IM. May repeat after fifteen (15) minutes one (1) time if symptoms do not improve.

Reference # 11010

Epinephrine (0.1 mg/ml) - Adult (ALS)

For Persistent severe anaphylactic shock:

Epinephrine (0.1 mg/ml), 0.1 mg slow IVP/IO. May repeat every five (5) minutes as needed to total dosage of 0.5 mg.

Cardiac Arrest, Asystole, PEA:

Epinephrine (0.1 mg/ml), 1 mg IV/IO. Repeat after every two (2) minute cycle of CPR.

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

Epinephrine (1 mg/ml) - Pediatric (LALS, ALS)

Severe Bronchospasm, Asthma Attack, Pending Respiratory Failure, Anaphylactic Shock/Severe Allergic Reactions:

Epinephrine, 0.01 mg/kg IM not to exceed adult dosage of 0.3 mg.

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

Epinephrine (0.1 mg/ml) - Pediatric (ALS)

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

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

Cardiac Arrest:

1 day to 8 years	Epinephrine (0.1 mg/ml), 0.01 mg/kg IV/IO (do not exceed adult dosage)
9 to 14 years	Epinephrine (0.1mg/ml), 1.0 mg IV/IO

Newborn Care:

Epinephrine (0.1 mg/ml), 0.01mg/kg IV/IO if heart rate is less than 60 after one (1) minute after evaluating airway for hypoxia and assessing body temperature for hypothermia.

Epinephrine (0.1 mg/ml), 0.005 mg/kg IV/IO every ten (10) minutes for persistent hypotension as a base hospital order or in radio communication failure.

Post resuscitation continued signs of inadequate tissue perfusion:

1 day to 8 years Epinephrine (0.1 mg/ml), 0.5 mcg/kg/min IV/IO drip

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

Fentanyl - Adult (ALS)

Chest Pain (Presumed Ischemic Origin):

Fentanyl, 50 mcg slow IV/IO over one (1) minute. May repeat every five (5) minutes titrated to pain, not to exceed 200 mcg.

Fentanyl, 100 mcg IM/IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Isolated Extremity Trauma, Burns:

Fentanyl, 50 mcg slow IV/IO push over one (1) minute. May repeat every five (5) minutes titrated to pain, not to exceed 200 mcg IV/IO, **or**

Fentanyl, 100 mcg IM/IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Pacing, synchronized cardioversion:

Fentanyl, 50 mcg slow IV/IO over one (1) minute. May repeat in five (5) minutes titrated to pain, not to exceed 200 mcg.

Fentanyl, 100 mcg IN. May repeat 50 mcg every ten (10) minutes titrated to pain, not to exceed 200 mcg.

Reference #s 2020, 6090, 6110, 7010, 7020, 7030, 10190, 11060, 11100, 13030, 15010

Fentanyl - Pediatric (ALS)

Fentanyl, 0.5 mcg/kg slow IV/IO over one (1) minute. May repeat in five (5) minutes titrated to pain, not to exceed 100 mcg.

Fentanyl, 1 mcg/kg IM/IN, may repeat every ten (10) minutes titrated to pain not to exceed 200 mcg.

Reference #s 2020, 6110, 7010, 7020, 7030, 11060, 13030, 14070, 15020

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

Adult with blood glucose < 80 mg/dL:

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

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

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

Hypoglycemia - Neonates (0 - 4 weeks) with blood glucose < 35 mg/dL or pediatric patients (greater than 4 weeks) with glucose < 60 mg/dL:

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

Reference #s 7010, 7020, 14050, 14060

Glucagon - Adult (LALS, ALS)

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

Beta blocker Poisoning:

Glucagon, 1 mg IV/IO (base hospital order only)

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

Glucagon - Pediatric (LALS, ALS)

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

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

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

Atrovent, 0.5 mg nebulized. Administer one (1) dose only.

Reference #s 7010, 7020, 11010, 11100

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

When used in combination with Albuterol MDI use Albuterol MDI dosing.

Reference #s 6090, 6110, 7010, 7020, 11010, 11100

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

1 day to 12 months	Atrovent, 0.25 mg nebulized. Administer one (1) dose only.
1 year to 14 years	Atrovent, 0.5 mg nebulized. Administer one (1) dose only.

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

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

When used in combination with Albuterol MDI use Albuterol MDI dosing.

Reference #s 6090, 6110, 7010, 7020, 14010, 14030, 14070

Lidocaine - Adult (ALS)

Intubation, King Airway, NG/OG, for suspected increased intracranial pressure (ICP):
Lidocaine, 1.5 mg/kg IV/IO

VT (pulseless)/VF:
Initial Dose: Lidocaine, 1.5 mg/kg IV/IO

For refractory *VT (pulseless)/VF*, may administer an additional 0.75 mg/kg IV/IO, repeat one (1) time in five (5) to ten (10) minutes; maximum total dose of 3 mg/kg.

V-Tach, Wide Complex Tachycardia - with Pulses:
Lidocaine, 1.5 mg/kg slow IV/IO

May administer an additional 0.75 mg/kg slow IV/IO; maximum total dose of 3 mg/kg.
Reference #s 2020, 6090, 7010, 7020, 8010, 10190, 11050, 11070, 15010

Lidocaine - Pediatric (ALS)

King Airway, NG/OG, for suspected increased intracranial pressure (ICP):
Lidocaine, 1.5 mg/kg IV/IO

Cardiac Arrest:

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

May repeat Lidocaine at 0.5 mg/kg after five (5) minutes; maximum total dose of 3 mg/kg.

Reference #s 2020, 7010, 7020, 14040

Lidocaine 2% (Intravenous Solution) - Pediatric and Adult (ALS)

Pain associated with IO infusion:

Lidocaine, 0.5 mg/kg slow IO push over two (2) minutes, not to exceed 40 mg total.

Reference #s 2020, 7010, 7020, 10140, 10190

Lidocaine 2% Gel (Viscous) - Pediatric and Adult (ALS)

Pain associated with Nasogastric/Orogastric Tube insertion.

Reference # 10190

Magnesium Sulfate (ALS)

Polymorphic Ventricular Tachycardia:

Magnesium Sulfate, 2 gm IV/IO bolus over five (5) minutes for polymorphic VT if prolonged QT is observed during sinus rhythm post-cardioversion.

Eclampsia (Seizure/Tonic/Clonic Activity):

Magnesium Sulfate, 4 gm IV/IO slow IV push over three (3) to four (4) minutes.

Magnesium Sulfate, 10 mg/min IV/IO drip to prevent continued seizures.

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

Midazolam (Versed) - Adult (ALS)

Behavioral Emergencies, with suspected excited delirium:

Midazolam, 5 mg IM/IN or IV/IO push. May repeat once for a total dosage of 10 mg.

Reference # 11130

Seizure:

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

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

Assess patient for medication related reduced respiratory rate or hypotension.

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

Pacing, synchronized cardioversion:

Midazolam, 2 mg slow IV/IO push or IN

Reference #s 6090, 6110, 7010, 7020, 10190, 11080, 13020, 14080

Midazolam (Versed) - Pediatric (ALS)

Seizures:

Midazolam, 0.1 mg/kg IV/IO with maximum dose 2.5 mg. May repeat Midazolam in five (5) minutes, **or**

Midazolam, 0.2 mg/kg IM/IN with maximum dose of 5 mg. May repeat Midazolam in ten (10) minutes for continued seizure.

Assess patient for medication related reduced respiratory rate or hypotension.

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

Reference #s 7010, 7020, 14060

Naloxone (Narcan) - Adult (BLS)

For resolution of respiratory depression related to suspected opiate overdose:

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

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

Reference #s 7010, 7020, 8050 11080

Naloxone (Narcan) - Adult (LALS, ALS)

For resolution of respiratory depression related to suspected opiate overdose:

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

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

Reference #s 6110, 7010, 7020, 11080

Naloxone (Narcan) - Pediatric (BLS)

For resolution of respiratory depression related to suspected opiate overdose:

1 day to 8 years	Naloxone, 0.1 mg/kg IM/IN (do not exceed the adult dose of 0.5 mg per administration)
9 to 14 years	Naloxone, 0.5 mg IM/IN

May repeat every two (2) to three (3) minutes if needed. Do not exceed the adult dosage of 10 mg total IM/IN.

Reference #s 7010, 7020, 8050, 14040, 14050

Naloxone (Narcan) - Pediatric (LALS, ALS)

For resolution of respiratory depression related to suspected opiate overdose:

1 day to 8 years	Naloxone, 0.1 mg/kg IV/IO/IM/IN (do not exceed the adult dose of 0.5 mg per administration)
9 to 14 years	Naloxone, 0.5 mg IV/IO/IM/IN

May repeat every two (2) to three (3) minutes if needed. Do not exceed the adult dosage of 10 mg total IV/IO/IM/IN.

Reference #s 7010, 7020, 14040, 14050

Nitroglycerin (NTG) (LALS, ALS)

Nitroglycerin, 0.4 mg sublingual/transmucosal.

One (1) every three (3) minutes as needed. May be repeated as long as patient continues to have signs of adequate tissue perfusion. **If a Right Ventricular Infarction is suspected, the use of nitrates requires base hospital contact.**

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

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

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

Nausea/Vomiting:

Ondansetron, 4 mg slow IV/IO/ODT

All patients four (4) to eight (8) years old: May administer a total of 4 mgs of Ondansetron prior to base hospital contact.

All patients nine (9) and older: May administer Ondansetron 4 mg; may repeat two (2) times, at ten (10) minute intervals, for a total of 12 mgs prior to base hospital contact.

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

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

Oxygen (non-intubated patient per appropriate delivery device)

General Administration (Hypoxia):

Titrate Oxygen at lowest rate required to maintain SPO_2 at 94%. Do not administer supplemental oxygen for $SPO_2 > 95\%$.

Chronic Obstructive Pulmonary Disease (COPD):

Titrate Oxygen at lowest rate required to maintain SPO_2 at 90%. Do not administer supplemental oxygen for $SPO_2 > 91\%$.

Reference #s 6140, 9010, 9120, 11010, 11020, 11040, 11050, 11060, 11080, 11090, 11100, 13010, 13020, 13030, 14010, 14020, 14030, 14050, 14060, 14070, 14080, 14090, 15010, 15020

Sodium Bicarbonate (ALS) (base hospital order only)

Tricyclic Poisoning:

Sodium Bicarbonate, 1 mEq/kg IV/IO

Reference #s 2020, 7010, 7020, 13010

Tranexamic Acid (TXA) - Patients 15 years of age and older (ALS)

Signs of hemorrhagic shock meeting inclusion criteria:

Administer TXA 1 gm in 50 - 100 ml of NS via IV/IO over ten (10) minutes. Do not administer IVP as this will cause hypotension.

Reference #s 7010, 7020, 15010

APPENDIX I

Medications for self-administration or with deployment of the ChemPack.

Medications listed below may be used only for the purposes referenced by the associated ICEMA Treatment Protocol. Any other use, route or dose other than those listed, must be ordered in consultation with the Base Hospital physician.

Atropine - Pediatric (BLS, AEMT-Auto-injector only with training, ALS)

Known nerve agent/organophosphate poisoning with deployment of the ChemPack using:

Two (2) or more mild symptoms: Administer the weight-based dose listed below as soon as an exposure is known or strongly suspected. If severe symptoms develop after the first dose, two (2) additional doses should be repeated in rapid succession ten (10) minutes after the first dose; do not administer more than three (3) doses. If profound anticholinergic effects occur in the absence of excessive bronchial secretions, further doses of atropine should be withheld.

One (1) or more severe symptoms: Immediately administer (3) three weight-based doses listed below in rapid succession.

Weight-based dosing:

< 6.8 kg (< 15 lbs):	0.25 mg, IM using multi-dose vial
6.8 to 18 kg (15 to 40 lbs):	0.5 mg, IM using AtroPen auto-injector
18 to 41 kg (40 to 90 lbs):	1 mg, IM using AtroPen auto-injector
> 41 kg (> 90 lbs):	2 mg, IM using multi-dose vial

Symptoms of insecticide or nerve agent poisoning, as provided by manufacturer in the AtroPen product labeling, to guide therapy:

Mild symptoms: Blurred vision, bradycardia, breathing difficulties, chest tightness, coughing, drooling, miosis, muscular twitching, nausea, runny nose, salivation increased, stomach cramps, tachycardia, teary eyes, tremor, vomiting, or wheezing.

Severe symptoms: Breathing difficulties (severe), confused/strange behavior, defecation (involuntary), muscular twitching/generalized weakness (severe), respiratory secretions (severe), seizure, unconsciousness, urination (involuntary).

NOTE: Infants may become drowsy or unconscious with muscle floppiness as opposed to muscle twitching.

Reference #s 7040, 13010, 13040

Diazepam (Valium) - Adult (ALS)

For seizures associated with nerve agent/organophosphate exposure ONLY with the deployment of the ChemPack:

Diazepam 10 mg (5 mg/ml) auto-injector IM (if IV is unavailable), **or**
Diazepam 2.5 mg IV

Reference # 13040

Diazepam (Valium) - Pediatric (ALS)

For seizures associated with nerve agent/organophosphate exposure ONLY with the deployment of the ChemPack:

Diazepam 0.05 mg/kg IV

Reference # 13040

Nerve Agent Antidote Kit (NAAK)/Mark I or DuoDote (containing Atropine/Pralidoxime Chloride for self-administration or with deployment of the ChemPack) - Adult

Nerve agent exposure with associated symptoms:

One (1) NAAK auto-injector IM into outer thigh. May repeat up to two (2) times every ten (10) to fifteen (15) minutes if symptoms persist.

Reference #s 7010, 7020, 13010, 13040

GENERAL PATIENT CARE GUIDELINES

I. PURPOSE

To establish guidelines for the minimum standard of care and transport of patients.

II. DEFINITIONS

Patient: An individual with a complaint of pain, discomfort or physical ailment. An individual regardless of complaint, with signs and/or symptoms of pain, discomfort, physical ailment or trauma. These signs or symptoms include, but are not limited to:

- Altered level of consciousness.
- Skeletal or soft tissue injuries.
- Acute or chronic injury or disease process.
- Altered ability to perceive illness or injury due to the influence of drug, alcohol or other mental impairment.
- Evidence that the individual was subject to force that may cause injury.
- Other condition that warrants evaluation and care at an acute care hospital.

Patient Contact: Determined to occur when any on duty BLS, LALS, or ALS field personnel (EMT, AEMT, EMT-P, RN) comes into the presence of a patient as defined above.

III. BLS INTERVENTIONS

- Obtain a thorough assessment of the following:
  - Airway, breathing and circulatory status.
  - Subjective assessment of the patient's physical condition and environment.
  - Objective assessment of the patient's physical condition and environment.
  - Vital signs (blood pressure, pulse, respiration, GCS, skin signs, etc.).

- Prior medical history and current medications.
- Any known medication allergies or adverse reactions to medications, food or environmental agents.

- Initiate care using the following tools as clinically indicated or available:
  - Axial spinal immobilization.
  - Airway control with appropriate BLS airway adjunct.
  - Oxygen as clinically indicated.
  - Assist the patient into a physical position that achieves the best medical benefit and maximum comfort.
  - Automated External Defibrillator (AED).
  - Administer Naloxone by intranasal and/or intramuscular routes.
  - Blood glucose monitoring.
  - Consider the benefits of early transport and/or intercept with ALS personnel if clinically indicated.
- Assemble necessary equipment for ALS procedures or treatment under direction of EMT-P.
  - Cardiac monitoring.
  - IV/IO.
  - Endotracheal intubation.
- Under EMT-P supervision, assemble pre-load medications as directed (excluding controlled substances).

IV. LIMITED ALS (LALS) INTERVENTIONS

- Evaluation and continuation of all initiated BLS care.
- Augment BLS assessment with an advanced assessment including, but not limited to the following:
  - Qualitative lung assessment.

- Blood glucose monitoring.

- Augment BLS treatment measures with LALS treatments as indicated by LALS protocols.

- Initiate airway control as needed with the appropriate LALS adjunct.

- Initiate vascular access as clinically indicated.

V. ALS INTERVENTIONS

- Evaluation and continuation of all initiated BLS and/or LALS care when indicated by patient's condition.

- Augment BLS and/or LALS assessment with clinically indicated advanced assessments including but not limited to the following:

  - Cardiac monitor and/or 12-lead ECG.

  - Capnography.

  - Blood glucose monitoring.

- Augment BLS and/or LALS treatment with advanced treatments as clinically indicated.

  - Initiate airway control using an appropriate airway adjunct to achieve adequate oxygenation and ventilation.

  - Initiate airway control only when clinically indicated for the appropriate administration of medications and/or fluids.

- Review and evaluate treatments initiated by BLS, LALS, or ALS personnel.

  - Consider discontinuing treatments not warranted by patient's clinical condition. Intermittent monitoring may be used instead of continuous monitoring when clinically indicated.

APPLYING PATIENT RESTRAINTS GUIDELINES

I. PURPOSE

To provide guidelines on the use of restraints in the field or during transport for patients who are violent or potentially violent, or who may harm themselves or others.

II. FIELD ASSESSMENT/TREATMENT INDICATORS

- The safety of the patient, community and responding personnel is of paramount concern when following this policy.
- Restraints are to be used only when necessary in situations where the patient is potentially violent and is exhibiting behavior that is dangerous to self or others.
- EMS field personnel must consider that aggressive or violent behavior may be a symptom of medical conditions such as head trauma, alcohol, drug-related problems, metabolic disorders, stress and psychiatric disorders.
- The method of restraint used shall allow for adequate monitoring of vital signs and shall not restrict the ability to protect the patient's airway or compromise neurological or vascular status.
- Restraints should be applied by law enforcement whenever possible. If applied, an officer is required to remain available at the scene or during transport to remove or adjust the restraints for patient safety.
- This policy is not intended to negate the need for law enforcement personnel to use appropriate restraint equipment that is approved by its respective agency to establish scene-management control.

III. PROCEDURE

The following procedures should guide EMS field personnel in the application of restraints and the monitoring of the restrained patient:

- Restraint equipment must be either padded leather restraints or soft restraints (e.g., posey, Velcro or seat-belt type). Both methods must allow for quick release.

- EMS field personnel shall **not** apply following forms of restraint:
  - Hard plastic ties, any restraint device requiring a key to remove, hand cuffs or hobble restraints.
  - Backboard, scoop stretcher or flat as a "sandwich" restraint.
  - Restraining a patient's hands and feet behind the patient (e.g., hog-tying).
  - Methods or other materials applied in a manner that could cause vascular or neurological compromise.
- Restraint equipment applied by law enforcement (handcuffs, plastic ties or "hobble" restraints) must provide sufficient slack in the restraint device to allow the patient to straighten the abdomen and chest, and to take full tidal volume breaths.
- Restraint devices applied by law enforcement require the officer's continued presence to ensure patient and scene-management safety. The officer shall accompany the patient in the ambulance or follow by driving in tandem with the ambulance on a predetermined route. A method to alert the officer of any problems that may develop during transport should be discussed prior to leaving the scene.
- Transport patients in low to high fowler's position. Transportation of a patient supine or prone, while restrained, can affect respiratory function and constant monitoring of respiratory status is required. EMS field personnel must ensure that the patient's position does not compromise respiratory/circulatory systems, or does not preclude any necessary medical intervention to protect the patient's airway should vomiting occur.
- Restrained patients shall be transported to the most appropriate receiving facility within the guidelines per ICEMA Reference #9030 - Responsibility for Patient Management Policy., The only allowable exception is a 5150 order presented when direct admission to a psychiatric facility has been arranged.

IV. DOCUMENTATION

Documentation on the Electronic Patient Care Report (ePCR) shall include:

- The reasons restraints were needed.
- Which agency applied the restraints (e.g., EMS, law enforcement).

- Restrained extremities should be evaluated for pulse quality, capillary refill, color, nerve and motor function every fifteen (15) minutes. It is recognized that the evaluation of nerve and motor status requires patient cooperation, and may be difficult to monitor. Documentation on ePCR is essential.

- Respiratory status should be evaluated for rate and quality every fifteen (15) minutes or more often as clinically indicated while restrained.

V. REFERENCE

Number	Name
9030	Responsibility for Patient Management Policy

PSYCHIATRIC/BEHAVIORAL EMERGENCIES - ADULT

I. PURPOSE

To provide timely and appropriate treatment for patients that are violent, potentially violent, or who may harm themselves or others, including the potential use of restraints in the field or during transport.

II. FIELD ASSESSMENT/TREATMENT INDICATORS

Symptoms of suspected excited delirium may include the physically combative, extreme agitation, confusion and hallucinations, erratic behavior, profuse diaphoresis, elevated vital signs, hyperthermia, unexplained strength and endurance, and behaviors that include clothing shedding, shouting, and extreme thrashing when restrained.

This policy is not intended to negate the need for law enforcement personnel to use appropriate restraint equipment to establish scene-management control. Restraints should be applied by law enforcement whenever possible. If applied, an officer is required to remain available at the scene or during transport to remove or adjust the restraints for patient safety, per ICEMA Reference #9070 - Applying Patient Restraints Guidelines.

III. BLS INTERVENTIONS

- Approach patient in a calm and cautious manner.
- Ensure patent airway, obtain oxygen saturation and apply oxygen as needed.
- Restraint equipment must be either padded leather restraints or soft restraints (e.g., posey, velcro or seat-belt type).
- Apply four (4) point restraints as clinically indicated. Transport of a restrained patient should be in low to high Fowlers position. Transport of a patient supine or prone, while restrained, can affect respiratory function and constant monitoring of respiratory status is required.
- Perform cooling measures as clinically indicated.
- If suspected hypoglycemia, obtain a blood glucose.

IV. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.

V. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- If patient meets criteria for suspected excited delirium, administer Midazolam per ICEMA Reference #7040 - Medication - Standard Orders. Do not delay administration of Midazolam due to lack of vascular access as IM or IN is preferred in this circumstance. May repeat one (1) time using same method as first administered.
- Place on cardiac monitor. Continuous monitoring of a patient after administration of Midazolam is required.
- Obtain capnography, monitor waveform and numerical value. Apnea can be the result of the use of Midazolam and other medications.
- Once conditions are safe, establish IV.
- Base hospital may order:
  - For suspected excited delirium and suspected metabolic acidosis/hyperkalemia administer Sodium Bicarbonate, per ICEMA Reference #7040 - Medication - Standard Orders.

VI. REFERENCES

Number	**Name**
7040	Medication - Standard Orders
9070	Applying Patient Restraints Guidelines

TRAUMA - ADULT
(15 years of age and older)

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

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

I. FIELD ASSESSMENT/TREATMENT INDICATORS

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

II. BLS INTERVENTIONS

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

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

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

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

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

- Penetrating trauma without any NSAID indicators are not candidates for axial spinal immobilization.

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 stabilization. Judicious application of the LBB for purposes other than extrication necessitates that healthcare providers 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.

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

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

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

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

- **Femur**: Apply traction splint if indicated.
- **Grossly angulated long bone with distal neurovascular compromise**: Apply gentle unidirectional traction to improve circulation.
- **Check and document distal pulse before and after positioning**.

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

- **Head and Neck Trauma**: Place brain injured patients in reverse Trendelenburg (elevate the head of the backboard 15 - 20 degrees), if the patient exhibits no signs of shock.
  - **Eye**: Whenever possible protect an injured eye with a rigid dressing, cup or eye shield. Do not attempt to replace a partially torn globe, stabilize it in place with sterile saline soaked gauze. Cover uninjured eye.
  - **Avulsed Tooth**: Collect teeth, place in moist, sterile saline gauze and place in a plastic bag.

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

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

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

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

III. LIMITED ALS (LALS) INTERVENTIONS

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

- Apply AED.
- Establish IV access (administer warm IV fluids when available).
  - *Unstable*: If BP < 90 mm Hg and/or signs of inadequate perfusion, start 2nd IV access.
  - *Stable*: Maintain IV if BP > 90 mm Hg and/or signs of adequate tissue perfusion.

  Blunt Trauma:

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

  Penetrating Trauma:

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

  Isolated Closed Head Injury:

  - *Unstable:* Establish IV NS, administer 250 ml bolus. May repeat to a maximum of 500 ml.
  - *Stable*: Maintain IV NS, TKO.
- Transport to appropriate hospital.

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

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

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

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

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

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 stabilization. Judicious application of the LBB for purposes other than extrication necessitates that healthcare providers 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.

- **Fractures**:

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

  - Establish IV NS, administer 250 ml bolus one (1) time.

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

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

  - Apply AED and follow the voice prompts.

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

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

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

- If the patient does not meet the "Obvious Death Criteria" in ICEMA Reference #12010 - Determination of Death on Scene, contact the trauma base 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.**

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

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

IV. ALS INTERVENTIONS

- Advanced Airway (as indicated):

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

- Monitor ECG.

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

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

  - *Stable*: Maintain IV if BP > 90 mm Hg and/or signs of adequate tissue perfusion.

- For Tranexamic Acid (TXA) administration for blunt or penetrating traumas meeting inclusion and exclusion criteria below:

Inclusion Criteria	**Exclusion Criteria**
Within three (3) hours of injury, the prehospital use of TXA should be considered for all blunt or penetrating trauma patients with signs and symptoms of hemorrhagic shock that meet **any** one (1) of the following inclusion criteria: • Systolic blood pressure of < 90 mm Hg at any time during patient encounter. • Significant blood loss and a heart rate > 120. • Bleeding not controlled by direct pressure or tourniquet.	• Any patient < 15 years of age. • Any patient more than three (3) hours post-injury. • Penetrating cranial injury. • Traumatic brain injury with brain matter exposed. • Documented cervical cord injury with motor deficits.

Blunt Trauma:

➢ *Unstable*: Administer IV NS until stable or 2000 ml maximum is infused.

➢ For signs of hemorrhagic shock meeting inclusion criteria above, administer TXA per ICEMA Reference #7040 - Medication - Standard Orders.

➢ *Stable*: Maintain IV NS, TKO.

Penetrating Trauma:

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

➢ For signs of hemorrhagic shock meeting inclusion criteria above, administer TXA per ICEMA Reference #7040 - Medication - Standard Orders.

➢ *Stable*: Maintain IV NS, TKO.

Isolated Closed Head Injury:

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

➢ *Stable*: Maintain IV NS, TKO.

- Transport to appropriate hospital.

- Insert nasogastric/orogastric tube as indicated.

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

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

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

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

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

  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 stabilization. Judicious application of the LBB for purposes other than extrication necessitates that healthcare providers 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.

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

- **Fractures**:

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

- **Pain Relief**:
  - Administer Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.
  - Consider Ondansetron per ICEMA Reference #7040 - Medication - Standard Orders.
  - Patients in high altitudes should be hydrated with IV NS prior to IV pain relief to reduce the incidents of nausea, vomiting, and transient hypotension, which are side effects associated with administering IV Fentanyl. Administer IV NS 250 ml bolus one (1) time.

- **Head and Neck Trauma**: Immediately prior to intubation, consider prophylactic Lidocaine per ICEMA Reference #7040 - Medication - Standard Orders.

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

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

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

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

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

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

- If the patient does not meet the "Obvious Death Criteria" per ICEMA Reference #12010 - 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.

- **Precautions and Comments**:

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

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

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

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

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

V. REFERENCES

Number	**Name**
7040	Medication - Standard Orders
8120	Continuation of Care
11070	Cardiac Arrest - Adult
12010	Determination of Death on Scene

TRAUMA - PEDIATRIC
(Less than 15 years of age)

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

Inyo and Mono Counties do not have trauma center designations and the assigned base hospital should be contacted for determination of appropriate destination.

I. FIELD ASSESSMENT/TREATMENT INDICATORS

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

II. BLS INTERVENTIONS

- Ensure thorough initial assessment.
- Ensure 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>

- **Axial Spinal Immobilization**: 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 axial immobilization on an awake, alert and cooperative patient, without the use of a rigid spine board.

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

- **Axial Spinal Immobilization 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 #12010 - Determination of Death on Scene.

III. LIMITED ALS (LALS) INTERVENTIONS

- Advanced airway (as indicated).

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

- Apply AED.

- 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. May repeat once.

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

    Maintain IV NS rate at TKO.

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

A. Manage Special Considerations

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

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

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

- **Axial Spinal Immobilization 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.

- **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.

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

  - Apply AED and follow the instructions.

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

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

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

- If the patient does not meet the "Obvious Death Criteria" in ICEMA Reference #12010 - Determination of Death on Scene, contact the Trauma base 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**.

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

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

IV. ALS INTERVENTIONS

- Advanced airway (as indicated).

  - Unmanageable Airway: If an adequate airway cannot be maintained with a BVM device; **and** the paramedic is unable to intubate or perform a successful needle cricothyrotomy (if indicated), **then**

transport to the closest receiving hospital and follow ICEMA Reference #8100 - Continuation of Trauma Care.

- Monitor ECG.

- 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/IO, may repeat once.

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

    Maintain IV NS rate at TKO.

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

- Insert nasogastric/orogastric tube as indicated

A. Manage Special Considerations

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

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

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

- **Axial Spinal Immobilization 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.

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

- **Fractures**

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

  - **Pain Relief**:
    - Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.
    - For patients four (4) years old and older, consider Ondansetron per ICEMA Reference #7040 - Medication - Standard Orders.
    - Patients in high altitudes should be hydrated with IV NS prior to IV pain relief to reduce the incidents of nausea, vomiting, and transient hypotension, which are side effects associated with administering IV Fentanyl. Administer 20 ml/kg NS bolus IV/IO one time.

- **Head and Neck Trauma**: Immediately prior to intubation, consider prophylactic Lidocaine per ICEMA Reference #7040 - Medication - Standard Orders for suspected head/brain injury.

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

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

  - Treat per ICEMA Reference #14040 - Cardiac Arrest - Pediatric.

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

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

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

- If the patient does not meet the "Obvious Death Criteria" in ICEMA Reference #12010 - Determination of Death on Scene, contact the Trauma base 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.

- **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**.

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

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

V. REFERENCES

Number	**Name**
7040	Medication - Standard Orders
12010	Determination of Death on Scene
14040	Cardiac Arrest - Pediatric
15030	Trauma Triage Criteria and Destination Policy