



# Inland Counties Emergency Medical Agency

*Serving San Bernardino, Inyo, and Mono Counties*

*Tom Lynch, EMS Administrator  
Reza Vaezazizi, MD, Medical Director*

**DATE:** November 1, 2014

**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  
DECEMBER 1, 2014**

The protocols/policies listed below are effective December 1, 2014.

ICEMA Reference Number and Name

- 1010 - Emergency Medical Dispatch Certification Requirements (DELETE)
- 1060 - Certification/Accreditation Review Policy
- 6070 - Cardiovascular ST Elevation Myocardial Infarction Receiving Centers Criteria and Destination Policy
- 6090 - Fireline Paramedic
- 6100 - Neurovascular Stroke Receiving Centers Criteria and Destination Policy
- 7010 - BLS/LALS/ALS Standard Drug & Equipment List
- 7020 - EMS AIRCRAFT Standard Drug & Equipment List
- 7040 - Medication - Standard Orders
- 8020 - Critical Care Interfacility Transport
- 8120 - Continuation of Care (San Bernardino County Only)
- 9120 - Nausea and Vomiting
- 11060 - Suspected Acute Myocardial Infarction
- 11100 - Burn - Adult (15 years of age and older)
- 11110 - Stroke Treatment - Adult
- 13030 - Cold Related Emergencies
- 14070 - Burns - Pediatric (Less than 15 years of age)
- 15010 - Trauma - Adult (15 years of age and older)
- 15020 - Trauma - Pediatric (Less than 15 years of age)

IMPLEMENTATION OF PROTOCOLS EFFECTIVE DECEMBER 1, 2014

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Additionally, the following protocols are being deleted due to the June 1, 2014, implementation of ICEMA Reference #10190 - ICEMA Approved Skills:

- 10010 - King Airway Device (Perilaryngeal) - Adult
- 10020 - King Airway Device (Perilaryngeal) - Pediatric
- 10030 - Oral Endotracheal Intubation - Adult
- 10040 - Oral Endotracheal Intubation - Pediatric
- 10050 - Nasotracheal Intubation
- 10060 - Needle Thoracostomy
- 10070 - Needle Cricothyrotomy
- 10080 - Insertion of Nasogastric/Orogastric Tube
- 10090 - Vagal Maneuvers
- 10100 - 12 Lead Electrocardiography
- 10110 - Transcutaneous Cardiac Pacing
- 10120 - Synchronized Cardioversion
- 10130 - Automatic External Defibrillation (AED) - BLS
- 10140 - Intraosseous Infusion (IO)
- 10150 - External Jugular Vein Access
- 10180 - Continuous Positive Airway Pressure Device (CPAP) - Adult

ICEMA Reference # 9130 - Procedures for EMS Monitoring of Multiple Patients (San Bernardino County Only), was endorsed by the Medical Advisory Committee but ICEMA is delaying implementation of the protocol pending ongoing discussions with the Ambulance Patient Offload Delay Task Force.

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](http://www.ICEMA.net) under Emergency Medical Services Information and select the EMS Policy, Procedure and Protocol Manual section.

If you have any questions related to documents in the manual, please contact Ron Holk, RN, EMS Nurse Specialist, at (909) 388-5808 or via e-mail at [Ron.Holk@cao.sbcounty.gov](mailto:Ron.Holk@cao.sbcounty.gov).

TL/RV/jlm

Attachments

c: File Copy

**POLICIES/PROTOCOLS CHANGES EFFECTIVE DECEMBER 1, 2014**

<b>Reference #</b>	<b>Title</b>	<b>Changes</b>
<b>NEW</b>		
None		
<b>1000 ACCREDITATION, CERTIFICATION AND AUTHORIZATION</b>		
1060	Certification/Accreditation Review Policy	Routine review. Formatting and grammatical revisions for consistency.
<b>2000 DATA COLLECTION</b>		
None		
<b>3000 EDUCATION</b>		
None		
<b>4000 QUALITY IMPROVEMENT</b>		
None		
<b>5000 MISCELLANEOUS SYSTEM POLICIES</b>		
None		
<b>6000 SPECIALTY PROGRAM/ PROVIDER POLICIES</b>		
6070	Cardiovascular ST Elevation Myocardial Infarction Receiving Centers Criteria and Destination Policy	<ul style="list-style-type: none"> <li>• Policy title change for clarification.</li> <li>• Addition of SRC requirements for semi-annual CE opportunities for EMS providers and personnel requirement of an Emergency Department Liaison Nurse for non base hospitals.</li> <li>• Additional language added to Continuation of STEMI patients regarding diversion and detailed case review requirement.</li> <li>• Addition of mandatory SRC base hospital contact for sustained ROSC patients.</li> <li>• Deleted reference to re-designation criteria; reference made to agreement.</li> <li>• Formatting and grammatical revisions for consistency.</li> </ul>
6090	Fireline Paramedic	<ul style="list-style-type: none"> <li>• Formatting and grammatical revisions for consistency.</li> <li>• Addition of Fentanyl and D10W references.</li> </ul>

**POLICIES/PROTOCOLS CHANGES EFFECTIVE DECEMBER 1, 2014**

<b>Reference #</b>	<b>Title</b>	<b>Changes</b>
6100	Neurovascular Stroke Receiving Centers Criteria and Destination Policy	<ul style="list-style-type: none"> <li>• Policy title change for clarification.</li> <li>• This policy reflects the change to a single-tiered system. EMS provider will transport mLAPSS positive patients to the closest NSRC.</li> <li>• Deletion of NSRC-I and NSRC-II definitions. Clarification of NSRC definition.</li> <li>• Addition of NSRC requirements for semi-annual CE opportunities for EMS providers.</li> <li>• Deletion of NSRC specific criteria.</li> <li>• Reference to air transport deleted.</li> <li>• Deleted reference to re-designation criteria; reference made to agreement.</li> <li>• Change to EMS destination criteria and removal of the “Stroke Patient Destination Decision Tree.”</li> <li>• Formatting and grammatical revisions for consistency.</li> </ul>
<b>7000 STANDARD DRUG &amp; EQUIPMENT LISTS</b>		
7010	BLS/LALS/ALS Standard Drugs & Equipment List	Addition of Dextrose 10% in 250 ml NS and Fentanyl.
7020	EMS Aircraft Standard Drugs & Equipment List	Formatting changes for consistency. Addition of Dextrose 10% in 250ml NS and Fentanyl
7040	Medication - Standard Orders	Addition of Dextrose 10% in 250 ml NS and Fentanyl. Changed give/given to administer/administered.
<b>8000 TRANSPORT/TRANSFERS AND DESTINATION POLICIES</b>		
8020	Critical Care Interfacility Transport	Protocol named changed. Changes to the process of program approval and program requirements.
8120	Continuation of Care (San Bernardino County Only)	<ul style="list-style-type: none"> <li>• Additional clarification to Specialty Care Center diversion.</li> <li>• Reference to air transport deleted.</li> <li>• Additional policy references added for consistency.</li> <li>• Formatting and grammatical revisions for consistency.</li> </ul>
<b>9000 GENERAL PATIENT CARE POLICIES</b>		
9120	Nausea and Vomiting	Formatting and grammatical revisions for consistency.
<b>10000 SKILLS</b>		
None		

**POLICIES/PROTOCOLS CHANGES EFFECTIVE DECEMBER 1, 2014**

<b>Reference #</b>	<b>Title</b>	<b>Changes</b>
<b>11000 ADULT EMERGENCIES</b>		
11060	Suspected Acute Myocardial Infarction	Addition of Fentanyl.
11100	Burn - Adult (15 years of age and older)	Addition of Fentanyl.
11110	Stroke Treatment - Adult	<ul style="list-style-type: none"> <li>• Revised mLAPSS criteria from sentences to table format.</li> <li>• NSRC base hospital contact for suspected stroke patients that are mLAPSS negative.</li> <li>• Obtain and document on scene family phone number.</li> <li>• Consideration of 12-lead ECG for ALS.</li> <li>• Deleted "Stroke Patient Destination Decision Tree."</li> <li>• Formatting and grammatical revisions for consistency.</li> </ul>
<b>12000 END OF LIFE CARE</b>		
None		
<b>13000 ENVIRONMENTAL EMERGENCIES</b>		
13030	Cold Related Emergencies	Addition of Fentanyl.
<b>14000 PEDIATRIC EMERGENCIES</b>		
14070	Burns - Pediatric (Less than 15 years of age)	Addition of Fentanyl.
<b>15000 TRAUMA</b>		
15010	Trauma - Adult (15 years of age and older)	Addition of Fentanyl.
15020	Trauma - Pediatric (Less than 15 years of age)	Addition of Fentanyl.
<b>DELETIONS</b>		
1010	Emergency Medical Dispatcher Certification Requirements	Policy no longer in use.
10010	King Airway Device (Perilaryngeal) - Adult	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10020	King Airway Device (Perilaryngeal) - Pediatric	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10030	Oral Endotracheal Intubation - Adult	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.

**POLICIES/PROTOCOLS CHANGES EFFECTIVE DECEMBER 1, 2014**

<b>Reference #</b>	<b>Title</b>	<b>Changes</b>
10040	Oral Endotracheal Intubation - Pediatric	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10050	Nasotracheal Intubation	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10060	Needle Thoracostomy	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10070	Needle Cricothyrotomy	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10080	Insertion of Nasogastric/Orogastric Tube	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10090	Vagal Maneuvers	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10100	12 Lead Electrocardiography	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10110	Transcutaneous Cardiac Pacing	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10120	Synchronized Cardioversion	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10130	Automatic External Defibrillation (AED) - BLS	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10140	Intraosseous Infusion (IO)	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10150	External Jugular Vein Access	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.
10180	Continuous Positive Airway Pressure Device (CPAP) - Adult	Deleted due to implementation of ICEMA Reference #10190 - ICEMA Approved Skills.

**PROTOCOLS/POLICIES FOR 30-DAY COMMENT FORM**

**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
7010 - BLS/LALS/ALS Standard Drug & Equipment List	AMR Rancho	Dextrose 25% 2.5 gm preload should either be removed with the addition of D10, or changed to an optional item during the transitional period. As written all three would be required.	Once MAC endorses D10% and establishes a transition date, EMS providers may continue to carry D50, D25 and/or D10 until their current stock of D50% and D25% have been depleted. During the transition period, EMS providers may carry reduced quantities of each as they reduce their quantities of D50 and D25 provided a minimum of 50 gm is available in combination of all concentrations. After the transition date, only D10% will be required. ICEMA will add a notation to the Drug and Equipment List noting the transition period and the allowances for carrying reduced quantities of D50 and D25.
	AMR Rancho	Dextrose 50% 25 gm preload should either be removed with the addition of D10, or changed to an optional item during the transitional period. As written all three would be required.	Once MAC endorses D10% and establishes a transition date, EMS providers may continue to carry D50, D25 and/or D10 until their current stock of D50% and D25% have been depleted. During the transition period, EMS providers may carry reduced quantities of each as they reduce their quantities of D50 and D25 provided a minimum of 75 gm is available in combination of all concentrations. After the transition date, only D10% will be required. ICEMA will add a notation to the Drug and Equipment List noting the transition period and the allowances for carrying reduced quantities of D50 and D25.
	AMR Rancho	Morphine Sulfate - vials of 10 mg should be either removed with the addition of Fentanyl or made optional during the transitional period. (in #7040 you can give either or, but 7010 shows both mandatory).As written both are required.	Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC. ICEMA will add an asterisk (*) under Controlled

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PROTOCOL #	AGENCY	COMMENT	RESPONSE
7010 - BLS/LALS/ALS Standard Drug & Equipment List (continued)			Substance Medications - *EMS providers must stock either Fentanyl or Morphine but not both. Add a double asterisk (**) under Controlled Substances Medications - EMS providers must transition to Fentanyl by (date). The date will be determined by MAC.
	AMR Rancho	End Title CO2 Device - Pediatric and Adult should be listed as an optional item, not mandatory with the recent change to make Capnography a requirement within the region.	ETC02 is still considered a mandatory item for ALS providers unless a waiver is issued. MAC will consider this item at a future meeting.
	Colton FD	Dextrose 10%, Dextrose 25% and Dextrose 50% are all listed as required medications on standard drug and equipment list. Is this necessary to carry a minimum of 2 for each concentration of dextrose? The Colton Fire Department feels there are certain patient care situations where it might be beneficial to have the ability to push D50 (full arrest) and would like to have the ability to carry D50 as an option.	Once MAC endorses D10% and establishes a transition date, EMS providers may continue to carry D50, D25 and/or D10 until their current stock of D50% and D25% have been depleted. During the transition period, EMS providers may carry reduced quantities of each as they reduce their quantities of D50 and D25 provided a minimum of 50 gm is available in combination of all concentrations. After the transition date, only D10% will be required. ICEMA will add a notation to the Drug and Equipment List noting the transition period and the allowances for carrying reduced quantities of D50 and D25. The use of Dextrose 10% will be sufficient in these cases. With a large bore IV the time it takes to administer 250 ml will be sufficient. ICEMA will add a notation to the Drug and Equipment List noting the transition period.
	Colton FD	Is it required to carry both Fentanyl and MS? Currently, they are both listed as required on standard drug and equipment list. The Colton Fire Department has no issue in the change to Fentanyl from MS as long as there is a changeover period for	Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC.

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PROTOCOL #	AGENCY	COMMENT	RESPONSE
7010 - BLS/LALS/ALS Standard Drug & Equipment List (continued)		training and budgeting.	ICEMA will add an asterisk (*) under Controlled Substance Medications - *EMS providers must stock either Fentanyl or Morphine but not both. Add a double asterisk (**) under Controlled Substances Medications - EMS providers must transition to Fentanyl by (date). The date will be determined by MAC.
	Ontario Airport FD	Page 3, Wall mounted suction device- BLS transport only. Non-transporters cannot have those. Suggest a footnote stating such.	ICEMA will add footnote noting BLS transport only.
	Ontario Airport FD	Page 4, BP Cuffs. One of each or???	ICEMA will clarify one of each.
	Ontario Airport FD	Page 5. AED pads. Two adults? One adult one pediatric?	ICEMA will clarify one adult and one pediatric.
	Ontario Airport FD	Page 6. Does non-transport need ankle and wrist restraints? Bed pans or urinals?	Non-transport providers are required to carry restraints. Non-transport providers are not required to carry bedpans or urinals.
	Ontario Airport FD	Page 6. Non-transporters do not carry gurneys, pillow case, sheets or gurney straps	Agree - Not required for non-transport providers.
	Ontario FD	Dextrose 10%, Dextrose 25% and Dextrose 50% are all listed as required medications on standard drug and equipment list. Is this necessary to carry a minimum of 2 for each concentration of dextrose? The Ontario Fire Department feels there are certain patient care situations in which it might be beneficial to have the ability to push D50 (full arrest) and would like to have the ability to carry D50 as an optional item.	Once MAC endorses D10% and establishes a transition date, EMS providers may continue to carry D50, D25 and/or D10 until their current stock of D50% and D25% have been depleted. During the transition period, EMS providers may carry reduced quantities of each as they reduce their quantities of D50 and D25 provided a minimum of 50 gm is available in combination of all concentrations. After the transition date, only D10% will be required. ICEMA will add a notation to the Drug and Equipment List noting the transition period and the allowances for carrying reduced quantities of D50 and D25. The use of Dextrose 10% will be sufficient in these cases. With a large bore IV the time it

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PROTOCOL #	AGENCY	COMMENT	RESPONSE
7010 - BLS/LALS/ALS Standard Drug & Equipment List (continued)			takes to administer 250 ml will be sufficient. ICEMA will add a notation to the Drug and Equipment List noting the transition period.
	Ontario FD	Is it required to carry both Fentanyl and Morphine Sulfate? Right now, they are both listed as required on standard drug and equipment list. The Ontario Fire Department has no issue in the change to Fentanyl from Morphine as long as there is a transitional period for training and budget.	Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC. ICEMA will add an asterisk (*) under Controlled Substance Medications - *EMS providers must stock either Fentanyl or Morphine but not both. Add a double asterisk (**) under Controlled Substances Medications - EMS providers must transition to Fentanyl by (date). The date will be determined by MAC.
	Rancho Cucamonga FD	Dextrose 10%, Dextrose 25% and Dextrose 50% are all listed as required medications on standard drug and equipment list. Is this necessary to carry a minimum of 2 for each concentration of dextrose? RCFD likes the ability to carry D10 and D50, but is it still necessary to carry D25 if we carry the other 2? We definitely support having the option to carry D50 and /or D10 since there are scenarios that either may be the preferred choice.	Once MAC endorses D10% and establishes a transition date, EMS providers may continue to carry D50, D25 and/or D10 until their current stock of D50% and D25% have been depleted. During the transition period, EMS providers may carry reduced quantities of each as they reduce their quantities of D50 and D25 provided a minimum of 50 gm is available in combination of all concentrations. After the transition date, only D10% will be required. ICEMA will add a notation to the Drug and Equipment List noting the transition period and the allowances for carrying reduced quantities of D50 and D25. The use of Dextrose 10% will be sufficient in these cases. With a large bore IV the time it takes to administer 250 ml will be sufficient.

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7010 - BLS/LALS/ALS Standard Drug & Equipment List (continued)			ICEMA will add a notation to the Drug and Equipment List noting the transition period.
	Rancho Cucamonga FD	RCFD will support whichever or both medications (fentanyl and MS), however we would like to see unified training implementation for fentanyl since it is new to the medics in this county. Is it required to carry both or does each agency have a choice as to which they carry?	Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC. Fentanyl is part of the EMT-P Scope of Practice. ICEMA agrees that a unified training is appropriate and providers are encouraged to develop the training and share among EMS providers. ICEMA will add an asterisk (*) under Controlled Substance Medications - *EMS providers must stock either Fentanyl or Morphine but not both. Add a double asterisk (**) under Controlled Substances Medications - EMS providers must transition to Fentanyl by (date). The date will be determined by MAC.
	Redlands FD	We thought we were going only to Fentanyl? Morphine and Fentanyl are both listed on the required drug and equipment list.	Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC. ICEMA will add an asterisk (*) under Controlled Substance Medications - *EMS providers must stock either Fentanyl or Morphine but not both. Add a double asterisk (**) under Controlled Substances Medications - EMS providers must transition to Fentanyl by (date). The date will be determined by MAC.

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**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
7010 - BLS/LALS/ALS Standard Drug & Equipment List (continued)	Redlands FD	Are we still carrying D10, D25 and D50? They are all on the required standard drug list.	Once MAC endorses D10% and establishes a transition date, EMS providers may continue to carry D50, D25 and/or D10 until their current stock of D50% and D25% have been depleted. During the transition period, EMS providers may carry reduced quantities of each as they reduce their quantities of D50 and D25 provided a minimum of 50 gm is available in combination of all concentrations. After the transition date, only D10% will be required. ICEMA will add a notation to the Drug and Equipment List noting the transition period and the allowances for carrying reduced quantities of D50 and D25.
	Upland FD	Will Fentanyl be a replacement or an addition to the Controlled Substances? Suggest addition OR, a transition period.	Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC. ICEMA will add an asterisk (*) under Controlled Substance Medications - *EMS providers must stock either Fentanyl or Morphine but not both. Add a double asterisk (**) under Controlled Substances Medications - EMS providers must transition to Fentanyl by (date). The date will be determined by MAC.
7020 - EMS Aircraft Standard Drug & Equipment List	Fort Irwin FD	Can we word the protocol to say that Either Morphine or Fentanyl and D10 or D50 & D25 are acceptable so that we don't have to carry all of them at once? This will allow us to use what we have and replace with the new items once expired or used up.	Once MAC endorses D10% and establishes a transition date, EMS providers may continue to carry D50, D25 and/or D10 until their current stock of D50% and D25% have been depleted. During the transition period, EMS providers may carry reduced quantities of each as they reduce their quantities of D50 and D25 provided a minimum of 50 gm is available in combination of

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PROTOCOL #	AGENCY	COMMENT	RESPONSE
7020 - EMS Aircraft Standard Drug & Equipment List (continued)			<p>all concentrations. After the transition date, only D10% will be required.</p> <p>ICEMA will add a notation to the Drug and Equipment List noting the transition period and the allowances for carrying reduced quantities of D50 and D25.</p> <p>Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC.</p> <p>ICEMA will add an asterisk (*) under Controlled Substance Medications - *EMS providers must stock either Fentanyl or Morphine but not both.</p> <p>Add a double asterisk (**) under Controlled Substances Medications - EMS providers must transition to Fentanyl by (date). The date will be determined by MAC.</p>
	Upland FD Air Ops and SB Sheriff Air Medics	<p>General comment: Specifying the concentration that we are required to carry makes it difficult in light of frequent medication shortages. Occasionally we carry different concentrations because it's the only concentration available from our suppliers. MgSO<sub>4</sub> is a prime example. We are currently unable to obtain 10 gm vials, and are carrying 5 gm vials. Rather than having to file an exception every time this occurs, why not maintain the current system of mandating the minimum amount and allow flexibility in the manner we carry it?</p>	<p>ICEMA has moved away from mandating specific concentrations and containers as long as the quantity is available to appropriately treat the patient. It is acceptable to carry two 5 gm vials to meet the requirement of 10 gm for MgSO<sub>4</sub>. The only mandated amounts are narcotics with a maximum amount allowed.</p>
	Upland FD Air Ops and SB Sheriff Air Medics	<p>Adenosine- Why specify 6 mg vs 12 mg? Now required to carry two different strengths of the same medication.</p>	<p>The amounts required equal the doses normally administered. The requirement to carry both 6 mg and 12 mg is to reduce medication errors and to ensure that the 12 mg dose can be administered rapid IV push.</p>

**PROTOCOLS/POLICIES FOR 30-DAY COMMENT FORM**

**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
7020 - EMS Aircraft Standard Drug & Equipment List (continued)	Upland FD Air Ops and SB Sheriff Air Medics	Adrenaline (Epinephrine) - It appears all concentrations of Epinephrine have been removed, as there are strikes through each line with the medication.	Adrenaline has not been removed; but was retitled and listed as Epinephrine.
	Upland FD Air Ops and SB Sheriff Air Medics	Albuterol- Infrequently utilized in the HEMS environment. Suggest decreasing to 3 doses, as this is the maximum number of doses allowed per patient	Agree - ICEMA will reduce the amount required for HEMS only.
	Upland FD Air Ops and SB Sheriff Air Medics	D10NS- This is a reasonable approach, and we appreciate the consideration of adding 10% Dextrose. What was the rationale for utilizing D10NS and not D10W? We prefer not to administer the additional sodium to these patients. In light of ongoing drug shortages, would you consider changing the verbage to D10W or D10NS? Additionally, there are logistic issues with the volume necessary to administer 25 grams in D10 versus a short IV push of D50. Suggest keeping one as optional.	ICEMA will change to D10W instead of D10 NS. Drug shortages can be handled through the normal waiver process. The regular waiver process can be used when shortages do occur. Current studies dispute this concern. The use of Dextrose 10% will be sufficient in these cases. With a large bore IV the time it takes to administer 250 ml will be sufficient.
	Upland FD Air Ops and SB Sheriff Air Medics	Dextrose 25% & 50%- So providers are now required to carry three different concentrations of Dextrose? Rather than limiting abilities versus mandating all three, strongly suggest maintaining a D10 OR D50. Another approach would be to mandate the number of grams required to be carried, and allow the providers to choose which method. For instance, mandate we carry 50 grams of dextrose in water. That would allow some flexibility that would work around anticipated drug shortages.	Once MAC endorses D10% and establishes a transition date, EMS providers may continue to carry D50, D25 and/or D10 until their current stock of D50% and D25% have been depleted. During the transition period, EMS providers may carry reduced quantities of each as they reduce their quantities of D50 and D25 provided a minimum of 50 grams is available in combination of all concentrations. After the transition date, only D10% will be required. ICEMA will add a notation to the Drug and Equipment list noting the transition period and the allowances for carrying reduced quantities of D50 and D25. The use of Dextrose 10% will be sufficient in

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PROTOCOL #	AGENCY	COMMENT	RESPONSE
7020 - EMS Aircraft Standard Drug & Equipment List (continued)			these cases. With a large bore IV the time it takes to administer 250 ml will be sufficient. ICEMA will add a notation to the Drug and Equipment List noting the transition period.
	Upland FD Air Ops and SB Sheriff Air Medics	Ipratopium Bormide-Suggest decreasing to three doses to match Albuterol comment above	Agree - ICEMA will reduce the amount required for HEMS only.
	Upland FD Air Ops and SB Sheriff Air Medics	Lidocaine viscous bottle- Suggest changing "bottle" to "dose." Bottles are considerably larger than actually necessary for one patient, and must be disposed after opening. Tubes of viscous lidocaine are more user friendly, economical, and require less space.	Agree - ICEMA will change to dose with MAC endorsement.
	Upland FD Air Ops and SB Sheriff Air Medics	Nalaxone- Suggest deleting "needleless" as it is not specified in any other medication.	Agree - ICEMA will change by deleting needless with MAC endorsement.
	Upland FD Air Ops and SB Sheriff Air Medics	Normal Saline 500 mL and/or 1000 mL 4 liters of fluid seems excessive in light of decreased fluid administration. This adds significant weight and space concerns. Because of aircraft fueling necessity, it is rare that a provider would experience enough back-to-back calls to run out of NS without returning to quarters to refuel and restock. Typically the ground providers have initiated fluids, and additional fluids are not needed with every patient. Providers may elect to carry additional fluid, if desired. Suggest 2 liters.	Agree - ICEMA will change to 2 liters with MAC endorsement.
	Upland FD Air Ops and SB Sheriff Air Medics	ETT 4.0 to 5.5- Suggest deleting specification of uncuffed, as research is suggesting cuffed tubes in this population.	Pediatric cuffed ET tubes are a specialty program. The use of cuffed ET tubes for pediatric patients has not been approved for system-wide usage.

**PROTOCOLS/POLICIES FOR 30-DAY COMMENT FORM**

**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

<b>PROTOCOL #</b>	<b>AGENCY</b>	<b>COMMENT</b>	<b>RESPONSE</b>
7020 - EMS Aircraft Standard Drug & Equipment List (continued)	Upland FD Air Ops and SB Sheriff Air Medics	Small volume nebulizer-suggest decreasing number to one. Very infrequent usage in the HEMS environment. Highly unlikely to have back-to-back patients requiring breathing treatments that do not already have one initiated by ground providers.	Agree - ICEMA will change by reducing nebulizer to 1 with MAC endorsement.
	Upland FD Air Ops and SB Sheriff Air Medics	Yankauers- Brand name. Suggest changing to Rigid Tonsil Tip suction.	Agree - ICEMA will change by removing Yankeuers and changing to Rigid Tonsil Tip Suction device.
	Upland FD Air Ops and SB Sheriff Air Medics	IO Needles-Manual - Suggest moving to Optional Equipment to clarify necessity to carry	It is stated as optional equipment.
	Upland FD Air Ops and SB Sheriff Air Medics	Macro drip Administration set-Suggest deleting 10 drops/mL as some providers might prefer to carry 15 or 20 drops/mL sets	Agree - ICEMA will change by deleting specific drops/ml with MAC endorsement.
	Upland FD Air Ops and SB Sheriff Air Medics	Syringes-Suggest moving 60 mL Cath tip to separate line, as it is not compatible with needles	Agree - ICEMA will change by moving 60 ml cath tip to a separate line with MAC endorsement.
	Upland FD Air Ops and SB Sheriff Air Medics	Optional Equipment-Suggest moving to below Dressing Materials to clarify there is more required equipment.	Agree - ICEMA will change with MAC endorsement.
	Upland FD Air Ops and SB Sheriff Air Medics	D5W- Why include this? It doesn't fit into any protocols	It is optional, for mixing Dopamine if premix not available.
	Upland FD Air Ops and SB Sheriff Air Medics	Cervical Collars & Head Immobilizing device-Suggest changing to one of each. We are decreasing the number of patients being placed in spinal protection, and most are already in protection by ground providers.	Agree - ICEMA will change by reducing cervical collars and head immobilizing devices to one each with MAC endorsement.
	Upland FD Air Ops and SB Sheriff Air Medics	Short extrication device - Suggest deleting. Current research shows that these devices are more harmful than previously thought. The likelihood of a HEMS unit utilizing an extrication device is highly improbable, as ground providers have advanced beyond this stage	Agree - ICEMA will change by deleting short extrication device with MAC endorsement.

**PROTOCOLS/POLICIES FOR 30-DAY COMMENT FORM**

**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
		when transferring care to the helicopter crew	
7020 - EMS Aircraft Standard Drug & Equipment List (continued)	Upland FD/Reach	Epinephrine is not on the list of medications. We suggest putting Epi back on the list. Suggest: consider making KED optional for air ambulance. Suggest: consider King airways OR, equivalent back up airway device. (Flight nurses with LMA in their skill set)	Adrenaline has not been removed; but was retitled and listed as Epinephrine. KED will be moved to optional. The Drug and Equipment List is for EMT-Ps, and LMA or other airways are not in their scope of practice.
7040 - Medication - Standard Orders	AMR Rancho	Dextrose - Adult (LALS) and Dextrose Adult (ALS) should follow the same format as the Dextrose - Pediatric (LALS, ALS) since the dose is the same.	ICEMA will change for consistency.
	AMR Rancho	D10 dosing should be consistent. The Pediatric dose is noted as a weight based calculation, vs the adult dose which is fluid based. I would suggest a dose of 5ml/kg vs 0.5 g/kg to maintain consistency with a volume based dose.	No change. Adult dosing is not weight based.
	AMR Rancho	Should Atrovent be single or multiple dose?	One time only. No repeat doses. ICEMA will clarify by adding Nebulized, one dose only, may be mixed with Albuterol.
	Colton FD	<u>Dextrose - Adult (ALS)</u> Is there a dose range in regards to IV administration of D10%? At what rate do we administer D10 (gtts/min)? Do you administer the entire amount on all patients?	It is titrated to effect. Recheck blood sugar when symptoms resolve. This should be part of the education.
	Colton FD	<u>Epinephrine (1:1000)-Adult (ALS)</u> The administration route of Epi has changed and is not listed in red. Can we change it so that it stands out?	This is an educational issue; this change was done in the last protocol review.
	Colton FD	<u>Epinephrine (1:1000)-Pediatric (ALS)</u> In the adult dose you list the indications for administration of epinephrine as <i>Acute Asthma, Bronchospasm, Allergic Reaction, and Anaphylaxis</i> . In the pediatric you only list <i>Allergic Reactions</i> . Aren't the indications the same for both pediatric and adults?	ICEMA will change adult and pediatric to read: Severe Bronchospasm, asthma attack pending respiratory failure, anaphylactic shock/severe allergic reaction.

**PROTOCOLS/POLICIES FOR 30-DAY COMMENT FORM**

**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
7040 - Medication - Standard Orders (continued)	Colton FD	<u>Fentanyl-Adult (ALS)</u> You state that Fentanyl may be used in place of Morphine? Is this available now or will we have the ability to carry either or?	Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC.
	Colton FD	Morphine-Adult (ALS) You state that MS may be used in the place of Fentanyl. Is this available now or will we have the ability to carry either or?	Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC. ICEMA will add an asterisk (*) under Controlled Substance Medications - *EMS providers must stock either Fentanyl or Morphine but not both. Add a double asterisk (**) under Controlled Substances Medications - EMS providers must transition to Fentanyl by (date). The date will be determined by MAC.
	Fort Irwin FD	Same as above. Instead of striking out D25/D50, change to either D10 or D25/50 to allow us to use up what we have.	Once MAC endorses D10% and establishes a transition date, EMS providers may continue to carry D50, D25 and/or D10 until their current stock of D50% and D25% have been depleted. During the transition period, EMS providers may carry reduced quantities of each as they reduce their quantities of D50 and D25 provided a minimum of 50 gm is available in combination of all concentrations. After the transition date, only D10% will be required. ICEMA will add a notation to the Drug and Equipment List noting the transition period and the allowances for carrying reduced quantities of D50 and D25.
	ICEMA	Use of "May be used in place of Morphine" and "May be used in place of Fentanyl" is not necessary.	Agree - ICEMA will remove reference. ICEMA will add an asterisk (*) under Controlled Substance Medications - *EMS providers must

## PROTOCOLS/POLICIES FOR 30-DAY COMMENT FORM

**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
7040 - Medication - Standard Orders (continued)			stock either Fentanyl or Morphine but not both. Add a double asterisk (**) under Controlled Substances Medications - EMS providers must transition to Fentanyl by (date). The date will be determined by MAC.
	ICEMA	Lidocaine is listed incorrectly. Doses are confusing. The repeat dose for VT/VF and Refractory are the same. The repeat dose for VT/VF and the Refractory VF dose may cause Lidocaine Toxicity. Review AHA guidelines. Range for infusion is inconsistent, suggest change to 2 mg/min	ICEMA will delete VF/VT. ICEMA will change Lidocaine to: <ul style="list-style-type: none"> <li>Initial dose: 1.5 mg/kg IV/IO,</li> <li>May administer an additional 0.75 mg/kg IV push, repeat once in five (5) to ten (10) minutes for refractory VF</li> </ul> ICEMA will change infusion rate to 2 mg/min and remove reference to mcg/kg/min to be consistent with V-Tach, Wide Complex.
	Mammoth Hospital MICNs	All medications should include the name, dosage, route(s), time interval between doses, increments, max dose, and concentration, if indicated.	In most cases, the medications include the name, route, dose, indication and max dose. Other elements may be listed in the protocol. ICEMA will review and include additional elements as indicated in future protocol revisions.
	Mammoth Hospital MICNs	Epi for adult anaphylactic shock - what is the time interval between each 0.1mg SIVP dose	ICEMA will add time interval of five (5) minutes to dose.
	Mammoth Hospital MICNs	Fentanyl -Peds, is there a specific age range to administer? For the "IV" dose, include the IO route?	ICEMA will add IO as a route for all IV medications with dosing the same for both (except Adenosine).
	Mammoth Hospital MICNs	Ipratropium, Magnesium, Lidocaine indicate route for each entry to be consistent	Agree - ICEMA will change indicating route for clarification.
	Mammoth Hospital MICNs	Morphine - Adult - ALS...the first entry of 2mg IV q3min, max 10mg is for chest pain but no caption like isolated extremity/burns.	The initial entry is for the treatment of pain, other entries are exceptions to the standard dose.
	Mammoth Hospital MICNs	Morphine-Peds: no caption for the first entry	The initial entry is for the treatment of pain, other entries are exceptions to the standard dose.
	Mammoth Hospital MICNs	Shouldn't isolated extremity trauma be included with the burns or is the first entry isolated extremity	The initial entry is for the treatment of pain, other entries are exceptions to the standard dose.

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**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
7040 - Medication - Standard Orders (continued)		trauma? Need to have time intervals between each dose. Morphine IM dose "titrated for pain relief" - if more than one IM dose can be given what is the time interval for a repeat dose? For IV route, include IO.	
	Mammoth Hospital MICNs	Atropine for organophosphate poisoning: what is the time interval between each 2mg dose IVP?	Agree - ICEMA will make the necessary addition regarding timing for clarification.
	Mammoth Hospital MICNs	Dextrose Peds: can 5cc/kg be added to the dosing?	ICEMA will add (5 ml/kg IV/IO) following the gm dose.
	Mammoth Hospital MICNs	Dextrose Adult: 250cc D10 bag infused—what about a Diabetic CHF patient with wet lungs?	In the setting of symptomatic hypoglycemia, the 250 cc volume of D10% is not a concern.
	Mammoth Hospital MICNs	PTC, will it be the medics' discretion as to whether a patient receives MS or Fentanyl? Our ED typically does not use Fentanyl for CP cardiac patients. Will MS at some point be taken out of the protocols altogether if Fentanyl is primarily used?	Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC.
	Mammoth Hospital MICNs	Lidocaine 2% for IO insertion-Is this a one-time dose?	Yes, one time dose for pain associated with IO insertion.
	Mammoth Hospital MICNs	Narcan-Peds-ALS/LALS: Why not combine LALS and ALS, it's the same? Do not exceed 0.5mg for the 1day-8yo.	ICEMA will combine LALS and ALS. Dose is 0.1 mg/kg with a maximum dose of 10 mg.
	Mammoth Hospital MICNs	Can it be repeated? Time interval between doses?	ICEMA will add the time and repetition rate for clarification.
	Mammoth Hospital MICNs	Routes of administration should be consistent IV/IO/IN.	ICEMA will make consistent by adding IV/IO/IN when appropriate.
	Ontario FD	<u>Dextrose-Adult (ALS)</u> : Is there a dose range in regards to IV administration of D10%? At what rate do we administer the medication (gtts/min)? Do you administer the entire amount on all patients?	D10% is titrated to effect and relief of symptoms. Use of D10% will require education by the EMS provider.
	Ontario FD	<u>Epinephrine (1:1000)-Adult (ALS)</u> The administration route of Epinephrine is changed and not listed in red. Can we please document this change in red so that it stands out.	This is an educational issue and was previously changed in an earlier protocol update.
	Ontario FD	<u>Epinephrine (1:1000)-Pediatric (ALS)</u> In the adult dose you list the indications for	ICEMA will change adult and pediatric to read: Severe Bronchospasm, asthma attack pending

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**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
7040 - Medication - Standard Orders (continued)		administration of epinephrine as <i>Acute Asthma, Bronchospasm, Allergic Reaction, Anaphylaxis</i> . Yet in the pediatric you only list <i>Allergic Reactions</i> . Shouldn't the indications be the same for both pediatric and adults?	respiratory failure, anaphylactic shock/severe allergic reaction.
	Ontario FD	<u>Fentanyl-Adult (ALS)</u> You state that Fentanyl may be used in place of Morphine? Is this available now? Will we have the ability to carry either or?	ICEMA will remove reference to "May be used in place of...". Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC.
	Ontario FD	<u>Morphine-Adult (ALS)</u> You state that Morphine may be used in the place of Fentanyl. Is this available now? Will we have the ability to carry either or?	ICEMA will remove reference to "May be used in place of...". Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC.
	Rancho Cucamonga FD	<u>Epinephrine (1:1000)-Pediatric (ALS)</u> Adult dose lists indications for administration of epinephrine as <i>Acute Asthma, Bronchospasm, Allergic Reaction, Anaphylaxis</i> . Pediatric only lists <i>Allergic Reactions</i> . Should they be the same?	ICEMA will change adult and pediatric to read: Severe Bronchospasm, asthma attack pending respiratory failure, anaphylactic shock/severe allergic reaction.
	San Antonio Community Hospital	MSO - The first section of the morphine reference is ambiguous. It's confusing because the other sections of morphine refer to treatment: example - isolated extremity, pacing, burns in the pediatric section. It reads that the medics can give morphine "whenever" for any pain is that true? Needs to be more specific. Maybe a "pain protocol" could help this issue, to treat patients with back pain, kidney stones etc. Chest pain should be added.	Medicating for pain with morphine is protocol driven. Morphine may not be administered for any pain, the protocols are specific.

**PROTOCOLS/POLICIES FOR 30-DAY COMMENT FORM**

**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
7040 - Medication - Standard Orders (continued)	San Antonio Community Hospital	MSO - Midazolam - needs clarification, especially in pediatric dose. It is confusing should be simple. It says max 3 doses - various routes - not to exceed adult dosage so no more than 2.5 or 5 mg. The dosage should coordinate with weight, like the Broslow tape. REMS has a nice tool for midazolam for pediatric dosages - simple to read. Attached is a copy of highlighted concerns regarding MSO and a copy of REMS calculation chart.	Total dose is dependent on the route administered. ICEMA will remove adult dose limitations from the pediatric IV/IO seizure dose. Dose is weight dependent and limited to three times not to exceed 2.5 or 5.0 mg depending on route.
	San Antonio Community Hospital	Dextrose 10% and D50 - would it be difficult for EMS providers to carry both?	The use of Dextrose 10% will be sufficient in situations where D50 would have been used. The same amount of Dextrose will be administered over only a slightly longer time.
	Upland FD Air Ops and SB Sheriff Air Medics	Dextrose Adult and Pediatric- Suggest changing to D10% W or NS. Also please consider keeping different concentrations to accommodate drug shortages and different situations (ex: Full arrest)	ICEMA will change to D10W. The use of Dextrose 10% will be sufficient in these cases.
	Upland FD Air Ops and SB Sheriff Air Medics	Dopamine- Change language in the adult dose to match that in the pediatric dose. "to maintain signs of adequate tissue perfusion" is more clinically appropriate than an arbitrary SBP	ICEMA will change for consistency.
	Upland FD Air Ops and SB Sheriff Air Medics	Fentanyl- Suggest increasing max dosage in burn patient. Clarify language in pediatric dose (single dose not to exceed adult dose of 50 mcg), and increase max dosage. Big teenagers may require large, more frequent doses.	Dosage will be determined by MAC.
	Upland FD Air Ops and SB Sheriff Air Medics	Ipratropium- suggest changing to 0.25 mg nebulized to match language of albuterol	ICEMA will change for consistency.
	Upland FD Air Ops and SB Sheriff Air Medics	Lidocaine-intubation - "for suspected brain injury" suggest changing to suspected increased ICP.	ICEMA will change for consistency.

**PROTOCOLS/POLICIES FOR 30-DAY COMMENT FORM**

**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
7040 - Medication - Standard Orders (continued)	Upland FD Air Ops and SB Sheriff Air Medics	Lidocaine- Refractory v-fib- Which is it? Three doses or 3 mg? Three doses = 2.25mg/kg	ICEMA will change Lidocaine to: <ul style="list-style-type: none"> <li>Initial dose: 1.5 mg/kg IV/IO</li> <li>May administer an additional 0.75 mg/kg IV push, repeat once in five (5) to ten (10) minutes for refractory VF</li> </ul> ICEMA will change infusion rate to 2 mg/min and remove reference to mcg/kg/min to be consistent with V-Tach, Wide Complex.
	Upland FD Air Ops and SB Sheriff Air Medics	Lidocaine- VF/VT infusion- suggest utilizing one or the other. Depending on the patients weight, 1-4 mg/min may not be 30 - 50 mcg/kg/min. 50 kg vs 150 kg, for instance is 1.5 vs 4.5 mg/min. This also does not match the next line of 2 mg/min.	ICEMA will change infusion rate for VT/VF to 2 mg/min and remove reference to mcg/kg/min to be consistent with V-Tach, Wide Complex.
	Upland FD	Dextrose-Adult (ALS) Administer to affect	Agree - Will require education by the EMS provider.
	Upland FD	Epinephrine-Pediatric (ALS) use same indications as adult	The concentration of Epinephrine is different for treatment of pediatrics and that is why it is divided into different sections.
	Upland FD	Fentanyl-Pediatric-suggest maximum dose of IM/IN 1 mcg/kg not to exceed 100 mcg. 200 mcg seems excessive. If necessary add "Not to exceed adult dose"	Maximum dose is appropriate for pediatric patients that may be large enough to warrant the adult dose. The language is consistent for both adult and pediatric.
	Upland FD	We are in favor of carrying both Morphine and Fentanyl. Suggest language that states must choose one or the other medication per patient. Also suggest that if allowed to carry both, we decrease the mandatory minimum of MS from 60 mg to 40 mgs on each unit. Perhaps clarify usage of morphine and Fentanyl in 7040 using indications. (we recognize these are training issues as well)	Once MAC endorses Fentanyl and the final date is set for the transition, ICEMA will allow one or the other narcotic to be carried but not both at the same time. A transition period for the change to Fentanyl will be established by MAC. EMS Provider medical directors present at MAC were opposed to allowing both.
	Upland FD	Suggest training modules specific to the changes be created and taught prior to protocols being implemented. Hospital personnel are familiar with Fentanyl however, pre-hospital personnel are not	Fentanyl is part of the EMT-P scope of practice. ICEMA agrees that education by the EMS provider will be required. Education is a responsibility of the EMS provider

**PROTOCOLS/POLICIES FOR 30-DAY COMMENT FORM**

**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
7040 - Medication - Standard Orders (continued)		familiar with the drug, it's effects, side effects, half-life etc.	and they are encouraged to develop training and share with other EMS providers.
8020 - Critical Care Interfacility Transport		No comments received.	
9130 (DRAFT) - Procedures for EMS Monitoring of Multiple Patients (San Bernardino County Only)	Loma Linda University Medical Center	Under Procedure IV bullet point 5, can we add that during monitoring any changes and /or deterioration should be communicated to the appropriate hospital personnel (I know that this should be done automatically but we have had some cases that personnel of the hospital were not notified)?	Bullet 7 states "If patient's condition deteriorates, the EMS field personnel will notify ED staff immediately and transfer care to the hospital."
	Redlands Community Hospital	Bullet 2: Patients must be stable and not require any additional medications... What is the decision regarding cardiac monitoring? I think there should be a statement regarding cardiac monitoring here. Bullet 4: Patients may be on a cot. I am assuming that the cot referred to is a regular disaster cot, one without wheels. This should probably not be in the policy as cots do not have wheels and is a fire code violation. Hospitals can not violate fire code.	There is no intent to change requirements for patient monitoring. The EMS field personnel will need to determine whether patients require continuous cardiac monitoring. Patients requiring continuous cardiac monitoring should have their own dedicated EMS field personnel and/or be transferred to the care of the hospital. Patient may be placed on spare EMS gurneys or other appropriate devices that will allow adequate monitoring. It is not ICEMA's intent to violate any regulations or codes.
	Hospital Association of Southern California (HASC)	As proposed, HASC and San Bernardino County hospitals have serious policy and practical concerns with 9130. Those concerns include (as paraphrased from HASC's letter, dated August 19, 2014, below): <ul style="list-style-type: none"> <li>Lack of involvement of hospitals in activation the procedure. The procedure "may be activated only by the ALS transport provider and their supervisor in consultation with the EMS crews in the hospital"</li> </ul>	<ul style="list-style-type: none"> <li>ICEMA is responsible to ensure the integrity of the EMS System and the adequate number of ambulances to respond to emergencies. Hospitals have full control over whether the procedures are used by accepting and transferring patients from the EMS gurney to the hospital as soon as the patients arrive.</li> </ul>

**PROTOCOLS/POLICIES FOR 30-DAY COMMENT FORM**

**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
9130 (DRAFT) - Procedures for EMS Monitoring of Multiple Patients (San Bernardino County Only) (continued)		<ul style="list-style-type: none"> <li>• Lack of substantiation or rationale for a 25 minute threshold for activation of this policy. What is the basis for this timeframe? Local hospitals understand that turnaround time is a priority for the EMS providers and the communities we serve. We are uncertain that the institution of what appears to be an arbitrary threshold for activating this policy is in the public's interest.</li> <li>• Lack of clarity as to the qualifications of EMS crews to monitor multiple patients. The policy does not define nor limit the number of patients that an EMS crew member may oversee. It also does not set forth the qualifications or certifications of crewmembers overseeing the patients.</li> <li>• Hospitals have specific nurse patient ratios as required by law. We are uncertain as to an equivalent ratio for this policy.</li> <li>• Absence of clarity as to the acuity of the patients being tended to by EMS crew members. This is important so that there is a match of the severity of a patients' condition with the qualifications of an EMS crew member to respond to patient's needs.</li> </ul>	<ul style="list-style-type: none"> <li>• The 25 minutes is the allowance that ICEMA subtracts when computing bed delay time. This timeframe is a long standing policy established through committee input and is considered an acceptable time allowance for providing patient report and offloading the patient to the hospital gurney.</li> <li>• EMT-Ps are licensed by the State of California to provide care while at the scene of a medical emergency or during transport, or during interfacility transfer. An EMT-P may perform any activity identified in the scope of practice as described in the California Code of Regulations, Title 22, Division 9. There is no stipulation for the maximum number of patients that an EMT-P may care for. EMT-Ps have specific training for treating multiple patients at the scene of multi-casualty incidents.</li> <li>• Hospital nurse to patient ratios do not apply to EMT-Ps. There is no equivalent ratio for EMT-Ps.</li> <li>• The procedures states that "the patients must be stable and require no additional medications or procedures while being monitored by an EMS crew or until transferred to a hospital gurney under hospital care."</li> </ul>

**PROTOCOLS/POLICIES FOR 30-DAY COMMENT FORM**

**ICEMA Reference #s: 7010, 7020, 7040, 8020, 9130 (NEW)**

**DEADLINE TO SUBMIT COMMENTS: August 20, 2014, at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
9130 - Procedures for EMS Monitoring of Multiple Patients (San Bernardino County Only) (continued)		<ul style="list-style-type: none"> <li>• Apparent lack of review by CDPH. Since the EMS crews will be operating in hospital emergency departments, CDPH may have input as to the qualifications and provider to patient ratios that must be applied to ensure safe patient care as well as additional concerns with this approach.</li>   <li>• Potential shifts in liability exposure. Under this policy, the EMS providers, ICEMA and in turn the County might likely be assuming additional malpractice liability even if the policy could be tightened as alluded to above. Additionally, potentially places the hospital in a risk management situation, as any patient on their property is the responsibility of the facility. What type of indemnification will ICEMA offer for patients not properly monitored? There may be other legal aspects that need to be considered in this proposed policy.</li> </ul>	<ul style="list-style-type: none"> <li>• Under current California Code of Regulations, Title 22, regulations, only a local EMS agency (LEMSA) and its medical director are able to establish policies and protocols regarding management of patients by EMS field personnel. CDPH is not the licensing or oversight agency for EMS field personnel. However, ICEMA is always appreciative of advisory input.</li>   <li>• ICEMA believes that the entire responsibility and liability associated with the care of any EMS patient is shifted to the hospital, its staff and its physicians once the EMS crew arrives at the hospital. This is regardless of any time the EMS crew spends waiting to offload. Further, it is ICEMA's belief that extended bed delay in the hospitals potentially shifts liability exposure from hospitals to the EMS crew.</li> </ul>

**POLICIES/PROTOCOLS FOR 30-DAY COMMENT FORM**

**ICEMA Reference #s: 6070, 6100, 8120, 11110, 15020**

**DEADLINE TO SUBMIT COMMENTS: October 9, 2014 at 5:00 pm**

PROTOCOL #	AGENCY	COMMENT	RESPONSE
6070 - Cardiovascular ST Elevation Myocardial Infarction Receiving Centers Criteria and Destination Policy		No comments received.	
6100 - Neurovascular Stroke Receiving Centers Criteria and Destination Policy		No comments received.	
8120 – Continuation of Care		No comments received.	
11110 - Stroke Treatment - Adult		No comments received.	
15020 - Trauma - Pediatric (Less than 15 years of age)		No comments received.	

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<b>SERIES</b>	<b>SYSTEM POLICIES AND PROCEDURES</b>	<b>EFFECTIVE DATE</b>
<b>1000</b>	<b>ACCREDITATION, CERTIFICATION and AUTHORIZATION</b>	
1010	Emergency Medical Dispatch Certification Requirements <b>DELETE</b>	<b>12/01/14</b>
1020	First Responder Certification Requirements	05/01/94
1030	EMT Certification	08/15/14
1040	EMT-P Accreditation	08/15/14
1050	MICN Authorization - Base Hospital, Administrative, Flight Nurse, Critical Care Transport	08/15/14
1060	Certification/Accreditation Review Policy <b>REVISED</b>	<b>12/01/14</b>
1070	EMT/AEMT Incident Investigation, Determination of Action, Notification, and Administrative Hearing Process	08/15/14
1090	Criminal History Background Checks (Live Scan)	08/15/14
1100	AEMT Certification	08/15/14
<b>2000</b>	<b>DATA COLLECTION</b>	
2010	Requirements for Patient Care Records	05/01/06
2020	ICEMA Abbreviation List	03/15/12
2030	Minimum Documentation Requirements for Transfer of Patient Care	03/15/12
2120	Instructions for the 01A/F1612 Forms	04/01/09
<b>3000</b>	<b>EDUCATION</b>	
3020	Continuing Education Provider Requirements	03/15/11
3030	EMT Continuing Education Requirements	03/15/11
<b>4000</b>	<b>QUALITY IMPROVEMENT</b>	
4010	Continuous Quality Improvement Plan	02/28/11
<b>5000</b>	<b>MISCELLANEOUS SYSTEM POLICIES</b>	
5010	Licensure Changes 911 Receiving Hospitals	01/01/10
5020	Base Hospital Selection Criteria	07/15/00
5030	Procedure for Adoption of Protocols and Policies	06/01/14
5040	Radio Communication Policy	03/15/11
5050	Medical Response to a Multi-Casualty Incident	04/01/13
5050 I/Mono Annex	Inyo and Mono Counties Medical Response to a Multi-Casualty Incident	05/01/11
5060	MCI Definitions/Key ICS Positions	01/01/10
5070	Medical Response to Hazardous Materials/Terrorism Incident	04/01/13
5080	ICEMA Ground Based Ambulance Rate Setting Policy-San Bernardino County	05/08/12
5090	2014/2015 Fee Schedule	07/01/14
<b>6000</b>	<b>SPECIALTY PROGRAM/ PROVIDER POLICIES</b>	
6010	Paramedic Vaccination Policy	04/01/13
6030	AED Service Provider Policy - Public Safety	09/15/11
6040	Lay Rescuer AED Implementation Guidelines	09/15/11
6060	Specialty and Optional Scope Program Approval Policy	11/01/09

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<b>SERIES</b>	<b>SYSTEM POLICIES AND PROCEDURES</b>	<b>EFFECTIVE DATE</b>
<b>6000</b>	<b>SPECIALTY PROGRAM/ PROVIDER POLICIES (CONTINUED)</b>	
6070	Cardiovascular ST Elevation Myocardial Infarction Receiving Centers Criteria and Destination Policy <b>REVISED</b>	<b>12/01/14</b>
6080	Paramedic Blood Draw for Chemical Test at the Request of a Peace Officer	04/01/13
6090	Fireline Paramedic <b>REVISED</b>	<b>12/01/14</b>
6100	Neurovascular Stroke Receiving Centers Criteria and Destination Policy ( <i>San Bernardino County Only</i> ) <b>REVISED</b>	<b>12/01/14</b>
6110	Tactical Medicine Program	04/01/13
6120	Emergency Medical Dispatch Center Requirements ( <i>San Bernardino County Only</i> )	08/15/13
6130	Medical Priority Dispatch Minimum Response Assignments for Emergency Medical Dispatch (EMD) Categories	08/15/13
6140	Smoke Inhalation/CO Exposure/Suspected Cyanide Toxicity	06/01/14
<b>7000</b>	<b>STANDARD DRUG &amp; EQUIPMENT LISTS</b>	
7010	BLS/LALS/ALS Standard Drug & Equipment List <b>REVISED</b>	<b>12/01/14</b>
7020	EMS Aircraft Standard Drug & Equipment List <b>REVISED</b>	<b>12/01/14</b>
7030	Controlled Substance Policy	06/01/14
7040	Medication - Standard Orders <b>REVISED</b>	<b>12/01/14</b>
<b>8000</b>	<b>TRANSPORT/TRANSFERS AND DESTINATION POLICIES</b>	
8010	Interfacility Transfer Guidelines	09/15/13
8020	Critical Care Interfacility Transport <b>REVISED</b>	<b>12/01/14</b>
8050	Transport of Patients (BLS)	02/01/92
8060	Requests for Hospital Diversion Policy ( <i>San Bernardino County Only</i> )	04/01/13
8070	Aircraft Rotation Policy ( <i>San Bernardino County Only</i> )	04/01/13
8090	Fort Irwin Continuation of Trauma Care	06/25/10
8110	EMS Aircraft Permit Policy	10/01/13
8120	Continuation of Care ( <i>San Bernardino County Only</i> ) <b>REVISED</b>	<b>12/01/14</b>
8130	Destination Policy	06/01/14
	<b>PATIENT CARE POLICIES</b>	
<b>9000</b>	<b>GENERAL PATIENT CARE POLICIES</b>	
9010	General Patient Care Guidelines	04/01/13
9020	Physician on Scene	04/01/13
9030	Responsibility for Patient Management Policy	04/01/13
9040	Reporting Incidents of Suspected Abuse Policy	04/01/13
9050	Organ Donor Information	04/01/13
9060	Local Medical Emergency Policy	02/01/14
9070	Applying Patient Restraints Guidelines	05/01/06
9080	Care of Minors in the Field	05/01/06
9090	Patient Refusal of Care - Adult	06/01/14
9110	Treatment of Patients with Airborne Infections & Transport Recommendations	09/15/11
9120	Nausea and Vomiting <b>REVISED</b>	<b>12/01/14</b>

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<b>SERIES</b>	<b>PATIENT CARE POLICIES</b>	<b>EFFECTIVE DATE</b>
<b>10000</b>	<b>SKILLS</b>	
10010	King Airway Device (Perilaryngeal) - Adult	<b>DELETE 12/01/14</b>
10020	King Airway Device (Perilaryngeal) - Pediatric	<b>DELETE 12/01/14</b>
10030	Oral Endotracheal Intubation - Adult	<b>DELETE 12/01/14</b>
10040	Oral Endotracheal Intubation - Pediatric	<b>DELETE 12/01/14</b>
10050	Nasotracheal Intubation	<b>DELETE 12/01/14</b>
10060	Needle Thoracostomy	<b>DELETE 12/01/14</b>
10070	Needle Cricothyrotomy	<b>DELETE 12/01/14</b>
10080	Insertion of Nasogastric/Orogastric Tube	<b>DELETE 12/01/14</b>
10090	Vagal Maneuvers	<b>DELETE 12/01/14</b>
10100	12 Lead Electrocardiography	<b>DELETE 12/01/14</b>
10110	Transcutaneous Cardiac Pacing	<b>DELETE 12/01/14</b>
10120	Synchronized Cardioversion	<b>DELETE 12/01/14</b>
10130	Automatic External Defibrillation (AED) - BLS	<b>DELETE 12/01/14</b>
10140	Intraosseous Infusion (IO)	<b>DELETE 12/01/14</b>
10150	External Jugular Vein Access	<b>DELETE 12/01/14</b>
10180	Continuous Positive Airway Pressure Device (CPAP) - Adult	<b>DELETE 12/01/14</b>
10190	ICEMA Approved Skills	06/01/14
<b>11000</b>	<b>ADULT EMERGENCIES (15 YEARS OF AGE AND OLDER)</b>	
11010	Adult Respiratory Emergencies	08/15/14
11020	Airway Obstruction - Adult	08/15/14
11040	Bradycardias - Adult	08/15/14
11050	Tachycardias - Adult	08/15/14
11060	Suspected Acute Myocardial Infarction (AMI)	<b>REVISED 12/01/14</b>
11070	Cardiac Arrest - Adult	08/15/14
11080	Altered Level of Consciousness/Seizures - Adult	08/15/14
11090	Shock (Non-Traumatic)	08/15/14
11100	Burns - Adult	<b>REVISED 12/01/14</b>
11110	Stroke Treatment - Adult	<b>REVISED 12/01/14</b>
<b>12000</b>	<b>END OF LIFE CARE</b>	
12010	Determination Of Death on Scene	08/15/14
	Coroners Worksheet of Death - EMS Report of Death Form	09/15/12
12020	Withholding Resuscitative Measures	10/01/14
<b>13000</b>	<b>ENVIRONMENTAL EMERGENCIES</b>	
13010	Poisonings	08/15/14
13020	Heat Related Emergencies	08/15/14
13030	Cold Related Emergencies	<b>REVISED 12/01/14</b>

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<b>SERIES</b>	<b>PATIENT CARE POLICIES</b>	<b>EFFECTIVE DATE</b>
<b>14000</b>	<b>PEDIATRIC EMERGENCIES (LESS THAN 15 YEARS OF AGE)</b>	
14010	Respiratory Emergencies - Pediatric	08/15/14
14020	Airway Obstruction - Pediatric	08/15/14
14030	Allergic Reactions - Pediatric	08/15/14
14040	Cardiac Arrest - Pediatric	08/15/14
14050	Altered Level of Consciousness - Pediatric	08/15/14
14060	Seizure - Pediatric	08/15/14
14070	Burns - Pediatric <span style="float: right;"><b>REVISED</b></span>	<b>12/01/14</b>
14080	Obstetrical Emergencies	08/15/14
14090	Newborn Care	08/15/14
<b>15000</b>	<b>TRAUMA</b>	
15010	Trauma - Adult (15 years of age and older) <span style="float: right;"><b>REVISED</b></span>	<b>12/01/14</b>
15020	Trauma - Pediatric (Less than 15 years of age) <span style="float: right;"><b>REVISED</b></span>	<b>12/01/14</b>
15030	Trauma Triage Criteria & Destination Policy	08/15/14
15040	Glasgow Coma Scale Operational Definitions	04/01/13
15050	Hospital Emergency Response Team (HERT) Policy	10/15/13



## EMERGENCY MEDICAL DISPATCHER CERTIFICATION REQUIREMENTS

### PURPOSE

To define requirements for initial certification of eligible individuals as an Emergency Medical Dispatcher (EMD) at an approved EMD Dispatch Center in the Inland Counties Region.

### POLICY

The applicant shall be issued an EMD certificate upon successful completion and verification of all of the requirements.

The expiration date of an EMD certificate shall be two (2) years from the date of successful completion of the EMD certifying examination.

The certification fee paid to ICEMA is nonrefundable.

### ELIGIBILITY

In order to be eligible to become certified as an EMD, an individual must:

1. Be eighteen (18) years of age or older.
2. Document successful completion of an ICEMA approved EMD Training Program within the last six (6) months (a list of approved programs is available through ICEMA).
3. Have a current American Heart Association BLS level B or an American Red Cross Community CPR card.
4. Fee as set by ICEMA. The fee is not refundable or transferable.

### PROCEDURE

1. An individual applying for certification as an EMD within the ICEMA region shall:
  - a. Submit a completed ICEMA application form within six (6) months of being issued a course completion record. Incomplete applications will not be accepted or acknowledged and will be returned to the individual.

- b. Complete a statement that the individual is not precluded for certification for reasons defined in Section 1798.200 of the Health and Safety Code.
  - c. Submit a 1" x 1¼" drivers' license-type photograph, no hats or dark glasses accepted. A photo may be taken at ICEMA at no charge. If the photo is submitted by mail, it will be necessary that it be accompanied by a photocopy of the applicant's driver's license for verification purposes.
  - d. Pay the established fee at time of application (Cashier's check, money order, cash or agency check only; no personal checks will be accepted).
  - e. Submit a photocopy of the individual's current BLS/CPR card as specified above.
2. After verification of eligibility, the applicant shall take the ICEMA written certification exam. The individual must score at least eighty percent (80%) in order to successfully complete the written examination. The individual will be allowed to take the certification examination a second time and must score at least eighty percent (85%) to be successful. Failure to successfully complete the written certification exam on the second attempt will constitute failure of the entire process, and the individual must take and successfully complete an approved EMD basic course in order to re-enter the certification process.



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## **CERTIFICATION/ACCREDITATION REVIEW POLICY**

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### **I. PURPOSE**

To establish a process for the disciplinary review of certification and/or accreditation held by all levels of EMS field personnel within the ICEMA region.

### **II. POLICY**

1. Disciplinary proceedings are in accordance with California Code of Regulations, Title 22, Chapter 6.
2. Licensure and certification actions (e.g., immediate suspension) shall be performed according to the California Health and Safety Code, Section 1798.202.
3. If the action is to recommend to the EMS Authority for disciplinary action of an EMT-P license:
  - a. A summary explaining the actions of the EMT-P that are a threat to the public health and safety pursuant to the California Health and Safety Code, Section 1798.200; and,
  - b. Documented evidence, relative to the recommendation, collected by the Medical Director, forwarded to the EMS Authority.
4. Request for discovery, petitions to compel discovery, evidence and affidavits shall be followed pursuant to the Administrative Procedures Act (Government Code, Title 2, Chapter 5, Sections 11507.6, 11507.7, 11513, and 11514).



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## CARDIOVASCULAR ST ELEVATION MYOCARDIAL INFARCTION RECEIVING CENTERS CRITERIA AND DESTINATION POLICY

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### I. PURPOSE

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

### II. DEFINITIONS

**STEMI Base Hospital** - A licensed general acute care hospital that has emergency interventional cardiac catheterization capabilities that also function as a base hospital.

**STEMI Receiving Center (SRC)** - A licensed general acute care hospital that has emergency interventional cardiac catheterization capabilities.

**STEMI Referring Hospital (SRH)** - A licensed general acute care hospital that does not have emergency interventional cardiac catheterization capabilities.

### III. POLICY

The following requirements must be met for a hospital to be designated as a SRC by ICEMA:

- An ICEMA approved receiving hospital which is a full service acute care hospital.
- Licensure as a Cardiac Catheterization Laboratory (Cath Lab).
- Intra-aortic balloon pump capability.
- Cardiovascular surgical services permit.
- An alert/communication system for notification of incoming STEMI patients, available twenty-four (24) hours per day, seven (7) days per week (i.e., in-house paging system).
- Provide continuing education (CE) opportunities twice per year for emergency medical services (EMS) field personnel in areas of 12-lead ECG acquisition and interpretation, as well as assessment and management of STEMI patients.

#### IV. STAFFING REQUIREMENTS

The hospital will have the following positions filled prior to becoming a SRC:

- Medical Directors

The hospital shall designate two (2) physicians as co-directors of its SRC program. One (1) physician shall be a board certified interventional cardiologist with active Percutaneous Coronary Intervention (PCI) privileges. The co-director shall be a board certified emergency medicine physician with active privileges to practice in the emergency department.

- Nursing Coordinator

The hospital shall designate a SRC Nursing Coordinator who is trained or certified in Critical Care nursing.

- On-Call Physician Consultants and Staff

A daily roster of the following on-call physician consultants and staff that must be promptly available within thirty (30) minutes of notification.

- Cardiologist with PCI privileges.
- Cardiovascular Surgeon.
- Cardiac Catheterization Laboratory Team.
- Intra-aortic balloon pump nurse or technologist.

- Emergency Department Liaison Nurse

The non-base hospital shall designate an SRC Emergency Department Liaison Nurse who has a minimum of two (2) years emergency department experience to facilitate communication and education between the Cath Lab, emergency department and EMS field personnel.

#### V. INTERNAL HOSPITAL POLICIES

The hospital shall develop internal policies for the following situations:

- Fibrinolytic therapy protocol to be used only in unforeseen circumstances when PCI of a STEMI patient is not possible.

- Acknowledgement that STEMI patients may **only** be diverted during the times of Internal Disaster in accordance to ICEMA Reference #8060 - Requests for Hospital Diversion Policy (applies to physical plant breakdown threatening significant patient services or immediate patient safety issues, i.e., bomb threat, earthquake damage, hazardous material or safety and security of the hospital). A written notification describing the event must be submitted to ICEMA within twenty-four (24) hours.
- Prompt acceptance of STEMI patients from other SRHs that do not have PCI capability. STEMI diversion is not permitted except for internal disaster. Refer to ICEMA Reference #8120 - Continuation of Care (San Bernardino County Only). However, STEMI base hospitals are allowed to facilitate redirecting of STEMI patients to nearby SRCs when the closest SRC is over capacity to avoid prolonged door to intervention time. SRC and base hospitals shall ensure physician to physician contact when redirecting patients.
- Cath Lab Team activation policy which requires immediate activation of the team upon EMS notification when there is documented STEMI patient en route to the SRC, based on machine algorithm interpretation.

## VI. DATA COLLECTION

All required data elements shall be collected and entered in an ICEMA approved STEMI registry on a regular basis and submitted to ICEMA for review.

## VII. CONTINUOUS QUALITY IMPROVEMENT PROGRAM (CQI)

SRC shall develop an on-going CQI program which monitors all aspect of treatment and management of suspected STEMI patients and identify areas needing improvement. The program must, at a minimum, monitor the following parameters:

- Morbidity and mortality related to procedural complications.
- Detail review of cases requiring emergent rescue Coronary Artery Bypass Graph (CABG).
- Tracking of door-to-dilation time and adherence to minimum performance standards set by this policy.
- Detailed review of cases requiring redirection of EMS STEMI patients to other SRCs as a result of SRC over capacity and prolonged delay of door-to-intervention time.
- Active participation in each ICEMA STEMI CQI Committee and STEMI regional peer review process. This will include a review of selected medical

records as determined by CQI indicators and presentation of details to peer review committee for adjudication.

## VIII. PERFORMANCE STANDARD

SRCs must achieve and maintain a door-to-balloon (D2B) time of less than or equal to ninety (90) minutes in 75% of primary PCI patients with a STEMI, in accordance with D2B: An Alliance for Quality Guidelines. If this standard is not achieved, the SRC may be required to submit an improvement plan to ICEMA addressing the deficiency with steps being taken to remedy the problems.

## IX. DESIGNATION

- The SRC applicant shall be designated after satisfactory review of written documentation and an initial site survey by ICEMA or its designees and completion of an agreement between the hospital and ICEMA.
- Documentation of current accreditation from The Society of Chest Pain Centers as “Chest Pain Center with PCI” shall be accepted in lieu of a formal site visit by ICEMA.
- Initial designation as a SRC shall be in accordance with terms outlined in the agreement.
- Failure to comply with the agreement, criteria and performance standards outlined in this policy may result in probation, suspension or rescission of SRC designation.

## X. PATIENT DESTINATION

- The SRC should be considered as the destination of choice if all of the following criteria are met:
  - Identified STEMI patients based on machine interpretation of field 12-lead ECG, verified by EMT-Ps and approved by a base hospital physician.
  - Total transport time to the STEMI base hospital is thirty (30) minutes or less. Base hospital physician may override this requirement and authorize transport to the SRC with transport time of greater than thirty (30) minutes.
  - STEMI base hospital contact is **mandatory** for all patients identified as possible STEMI patient. The STEMI base hospital confirms a SRC as the destination.

- The STEMI base hospital is the only authority that can direct a patient to a SRC. The destination may be changed at STEMI base hospital discretion.
- The STEMI base hospital, if different from the SRC, will notify the SRC of patient's pending arrival as soon as possible, to allow timely activation of Cardiac Cath Lab Team at the SRC.
- If the patient chooses to bypass the recommended SRC, EMS field personnel must obtain an AMA and notify the STEMI base hospital.
- The following factors should be considered with regards to choice of destination for STEMI patients. STEMI base hospital contact and consultation is mandatory in these and similar situations:
  - Patients with unmanageable airway, unstable cardiopulmonary condition, or in cardiopulmonary arrest should be transported to the closest receiving hospital.
  - Patients with malignant ventricular fibrillation, ventricular tachycardia, second degree type II heart block and third degree heart blocks should be considered for transport to the closest receiving hospital.
  - Patients with obvious contraindication to thrombolytic therapy should be strongly considered for transport to the closest SRC.
  - Patients with hemodynamic instability as exhibited by blood pressure less than 90 systolic and/or signs of inadequate tissue perfusion should be transported to the closest receiving hospital.
  - Patients with *sustained* ROSC should be strongly considered for transport to the closest SRC. STEMI base hospital contact must be made.

## XI. REFERENCES

<u>Number</u>	<u>Name</u>
8060	Requests for Hospital Diversion Policy (San Bernardino County Only)
8120	Continuation of Care (San Bernardino County Only)



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## **FIRELINE PARAMEDIC**

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### **I. PURPOSE**

To provide guidance and medical oversight for an ICEMA paramedic deployed to function as a fireline paramedic.

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

### **II. DEFINITIONS**

Fireline Emergency Medical Technician-P (FEMP): A paramedic who meets all prerequisites established by FIRESCOPE and is authorized by the paramedic's department to provide ALS treatment on the fireline to ill or injured fire suppression personnel.

### **III. REQUIREMENTS**

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

#### IV. PROCEDURE

- The provider agency will notify ICEMA of the deployment of the FEMP to an incident.
- The FEMP will carry inventory in the ALS pack as per the attached inventory list. Inventory will be supplied and maintained by the employing provider agency. Additional items for restock should also be maintained and secured in a vehicle or in the Medical Unit trailer.
- Incident Medical Units may not have the capability of resupplying controlled substances (narcotics). Providers should stock sufficient quantities of medical supplies and medications, especially controlled substance medications, to assure adequate supplies and medications.
- Narcotics must be under double lock and maintained on the FEMP person or secured in his/her vehicle at all times as per the ICEMA Drug and Equipment List.
- FEMP may carry an inventory of controlled substances (i.e. Morphine, Fentanyl and Midazolam) if authorized by the employing agency's Medical Director. The authorizing Medical Director is responsible to assure full compliance with all federal and state laws relating to purchase, storage and transportation of controlled substances. Only controlled substances approved for use in the ICEMA region may be carried and their use must be in accordance with current ICEMA patient care protocols.
- Radio communication failure protocols will not be used. Prior to base contact protocols will be followed. If further treatment is needed, radio contact with the base station should be established as soon as possible.
- Documentation of patient care must follow ICEMA protocol utilizing the ePCR, if available, or a paper OIA form. All patient care reports will be reviewed by the provider agency and ICEMA for QI purposes.
- A FEMP will be paired with a fireline EMT (FEMT) or another FEMP who will assist with BLS treatment and supplies.

#### V. FIRELINE EMT-P (ALS) PACK INVENTORY

*Minimum Requirements: The weight of the pack will dictate if the paramedic chooses to carry additional ALS supplies.*

### **ALS AIRWAY EQUIPMENT**

1. Endotracheal intubation equipment:
  - a. 6.0, 7.0 and/or 7.5 ET
  - b. Mac 4, Miller 4, and handle (pediatric suggested for weight)
  - c. Stylet and/or gum elastic intubation stylet
2. King Airway - Size 3, 4 and 5 (1 of each)
3. ET tube holder
4. End tidal CO2 Detector
5. Needle cricothyrotomy kit
6. Needle thoracostomy kit

### **IV/MEDICATION ADMINISTRATION SUPPLIES**

1. IV administration set macro drip (2)
2. Venaguard (2)
3. Alcohol preps (6)
4. Betadine swabs (4)
5. Tourniquet (2)
6. Razor (1)
7. Tape (1)
8. IV catheters - 14, 16, 18 and 20 gauge (2 of each)
9. 10cc syringe (2)
10. 1 cc TB syringe (2)
11. 18 gauge needle (4)
12. 25 gauge needle (2)
13. Lancets

**MISCELLANEOUS**

1. Sharps container (1)
2. Narcotic storage per protocol
3. FEMP pack inventory sheet (1)
4. Patient care record or ePCR (Toughbook)
5. AMA forms (3)

**EQUIPMENT**

1. Compact AED or compact monitor defibrillator combination
2. Appropriate cardiac pads
3. Pulse oximetry (optional)
4. Glucometer and test strips (4)

**MEDICATIONS**

1. Albuterol Solution 2.5 mg (4) Handheld Nebulizer or Multidose Inhaler
2. Atropine 1 mg (2)
3. Ipratropium Bromide Solution 0.5mg (4) Handheld Nebulizer or Multidose Inhaler
4. Lidocaine 100 mg IV pre-load (2)
5. Aspirin 80 mg chewable bottle (1)
6. Dextrose 10% (D10W) 250 cc
7. Diphenhydramine 50 mg (4)
8. Epinephrine 1:10,000 1 mg (2)
9. Epinephrine 1:1000 1 mg (4)
10. Glucagon 1mg (1)
11. Midazolam 20 mg

12. Morphine 10 mg/ml or Fentanyl 100 mcg/2 ml (amount determined by the medical director)
13. Nitroglycerin spray 0.4 metered dose (1)
14. Saline 0.9% IV 1000 ml may be divided in two (2) 500 ml bags or four (4) 250 ml bags.

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



## NEUROVASCULAR STROKE RECEIVING CENTERS CRITERIA AND DESTINATION POLICY

*(San Bernardino County Only)*

### I. PURPOSE

To provide developing guidelines to rapidly transport stroke patients who access the 9-1-1 system to a designated Neurovascular Stroke Receiving Center (NSRC) when indicated. Patients transported to NSRC will benefit from rapid assessment, intervention and treatment at a dedicated stroke specialty center. Patients will meet the defined criteria for triage as an acute ischemic or hemorrhagic cerebral vascular event.

### II. DEFINITIONS

**Interventional Neuroradiologic Capabilities:** A licensed general acute care hospital with qualified interventional radiologists and/or neurosurgeons able to administer inter-arterial tissue plasminogen activator and/or perform mechanical clot retrieval.

**mLAPSS:** Modified Los Angeles County Prehospital Stroke Screening Scale.

**Neurovascular Stroke Base Hospital:** A licensed general acute care hospital that has The Joint Commission (TJC) or Healthcare Facilities Accreditation Program (HFAP) Primary Stroke Center accreditation and designated as a base hospital.

**Neurovascular Stroke Receiving Centers (NSRC):** A twenty-four (24) hours per day, seven (7) days per week licensed general acute care hospital that has successfully completed and maintains TJC or HFAP accreditation as a Primary Stroke Center and enters into an agreement with ICEMA, for patients triaged as having a cerebral vascular event requiring hospitalization for treatment, evaluation and/or management of this event.

**Neurovascular Stroke Referral Hospital (NSRH):** A licensed general acute care hospital that refers possible stroke patients to NSRC.

### III. POLICY

The following requirements must be met for a hospital to be an ICEMA designated NSRC:

- An ICEMA approved receiving hospital which is a full service acute care hospital.
- Accreditation as a Primary Stroke Center by TJC or HFAP and proof of re-accreditation every two (2) years.

- An alert/communication system for notification of incoming stroke patients, available twenty-four (24) hours per day, seven (7) days per week (i.e., in-house paging system).
- Provide continuing education (CE) opportunities twice per year for NSRC, NSRH and emergency medical services (EMS) field personnel in areas of pathophysiology, assessment, triage and management for stroke patients and report annually to ICEMA.
- Lead public stroke education efforts at the appropriate educational level and report annually to ICEMA.

#### IV. STAFFING REQUIREMENTS

The hospital will have the following positions filled prior to becoming a NSRC:

- Medical Directors

The hospital shall designate two (2) physicians with hospital privileges as co-directors of its NSRC program. One (1) physician shall be board certified or board eligible by the American Board of Medical Specialties or American Osteopathic Association, neurology or neurosurgery board. The co-director shall be a board certified or board eligible emergency medicine physician.

- Nursing Coordinator

The hospital shall designate a NSRC Nursing Coordinator who has experience in critical care or emergency nursing, and has advanced education in stroke physiology or at least has two (2) years dedicated stroke patient management experience. Certification in critical care or emergency nursing is preferred.

- On-Call Physicians Specialists/Consultants

A daily roster of the following on-call physician consultants and staff must be promptly available within thirty (30) minutes of notification of “Stroke Alert” twenty-four (24) hours per day, seven (7) days per week.

- Radiologist experienced in neuroradiologic interpretations.
- On-call Neurologist and /or tele-neurology services available twenty-four (24) hours per day; seven (7) days per week.
- If neurosurgical services are not available in-house, the hospital must have a rapid transfer agreement in place with a hospital that provides this service. The agreement must be on file with the ICEMA.

NSRCs must promptly accept rapid transfer requests from NSRCs. Additionally, the hospital must have a rapid transport agreement in place with an ICEMA permitted transport provider for that exclusive operation area (EOA).

## V. INTERNAL HOSPITAL POLICIES

The hospital shall develop internal policies for the following situations:

- Stroke Team alert response policy upon EMS notification of a “Stroke Alert”.
- Rapid assessment of stroke patient by Emergency and Neurology Teams.
- Prioritization of ancillary services including laboratory and pharmacy with notification of “Stroke Alert”.
- Arrangement for priority bed availability in Acute Stroke Unit or Intensive Care Unit (ICU) for “Stroke Alert” patients.
- Acknowledgement that stroke patients may **only** be diverted during the times of Internal Disaster in accordance to ICEMA Reference #8060 - Requests for Hospital Diversion Policy (applies to physical plant breakdown threatening significant patient services or immediate patient safety issues, i.e., bomb threat, earthquake damage, hazardous material or safety and security of the hospital.) A written notification describing the event must be submitted to ICEMA within twenty-four (24) hours.
- Emergent thrombolytic and tele-neurology (if waiver is approved) protocol to be used by Neurology, Emergency, Pharmacy and Critical Care Teams.
- Readiness of diagnostic computed tomography (CT) and magnetic resonance imaging (MRI), upon notification of Stroke Team.

## VI. DATA COLLECTION

Data will be reported to the ICEMA Medical Director on a monthly basis using an ICEMA approved registry.

## VII. CONTINUOUS QUALITY IMPROVEMENT PROGRAM

NSRC shall develop an on-going CQI program which monitors all aspects of treatment and management of stroke patients and identify areas needing improvement. The program must, at a minimum, monitor the following parameters:

- Morbidity and mortality related to procedural complications.

- Tracking door-to-intervention times and adherence to minimum performance standards.

ICEMA will determine current performance indicators. Any specific or additional performance indicators will be determined in collaboration with the Stroke CQI Committee.

- Active participation in ICEMA Stroke CQI Committee activities.

### **VIII. PERFORMANCE STANDARDS**

Compliance with the American Stroke Association Performance Measures as a Primary Stroke Center.

### **IX. DESIGNATION**

- The NSRC applicant shall be designated by ICEMA after satisfactory review of written documentation, a potential site survey and completion of an agreement between the hospital and ICEMA.
- Documentation of current accreditation as a Primary Stroke Center by TJC or HFAP shall be accepted in lieu of a formal site visit by ICEMA.
- Initial designation as a NSRC shall be in accordance with terms outlined in the agreement.
- Failure to comply with the agreement, criteria and performance standards outlined in this policy may result in probation, suspension or rescission of the NSRC designation.

### **X. PATIENT DESTINATION**

- The NSRC should be considered as the destination of choice if all of the following criteria are met:
  - Stroke patients eligible for transport to NSRC (suspected stroke patients) will be identified using the mLAPSS triage criteria.
  - Identified acute stroke patients with “last seen normal” time plus transport time equaling greater than twelve (12) hours, or if “last seen normal” time is unknown, transport to the closest receiving hospital.
  - Identified stroke patients with “last seen normal” time less than twelve (12) hours, or a “wake-up stroke”, transport to closest NSRC.

- NSRC base hospital contact is **mandatory** for all patients identified as a possible stroke patient.
- The NSRC base hospital is the only authority that can direct a patient to a NSRC. The destination may be changed at NSRC base hospital discretion.
- The NSRC base hospital, if different from the NSRC, will notify the NSRC of the patient's pending arrival as soon as possible, to allow timely notification of Stroke Team.
- The following factors should be considered in determining choice of destination for acute stroke patients. NSRC base hospital contact and consultation is mandatory in these situations:
  - Patients with unmanageable airway, unstable cardiopulmonary condition, or in cardiopulmonary arrest should be transported to the closest receiving hospital.
  - Patients with obvious contraindication to thrombolytic therapy should be strongly considered for transport to closest NSRC.
  - Patients with hemodynamic instability and exhibiting signs of inadequate tissue perfusion should be transported to the closest receiving hospital.

## **XI. REFERENCE**

<b><u>Number</u></b>	<b><u>Name</u></b>
8060	Requests for Hospital Diversion Policy (San Bernardino County Only)



## BLS/LALS/ALS STANDARD DRUG & 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
Dextrose 25% 2.5 gm preload *			2	2
Dextrose 50% 25 gm preload *		2	2	2
Diphenhydramine (Benadryl) 50 mg			1	1
Dopamine 400 mg			1	1
Epinephrine 1:1000 1 mg		2	2	2
Epinephrine 1:10,000 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

Exchanged Medications/Solutions	BLS	LALS	ALS Non-Transport	ALS Transport
Nitroglycerine - Spray 0.4 mg metered dose and/or tablets (tablets to be discarded 90 days after opening)		2	1	2
Normal Saline for Injection (10 cc)		2	2	2
Normal Saline 100 cc			1	2
Normal Saline 250 cc			1	1
Normal Saline 500 ml and/or 1000 ml		2000 ml	3000 ml	6000 ml
Ondansetron (Zofran) 4 mg Oral Disintegrating Tablets (ODT)			4	4
Ondansetron (Zofran) 4 mg IM/ IV			4	4
Phenylephrine HCL - 0.5 mg per metered dose			1 bottle	1 bottle
Procainamide 1 gm			1	2
Sodium Bicarbonate 50 mEq preload			2	2
Verapamil 5 mg			3	3

\* All EMS providers must transition to Dextrose 10% (D10W) by June 1, 2015. Between December 1, 2014 and June 1, 2015, EMS providers may carry reduced quantities of D50 and D25 provided a minimum of 50 gm is available in combination of all concentrations.

### CONTROLLED SUBSTANCE MEDICATIONS

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
Morphine Sulfate -vials of 10 mg **			20-60mg	30-60mg

\*\* All EMS providers must transition to Fentanyl by June 1, 2015. Between December 1, 2014 and June 1, 2015, EMS providers must stock either Fentanyl or Morphine but not both.

### AIRWAY/SUCTION EQUIPMENT

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

<b>Exchanged Airway/Suction Equipment</b>	<b>BLS</b>	<b>LALS</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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
Suction Canister	1		1	1
Suction catheters - 6fr, 8fr or 10fr, 12fr or 14fr	1 each		1 each	1 each
Ventilation Bags - Infant 250 ml Pediatric 500 ml (or equivalent) Adult	1 1 1	1 1 1	1 1 1	1 1 1
Water soluble lubricating jelly		1	1	1

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

**IV/NEEDLES/SYRINGES/MONITORING EQUIPMENT**

<b>Exchanged IV/Needles/Syringes/Monitor Equipment</b>	<b>BLS</b>	<b>LALS</b>	<b>ALS Non- Transport</b>	<b>ALS Transport</b>
Conductive medium or Pacer/Defibrillation pads			2 each	2 each
Disposable Tourniquets		2	2	2
ECG electrodes			20	20
EZ-IO Needles and Driver 15 mm, 25 mm, and 45 mm			2 each 1 each	2 each 1 each
Glucose monitoring device with compatible strips and OSHA approved single use lancets		1	1	1
3-way stopcock with extension tubing			2	2
IV Catheters - sizes 14, 16, 18, 20, 22, 24		2 each	2 each	2 each
Macro drip Administration Set		3	3	3
Micro drip Administration Set (60 drops /cc)		1	1	2
Mucosal Atomizer Device (MAD) for nasal administration of medication		2	2	4
Pressure Infusion Bag (disposable)		1	1	1
Razors		1	2	2
Safety Needles - 20 or 21 gauge and 23 or 25 gauge		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

<b>Non-Exchange IV/Needles/Syringes/Monitor Equipment</b>	<b>BLS</b>	<b>LALS</b>	<b>ALS Non- Transport</b>	<b>ALS Transport</b>
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
Thermometer - Mercury Free with covers	1	1	1	1

**OPTIONAL EQUIPMENT/MEDICATIONS**

<b>Non-Exchange Optional Equipment/Medications</b>	<b>BLS</b>	<b>LALS</b>	<b>ALS Non- Transport</b>	<b>ALS Transport</b>
AED/defib pads - Adult (1), Pediatric (1)	1 each	1 each		
Ammonia Inhalants			2	2
Automatic CPR device (FDA approved)	1	1	1	1

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

## \* Hemostatic Dressings

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

**Note:**

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

**DRESSING MATERIALS/OTHER EQUIPMENT/SUPPLIES**

<b>Exchanged Dressing Materials/Other Equipment/Supplies</b>	<b>BLS</b>	<b>LALS</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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
Bedpan or fracture pan	1(BLS TRANSPORT UNITS ONLY			1
Urinal	1(BLS TRANSPORT UNITS ONLY			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

<b>Non-Exchange Dressing Materials/Other Equipment/Supplies</b>	<b>BLS</b>	<b>LALS</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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
Drinkable water in secured plastic container or equivalent	1 gallon			1 gallon
Long board with restraint straps	1	1	1	1
Pediatric immobilization board	1	1	1	1
Pillow, pillow case, sheets and blanket	1 set (BLS TRANSPORT UNITS ONLY			1 set

<b>Non-Exchange Dressing Materials/Other Equipment/Supplies</b>	<b>BLS</b>	<b>LALS</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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 - CAL Chiefs or ICEMA approved	20	20	20	20



## EMS AIRCRAFT STANDARD DRUG & 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
Dextrose 25% 2.5 gm preload *	2
Dextrose 50% 25 gm preload *	2
Diphenhydramine (Benadryl) 50 mg	1
Dopamine 400 mg	1
Epinephrine 1:1,000	2
Epinephrine 1:10,000	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 - 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
Phenylephrine HCL - 0.5 mg per metered dose	1 bottle
Procainamide 1 gm	1
Sodium Bicarbonate 50 mEq preload	2
Verapamil 5 mg	3

\* All EMS providers must transition to Dextrose 10% (D10W) by June 1, 2015. Between December 1, 2014 and June 1, 2015, EMS providers may carry reduced quantities of D50 and D25 provided a minimum of 50 gm is available in combination of all concentrations.

<b>CONTROLLED SUBSTANCE MEDICATIONS-MUST BE DOUBLE LOCKED</b>	<b>AMOUNT</b>
Fentanyl **	200-400 mcg
Midazolam	20-40 mg
Morphine Sulfate - vials 10 mg **	20-60 mg

\*\* All EMS providers must transition to Fentanyl by June 1, 2015. Between December 1, 2014 and June 1, 2015, EMS providers must stock either Fentanyl or Morphine but not both.

<b>AIRWAY/SUCTION EQUIPMENT</b>	<b>AMOUNT</b>
Aircraft Oxygen source -10 L /min for 20 minutes	1
BAAM Device	1
C-PAP circuits - all manufacture's available sizes	1 each
End-tittle CO2 device - pediatric and adult (may be integrated into bag)	1 each
Endotracheal tubes, uncuffed - 2.5, 3.0, 3.5 with stylet	2 each
Endotracheal Tubes, uncuffed - 4.0 or 4.5, 5.0 or 5.5 with stylet	2 each
Endotracheal Tubes cuffed - 6.0 and/or 6.5, 7.0 and/or 7.5 and 8.0 and/or 8.5 with stylet	2 each
ET Tube holders - pediatric and adult	1 each
Flashlight/penlight	1
King LTS-D Adult: Size 3 (yellow) Size 4 (red) Size 5 (purple)	1 each
King Ped: 12-25 kg: Size 2 (green) 25-35 kg: Size 2.5 (orange)	1 each
Laryngoscope handle with batteries - or 2 disposable handles	1
Laryngeal blades - #0, #1, #2, #3, #4 curved and/or straight	1 each
Magill Forceps - Pediatric and Adult	1 each
Nasal Cannulas - infant, pediatric and adult	2 each
Naso/Orogastric tubes - 10fr or 12fr, 14fr, 16fr or 18fr	1 each
Naso/Orogastric feeding tubes - 5fr or 6fr, and 8fr	1 each
Nasopharyngeal Airways - infant, child, and adult	1 each
Needle Cricothyrotomy Device (Approved) - Pediatric and adult <i>or</i>	1 each
Needles for procedure 10, 12, 14 and/or 16 gauge	2 each
Non Re-Breather O <sub>2</sub> 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) <i>and/or</i> 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

<b>IV/NEEDLES/SYRINGES/MONITORING EQUIPMENT</b>	<b>AMOUNT</b>
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 <i>or</i> Adult and Pediatric Pacer/Defibrillation pads	2 each
ECG - Pediatric and Adult	20 patches
EZ IO Needles and Driver 15 mm, 25 mm, and 45 mm	2 each 1 each
3-way stopcock with extension tubing	2
IO Needles - Manual, Adult and Pediatric, <u>Optional</u>	1 each
IV Catheters - sizes 14, 16, 18, 20, 22, 24	2 each
Glucose monitoring device	1
Macro drip Administration Set	3
Micro drip Administration Set (60 drops/ml)	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

<b>DRESSING MATERIALS/OTHER EQUIPMENT SUPPLIES</b>	<b>AMOUNT</b>
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 <i>or</i>	1 each
Cervical Collars - Adjustable Adult and Pediatric	1 each
Emesis basin or disposable bags and covered waste container	1
Head immobilization device	1
OB Kit	1
Pneumatic or rigid splints capable of splinting all extremities	4
Providence/Iodine swabs/wipes or antiseptic equivalent	
Roller bandages - 4 inch	3
Sterile bandage compress or equivalent	6
Sterile gauze pads - 4x4 inch	4

<b>DRESSING MATERIALS/OTHER EQUIPMENT SUPPLIES</b>	<b>AMOUNT</b>
Sterile Sheet for Burns	2
Traction splint	1
Universal Dressing 10x30 inches	2

<b>OPTIONAL EQUIPMENT/MEDICATIONS</b>	<b>Amount</b>
Ammonia Inhalants	2
Automatic ventilator (Approved)	1
Backboard padding	1
BLS AED/defib pads	1
Chemistry profile tubes	3
CyanoKit (Specialty Program Only)	SPECIALTY PROGRAMS ONLY
D5W in bag	1
Endotracheal tubes, cuffed - 2.5, 3.0, 3.5 with stylet	SPECIALTY PROGRAMS ONLY
Endotracheal Tubes, cuffed - 4.0 or 4.5, 5.0 or 5.5 with stylet	SPECIALTY PROGRAMS ONLY
Hemostatic Dressing *	1
IV infusion pump	1
IV warming device	1
Manual powered suction device	1
Medical Tourniquet	1
Needle Thoracostomy Kit (prepackaged)	2
Pediatric immobilization board	1
Pitocin	2
Translaryngeal Jet Ventilation Device	1
Vacutainer	1

\* Hemostatic Dressings

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

**Note:**

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



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## MEDICATION - STANDARD ORDERS

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### **Adenosine (Adenocard) - Adult (ALS)**

*Stable narrow-complex SVT or Wide complex tachycardia:*

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

*Reference #s 7010, 7020, 11050*

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

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

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

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

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

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

### **Albuterol - Pediatric (LALS, ALS)**

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

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

### **Aspirin, chewable (LALS, ALS)**

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

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

### **Atropine (ALS)**

Atropine, 0.5 mg 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)**

Dextrose 10%/250 ml (D10W 25 g) IV/IO Bolus

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

**Dextrose - Pediatric (LALS, ALS)**

Dextrose 10%/250 ml (D10W 25 g) 0.5 g/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*

**Dopamine - Adult (ALS)**

Dopamine, infusion of 400 mg in 250 ml of NS IV/IO, titrated between 5 - 20 mcg/kg/min to maintain signs of adequate tissue perfusion.

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



*Newborn Care:*

Epinephrine (1: 10,000), 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 (1:10,000), 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 (1:10,000), 0.5 mcg/kg/min IV/IO drip

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

**Fentanyl - Adult (ALS)**

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.

**Fentanyl - Pediatric (ALS)**

Fentanyl, 0.5 mcg/kg slow IV/IO over one (1) minute. May repeat in five 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, 6090, 6110, 7010, 7020, 7030, 9120, 10110 10120, 11060, 11100, 13030, 14070, 15010, 15020*

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

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

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

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

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

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

**Glucagon - Adult (LALS, ALS)**

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

*Betablocker 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 Inhalation Solution (Atrovent) - Adult (ALS) use with Albuterol**

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

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

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

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

*Reference #s 6090, 6110, 7010, 7020*

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

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

*Reference #s 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/VF:***

Initial Dose: Lidocaine, 1.5 mg/kg IV/IO

May administer an additional 0.75 mg/kg IV/IO, repeat once in five (5) to ten (10) minutes for refractory VF.

***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 IV/IO, repeat once in five (5) to ten (10) minutes for refractory VF

Initiate infusion of Lidocaine 2 mg/min IV/IO drip.

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

**Lidocaine - Pediatric (ALS)**

*Intubation, 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.

*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*

**Magnesium Sulfate (ALS)**

*Polymorphic Ventricular Tachycardia:*

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

*Eclampsia (Seizure/Tonic/Clonic Activity):*

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

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

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

**Midazolam - Adult (ALS)**

*Seizure:*

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

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

Assess patient for medication related reduced respiratory rate or hypotension.

Maximum of three (3) doses using any combination of IM/IN/IV/IO may be 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, 10110, 10120, 11080, 13020, 14080*

**Midazolam - Pediatric (ALS)***Seizures:*

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

Midazolam, 0.2 mg/kg IM/IN with maximum dose of 5 mg. May repeat Midazolam in ten (10) minutes for continued seizure. IN dosage of Midazolam is doubled due to decreased surface area of nasal mucosa resulting in decreased absorption of medication.

Assess patient for medication related reduced respiratory rate or hypotension.

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

*Reference #s 7010, 7020, 14060*

**Morphine - Adult (ALS)**

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

*Isolated Extremity Trauma, Burns:*

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

Morphine, 10 mg IM.

*Pacing, synchronized cardioversion:*

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

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

**Morphine - Pediatric (ALS)**

Morphine, 0.1 mg/kg IV/IO not to exceed 2 mg increments, for a total of 5 mg, **or**

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

*Burns:*

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

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

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

**Naloxone (Narcan) - Adult (LALS, ALS)***Resolution of respiratory depression related to suspected narcotic overdose:*

Naloxone, 0.5 mg IV/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, 11070, 11080*

**Naloxone (Narcan) - Pediatric (LALS, ALS)***Resolution of respiratory depression related to suspected narcotic overdose:*

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

9 to 14 years      Naloxone, 0.5 mg IV/IO

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

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

**Nitroglycerin (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 and may repeat twice, 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*

### **Phenylephrine HCL (ALS)**

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

*Reference #s 7010, 7020, 10050*

### **Procainamide (ALS)**

*SVT, V-Tach or Wide Complex Tachycardias:*

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

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

### **Sodium Bicarbonate (ALS)**

*Tricyclic Poisoning:*

Sodium Bicarbonate, 1 mEq/kg IV/IO

*Reference #s 2020, 7010, 7020, 13010*

### **Verapamil (ALS)**

*SVT if adenosine is ineffective:*

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

*Reference #s 7010, 7020, 11050*



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## CRITICAL CARE INTERFACILITY TRANSPORT

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### I. PURPOSE

To establish criteria for the approval of Critical Care Transport (CCT) providers including nurse staffed Advanced Life Support (ALS) Interfacility Transport units operating within San Bernardino, Inyo or Mono Counties.

### II. PROGRAM APPROVAL

1. Requests for approval must be made in writing sixty (60) days prior to the anticipated starting date of service. The request must include:
  - a. Proposed identification and location of the nurse staffed unit.
  - b. All procedures and protocols.
  - c. Documentation of qualifications for the Medical Director.
  - d. Documentation of qualifications for the Nurse Coordinator.
  - e. Continuous Quality Improvement Plan.
  - f. Agreement to comply with all ICEMA policies and procedures for transport of critical patients.
2. ICEMA will notify the applicant in a timely manner, if any further documentation is needed.
3. The applicant shall be notified in writing of approval or denial of the program.

### III. EQUIPMENT

**The EMS provider shall provide, at a minimum, the following equipment:**

1. ALS equipment per ICEMA Reference #7010 - BLS/LALS/ALS Standard Drug & Equipment List.
2. Back-up power source.

#### IV. MEDICAL DIRECTOR

1. Medical Director: A full or part-time physician licensed in the State of California and qualified by training and experience with practice, within the last five (5) years, in emergency or acute critical care medicine. The ICEMA Medical Director must approve the candidate for medical director. The duties of the medical director shall include but not be limited to:
  - a. Sign and approve, in advance, all medical protocols to be followed by the registered nurses (RN) at the ALS level.
  - b. Ensure the ongoing training of all nurse staff involved.
  - c. Ensure the quality of patient transfers being conducted by the provider, including familiarity with SB612 and COBRA laws.
  - d. Ensure that continuous quality improvement/assurance outcome audits are conducted.

#### V. NURSE COORDINATOR

1. Nurse Coordinator: A full or part-time RN employed as a Nurse Coordinator qualified by training and/or experience in emergency or acute critical care medicine, within the last five (5) years, in emergency or acute critical care nursing. The duties of the Nurse Coordinator shall include but not be limited to:
  - a. Sign and approve, in advance, all nursing procedures to be followed by the RN at the ALS level.
  - b. Provide ongoing training to all CCT personnel
  - c. Ensure quality of patient transfers through **continuous quality improvement/assurance outcome audits.**

#### VI. PROCEDURES/PROTOCOLS

1. Each CCT provider utilizing nurse staffed ALS units shall develop and maintain procedures for the hiring and training of nursing personnel.
2. Each provider must develop a manual to include the following:
  - a. Malpractice insurance coverage.
  - b. Identity and accessibility of the Medical Director and Nurse Coordinator.

- c. Vehicle inventory lists.
  - d. Copies of all related interfacility transfer paperwork.
  - e. Statement of responsibility of the sending physician for the patient during transfer and in accordance with COBRA and SB612 laws.
  - f. Guidelines for change in patient destination due to patient condition.
  - g. Protocols (Standing Orders) based on ACLS, PALS and/or NALS guidelines.
3. Procedures and protocols shall be subject to review by ICEMA.

## **VII. CONTINUOUS QUALITY IMPROVEMENT**

1. Submit to ICEMA a continuous quality improvement (CQI) plan, quarterly and annual reports to ICEMA.
2. All transports resulting in poor patient outcome shall be reviewed in a timely manner following the occurrence.
3. Periodic staff conferences on audits and outcomes are required in order to improve or revise protocols.
4. Records of all these activities shall be kept by the provider and be made available for inspection and audit by ICEMA.
5. ICEMA shall perform periodic on-site audits of records to ensure compliance with this policy.
6. Non-compliance with ICEMA policies and/or protocols may lead to suspension or revocation of ICEMA approval of the EMS provider's CCT program.



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## CONTINUATION OF CARE (San Bernardino County Only)

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### I. PURPOSE

To develop a system that ensures the rapid transport of patients at the time of symptom onset or injury, to receiving the most appropriate definitive care. This system of care consists of public safety answering point (PSAP) providers, EMS providers, referral hospitals (RH), Specialty Care Centers (Trauma, Cardiovascular ST Elevation Myocardial Infarction (STEMI) or Stroke), ICEMA and EMS leaders combining their efforts to achieve this goal.

This policy shall only be used for:

- Rapid transport of trauma, STEMI and stroke patients from RH to Specialty Care Center.
- Specialty Care Center to Specialty Care Center when higher level of care is required.
- EMS providers transporting unstable patients requiring transport to a Specialty Care Center to stop at any closest receiving hospital for airway stabilization, and continue on to a Specialty Care Center.

It is not to be used for any other form of interfacility transfer of patients.

### II. DEFINITIONS

**Neurovascular Stroke Receiving Centers (NSRC):** A licensed general acute care hospital designated by ICEMA's Governing Board as a NSRC.

**Referral Hospital (RH):** Any licensed general acute care hospital that is not an ICEMA designated TC, SRC or NSRC.

**Specialty Care Center:** An ICEMA designated Trauma, STEMI or Stroke Center.

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

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

### III. INCLUSION CRITERIA

- Any patient meeting ICEMA Trauma Triage Criteria, (refer to ICEMA Reference #15030 - Trauma Triage Criteria and Destination Policy) arriving at a non-trauma hospital by EMS or non-EMS transport.
- Any patient with a positive STEMI requiring EMS transport to a SRC (refer to ICEMA Reference #6070 - Cardiovascular ST Elevation Myocardial Infarction Receiving Centers Criteria and Destination Policy).
- Any patient with a positive mLAPSS or stroke scale requiring EMS transport to a NSRC (refer to ICEMA Reference #6100 - Neurovascular Stroke Receiving Centers Criteria and Destination Policy).

### IV. INITIAL TREATMENT GOALS AT RH

- Initiate resuscitative measures within the capabilities of the facility.
- Ensure patient stabilization is adequate for subsequent transport.
- Do not delay transport by initiating any diagnostic procedures that do not have direct impact on immediate resuscitative measures.

#### ➤ TIMELINES

- < 30 minutes at RH (door-in/door-out).
- < 30 minutes to complete ALS continuation of care transport.
- < 30 minutes door-to-intervention at Specialty Care Center.
- RH shall contact the appropriate Specialty Care Center ED physician directly without calling for an inpatient bed assignment. Refer to Section IV - SRH-SRC Buddy System Table.
- EMS providers shall make Specialty Care Center base hospital contact.
- The Specialty Care Centers shall accept all referred trauma, stroke and STEMI patients unless they are on Internal Disaster as defined in ICEMA Reference #8060 - Requests for Hospital Diversion Policy (San Bernardino County Only).
- The Specialty Care Center ED physician is the accepting physician at the Specialty Care Center and will activate the internal Trauma, STEMI, or Stroke Team according to internal TC, SRC or NSRC policies or protocols.

- RH ED physician will determine the appropriate mode of transportation for the patient.
- Simultaneously call 9-1-1 and utilize the following script to dispatch:  
  
**“This is a Continuation of Care run from \_\_\_\_ hospital to \_\_\_\_ Trauma, STEMI or Stroke Center”**  
  
*Dispatchers will only dispatch transporting paramedic units without any fire apparatus.*
- RH must send all medical records, test results, radiologic evaluations to the Specialty Care Center. DO NOT DELAY TRANSPORT - these documents may be FAXED to the Specialty Care Center.

#### V. SPECIAL CONSIDERATIONS

- If the patient has arrived at the RH via EMS field personnel, the RH ED physician may request that the transporting team remain and immediately transport the patient once minimal stabilization is done at the RH.
- EMT-Ps may only transport patients on Dopamine, Lidocaine and Procainamide drips. Heparin and Integrillin drips are not within the EMT-P scope of practice and require a “critical care transport” nurse to be in attendance. Unless medically necessary, avoid using medication drips that are outside of the EMT-P scope of practice to avoid any delays in transferring of patients.
- The RH may consider sending one of its nurses with the transporting ALS unit if deemed necessary due to the patient’s condition or scope of practice.
- Nurse staffed ALS units (ground or air) may be used; but may create a delay due to availability. Requests for a nurse staffed ALS unit must be made directly to the Critical Care Transport (CCT) provider by landline.
- Specialty Care Center diversion is not permitted except for Internal Disaster. However, Specialty Care Center base hospitals are allowed to facilitate redirecting of EMS patients to nearby SRCs, NSRCs or TCs when the closest Specialty Care Center is over capacity to avoid prolonged door-to-intervention times. Specialty Care Center base hospitals shall ensure physician to physician contact when redirecting patients.

**VI. SPECIALTY CARE CENTER - REFERRAL HOSPITAL BUDDY SYSTEM TABLE**

NEUROVASCULAR STROKE RECEIVING CENTERS (NSRC)	NEUROVASCULAR STROKE REFERRAL HOSPITALS (NSRH)
Arrowhead Regional Medical Center	<ul style="list-style-type: none"> <li>• Barstow Community Hospital</li> <li>• Community Hospital of San Bernardino</li> <li>• Desert Valley Hospital</li> <li>• Kaiser Fontana Medical Center</li> <li>• St. Bernardine Medical Center</li> <li>• St. Mary Medical Center</li> </ul>
Desert Regional Medical Center	<ul style="list-style-type: none"> <li>• Colorado River Medical Center</li> <li>• Hi-Desert Medical Center</li> </ul>
Loma Linda University Medical Center	<ul style="list-style-type: none"> <li>• Bear Valley Community Hospital</li> <li>• J.L. Pettis VA Hospital (Loma Linda VA)</li> <li>• Mountains Community Hospital</li> <li>• St. Mary Medical Center</li> <li>• Victor Valley Global Medical Center</li> <li>• Weed Army Community Hospital at Fort Irwin</li> </ul>
Pomona Valley Hospital Medical Center	<ul style="list-style-type: none"> <li>• Chino Valley Medical Center</li> <li>• Montclair Hospital Medical Center</li> </ul>
Redlands Community Hospital	<ul style="list-style-type: none"> <li>• Bear Valley Community Hospital</li> <li>• Community Hospital of San Bernardino</li> <li>• St. Bernardine Medical Center</li> </ul>
San Antonio Community Hospital	<ul style="list-style-type: none"> <li>• Chino Valley Medical Center</li> <li>• Kaiser Ontario Medical Center</li> <li>• Montclair Hospital Medical Center</li> </ul>
STEMI RECEIVING CENTER (SRC)	STEMI REFERRAL HOSPITAL (SRH)
Desert Valley Hospital	<ul style="list-style-type: none"> <li>• Barstow Community Hospital</li> <li>• Victor Valley Global Medical Center</li> <li>• Weed Army Community Hospital at Fort Irwin</li> </ul>
Loma Linda University Medical Center	<ul style="list-style-type: none"> <li>• Arrowhead Regional Medical Center</li> <li>• Bear Valley Community Hospital</li> <li>• J. L. Pettis VA Hospital (Loma Linda VA)</li> <li>• Redlands Community Hospital</li> </ul>
Pomona Valley Hospital Medical Center	<ul style="list-style-type: none"> <li>• Chino Valley Medical Center</li> <li>• Montclair Hospital Medical Center</li> </ul>
San Antonio Community Hospital	<ul style="list-style-type: none"> <li>• Chino Valley Medical Center</li> <li>• Kaiser Ontario Medical Center</li> <li>• Montclair Hospital Medical Center</li> </ul>
St. Bernardine Medical Center	<ul style="list-style-type: none"> <li>• Colorado River Medical Center</li> <li>• Community Hospital of San Bernardino</li> <li>• Kaiser Fontana Medical Center</li> <li>• Mountains Community Hospital</li> </ul>
St. Mary Medical Center	<ul style="list-style-type: none"> <li>• Barstow Community Hospital</li> <li>• Bear Valley Community Hospital</li> <li>• Hi-Desert Medical Center</li> <li>• Robert E. Bush Naval Hospital-29 Palms</li> <li>• Victor Valley Global Medical Center</li> </ul>

**VII. REFERENCES**

<u>Number</u>	<u>Name</u>
6070	Cardiovascular ST Elevation Myocardial Infarction Receiving Centers Criteria and Destination Policy
6100	Neurovascular Stroke Receiving Centers Criteria and Destination Policy (San Bernardino County Only)
8060	Requests for Hospital Diversion Policy (San Bernardino County Only)
15030	Trauma Triage Criteria and Destination Policy



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## NAUSEA AND VOMITING

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### I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Nausea.
- Vomiting.
- Prophylactic treatment of narcotic induced nausea and/or vomiting.

### II. CONTRAINDICATIONS

**Patients under four (4) years of age.**

Known sensitivity to Ondansetron or other 5-HT<sub>3</sub> antagonists:

- Granisetron (Kytril)
- Dolasetron (Anzemet)
- Palonosetron (Aloxi)

### III. ALS PROCEDURE

- Assess patient for need for anti-emetic therapy.
- Maintain airway.
- Position of comfort.
- Oxygen.
- Cardiac monitoring in patients with history of cardiac problems.
- Ondansetron per ICEMA Reference #7040 - Medication - Standard Orders.

### IV. DOCUMENTATION

Document patient response.



## KING AIRWAY DEVICE (PERILARYNGEAL) - ADULT (Limited ALS (LALS), ALS and Approved BLS Specialty Program Providers)

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Use of the King Airway adjunct may be performed only on those patients who meet **ALL** of the following criteria:
  - Unresponsive, agonal respirations (less than six (6) breaths per minute) or apneic.
  - No gag reflex.
  - Anyone over four (4) feet in height.
    - 4 - 5 feet: Size 3 (connector color - yellow)
    - 5 - 6 feet: Size 4 (connector color - red)
    - 6 feet and over: Size 5 (connector color - purple)

### II. ADDITIONAL CONSIDERATIONS

- BVM management not adequate or effective.
- A King Airway adjunct should not be removed unless it becomes ineffective.
- Medications may **NOT** be given via the King Airway.

### III. CONTRAINDICATIONS

- Conscious patients with an intact gag reflex.
- Known ingestion of caustic substances.
- Suspected foreign body airway obstruction (FBAO).
- Facial and/or esophageal trauma.
- Patients with known esophageal disease (cancer, varices, surgery, etc.).
- Epiglottitis.
- Airway burns.

#### IV. PROCEDURE

- Using the information provided, choose the correct KING LTS-D size based on patient height.
- Test cuff inflation system by injecting the maximum recommended volume of air into the cuffs (size 3 - 60 ml; size 4 - 80 ml; size 5 - 90 ml). Prior to insertion, disconnect valve actuator from Inflation Valve and remove all air from both cuffs.
- Apply a water-based lubricant to the beveled distal tip and posterior aspect of the tube taking care to avoid introduction of lubricant in or near the ventilatory openings.
- Have a spare KING LTS-D ready and prepared for immediate use.
- Pre-oxygenate.
- Position the head. (The ideal head position for insertion of the KING LTS-D is the “sniffing position”.)
- Hold the KING LTS-D at the connector with dominant hand. With non-dominant hand, hold mouth open and apply chin lift.
- With the KING LTS-D rotated laterally 45-90°, introduce tip into mouth and advance behind base of tongue.
- Rotate the tube back to the midline as the tip reaches the posterior wall of the pharynx.
- Without exerting excessive force, advance KING LTS-D until base of connector is aligned with teeth or gums.
- Holding the KLT 900 Cuff Pressure Gauge in non-dominant hand, inflate cuffs of the KING LTS-D to 60 cm H<sub>2</sub>O. If a cuff pressure gauge is not available and a syringe is being used to inflate the KING LTS-D, inflate cuffs with the minimum volume necessary to seal the airway at the peak ventilatory pressure employed (just seal volume).
- Attach the breathing circuit to the 15 mm connector of the KING LTS-D. While gently bagging the patient to assess ventilation, simultaneously withdraw the airway until ventilation is easy and free flowing (large tidal volume with minimal airway pressure).
- Reference marks are provided at the proximal end of the KING LTS-D which when aligned with the upper teeth give an indication of the depth of insertion.

- Confirm proper position by auscultation, chest movement and/or verification of CO<sub>2</sub> by capnography.
- Re-adjust cuff inflation to 60 cm H<sub>2</sub>O (or to just seal volume).
- Secure KING LTS-D to patient.

## **V. DOCUMENTATION**

In the event the receiving physician discovers the device is improperly placed, an incident Report must be completed by the receiving hospital and forwarded to ICEMA within twenty-four (24) hours of the incident. Forms are available as part of the protocol manual and on the ICEMA website.

DELETED



## KING AIRWAY DEVICE (PERILARYNGEAL) – PEDIATRIC (Less than 15 years of age)

### FIELD ASSESSMENT/TREATMENT INDICATORS

1. Use of the King Airway adjunct may be performed only on those patients who meet **ALL** of the following criteria:
  - a. Unresponsive, agonal respirations (less than 6 per minute) or apneic.
  - b. No gag reflex.
  - c. Pediatric patients meeting the following criteria:
    - i. 35-45 inches or 12-25 kg: Size 2 (connector color: green)
    - ii. 41-51 inches or 25-35 kg: Size 2.5 (connector color: orange).

### ADDITIONAL CONSIDERATIONS

1. BVM management not adequate or effective.
2. A King Airway adjunct should not be removed unless it becomes ineffective.
3. Medications may **NOT** be given via the King Airway.

### CONTRAINDICATIONS

1. Conscious patients with an intact gag reflex.
2. Known ingestion of caustic substances.
3. Suspected foreign body airway obstruction (FBAO).
4. Facial and/or esophageal trauma.
5. Patients with known esophageal disease (cancer, varices, surgery, etc.).
6. Epiglottitis
7. Airway burns

**PROCEDURE**

1. Using the information provided, choose the correct KING LT size based on patient height.
2. Test cuff inflation system by injecting the maximum recommended volume of air into the cuffs (size 2: 25–35 ml; size 2.5: 30-40 ml). Prior to insertion, disconnect Valve Actuator from Inflation Valve and remove all air from both cuffs.
3. Apply a water-based lubricant to the beveled distal tip and posterior aspect of the tube taking care to avoid introduction of lubricant in or near the ventilatory openings.
4. Have a spare KING LT ready and prepared for immediate use.
5. Pre-oxygenate.
6. Position the head. (The ideal head position for insertion of the KING LT is the “sniffing position.”)
7. Hold the KING LT at the connector with dominant hand. With non-dominant hand, hold mouth open and apply chin lift.
8. With the KING LT rotated laterally 45-90°, introduce tip into mouth and advance behind base of tongue.
9. Rotate the tube back to the midline as the tip reaches the posterior wall of the pharynx.
10. Without exerting excessive force, advance KING LT until base of connector is aligned with teeth or gums.
11. Holding the KLT 900 Cuff Pressure Gauge in non-dominant hand, inflate cuffs of the KING LT to 60 cm H<sub>2</sub>O. If a cuff pressure gauge is not available and a syringe is being used to inflate the KING LT, inflate cuffs with the minimum volume necessary to seal the airway at the peak ventilatory pressure employed (just seal volume).
12. Attach the breathing circuit to the 15 mm connector of the KING LT. While gently bagging the patient to assess ventilation, simultaneously withdraw the airway until ventilation is easy and free flowing (large tidal volume with minimal airway pressure).

13. Reference marks are provided at the proximal end of the KING LT which when aligned with the upper teeth give an indication of the depth of insertion.
14. Confirm proper position by auscultation, chest movement and/or verification of CO<sub>2</sub> by capnography.
15. Re-adjust cuff inflation to 60 cm H<sub>2</sub>O (or to just seal volume).
16. Secure KING LT to patient.

#### **DOCUMENTATION**

In the event the receiving physician discovers the device is improperly placed, attached is an Incident Report that must be filled out and forwarded to ICEMA within one (1) week by the receiving hospital.



## ORAL ENDOTRACHEAL INTUBATION - ADULT

### AUTHORITY

Sections 1797.107, 1797.172 and 1797.176, Health and Safety Code.

Reference: Sections 1797.90, 1797.172, 1797.202, 1797.220, 1798, 1798.2, 1798.3 and 1798.105, Health and Safety Code

### FIELD ASSESSMENT/TREATMENT INDICATORS

1. Non-responsive and apneic patients.
2. Agonal or failing respirations with no gag reflex present.
3. Prolonged ventilation is required and adequate ventilation cannot otherwise be achieved.

Procedure may **initially** be contraindicated with suspected ALOC per Protocol Reference #11080, Altered Level of Consciousness/Seizures.

### PROCEDURE

1. Support ventilations with appropriate basic airway adjuncts. Use in-line cervical stabilization as needed to prevent lateral movement of the head.
2. Immediately prior to intubation, consider prophylactic Lidocaine 1.5mg/kg IV for suspected head/brain injury.
3. Select appropriate cuffed tube and pre-oxygenate. Cricoid pressure should be applied during intubation to protect against regurgitation of gastric contents.
  - a. Visualize the epiglottis and vocal cords with the laryngoscope. Insert the endotracheal tube until the entire balloon is 2cm past the vocal cords. Placement efforts must stop after twenty (20) seconds for ventilation.
  - b. Inflate the balloon with air to the point where no air leak can be heard; listen to breath sounds and resume ventilation with 100% oxygen. Secure the endotracheal tube.

- c. Monitor end-tidal CO<sub>2</sub> with capnography when available and monitor pulse oximetry and suction the trachea when necessary.
  - d. Document methods of verifying tube placement, (auscultation, visualization, capnography when available)
4. If unable to place ET after a maximum of three (3) intubation attempts (an attempt is considered made when tube passes the gum line), and if all procedures to establish an adequate airway fail, consider needle cricothyrotomy per protocol Reference #10070, Needle Cricothyrotomy.

#### DOCUMENTATION

In the event the receiving physician discovers the device is improperly placed, an Incident Report must be completed by the receiving hospital and forwarded to ICEMA within twenty-four (24) hours of the incident. Forms are available as part of the protocol manual and on the ICEMA website.



## ORAL ENDOTRACHEAL INTUBATION - PEDIATRIC (Less than 15 years of age)

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Non-responsive and apneic patients.
- Patients with agonal or failing respirations, and/or no gag reflex.
- Unable to maintain BLS airway.

Procedure may **initially** be contraindicated with suspected ALOC per ICEMA Reference #14050 - Pediatric Altered Level of Consciousness.

### II. PROCEDURE

Use in-line cervical stabilization.

- Immediately prior to intubation, consider prophylactic Lidocaine 1.5 mg/kg IVP for suspected head/brain injury.
- Select stylet with appropriate tube size.
  - Visualize the vocal cords with the laryngoscope. Watch as the tube passes through the vocal cords. Advance the tube until the vocal cord marker is situated beyond the vocal cords. Placement efforts must stop after twenty (20) seconds for ventilation.
  - Listen for breath sounds, resume ventilation with 100% oxygen and secure the airway. Place all patients under the age of eight (8) years in full axial-spinal stabilization.
  - Monitor end-tidal CO<sub>2</sub> and/or pulse oximetry. If available, utilize Waveform Capnography to assess efficacy of compressions and ventilations.
  - Reassess tube placement, lung sounds, pulse ox, and capnography frequently and every time patient is moved.
  - Document verification of tube placement. Run a continuous strip of capnography readings during movement of patient to verify tube placement.

- Insert NG/OG immediately after intubation to relieve gastric distention
- After two (2) intubation attempts, Base Station contact is required. (An attempt is considered made when the tube passes the gum line.)
- If all procedures to establish an adequate airway fail, consider ICEMA Reference #10070 - Needle Cricothyrotomy.

### III. DOCUMENTATION

In the event the receiving physician discovers the device is improperly placed, an Incident Report must be completed by the receiving hospital and forwarded to ICEMA within 24 hours of the incident. Forms are available as part of the protocol manual and on the ICEMA website.

### IV. REFERENCES

<u>Number</u>	<u>Name</u>
10070	Needle Cricothyrotomy
14050	Pediatric Altered Level of Consciousness.



## NASOTRACHEAL INTUBATION

### FIELD ASSESSMENT/TREATMENT INDICATORS

1. Possible cervical spine injury with clenched jaw and gag reflex.
2. Trapped and inaccessible for direct laryngoscopy.
3. Severe respiratory distress per Protocol Reference #11010, Adult Respiratory Emergencies.
4. Patient nares is able to accommodate size 7.0, 7.5 or 8.0 endotracheal tubes.

### ABSOLUTE CONTRAINDICATIONS

Apnea.

### RELATIVE CONTRAINDICATIONS

#### Base Station Contact Required

1. For significant trauma to the face or nose and/or possible basilar skull fracture.
2. For patients on anticoagulant therapy.
1. Suspected airway burns.
2. Failed CPAP.

### PROCEDURE

1. Support ventilations with appropriate basic airway adjuncts and explain the procedure to a conscious patient.
2. Immediately prior to intubation, consider prophylactic Lidocaine 1.5mg/kg IVP for suspected head/brain injury.
3. Select the nostril to be used and inspect for patency and air flow. Select the appropriate cuffed tube and pre-oxygenate patient with 100% oxygen prior to attempting procedure.

- a. If patient becomes apneic, discontinue procedure and attempt oral intubation.
  - b. Lubricate the distal tip of endotracheal tube with a water soluble jelly or viscous Lidocaine.
  - c. Position the patient as tolerated. Hold in-line cervical stabilization if neck injury is suspected.
  - d. Administer one (1) metered dose, 0.5mg of phenylephrine HCL to the selected nostril. May be repeated once prior to additional attempt.
  - e. With one hand, advance ET tube into the selected nostril with bevel facing out while applying cricoid pressure with the other hand. Monitor breath sounds continuously with Beck Airway Airflow Monitor (BAAM) while gently guiding the tube into the trachea.
  - f. Inflate the balloon with air and ventilate with 100% oxygen. Secure the ET tube.
  - g. Verify and document tube placement.
  - h. Monitor end-tidal CO<sub>2</sub>, wave form capnography and/or pulse oximetry during procedure.
  - i. Suction the trachea when necessary.
4. Contact Base Station if unable to place ET tube after a maximum of three (3) nasotracheal intubation attempts or if unable to adequately ventilate patient via BVM.

#### **DOCUMENTATION**

In the event the receiving physician discovers the device is improperly placed, an Incident Report must be completed by the receiving hospital and forwarded to ICEMA within twenty-four (24) hours of the incident. Forms are available as part of the protocol manual and on the ICEMA website.



## NEEDLE THORACOSTOMY

### FIELD ASSESSMENT/TREATMENT INDICATORS

Signs and symptoms of tension pneumothorax may include any or all of the following:

1. Increasing agitation.
2. Progressively worsening dyspnea/cyanosis.
3. Decreased or diminished breath sounds on the affected side.
4. Hypotension.
5. Distended neck veins.
6. Tracheal deviation away from the affected side.
7. In blunt chest trauma consider bilateral tension pneumothorax if SPO2 remains low with a patent airway or with poor respiratory compliance.

### PROCEDURE

1. Explain the procedure to the patient:
  - a. If conscious, place the patient in an upright position if able to tolerate.
  - b. If patient is unconscious or in axial-spinal immobilization, leave supine.
2. Use an approved pre-packaged device. If unable to obtain an approved pre-packaged device utilize the following:
  - a. For patients weighing more than 50kg - 14 or 16 gauge, 2 to 3½ inch needle and cannula.
  - b. For patients weighing less than 50kg - 18g, 1 to 1¼ inch needle and cannula.
3. Prepare the area with antiseptic wipes -- second intercostal space, midclavicular line. An alternative needle thoracostomy site may include the fourth or fifth intercostal space, mid-axillary line at nipple level. Caution should be exercised in the later stages of pregnancy when a higher (3rd) intercostal space should be used to

- avoid injury to the liver or spleen.
4. Insert needle perpendicular to the chest wall at the level of the superior border of the third rib until pleura is penetrated as indicated by one or more of the following:
    - a. A rush of air.
    - b. Ability to aspirate free air into the syringe.
  5. Remove syringe and needle stylet and leave cannula in place with flutter valve.
  6. Secure needle hub in place with tape or other approved device.
  7. Reassess patient lung sounds and respiratory status immediately and every five (5) minutes thereafter.
  8. Contact Base Station with patient update.



## NEEDLE CRICOTHYROTOMY

### FIELD ASSESSMENT/TREATMENT INDICATORS

1. Upper airway obstruction with severe respiratory distress.
2. When unable to ventilate utilizing conventional airway maneuvers or devices.

### ABSOLUTE CONTRAINDICATION

Transection of the distal trachea.

### PROCEDURE

1. Support ventilations with appropriate basic airway adjuncts. Use in-line cervical stabilization as needed. Explain procedure to a conscious patient.
2. Assemble appropriate equipment and pre-oxygenate prior to attempting procedure.
  - a. Locate the soft cricothyroid membrane between the thyroid and cricoid cartilage.
  - b. Insert appropriately sized needle and verify position. (An approved needle cricothyroid device may be utilized per manufacture's guidelines.)
    - i. Adult 10-15 gauge needle.
    - ii. Pediatric 12-15 gauge needle.
  - c. Per manufacturer's recommendation, attach cannula adapter to BVM or use Translaryngeal Jet Ventilation (TLJV) device and ventilate with either BVM or TLJV (one (1) second on and three (3) seconds off).
  - d. Assist with exhalation by intermittently pressing downward and upward on chest wall if needed. Consider adding a 3-way stopcock or y-connector inline to facilitate exhalation.
3. Document verification of needle placement.

4. Monitor end-tidal CO<sub>2</sub> and/or pulse oximetry and chest expansion. For agencies with waveform capnography document the shape of the wave and the capnography number in mmHG.
5. Contact Base Station if unable to adequately ventilate patient and transport immediately to closest hospital for airway management.

DELETED



## INSERTION OF NASOGASTRIC/OROGASTRIC TUBE

### FIELD ASSESSMENT/TREATMENT INDICATORS

1. Any intubated patient where gastric distention may impede ABC's.
2. Oral route for patients with mid-facial trauma and all patients less than six (6) months of age.
3. Conscious patients with gastric distention and/or vomiting.

### CONTRAINDICATIONS

1. History of esophageal strictures, varices and/or other esophageal diseases.
2. Caustic ingestion.
3. Significant facial or head trauma.
4. History of bleeding disorders.

### PROCEDURE

1. Explain procedure, then position patient in high fowlers unless otherwise contraindicated and select appropriate size naso/orogastric tube: adults 16-18fr, adolescents 12-14fr, children 8-10fr or infants 5-6fr.
2. Measure and mark the gastric tube for proper insertion length and have suction equipment readily available.
  - a. Nasogastric -- Combined distance between the tip of the nose to the ear lobe to the xiphoid process.
  - b. Orogastric -- Combined distance between the corner of the mouth to the ear lobe to the xiphoid process.
3. Examine both nares to determine nare with best airflow or examine oropharyngeal cavity for obstructions or secretions then:
  - a. Lubricate distal third of gastric tube with a water-soluble lubricant or viscous Lidocaine gel.

- b. Gently pass tube posteriorly along floor of nasal cavity.
  - c. Instruct patient to swallow (if conscious).
  - d. If resistance is met while using the nasal route, remove and attempt other nostril.
  - e. Slowly rotate and advance tube during insertion until pre-designated mark is at tip of nose.
  - f. If resistance is met, remove tube and attempt again.
4. For those adult patients with King LTS-D in place (Refer to Protocol #10010 King Airway Device - Perilaryngeal):
    - a. The gastric access lumen allows the insertion of up to an 18 Fr diameter gastric tube into the esophagus and stomach.
    - b. Lubricate gastric tube prior to insertion.
  5. Confirm proper placement by:
    - a. Aspiration of stomach contents.
    - b. Injection of 30-60ml of air into tube and auscultate for the sound of air over the epigastric region.
  6. Secure tube to bridge of nose (nasogastric) or side of mouth (orogastric).
  7. Attach gastric tube to suction tubing and adjust to low suction or some other type of approved suction device.
  8. If patient experiences respiratory distress at anytime during procedure, remove tube immediately.

## DOCUMENTATION

In the event the receiving physician discovers the device is improperly placed, an incident Report must be completed by the receiving hospital and forwarded to ICEMA within twenty-four (24) hours of the incident. Forms are available as part of the protocol manual and on the ICEMA website.



## VAGAL MANEUVERS

### FIELD ASSESSMENT/TREATMENT INDICATORS

Stable Narrow Complex Tachycardias.

### RELATIVE CONTRAINDICATIONS

1. Hypertension.
2. Suspected STEMI.
3. Suspected head/brain injury.

### PROCEDURE

1. Explain procedure to patient.
2. Have patient perform one of the following procedures:
  - a. Have the patient pinch nostrils together, close mouth and blow against a closed glottis.
  - b. Have patient bear down as if having a bowel movement.
3. All procedures should be performed until arrhythmia is terminated or for a maximum of ten (10) seconds.
4. Reassess cardiac and hemodynamic status. Document rhythm before, during and after procedure.
5. If rhythm does not convert within ten (10) seconds, follow Protocol Reference #11050, Adult Tachycardias.



## 12 LEAD ELECTROCARDIOGRAPHY

### PURPOSE

To identify guidelines for the acquisition, interpretation and transmission of a 12 lead ECG in the prehospital setting to facilitate early identification STEMI patients and prompt transportation to a STEMI Receiving Center (SRC).

**NOTE:** 12 lead ECG training and competency is mandatory in the ICEMA region for all ALS providers.

### POLICY

Paramedics will obtain a 12 lead ECG in patients suspected of having acute coronary syndrome and provide treatment in accordance with this policy.

### INDICATIONS

Any and all patients whose medical history and/or presenting complaints are consistent with an acute coronary syndrome. Patients will have one or more of the following:

1. Chest or upper abdominal discomfort suggestive of acute coronary syndrome.
2. New onset cardiac dysrhythmias (including adult cardiac arrest if return of spontaneous circulation).
3. Unexplained syncope or near syncope.
4. Unexplained acute generalized weakness with or without diaphoresis.
5. Acute onset of dyspnea suggestive of congestive heart failure.
6. Other signs or symptoms suggestive of acute coronary syndrome.
7. May be considered in patients with stable tachycardia for diagnostic purposes.
8. Any atypical presentation of symptoms that may be a suspected anginal equivalent.

**CONTRAINDICATIONS (RELATIVE)**

1. Trauma
2. Uncooperative patient
3. Presence of unstable ventricular tachycardia, ventricular fibrillation, or 3rd degree AV block.

**PROCEDURE**

1. Complete initial assessment and stabilizing treatment
2. Recommend obtaining the ECG as soon as possible and prior to departing the scene.
3. Place precordial lead electrodes and acquire tracing as per manufacturer's directions.
4. Relay ECG interpretation to STEMI Base Station. Assure that the receiving hospital is advised if machine interpretation is "acute myocardial infarction" or "suspected acute myocardial infarction." Meets STEMI criteria.
5. STEMI Base Station contact must be made in situations where the medic suspects a positive STEMI which is not supported by the ECG interpretation.
6. If defibrillation or synchronized cardioversion are necessary, place paddles or defibrillation electrodes, removing precordial leads if necessary.
7. The paramedic should transmit ECG to the STEMI Receiving Center when available.

**DOCUMENTATION**

1. Document the performance of 12 lead ECG, the machine interpretation and the paramedic interpretation on pre-hospital care report (PCR).
2. Provide original tracing to receiving hospital. Attach copy of 12 lead to hospital copy, provider copy and EMS copy of PCR.

**DATA COLLECTION**

In order to continue STEMI quality improvement, the following data elements must be collected on each and every 12 lead ECG performed and provided to the receiving hospital with the patient:

1. A copy of the ePCR or O1A.
  - a. Patient identifiers
  - b. Procedure performed (12 lead ECG)
  - c. Machine, paramedic, and physician interpretations
  - d. Additional ECG findings
  - e. Rhythm
2. A copy of the 12 lead ECG.
  - a. Patient identifiers
  - b. Date 12 lead ECG performed
  - c. Time 12 lead ECG performed

#### **SPECIAL CONSIDERATIONS**

1. Approximate time to acquire 12 lead should be no longer than three (3) minutes.
2. Perform 12 lead ECG prior to or just as Nitroglycerin is administered as changes in the 12 lead ECG may occur with treatment.
3. 12 lead ECG does not need to be repeated, if originally performed at clinics or other similar settings unless patient's condition changes.
4. Machine interpretation of suspected STEMI may not be accurate in presence of paced rhythms, bundle branch blocks, and certain tachydysrhythmias (e.g., SVT, atrial flutter) or wandering base line. When communicating machine interpretation to base hospital, paramedics should advise base of paced / BBB / tachydysrhythmia rhythms.



## TRANSCUTANEOUS CARDIAC PACING

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Unstable Bradycardia, refer to ICEMA Reference #11040 - Bradycardias - Adult.
- Patient eight (8) years of age and younger - not indicated.

### II. PROCEDURE IN SYMPTOMATIC BRADYCARDIA

- Start at rate of sixty (60) and adjust the output control starting at lowest setting available on the monitor until capture is noted. Assess peripheral pulses and confirm correlation with paced rhythm.
- Determine lowest threshold response by turning the output control down, until capture is lost, and then turn it back up slightly until capture is noted again. Maintain the output control at this level.
- Assess peripheral pulses and confirm correlation with paced rhythm. Reassess patient for signs of adequate perfusion
- Any movement of patient may increase the capture threshold response; the output may have to be adjusted to compensate for loss of capture.
- With signs of inadequate tissue perfusion, increase rate (**not to exceed 100**) and contact Base Station.
- Consider Midazolam 2 mg slow IV push or 2 mg IN if patient is awake and alert with signs of adequate tissue perfusion.
- Consider Morphine Sulfate titrate in 2 mg increments up to 10 mg for patient complaint of pain with signs of adequate tissue perfusion.
- Contact Base Station to advise of patient condition.

### III. DOCUMENTATION

In the event the receiving physician discovers the device is improperly placed, an Incident Report must be completed by the receiving hospital and forwarded to ICEMA within twenty-four (24) hours of the incident. Forms are available as part of the protocol manual and on the ICEMA website.

### IV. REFERENCE

<u>Number</u>	<u>Name</u>
11040	Bradycardias - Adult



## SYNCHRONIZED CARIOVERSION

### FIELD ASSESSMENT/TREATMENT INDICATORS

1. Unstable V-Tach or Wide Complex Tachycardias (sustained).
2. Unstable Narrow Complex Tachycardias.
3. Unstable Atrial Fibrillation/Atrial Flutter.
4. Patient eight (8) years of age and younger - **not indicated**.

### PROCEDURE

1. Monitor the patient in a lead that maximizes upright R wave and minimizes T wave, and observe location of synchronized marker on the R wave.
2. Consider Midazolam 1-2mg slow IV push or 1-2mg IN for all conscious patients.
3. Consider Morphine Sulfate titrated in 1-2mg increments up to 10mg slow IV push for patient complaint of pain with signs of adequate tissue perfusion.
4. Select initial energy level setting at 100 joules or a clinically equivalent biphasic energy level per manufacture guidelines.
5. Procedure may be repeated at 200, 300 & 360 joules or a clinically equivalent biphasic energy level per manufacture guidelines.
6. If cardioversion is successful, continue to monitor the patient and refer to the appropriate corresponding protocol.
7. In Radio Communication failure or with Base Station order, repeated cardioversion attempts at 360 joules or a clinically equivalent biphasic energy level per manufacture's guidelines may be attempted.
8. If ventricular fibrillation should occur during preparation or following cardioversion, immediately:
  - a. Turn off synchronizer and check pulse.

- b. Charge unit to 200 - 360 joules, or clinically equivalent biphasic energy level per manufacture guidelines.
  - c. Defibrillate per the appropriate corresponding protocol.
9. Document all reassessments of rhythm and pulses.

DELETE



## AUTOMATIC EXTERNAL DEFIBRILLATION (AED) - BLS

### PURPOSE

To identify guidelines for the use of the AED for all patients one (1) year of age or older in cardiac arrest. The overall goal of the AED program is to provide for rapid defibrillation and transfer of patients to an ALS provider as quickly as possible.

### FIELD ASSESSMENT/TREATMENT INDICATORS

All of the following criteria must be met prior to applying the AED machine:

1. Unresponsive, pulseless and apneic (“gasping” breaths).
2. One (1) year of age or older.
3. Have an apparent body temperature greater than 86 degrees F.

If patient meets the criteria per Protocol Reference #12010, Determination of Death, or Protocol Reference #12020, Withholding Resuscitation, AED application is not indicated.

### PROCEDURE

1. Initiate immediate CPR.
2. Power on the AED.
3. Place appropriate pads according to manufacturer’s guidelines. If the AED is equipped with a pediatric attenuator, it should be utilized for children between one (1) and nine (9) years of age. CPR is not to be interrupted except briefly for rhythm assessment.
4. Analyze rhythm.
  - a. If shocks are required, each shock should be immediately followed by two (2) minutes of CPR.
  - b. If additional shocks are not required:
    - i. If patient begins to move, maintain appropriate airway and oxygenation; obtain and monitor vital signs throughout care.

- ii. If patient remains unresponsive, pulseless and apneic, continue CPR for two (2) minutes and reanalyze.
5. Continue care as indicated by patient condition until ALS providers assume care or patient starts to move.
6. BLS agencies may only transfer care to a provider of equal or greater level. If a BLS transport agency is not an approved AED service provider, the AED personnel must accompany the patient with the appropriate equipment.

#### **DOCUMENTATION AND QUALITY IMPROVEMENT**

1. BLS agencies shall complete an ICEMA approved patient care report form and data collection device per Protocol Reference #2010, Requirements for Patient Care Records.
2. PS-D agencies must provide documentation on ICEMA approved form.
3. Use of the AED shall be evaluated by the provider agency through their QI Plan. All data will be used to compile their annual report to ICEMA.

#### **SPECIAL NOTE**

AED units should be programmed to the latest 2010 AHA Guidelines for CPR and Emergency Cardiac Care standards for defibrillation for adults and pediatrics no later than December 31, 2011. Until personnel and equipment have been updated to the new guidelines, agencies should continue to perform CPR as trained and follow the AED prompts as directed.



## INTRAOSSEROUS INFUSION (IO) (LALS - Pediatric only and ALS)

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Primary vascular access in cardiac arrest patients eight (8) years of age and younger.
- Any patient where venous access is unavailable by any other means.

### II. CONTRAINDICATIONS

- Fracture of target bone.
- Previous IO attempt and marrow entry at target site.

### III. PROCEDURE

- Select and prep the following preferred sites for appropriate patient age.
  - Eight (8) years of age and younger (LALS and ALS):
    - Anterior medial surface of tibia, 2 cm below tibial tuberosity.
  - Nine (9) years of age and older (ALS only):
    - Lower end of tibia, 2 cm above the medial malleolus
    - Proximal humerus.
  - Base Station contact - Anterior distal femur, 2 cm above the patella.
- Confirmation of placement is verified by the following:
  - Needle stands upright without support.
  - Aspiration of blood/marrow.
  - Ability to infuse IV solution without s/s of extravasation.
  - Leave site visible.
- To control infusion pain on a conscious patient, use 2% Lidocaine.

- Prime the extension tubing with 0.5 mg/kg of 2% Lidocaine and infuse *slowly* (over 30 to 60 seconds), not to exceed 50 mg total. Allow one (1) minute for anesthetic effect before infusing fluids.
- Infusion may need to be pressurized using syringe or pressure bag device.
- Monitor site closely when administering dopamine for signs of extravasation

#### IV. DOCUMENTATION

In the event the receiving physician discovers the device is improperly placed, an Incident Report must be completed by the receiving hospital and forwarded to ICEMA within twenty-four (24) hours of the incident. Forms are available as part of the protocol manual and on the ICEMA website.



## EXTERNAL JUGULAR VEIN ACCESS

### AUTHORITY

Sections 1797.107, 1797.172 and 1797.176, Health and Safety Code.

Reference: Sections 1797.90, 1797.172, 1797.202, 1797.220, 1798, 1798.2, 1798.3 and 1798.105, Health and Safety Code

### FIELD ASSESSMENT/TREATMENT INDICATORS

1. Patient condition requires IV access and other peripheral venous access attempts are unsuccessful.
2. Patient 8 years of age and younger - **not indicated.**

### PROCEDURE

1. Inform patient of procedure if alert.
2. Utilize axial-spinal stabilization in trauma patients. If not in axial-spinal stabilization, extend and stabilize patient's neck. Maintain axial stabilization if the need to remove C-collar arises.
3. Place in trendelenburg position or apply slight pressure at base of vein for tourniquet effect.
4. Obtain external jugular vein access with appropriately sized IV catheter.
5. Securely tape catheter with occlusive dressing in place and continue to monitor for patency.
6. Recheck site frequently for signs and symptoms of infiltration.



## CONTINUOUS POSITIVE AIRWAY PRESSURE DEVICE (CPAP) - ADULT

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

Symptomatic relief of acute respiratory distress and increased work of breathing associated with adult respiratory emergencies in a conscious patient who is cooperative and able to follow instructions.

### II. CONTRAINDICATIONS

- Apneic
- Unconscious
- Pediatric (appearing to be less than 15 years of age)
- Suspected Pneumothorax
- Vomiting
- Systolic blood pressure 90 mmHg or less (relative contraindication consult with Base Station)

### III. PROCEDURE

1. Provide supplemental oxygen as clinically indicated.
2. Provide clinically indicated treatment following ICEMA Reference #11010 - Adult Respiratory Emergencies.
3. Obtain and document O<sub>2</sub> saturation levels every five (5) minutes.
4. Apply and begin CPAP at 0 - 2 cm H<sub>2</sub>O (or lowest level allowed by the device). Instruct patient to inhale through nose and exhale through mouth.
5. Slowly titrate pressure in 3 cm increments up to a maximum of 15 cm H<sub>2</sub>O according to patient tolerance while instructing patient to continue exhaling against increasing pressure.
6. CPAP should be continued until patient is placed on CPAP device at the receiving hospital Emergency Department (ED).

**IV. DOCUMENTATION**

Document CPAP level, O<sub>2</sub> saturation, vitals, patient response and adverse reactions on electronic or paper patient care report (PCR).

**V. REFERENCE**

<u>Number</u>	<u>Name</u>
11010	Adult Respiratory Emergencies

DELETED



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## SUSPECTED ACUTE MYOCARDIAL INFARCTION (AMI)

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### I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Chest pain (typical or atypical).
- Syncopal episode.
- History of previous AMI, Angina, heart disease, or other associated risk factors.

### II. BLS INTERVENTIONS

- Recognition of signs/symptoms of suspected AMI.
- Reduce anxiety, allow patient to assume position of comfort.
- Oxygen as clinically indicated.
- Obtain O<sub>2</sub> saturation.
- May assist patient with self-administration of Nitroglycerin and/or Aspirin.

### III. LIMITED ALS (LALS) INTERVENTIONS

- Aspirin per ICEMA Reference #7040 - Medication - Standard Orders.
- Consider early vascular access.
- For patients with chest pain, signs of inadequate tissue perfusion and clear breath sounds, administer 300 ml NS bolus, may repeat.
- Nitroglycerin per ICEMA Reference #7040 - Medication - Standard Orders.
- Consider establishing a saline lock enroute on same side as initial IV.
- Complete thrombolytic checklist, if time permits.
- Contact base hospital.

#### IV. ALS INTERVENTIONS

- Aspirin per ICEMA Reference #7040 - Medication - Standard Orders.
- Consider early vascular access.
- For patients with chest pain, signs of inadequate tissue perfusion and clear breath sounds, administer 300 ml NS bolus, may repeat.
- 12-Lead Technology:
  - Obtain 12-lead ECG. Do not disconnect 12-lead cables until necessary for transport.
  - If signs of inadequate tissue perfusion or if inferior wall infarct is suspected, obtain a right-sided 12-lead (V4R).
  - If right ventricular infarct (RVI) is suspected with signs of inadequate tissue perfusion, consider 300 ml NS bolus, may repeat. Early consultation with base hospital or receiving hospital in rural areas is recommended. (Nitrates are contraindicated in the presence of RVI or hypotension.)
  - With documented ST segment elevation in two (2) or more contiguous leads, contact STEMI base hospital for destination decision while preparing patient for expeditious transport, refer to ICEMA Reference #6070 - Cardiovascular “STEMI” Receiving Centers. In Inyo and Mono Counties, the assigned base hospital should be contacted for STEMI consultation.
  - Repeat 12-lead at regular intervals, but do not delay transport of patient. If patient is placed on a different cardiac monitor for transport, transporting provider should obtain an initial 12-lead on their cardiac monitor and leave 12-lead cables in place throughout transport.
  - EMS field personnel shall ensure that a copy of the 12-lead ECG is scanned or attached as a permanent part of the patient’s ePCR or OIA and submit to ICEMA if patient is going to a SRC as a suspected STEMI.
- Nitroglycerin per ICEMA Reference #7040 - Medication - Standard Orders. Utilize Morphine or Fentanyl for pain control when Nitroglycerin is contraindicated.

- Morphine or Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders. Consider concurrent administration of Nitroglycerin with Morphine or Fentanyl if there is no pain relief from the initial Nitroglycerin administration. Contact base hospital for further Morphine or Fentanyl orders.
- Consider establishing a saline lock as a secondary IV site.
- Make early STEMI notification to the STEMI Receiving Center.
- In Radio Communication Failure (RCF), may administer up to an additional 10 mg Morphine in 2 mg increments with signs of adequate tissue perfusion or administer an additional 100 mcg of Fentanyl in 50 mcg increments with signs of adequate tissue perfusion.

**V. REFERENCES**

<u>Number</u>	<u>Name</u>
6070	Cardiovascular “STEMI” Receiving Centers
7040	Medication - Standard Orders



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## BURNS - ADULT (15 years of age and older)

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

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

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

Refer to ICEMA Reference #8130 - Destination Policy.

### II. BLS INTERVENTIONS

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

#### A. Manage Special Considerations

- **Thermal Burns:** Stop the burning process. Do not break blisters. Cover the affected body surface with dry, sterile dressing or sheet.
- **Chemical Burns:** Brush off dry powder, if present. Remove any contaminated or wet clothing. Irrigate with copious amounts of saline or water.
- **Tar Burns:** Cool with water, do not remove tar.
- **Electrical Burns:** Remove from electrical source (without endangering self) with a nonconductive material. Cover the affected body surface with dry, sterile dressing or sheet.

- **Eye Involvement:** Continuous flushing with NS during transport. Allow patient to remove contact lenses if possible.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death On Scene.

### III. LIMITED ALS (LALS) INTERVENTIONS

- Advanced airway as indicated.
- King Airway contraindicated in airway burns.
- Airway Stabilization:

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

- IV access (warm IV fluids when available).
  - *Unstable:* BP <90mmHG and/or signs of inadequate tissue perfusion, start 2<sup>nd</sup> IV access.  
*IV NS 250 ml boluses, may repeat to a maximum of 1000 ml.*
  - *Stable:* BP >90mmHG and/or signs of adequate tissue perfusion.  
*IV NS 500 ml/hour.*
  - Transport to appropriate facility.
    - *Minor Burn Classification:* Transport to the closest most appropriate receiving hospital.
    - *Moderate Burn Classification:* Transport to the closest most appropriate receiving hospital.
    - *Major Burn Classification:* Transport to the closest most appropriate Burn Center (San Bernardino County contact ARMC).
    - *Critical Trauma Patient (CTP) with Associated Burns:* Transport to the most appropriate Trauma Center.
- Burn patients with associated trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.

**A. Manage Special Considerations**

- **Electrical Burns:** Place AED on patient.
  - Electrical injuries that result in cardiac arrest shall be treated as medical arrests.
- **Respiratory Distress:** Use BVM as needed and transport to the nearest facility for airway control. Contact receiving hospital ASAP. Nebulized Albuterol with Atrovent per ICEMA Reference #7040 - Medication - Standard Orders.
- **Deteriorating Vital Signs:** Transport to the closest most appropriate receiving hospital. Contact base hospital.
- **Pulseness and Apneic:** Transport to the closest most appropriate receiving hospital and treat according to ICEMA policies. Contact base hospital.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.
- **Precautions and Comments:**
  - High flow oxygen is essential with known or potential respiratory injury. Beware of possible smoke inhalation.
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces, as additional injury will result.
- **Base Hospital Orders:** May order additional fluid boluses.

**IV. ALS INTERVENTIONS**

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

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

- Monitor ECG.
- IV/IO Access (Warm IV fluids when available).
  - *Unstable:* BP <90mmHG and/or signs of inadequate tissue perfusion, start 2<sup>nd</sup> IV access.  
  
IV/IO NS 250 ml boluses, may repeat to a maximum of 1000 ml.
  - *Stable:* BP >90mmHG and/or signs of adequate tissue perfusion.  
  
IV/IO NS 500 ml/hour.
- Treat pain as indicated.  
  
**Pain Relief:** Morphine or Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders. Document BPs every five (5) minutes while medicating for pain and reassess the patient.
- Transport to appropriate facility:
  - *CTP with associated burns,* transport to the closest Trauma Center.
  - Burn patients with associated trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.
- Insert nasogastric/orogastric tube as indicated.
- Refer to Section V - Burn Classifications below.

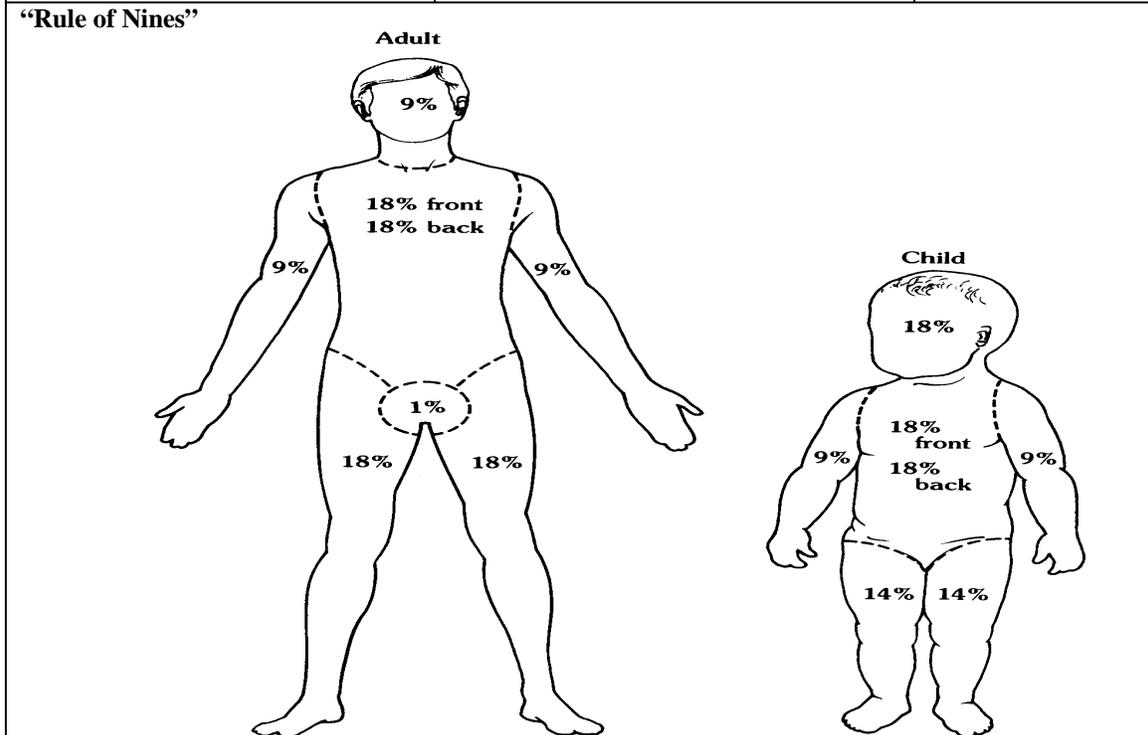
**A. Manage Special Considerations**

- **Electrical Burns:** Monitor for dysrhythmias, treat according to ICEMA protocols.
  - Electrical injuries that result in cardiac arrest shall be treated as medical arrests.
- **Respiratory Distress:** Intubate patient if facial/oral swelling are present or if respiratory depression or distress develops due to inhalation injury.
  - Albuterol with Atrovent per ICEMA Reference #7040 - Medication - Standard Orders.
  - Administer humidified oxygen, if available.

- Apply capnography.
- Awake and breathing patients with potential for facial/inhalation burns are not candidates for nasal tracheal intubation. CPAP may be considered, if indicated, after consultation with base hospital.
- **Deteriorating Vital Signs:** Transport to the closest receiving hospital. Contact base hospital.
- **Pulseness and Apneic:** Transport to the closest receiving hospital and treat according to ICEMA policies. Contact base hospital.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.
- **Precautions and Comments:**
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces, as additional injury will result.
- **Base Hospital Orders:** May order additional medications, fluid boluses and CPAP.

**V. BURN CLASSIFICATIONS**

ADULT BURN CLASSIFICATION CHART	DESTINATION	
<p><b><u>MINOR</u> - ADULT</b></p> <ul style="list-style-type: none"> <li>• &lt; 10% TBSA</li> <li>• &lt; 2% Full Thickness</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL</b></p>	
<p><b><u>MODERATE</u> - ADULT</b></p> <ul style="list-style-type: none"> <li>• 10 - 20% TBSA</li> <li>• 2 - 5% Full Thickness</li> <li>• High Voltage Injury</li> <li>• Suspected Inhalation Injury</li> <li>• Circumferential Burn</li> <li>• Medical problem predisposing to infection (e.g., diabetes mellitus, sickle cell disease)</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL</b></p>	
<p><b><u>MAJOR</u> - ADULT</b></p> <ul style="list-style-type: none"> <li>• &gt;20% TBSA burn in adults</li> <li>• &gt; 5% Full Thickness</li> <li>• High Voltage Burn</li> <li>• Known Inhalation Injury</li> <li>• Any significant burn to face, eyes, ears, genitalia, or joints</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE BURN CENTER</b></p> <p>In San Bernardino County, contact: Arrowhead Regional Medical Center (ARMC)</p>	



**VI. REFERENCES**

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
9010	General Patient Care Guidelines
10190	ICEMA Approved Skills
11070	Adult Cardiac Arrest
12010	Determination of Death on Scene
15030	Trauma Triage Criteria and Destination Policy



## STROKE TREATMENT - ADULT

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

Patient exhibiting signs/symptoms of a possible stroke. These signs may include: speech disturbances, altered level of consciousness, parasthesias, new onset seizures, dizziness unilateral weakness and visual disturbances.

### II. LIMITED ALS (LALS)/ALS INTERVENTIONS

- Vascular access.
- Obtain blood glucose.
- **Modified Los Angeles County Prehospital Stroke Screen (mLAPSS):** A screening tool used by EMS field personnel to assist in identifying patients who may be having a stroke.

**mLAPSS Criteria:** The patient is *mLAPSS positive*, if “yes” on Criteria #1 - 5 and exhibits unilateral weakness on Criteria #6.

mLAPSS Criteria	Yes	No	
1. Age over 40 years?			
2. No prior history of seizure disorder?			
3. New onset of neurologic symptoms in last 24 hours?			
4. Patient was ambulatory at baseline prior to event?			
5. Blood glucose between 60 and 400?			
6. Exam ( <i>look for obvious asymmetry</i> ):	<u>Normal-Bilaterally</u>	<u>Right</u>	<u>Left</u>
• Facial Smile/Grimace	<input type="checkbox"/>	<input type="checkbox"/> Droop <input type="checkbox"/> Normal	<input type="checkbox"/> Droop <input type="checkbox"/> Normal
• Grip	<input type="checkbox"/>	<input type="checkbox"/> Weak Grip <input type="checkbox"/> Normal	<input type="checkbox"/> Weak Grip <input type="checkbox"/> Normal
	<input type="checkbox"/>	<input type="checkbox"/> No Grip <input type="checkbox"/> Normal	<input type="checkbox"/> No Grip <input type="checkbox"/> Normal
• Arm Weakness	<input type="checkbox"/>	<input type="checkbox"/> Drifts Down <input type="checkbox"/> Normal	<input type="checkbox"/> Drifts Down <input type="checkbox"/> Normal
		<input type="checkbox"/> Falls Down Rapidly <input type="checkbox"/> Normal	<input type="checkbox"/> Falls Down Rapidly <input type="checkbox"/> Normal

- Ask when “last seen normal” or without stroke symptoms.
- If “last seen normal” plus transport time is greater than twelve (12) hours, transport to the closest receiving hospital.
- If “last seen normal” plus transport time is less than twelve (12) hours, or a “wake-up stroke”, transport to closest NSRC.
- In San Bernardino County, if Stroke Scale is positive, initiate “Stroke Alert”, contact NSRC base hospital and transport immediately.
- If mLAPSS negative and stroke is still suspected, contact NSRC base hospital.
- Obtain and document on scene family phone number.
- Consider 12-lead ECG (ALS only).
- **Thrombolytic Assessment:** If time is available, and the patient or family can provide the information, assess the patient using the criteria listed below and report to ED personnel:

<b>Thrombolytic Assessment Criteria</b>	<b>Yes</b>	<b>No</b>
Onset greater than 4 hours?		
History of recent bleeding?		
Use of anticoagulant?		
Major surgery or serious trauma in the previous fourteen (14) days?		
Sustained systolic blood pressure above 185 mm Hg?		
Recent stroke or intracranial hemorrhage?		



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## COLD RELATED EMERGENCIES

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### I. FIELD ASSESSMENT/TREATMENT INDICATORS

#### MILD HYPOTHERMIA

- Decreased core temperature.
- Cold, pale extremities.
- Shivering, reduction in fine motor skills.
- Loss of judgment and/or altered level of consciousness or simple problem solving skills.

#### SEVERE HYPOTHERMIA

- Severe cold exposure or any prolonged exposure to ambient temperatures below 36 degrees with the following indications:
  - Altered LOC with associated behavior changes.
  - Unconscious.
  - Lethargic.
- Shivering is generally absent.
- Blood pressure and heart sounds may be unobtainable.

#### SUSPECTED FROSTBITE

- Areas of skin that is cold, white, and hard to touch.
- Capillary refill greater than two (2) seconds.
- Pain and/or numbness to affected extremity.

### II. BLS INTERVENTIONS

- Remove from cold/wet environment; remove wet clothing and dry patient.
- Begin passive warming.

- Insulate and apply wrapped heat packs, if available, to groin, axilla and neck. This process should be continuous.
- Maintain appropriate airway with oxygen as clinically indicated (warm, humidified if possible).
- Assess carotid pulse for a minimum of one (1) to two (2) minutes. If no pulse palpable, place patient on AED. If no shock advised, begin CPR.
- Insulate to prevent further heat loss.
- Elevate extremity if frostbite is suspected.
- Do not massage affected extremity.
- Wrap affected body part in dry sterile gauze to prevent further exposure and handle with extreme care.

### III. LIMITED ALS INTERVENTIONS

- Advanced airway as clinically indicated.
- Obtain vascular access.
- Obtain blood glucose level, if indicated administer:
  - ADULT/PEDIATRIC
    - Dextrose per ICEMA Reference #7040 - Medication - Standard Orders.
    - May repeat blood glucose level. Repeat Dextrose per ICEMA Reference #7040 - Medication - Standard Orders.
    - Glucagon per ICEMA Reference #7040 - Medication - Standard Orders if unable to establish IV.
- Obtain vascular access and administer fluid bolus.
  - Nine (9) years and older: 300 ml warmed NS, may repeat.
  - Birth to eight (8) years: 20 ml/kg warmed NS, may repeat.
- Contact base hospital.

### IV. ALS INTERVENTIONS

- Obtain vascular access.

- Cardiac monitor.
- If clinically indicated, obtain blood glucose. If hypoglycemic administer:
  - ADULT/PEDIATRIC
    - Dextrose per ICEMA Reference #7040 -Medication - Standard Orders.
    - Glucagon per ICEMA Reference #7040 - Medication - Standard Orders, if unable to establish IV.
- For complaints of pain in affected body part:
  - ADULT/PEDIATRIC
    - Morphine or Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.
- In Radio Communication Failure, may repeat above dosage of Morphine or Fentanyl.
- Advanced airway as clinically indicated.
- Obtain vascular access and administer fluid bolus.
  - Nine (9) years and older: 500 ml warmed NS, may repeat.
  - Birth to eight (8) years: 20 ml/kg warmed NS, may repeat.
- Obtain rhythm strip for documentation.
- For documented VF, Pulseless V-Tach:
  - Defibrillate one (1) time at manufacturer recommended dose. Do not defibrillate again until patient has begun to warm.
- For documented asystole:
  - Begin CPR.
  - May give additional fluid bolus.
- Contact base hospital.

## V. REFERENCE

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders



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## BURNS - PEDIATRIC (Less Than 15 Years of Age)

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

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

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

Refer to ICEMA Reference #8130 - Destination Policy.

### II. BLS INTERVENTIONS

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

#### A. Manage Special Considerations

- **Thermal Burns:** Stop the burning process. Do not break blisters. Cover the affected body surface with dry, sterile dressing or sheet.
- **Chemical Burns:** Brush off dry powder, if present. Remove any contaminated or wet clothing. Irrigate with copious amounts of saline or water.
- **Tar Burns:** Cool with water, do not remove tar.
- **Electrical Burns:** Remove from electrical source (without endangering self) with a nonconductive material. Cover the affected body surface with dry, sterile dressing or sheet.

- **Eye Involvement:** Continuous flushing with NS during transport. Allow patient to remove contact lenses if possible.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.

### III. LIMITED ALS (LALS) INTERVENTIONS

- Airway Stabilization (as indicated). Burn patients with respiratory compromise or potential for such, will be transported to the closest receiving hospital for airway stabilization.
- IV/IO Access (warm IV fluids when available).
  - *Unstable:* Vital signs (age appropriate) and/or signs of inadequate tissue perfusion consider starting a second IV or saline lock. Administer 20 ml/kg NS bolus IV/IO, may repeat one (1) time.
  - *Stable:* Vital signs (age appropriate) and/or signs of adequate tissue perfusion.
  - < 5 years of age: IV NS 150 ml/hour
  - > 5 years of age - < 15 years of age: IV NS 250 ml/hour
- Transport to appropriate facility:
  - Critical trauma patients with associated burns or burn patients sustaining critical trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.
- Refer to Section V - Burn Classifications below.

#### A. Manage Special Considerations

- **Respiratory Distress:**
  - Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.
  - Administer humidified oxygen, if available.
- **Deteriorating Vital Signs:** Transport to the closest receiving hospital. Contact base hospital.

- **Pulseness and Apneic:** Transport to the closest receiving hospital and treat according to ICEMA protocols. Contact base hospital.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.
- **Precautions and Comments:**
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces as additional injury will result.
  - Do not apply cool dressings or allow environmental exposure, since hypothermia will result in a young child.

#### IV. ALS INTERVENTIONS

- Advanced airway (as indicated).
  - **Airway Stabilization:** Burn patients with respiratory compromise or potential for such, will be transported to the closest receiving hospital for airway stabilization.
- Monitor ECG.
- IV/IO Access (Warm IV fluids when available).
  - *Unstable:* Vital signs (age appropriate) and/or signs of inadequate tissue perfusion consider starting a second IV or saline lock. Administer 20 ml/kg NS bolus IV/IO, may repeat one (1) time.
  - *Stable:* Vital signs (age appropriate) and/or signs of adequate tissue perfusion.
  - < 5 years of age: IV NS 150 ml/hour
  - > 5 years of age - < 15 years of age: IV NS 250 ml/hour
- Treat pain as indicated.
  - Morphine or Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.

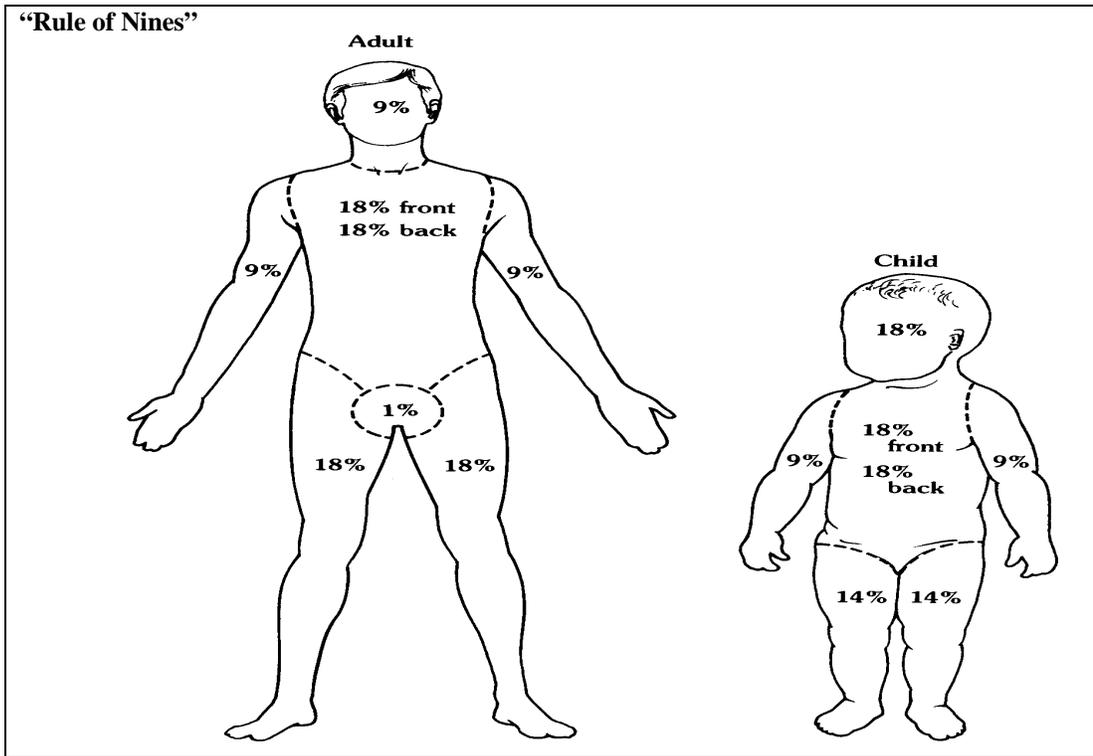
- Document vital signs every five (5) minutes while medicating for pain, and reassess the patient.
- Transport to appropriate facility:
  - Critical trauma patients with associated burns or burn patients sustaining critical trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.
  - Insert nasogastric/orogastric tube as indicated.
- Refer to Section V - Burn Classifications below.

**A. Manage Special Considerations**

- **Respiratory Distress:** Intubate patient if facial/oral swelling are present or if respiratory depression or distress develops due to inhalation injury.
  - Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.
  - Administer humidified oxygen, if available.
- **Deteriorating Vital Signs:** Transport to the closest receiving hospital. Contact base hospital.
- **Pulseness and Apneic:** Transport to the closest receiving hospital and treat according to ICEMA protocols. Contact base hospital.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.
- **Precautions and Comments:**
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces as additional injury will result.
  - Do not apply cool dressings or allow environmental exposure, since hypothermia will result in a young child.

V. BURN CLASSIFICATIONS

PEDIATRIC BURN CLASSIFICATION CHART	DESTINATION
<p><b>MINOR - PEDIATRIC</b></p> <ul style="list-style-type: none"> <li>• &lt; 5% TBSA</li> <li>• &lt; 2% Full Thickness</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL</b></p>
<p><b>MODERATE - PEDIATRIC</b></p> <ul style="list-style-type: none"> <li>• 5 - 10% TBSA</li> <li>• 2 - 5% Full Thickness</li> <li>• High Voltage Injury</li> <li>• Suspected Inhalation Injury</li> <li>• Circumferential Burn</li> <li>• Medical problem predisposing to infection (e.g., diabetes mellitus, sickle cell disease)</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL</b></p>
<p><b>MAJOR - PEDIATRIC</b></p> <ul style="list-style-type: none"> <li>• &gt; 10% TBSA</li> <li>• &gt; 5% Full Thickness</li> <li>• High Voltage Burn</li> <li>• Known Inhalation Injury</li> <li>• Any significant burn to face, eyes, ears, genitalia, or joints</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE BURN CENTER</b></p> <p>In San Bernardino County, contact: Arrowhead Regional Medical Center (ARMC)</p>



**VI. REFERENCES**

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
8130	Destination Policy
12010	Determination of Death on Scene



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## TRAUMA - ADULT (15 years of age and older)

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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.
- Oxygen and/or ventilate as needed, O<sub>2</sub> saturation (if BLS equipped).
- Keep patient warm.
- For a traumatic full arrest, an AED may be utilized, if indicated.
- Transport to ALS intercept or to the closest receiving hospital.

#### A. Manage Special Considerations

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

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

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

- Penetrating trauma without any NSAID indicators are not candidates for spinal immobilization using long board.
- **Abdominal Trauma:** Cover eviscerated organs with saline dampened gauze. Do not attempt to replace organs into the abdominal cavity.
- **Amputations:** Control bleeding. Rinse amputated part gently with sterile irrigation saline to remove loose debris/gross contamination. Place amputated part in dry, sterile gauze and in a plastic bag surrounded by ice (if available). Prevent direct contact with ice. Document in the narrative who the amputated part was given to.  
  
**Partial Amputation:** Splint in anatomic position and elevate the extremity.
- **Bleeding:**
  - Apply direct pressure and/or pressure dressing.
  - To control life-threatening bleeding of a severely injured extremity, consider application of tourniquet when direct pressure or pressure dressing fails.
- **Chest Trauma:** If a wound is present, cover it with an occlusive dressing. If the patient's ventilations are being assisted, dress wound loosely, (do not seal). Continuously reevaluate patient for the development of tension pneumothorax.
- **Flail Chest:** Stabilize chest, observe for tension pneumothorax. Consider assisted ventilations.
- **Fractures:** Immobilize above and below the injury. Apply splint to injury in position found except:
  - **Femur:** Apply traction splint if indicated.
  - **Grossly angulated long bone with distal neurovascular compromise:** Apply gentle unidirectional traction to improve circulation.
  - **Check and document distal pulse before and after positioning.**
- **Genital Injuries:** Cover genitalia with saline soaked gauze. If necessary, apply direct pressure to control bleeding. Treat amputations the same as extremity amputations.

- **Head and Neck Trauma:** Place brain injured patients in reverse Trendelenburg (elevate the head of the backboard 15 - 20 degrees), if the patient exhibits no signs of shock.
  - **Eye:** Whenever possible protect an injured eye with a rigid dressing, cup or eye shield. Do not attempt to replace a partially torn globe, stabilize it in place with sterile saline soaked gauze. Cover uninjured eye.
  - **Avulsed Tooth:** Collect teeth, place in moist, sterile saline gauze and place in a plastic bag.
- **Impaled Object:** Immobilize and leave in place. Remove object if it interferes with CPR, or if the object is impaled in the face, cheek or neck and is compromising ventilations.
- **Pregnancy:** Where axial spinal stabilization precaution is indicated, the board should be elevated at least 4 inches on the right side for those patients who have a large pregnant uterus, usually applies to pregnant females  $\geq 24$  weeks of gestation.
- **Traumatic Arrest:** CPR if indicated. May utilize an AED if indicated.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.

### III. LIMITED ALS (LALS) INTERVENTIONS

- Advanced airway (as indicated).
  - **Unmanageable Airway:** Transport to the closest most appropriate receiving hospital when the patient requires advanced airway and an adequate airway cannot be maintained with a BVM device.
- Apply AED.
- IV Access (warm IV fluids when available).
  - **Unstable:** BP<90mmHG and/or signs of inadequate perfusion, start 2<sup>nd</sup> IV access.
  - **Stable:** BP>90mmHG and/or signs of adequate tissue perfusion.

**Blunt Trauma:**

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

**Penetrating Trauma:**

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

**Isolated Closed Head Injury:**

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

- Transport to appropriate hospital.

**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 using the acronym (NSAID):

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

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

- **Fractures:**

- **Isolated Extremity Trauma:** Trauma 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 voice prompts.
- B. Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.
- *Severe Blunt Force Trauma Arrest:* If indicated, transport to the closest receiving hospital.
  - *Penetrating Trauma Arrest:* If indicated, transport to the closest receiving hospital.
  - If the patient does not meet the “Obvious Death Criteria” in ICEMA Reference #12010 - Determination of Death on Scene, contact the Trauma base 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.
- IV/IO Access (Warm IV fluids when available).
  - *Unstable:* BP <90mmHG and/or signs of inadequate perfusion, start 2<sup>nd</sup> IV access.
  - *Stable:* BP >90mmHG and/or signs of adequate tissue perfusion.

#### **Blunt Trauma:**

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

#### **Penetrating Trauma:**

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

#### **Isolated Closed Head Injury:**

- *Unstable:* IV NS 250 ml bolus, may repeat to a maximum of 500 ml
- *Stable:* IV NS TKO
- Transport to appropriate hospital.
- Insert nasogastric/orogastric tube as indicated.

A. **Manage Special Considerations**

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

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

- Consider maintaining spinal alignment on the gurney, or using spinal axial immobilization on an awake, alert and cooperative patient, without the use of a rigid spine board.
- Penetrating trauma without any NSAID indicators are not candidates for spinal immobilization using long board.
- **Chest Trauma:** Perform needle thoracostomy for chest trauma with symptomatic respiratory distress.
- **Fractures:**
  - **Isolated Extremity Trauma:** Trauma without multisystem mechanism. Extremity trauma is defined as those cases of injury where the limb itself and/or the appendicular skeleton (shoulder or pelvic girdle) may be injured, e.g., dislocated shoulder, hip fracture or dislocation.
  - **Pain Relief:**
    - Morphine or 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 Morphine. 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 ( $\geq 15$  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**

<u>Number</u>	<u>Name</u>
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<sub>2</sub> 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 2<sup>nd</sup> IV access.  
  
Administer 20ml/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 2<sup>nd</sup> IV access.  
  
Administer 20ml/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:**
    - Morphine or 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 Morphine. Administer 20ml/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 ( $\geq 15$  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**

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



## CERTIFICATION/ACCREDITATION REVIEW POLICY

### I. PURPOSE

To establish a process for the disciplinary review of certification and/or accreditation held by all levels of ~~EMS field/prehospital-care~~ personnel within the ICEMA region.

### AUTHORITY

~~California Health and Safety Code 1798.200-1798.208.~~

~~California Code of Regulations, Title 22, Division 9, Chapter 6.~~

~~California Government Code Title 2, Chapter 5, Section 11507.6-11507.7, 11513, 11514.~~

### II. POLICY

1. Disciplinary proceedings are in accordance with California Code of Regulations, Title 22, Chapter 6, ~~of the California Code of Regulations at <http://www.emsa.ca.gov/legislation/division25.rtf>.~~
2. ~~Paramedic~~ Licensure and certification actions (e.g., immediate suspension) shall be performed according to the California Health and Safety Code, Section 1798.202.
- ~~3. Notification to the EMS Authority is through the Form EMSA-Negative Action Report at <http://www.emsa.ca.gov/emt1p/negative-action-personnel.doc>.~~
34. If the action is to recommend to the EMS Authority for disciplinary action of an EMT-P license:
  - a. A summary explaining the actions of the EMT-P that are a threat to the public health and safety pursuant to the California Health and Safety Code, Section 1798.200 ~~of the Health and Safety Code~~; and,
  - b. Documented evidence, relative to the recommendation, collected by the Medical Director, forwarded to the ~~State~~ EMS Authority.
45. Request for discovery, petitions to compel discovery, evidence and affidavits shall be followed pursuant to the Administrative Procedures Act (Government Code, Title 2, Chapter 5, Sections 11507.6, 11507.7, 11513, and 11514).

<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=gov&group=11001-12000&file=11500-1154>



## CARDIOVASCULAR ~~ST ELEVATION MYOCARDIAL~~ INFARCTION “~~STEMI~~”-RECEIVING CENTERS ~~CRITERIA AND~~ DESTINATION POLICY

### I. PURPOSE

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

### II. DEFINITIONS

- ~~1. —STEMI—ST Elevation Myocardial Infarction.~~
- ~~2. —PCI—Percutaneous Coronary Intervention.~~
- ~~3. —STEMI Receiving Center (SRC) - A licensed general acute care hospital~~Facilities that has~~ve~~ emergency interventional cardiac catheterization capabilities.
- ~~4. —STEMI Referring Hospital (SRH) - A licensed general acute care hospital~~Facilities that does not have emergency interventional cardiac catheterization capabilities.
- ~~5. —STEMI Base Station—Hospital - A licensed general acute care hospital~~Facilities that has~~ve~~ emergency interventional cardiac catheterization capabilities that also function as a ~~B~~base hospitalstation.
- ~~6. —CQI—Continuous Quality Improvement.~~
- ~~7. —EMS—Emergency Medical Services.~~
- ~~8. —CE—Continuous Medical Education.~~

### III. POLICY

The following requirements must be met for a hospital to be designated as a ~~Cardiovascular STEMI Receiving Center~~SRC by ICEMA:

- ~~1. —An ICEMA approved paramedic—receiving hospital which is a full service acute care~~ hospitalfacility.
- ~~2. —Licensure as a Cardiac Catheterization Laboratory.~~

- ~~3.~~ Intra-aortic balloon pump capability.
- ~~4.~~ Cardiovascular surgical services permit.
- ~~5.~~ An alert/Communication system for notification of incoming STEMI patients, available twenty-four (24) hours per day, seven (7) days per week (i.e., in-house paging system).
- ~~6.~~ Provide continuing education (CE) opportunities twice per year for emergency medical services (EMS) field personnel in areas of 12-lead ECG acquisition and interpretation, as well as assessment and management of STEMI patients.

#### IV. STAFFING REQUIREMENTS

The hospital will have the following positions ~~designated and~~ filled prior to becoming a SRC:

- ~~1.~~ Medical Directors

The hospital shall designate two (2) physicians as co-directors of its SRC program. One (1) physician shall be a board certified interventional cardiologist with active Percutaneous Coronary Intervention (PCI) privileges. The co-director shall be a board certified emergency medicine physician with active privileges to practice in the emergency department.

- ~~2.~~ Nursing Coordinator~~Director~~

The hospital shall designate a SRC Nursing Coordinator~~Director~~ who is trained or certified in Critical Care nursing.

- ~~3.~~ On-Call Physician Consultants and Staff

A daily roster of the following on-call physician consultants and staff that must be promptly available within thirty (30) minutes of notification.

- ~~a.~~ Cardiologist with ~~percutaneous coronary intervention (PCI)~~ privileges.
- ~~b.~~ Cardiovascular Surgeon.
- ~~c.~~ Cardiac Catheterization Laboratory Team.
- ~~d.~~ Intra-aortic balloon pump nurse or technologist.
- 4. Emergency Department Liaison Nurse

The non-base hospital shall designate an SRC Emergency Department Liaison Nurse who has a minimum of two (2) years emergency department experience to facilitate communication and education between the cath lab, emergency department and prehospital personnel.

## V. INTERNAL HOSPITAL POLICIES

The hospital shall develop internal policies for the following situations:

- ~~1. Fibrinolytic therapy protocol to be used only in unforeseen circumstances when PCI of a STEMI patient is not possible.~~
- ~~2. Acknowledgement that STEMI patients may only be diverted during the times Diversion of STEMI patients only during times of Internal Disaster in accordance to ICEMA Reference protocol #8060 - Requests for Hospital Diversion Policy (applies to physical plant breakdown threatening significant patient services or immediate patient safety issues, i.e., bomb threat, earthquake damage, hazardous material or safety and security of the hospital facility.) A written notification describing the event must be submitted to ICEMA within twenty-four (24) hours.~~
- ~~3. Prompt acceptance of STEMI patients from other SRHs STEMI referral centers that do not have PCI capability. STEMI diversion is not permitted except for internal disaster. Refer to ICEMA Reference #8120 - Continuation of Care (San Bernardino County Only). However, STEMI base hospitals are allowed to facilitate redirecting of STEMI patients to nearby SRCs when the closest SRC is over-capacity to avoid prolonged door to intervention time. SRC and base hospitals shall ensure physician to physician contact when redirecting patients. Refer to ICEMA Policy Reference #8040, Interfacility Transfer of STEMI Patient.~~
- ~~4. Cath Lab Team activation policy which requires immediate activation of the team upon EMS notification when there is documented STEMI patient en route to the STEMI center, based on machine algorithm interpretation.~~

## VI. DATA COLLECTION

All required data elements shall be collected and entered in an ICEMA approved STEMI registry on a regular basis and submitted to ICEMA for review.

## VII. CONTINUOUS QUALITY IMPROVEMENT PROGRAM (CQI)

SRC shall develop an on-going CQI program which monitors all aspect of treatment and management of suspected STEMI ~~cardiac~~ patients and identify areas needing improvement. The program must, at a minimum, monitor the following parameters:

- ~~1.~~ Morbidity and mortality related to procedural complications.
- ~~2.~~ Detail review of cases requiring emergent rescue Coronary Artery Bypass Graph (CABG).
- ~~3.~~ Tracking of door-to-dilation time and adherence to minimum performance standards set by this policy.
- Detailed review of cases requiring redirection of EMS STEMI patients to other SRCs as a result of SRC over capacity and prolonged delay of door-to-intervention time.
- Active participation in each ICEMA STEMI CQI committee and STEMI regional peer review process. This will include a review of selected medical records as determined by CQI indicators and presentation of details to peer review committee for adjudication.

## VIII. PERFORMANCE STANDARD

~~In accordance with D2B: An Alliance for Quality guidelines,~~ SRCs must achieve and maintain a door-to-balloon (D2B) time of less than or equal to ninety (90) minutes in 75% of primary PCI patients with a STEMI, in accordance with D2B: An Alliance for Quality Guidelines. If this standard is not achieved, the SRC may be required to submit an improvement plan to ICEMA addressing the deficiency with steps being taken to remedy the problems.

## IX. DESIGNATION

- ~~1.~~ The ~~Cardiovascular STEMI Receiving Center~~SRC applicant shall be designated after satisfactory review of written documentation and an initial site survey by ICEMA or its designees and completion of an agreement between the hospital and ICEMA.
- ~~2.~~ Documentation of current accreditation from The Society of Chest Pain Centers as “Chest Pain Center with PCI” shall be accepted in lieu of a formal site visit by ICEMA.
- ~~3.~~ Initial designation as a SRC shall be in accordance with terms outlined in the agreement, for a period of two (2) years. Thereafter, re-designation shall occur every four (4) years, contingent upon satisfactory review.
- ~~4.~~ Failure to comply with the agreement, criteria and performance standards outlined in this policy may result in probation, suspension or rescission of SRC designation.

## X. PATIENT DESTINATION

- 1. — The ~~STEMI base station~~SRC should be considered as the destination of choice if all of the following criteria are met:
  - a. — Identified STEMI patients based on machine interpretation of field 12-lead ECG, verified by ~~paramedics-EMT-Ps~~ and approved by a base ~~station-hospital~~ physician.
  - b. — Total transport time to the base ~~station-hospital~~ SRC is thirty (30) minutes or less. Base hospital physician may override this requirement and authorize transport to the SRC with transport time of greater than thirty (30) minutes.
  - c. — STEMI base ~~station-hospital~~ contact is **mandatory** for all patients identified as possible STEMI patient. The STEMI base ~~Station-hospital~~ confirms a SRC as the destination.
  - d. — The STEMI base ~~station-hospital~~ is the only authority that can direct a patient to a SRC. The destination may be changed at SRC base hospital discretion.
  - e. — The STEMI base ~~station~~hospital, if different from the SRC, will notify the SRC of patient’s pending arrival as soon as possible, to allow timely activation of Cardiac Cath Lab Team at the SRC.
  - f. — If the patient chooses to bypass the recommended ~~system STEMI-center~~SRC, EMS field personnel must obtain an AMA and notify the STEMI base ~~hospital~~station.
- 2. — The following factors should be considered with regards to choice of destination for STEMI patients. STEMI Base ~~Station-hospital~~ contact and consultation is mandatory in these and similar situations:
  - a. — Patients with unmanageable airway, unstable cardiopulmonary condition, or in cardiopulmonary arrest should be transported to the closest receiving hospital.
  - b. — Patients with malignant ventricular fibrillation, ventricular tachycardia, second degree type II heart block and third degree heart blocks should be considered for transport to the closest receiving hospital.
  - c. — Patients with obvious contraindication to thrombolytic therapy should be strongly considered for transport to the closest SRC.

- d.—Patients with hemodynamic instability as exhibited by blood pressure less than 90 systolic and/or signs of inadequate tissue perfusion should be transported to the closest receiving hospital.
- e.—Patients with *sustained* ROSC should be strongly considered for transport to the closest SRC. STEMI base hospital contact must be made.

## XI. REFERENCE PROTOCOLS

<u>Number</u>	<u>Name</u>
<del>8040</del>	<del>Interfacility Transfer of STEMI Patient</del>
8060	<u>San Bernardino County</u> Requests for Hospital Diversion Policy ( <u>San Bernardino County Only</u> )
<u>8120</u>	<u>Continuation of Care (San Bernardino County Only)</u>



## FIRELINE PARAMEDIC

### I. PURPOSE

To provide guidance and medical oversight for an ICEMA paramedic deployed to function as a fireline paramedic.

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

### **AUTHORITY**

~~California Health and Safety Code, Division 2.5, Sections 1797.204, 1797.220 California Code of Regulations, Title 22, Division 9, Sections 100165 and 100167 California Fire Service and Rescue Emergency Mutual Aid System, Mutual Aid Plan, (3-2002). California Code of Regulations Title 22, Division 9, Section 100165 (1) states: "During a mutual aid response into another jurisdiction, a paramedic may utilize the scope of practice for which s/he is trained and accredited according to the policies and procedures established by his/her accrediting local EMS agency."~~

### II. DEFINITIONS

Fireline Emergency Medical Technician-P (FEMP): A paramedic who meets all prerequisites established by FIRESCOPE and is authorized by the paramedic's department to provide ALS treatment on the fireline to ill or injured fire suppression personnel.

### III. REQUIREMENTS

- Must be a currently licensed paramedic in California.
- Must be currently accredited paramedic in the ICEMA region.
- Must be currently employed by an ICEMA approved ALS provider.
- The FEMP will follow FIRESCOPE FEMP ICS 223-11 Position Manual and all other ICS protocols.
- The FEMP will check in and obtain briefing from the Logistics Section Chief or the Medical Unit Leader, if established. Briefing will include current incident situation, anticipated medical needs, and local emergency medical system orientation.

- The FEMP will provide emergency medical treatment to personnel operating on the fireline.
- The FEMP will follow ICEMA prior to contact protocols if unable to contact the assigned base station.
- The FEMP may not perform skills outside of the ICEMA scope of practice.

#### **IV. PROCEDURE**

- The provider agency will notify ICEMA of the deployment of the FEMP to an incident.
- The FEMP will carry inventory in the ALS pack as per the attached inventory list. Inventory will be supplied and maintained by the employing provider agency. Additional items for restock should also be maintained and secured in a vehicle or in the Medical Unit trailer.
- Incident Medical Units may not have the capability of resupplying controlled substances (narcotics). Providers should stock sufficient quantities of medical supplies and medications, especially controlled substance medications, to assure adequate supplies and medications.
- Narcotics must be under double lock and maintained on the FEMP person or secured in his/her vehicle at all times as per the ICEMA Drug and Equipment List.
- FEMP may carry an inventory of controlled substances (i.e. Morphine, Fentanyl and Midazolam) if authorized by the employing agency's Medical Director. The authorizing Medical Director is responsible to assure full compliance with all federal and state laws relating to purchase, storage and transportation of controlled substances. Only controlled substances approved for use in the ICEMA region may be carried and their use must be in accordance with current ICEMA patient care protocols.
- Radio communication failure protocols will not be used. Prior to base contact protocols will be followed. If further treatment is needed, radio contact with the base station should be established as soon as possible.
- Documentation of patient care must follow ICEMA protocol utilizing the ePCR, if available, or a paper OIA form. All patient care reports will be reviewed by the provider agency and ICEMA for QI purposes.
- A FEMP will be paired with a fireline EMT (FEMT) or another FEMP who will assist with BLS treatment and supplies.

**V. FIRELINE EMT-P (ALS) PACK INVENTORY**

**Minimum Requirements:** *The weight of the pack will dictate if the paramedic chooses to carry additional ALS supplies.*

**ALS AIRWAY EQUIPMENT**

1. Endotracheal intubation equipment:
  - a. 6.0, 7.0 and/or 7.5 ET
  - b. Mac 4, Miller 4, and handle (pediatric suggested for weight)
  - c. Stylet and/or gum elastic intubation stylet
2. King Airway -- one each - Size 3, 4 and 5
3. ET tube holder
4. End tidal CO2 Detector
5. Needle cricothyrotomy kit
6. Needle thoracostomy kit

**IV/MEDICATION ADMINISTRATION SUPPLIES**

1. IV administration set macro drip (2)
2. Venaguard (2)
3. Alcohol preps (6)
4. Betadine swabs (4)
5. Tourniquet (2)
6. Razor (1)
7. Tape (1)
8. IV catheters 2 each - 14, 16, 18 and 20 gauge
9. 10cc syringe (2)
10. 1 cc TB syringe (2)
11. 18 gauge needle (4)
12. 25 gauge needle (2)
13. Lancets

**MISCELLANEOUS**

1. Sharps container (1)
2. Narcotic storage per protocol
3. FEMP pack inventory sheet (1)
4. Patient care record or ePCR (Toughbook)
5. AMA forms (3)

**EQUIPMENT**

1. Compact AED or compact monitor defibrillator combination
2. Appropriate cardiac pads
3. Pulse oximetry (optional)
4. Glucometer and test strips (4)

**MEDICATIONS**

1. Albuterol Solution 2.5 mg (4) Handheld Nebulizer or Multidose Inhaler
2. Atropine Sulfate 1 mg (2)
3. Ipratropium Bromide Solution 0.5mg (4) Handheld Nebulizer or Multidose Inhaler
4. Lidocaine 100 mg IV pre-load (2)
5. Aspirin 80 mg chewable bottle (1)
6. Dextrose 10% (D10W) 250 cc ~~50% 25gm pre-load (1)~~
7. Diphenhydramine 50 mg (4)
8. Epinephrine 1: 10,000 1mg (2)
9. Epinephrine 1: 1000 1mg (4)
10. Glucagon 1mg (1)
11. Midazolam 20 mg
12. Morphine Sulfate 10 mg/ml or Fentanyl 100 mcg/2 ml (amount determined by the medical director)
13. Nitroglycerin spray 0.4 metered dose (1)
14. Saline 0.9% IV 1000 ml may be divided in two 500ml bags or four 250 ml bags.

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



## NEUROVASCULAR STROKE “NSRC” RECEIVING CENTERS CRITERIA AND DESTINATION POLICY

*(San Bernardino County Only)*

### I. PURPOSE

To provide developing guidelines to rapidly transport stroke patients who access the 9-1-1 system to a designated Neurovascular Stroke Receiving Center (NSRC) when indicated. Patients transported to NSRC will benefit from rapid assessment, intervention and treatment at a dedicated stroke specialty center. Patients will meet the defined criteria for triage as an acute ischemic or hemorrhagic cerebral vascular event.

### II. DEFINITIONS

**Interventional Neuroradiologic Capabilities:** A licensed general acute care hospital with qualified interventional radiologists and/or neurosurgeons able to administer inter-arterial tissue plasminogen activator and/or perform mechanical clot retrieval.

**mLAPSS:** Modified Los Angeles County Prehospital Stroke Screening Scale.

**Neurovascular Stroke Base Station(s):** A licensed general acute care hospital that has TJC or HFAP Primary Stroke Center accreditation ~~that also function as and designated as a base hospital~~ Paramedic Base Station.

**Neurovascular Stroke Receiving Centers (NSRC):** A twenty-four (24) hours per day, seven (7) days per week licensed general acute care hospital that has successfully completed and maintains The Joint Commission (TJC) or Healthcare Facilities Accreditation Program (HFAP) accreditation as a Primary Stroke Center and enters into an agreement with ICEMA, ICEMA-designated Level I or Level II receiving hospital for patients triaged as having a cerebral vascular event requiring hospitalization for treatment, evaluation and/or management of this event.

**Neurovascular Stroke Referral Hospital(s) (NSRH):** A licensed G general acute care hospitals that refer s possible stroke patients to NSRC.

~~**NSRC Level I (NSRC-I):** A twenty-four (24) hours per day, seven (7) days per week acute care hospital that has successfully completed and maintains The Joint Commission (TJC) or Healthcare Facilities Accreditation Program (HFAP) accreditation as a Primary Stroke Center, has interventional neuroradiologic and neurosurgical capabilities and enters into a memorandum of understanding with ICEMA relative to being a Stroke Center.~~

~~**NSRC Level II (NSRC-II):** A twenty four (24) hours per day, seven (7) days per week acute care hospital that has successfully completed and maintains The Joint~~

~~Commission (TJC) or Healthcare Facilities Accreditation Program (HFAP) accreditation as a Primary Stroke Center and enters into a memorandum of understanding with ICEMA relative to being a Stroke Center.~~

### III. POLICY

The following requirements must be met for a hospital to be an ICEMA designated NSRC ~~I or NSRC II~~:

- An ICEMA approved ~~paramedic~~ receiving hospital which is a full service acute care ~~hospital facility~~.
- Accreditation as a Primary Stroke Center by TJC or HFAP and proof of re-accreditation every two (2) years.
- An ~~facility~~ alert/communication system for notification of incoming stroke patients, available twenty-four (24) hours per day, seven (7) days per week (i.e., in-house paging system).
- Provide continuous education (CE) opportunities twice per year for NSRC, NSRH and emergency medical services (EMS) field personnel in areas of pathophysiology, assessment, triage and management for stroke patients and report annually to ICEMA.
- Lead public stroke education efforts at the appropriate educational level and report annually to ICEMA.

### IV. STAFFING REQUIREMENTS

The hospital will have the following positions filled prior to becoming a NSRC ~~I or NSRC II~~:

- Medical Directors

The hospital shall designate two (2) physicians with hospital privileges as co-directors of its NSRC program. One (1) physician shall be board certified or board eligible by the American Board of Medical Specialties or American Osteopathic Association, neurology or neurosurgery board. The co-director shall be a board certified or board eligible emergency medicine physician.

- Nursing Coordinator

The hospital shall designate a NSRC Nursing Coordinator who has experience in critical care or emergency nursing, and ~~who~~ has advanced education in stroke physiology or at least has two (2) years<sup>2</sup> dedicated stroke

patient management experience. Certification in critical care or emergency nursing is preferred.

- On-Call Physicians Specialists/Consultants

A daily roster of the following on-call physician consultants and staff must be promptly available within thirty (30) minutes of notification of “Stroke Alert” twenty-four (24) hours per day, seven (7) days per week.

- Radiologist experienced in neuroradiologic interpretations.
- On-call Neurologist and /or tele-neurology services available twenty-four (24) hours per day; seven (7) days per week.
- Additional requirements for: If neurosurgical services are not available in-house, the hospital must have a rapid transfer agreement in place with a hospital that provides this service. The agreement must be on file with the ICEMA. NSRCs must promptly accept rapid transfer requests from NSRCs. Additionally, the hospital must have a rapid transport agreement in place with an ICEMA permitted transport provider for that EOA.

**NSRC-I**

- ~~Interventional neuroradiologist or Interventional vascular neurosurgeon and an angiogram suite available twenty-four (24) hours per day; seven (7) days per week.~~
- ~~Neurosurgeon available twenty-four (24) hours per day; seven (7) days per week.~~

**NSRC-II:**

- ~~If neurosurgical services are not available in house, the facility must have a rapid transfer agreement in place with a facility that provides this service. The agreement must be on file with the ICEMA. NSRC Is must promptly accept rapid transfer requests from NSRC IIs. Additionally, the facility must have a rapid transport agreement in place with an ICEMA permitted transport agency for that EOA.~~

## V. INTERNAL HOSPITAL POLICIES

The hospital shall develop internal policies for the following situations:

- Stroke Team alert response policy upon EMS notification of a “Stroke Alert”.

- Rapid assessment of stroke patient by Emergency and Neurology Teams.
- Prioritization of ancillary services including laboratory and pharmacy with notification of “Stroke Alert”.
- Arrangement for priority bed availability in Acute Stroke Unit or Intensive Care Unit (ICU) for “Stroke Alert” patients.
- Acknowledgement that stroke patients may **only** be diverted during the times of Internal Disaster in accordance to ICEMA Reference #8060 - Requests for Hospital Diversion Policy; (applies to physical plant breakdown threatening significant patient services or immediate patient safety issues, i.e., bomb threat, earthquake damage, hazardous material or safety and security of the hospital facility.) A written notification describing the event must be submitted to ICEMA within twenty-four (24) hours.
- Additional requirements for: Emergent thrombolytic and tele-neurology (if waiver is approved) protocol to be used by Neurology, Emergency, Pharmacy and Critical Care Teams.
- Readiness of diagnostic computed tomography (CT) and magnetic resonance imaging (MRI), upon notification of Stroke Team.

#### **NSRC-I**

- ~~Emergent thrombolytic and mechanical therapy protocol to be used by Neurology, Emergency, Pharmacy, Interventional and Critical Care teams.~~
- ~~Maintaining readiness of diagnostic computed tomography (CT), magnetic resonance imaging (MRI) and therapeutic resources such as an interventional suite upon notification of Stroke Team.~~
- ~~Prompt acceptance of stroke patients from any NSRH as well as referral from NSRC II to NSRC I when interventional skills are required.~~

#### **NSRC-II**

- ~~Emergent thrombolytic and tele-neurology (if waiver is approved) protocol to be used by Neurology, Emergency, Pharmacy and Critical Care teams.~~
- ~~Maintaining readiness of diagnostic computed tomography (CT) and magnetic resonance imaging (MRI), upon notification of Stroke Team.~~

## VI. DATA COLLECTION

Data will be reported to the ICEMA Medical Director on a monthly basis using an ICEMA approved registry.

## VII. CONTINUOUS QUALITY IMPROVEMENT PROGRAM

NSRC shall develop an on-going CQI program which monitors all aspects of treatment and management of stroke patients and identifies areas needing improvement. The program must, At a minimum, the program will monitor the following parameters:

- Morbidity and mortality related to procedural complications.
- Tracking door-to-intervention times and adherence to minimum performance standards.

ICEMA will determine current performance indicators. Any specific or additional performance indicators will be determined in collaboration with the Stroke CQI Committee.

- Active participation in ICEMA Stroke CQI Committee activities.

## VIII. PERFORMANCE STANDARDS

Compliance with the American Stroke Association Performance Measures as a Primary Stroke Center.

## IX. DESIGNATION

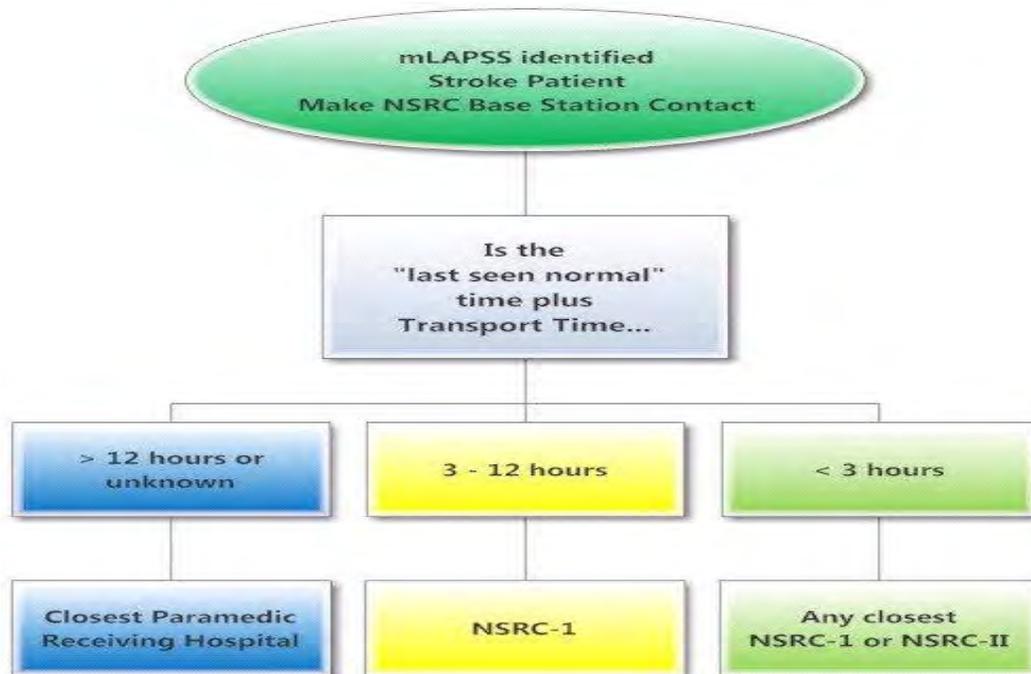
- The NSRC applicant shall be designated by ICEMA after satisfactory review of written documentation, a potential site survey and completion of an agreement between the hospital and ICEMA.
- Documentation of current accreditation as a Primary Stroke Center by TJC or HFAP shall be accepted in lieu of a formal site visit by ICEMA. ~~NSRC-I shall submit Primary Stroke Center accreditation as well as supplemental documentation verifying neurovascular interventional service capabilities.~~
- Initial designation as a NSRC shall be in accordance with terms outlined in the agreement for a period of two (2) years. Thereafter, redesignation shall occur every two (2) years contingent upon satisfactory review.
- Failure to comply with the agreement, criteria and performance standards outlined in this policy may result in probation, suspension or rescission of the NSRC designation.

## X. PATIENT DESTINATION

- The NSRC should be considered as the destination of choice if all of the following criteria are met:
  - Stroke patients eligible for transport to NSRC (~~suspected~~identified stroke patients) will be identified using the mLAPSS triage criteria.
  - Identified acute stroke patients with “last seen normal” time plus transport time equaling greater than twelve (12) hours, or if “last seen normal” time is unknown, transport to the closest paramedic receiving hospital.
  - ~~Identified stroke patients with “last seen normal” time plus transport time between three (3) to twelve (12) hours will be transported to NSRC-I.~~
  - Identified stroke patients with “last seen normal” time plus transport less than twelve (12) hours, or a “wake-up stroke” time less than (3) hours will be transported to any closest NSRC ~~I or NSRC-II.~~
  - NSRC ~~Base-base Station-hospital~~ contact is **mandatory** for all patients identified as a possible stroke patient.
  - The NSRC ~~Base-base Station-hospital~~ is the only authority that can direct a patient to a NSRC. The destination may be changed at NSRC base station-hospital discretion.
  - The NSRC ~~b~~Base Stationhospital, if different from the NSRC will notify the NSRC of the patient’s pending arrival as soon as possible, to allow timely notification of Stroke Team.
- ~~— Air transport may be considered if ground transport is greater than thirty (30) minutes.~~
- The following factors should be considered in determining choice of destination for acute stroke patients. NSRC ~~Base-base Station-hospital~~ contact and consultation is mandatory in these situations:
  - Patients with unmanageable airway, unstable cardiopulmonary condition, or in cardiopulmonary arrest should be transported to the closest paramedic receiving hospital.
  - Patients with obvious contraindication to thrombolytic therapy should be strongly considered for transport to closest NSRC ~~I.~~

- Patients with hemodynamic instability and exhibiting signs of inadequate tissue perfusion should be transported to the closest **paramedic** receiving hospital.

## XI.—STROKE PATIENT DESTINATION DECISION TREE





## BLS/LALS/ALS STANDARD DRUG & 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
<del>Dextrose 10% in 250 ml Water (D10W) *</del>		<del>2</del>	<del>2</del>	<del>2</del>
<del>Dextrose 25% 2.5 gm preload *</del>			2	2
<del>Dextrose 50% 25 gm preload *</del>		2	2	2
Diphenhydramine (Benadryl) 50 mg			1	1
Dopamine 400 mg			1	1
Epinephrine 1:1000 1 mg		2	2	2
Epinephrine 1:10,000 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
<del>Lidocaine 2% Intravenous solution</del>			<del>1</del>	<del>1</del>
<del>Lidocaine 2% (Viscous) bottle-dose</del>			1	1
Magnesium Sulfate 10 gm			1	1
Naloxone (Narcan) 2 mg preload (needle-less)		2	2	2

Exchanged Medications/Solutions	BLS	LALS	ALS Non-Transport	ALS Transport
Nitroglycerine - Spray 0.4 mg metered dose and/or tablets (tablets to be discarded 90 days after opening)		2	1	2
Normal Saline for Injection (10 cc)		2	2	2
Normal Saline 100 cc			1	2
Normal Saline 250 cc			1	1
Normal Saline 500 ml and/or 1000 ml		2000 ml	3000 ml	6000 ml
Ondansetron (Zofran) 4 mg Oral Disintegrating Tablets (ODT)			4	4
Ondansetron (Zofran) 4 mg IM/ IV			4	4
Phenylephrine HCL - 0.5 mg per metered dose			1 bottle	1 bottle
Procainamide 1 gm			1	2
Sodium Bicarbonate 50 mEq preload			2	2
Verapamil 5 mg			3	3

\* All EMS providers must transition to Dextrose 10% (D10W) by June 1, 2015. Between December 1, 2014 and June 1, 2015, EMS providers may carry reduced quantities of D50 and D25 provided a minimum of 50 gm is available in combination of all concentrations.

### CONTROLLED SUBSTANCE MEDICATIONS

Non-Exchange Controlled Substance Medications MUST BE DOUBLE LOCKED	BLS	LALS	ALS Non-Transport	ALS Transport
<del>Fentanyl</del> **			200-400 mcg	200-400 mcg
Midazolam			20-40mg	20-40mg
<del>Morphine Sulfate</del> -vials of 10 mg **			20-60mg	30-60mg

\*\* All EMS providers must transition to Fentanyl by June 1, 2015. Between December 1, 2014 and June 1, 2015, EMS providers must stock either Fentanyl or Morphine but not both.

### AIRWAY/SUCTION EQUIPMENT

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

Exchanged Airway/Suction Equipment	BLS	LALS	ALS Non-Transport	ALS Transport
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
<del>Rigid tonsil tip suction</del>	<del>1</del>		<del>1</del>	<del>1</del>
Small volume nebulizer with universal cuff adaptor		2	2	2
Suction Canister	1		1	1
Suction catheters - 6fr, 8fr or 10fr, 12fr or 14fr	1 each		1 each	1 each
Ventilation Bags - Infant 250 ml Pediatric 500 ml (or equivalent) Adult	1 1 1	1 1 1	1 1 1	1 1 1
Water soluble lubricating jelly		1	1	1
<del>Yankauers tonsil tip</del>	<del>1</del>		<del>1</del>	<del>1</del>

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

Non-Exchange Airway/Suction Equipment	BLS	LALS	ALS Non-Transport	ALS Transport
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 Needles and Driver 15 mm, 25 mm, and 45 mm			2 each 1 each	2 each 1 each
Glucose monitoring device with compatible strips and OSHA approved single use lancets		1	1	1
3-way stopcock with extension tubing			2	2
IV Catheters - sizes 14, 16, 18, 20, 22, 24		2 each	2 each	2 each
Macro drip Administration Set <del>(10 drops /cc)</del>		3	3	3
Microdrip Administration Set (60 drops /cc)		1	1	2
Mucosal Atomizer Device (MAD) for nasal administration of medication		2	2	4
Pressure Infusion Bag (disposable)		1	1	1
Razors		1	2	2
Safety Needles - 20 or 21 gauge and 23 or 25 gauge		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 <u>(one of each size)</u>	1	1	1	1
Capnography monitor and supplies, may be integrated in the cardiac monitor			1	1
Needle disposal system (OSHA approved)		1	1	1
Thermometer - Mercury Free with covers	1	1	1	1

## OPTIONAL EQUIPMENT/MEDICATIONS

Non-Exchange Optional Equipment/Medications	BLS	LALS	ALS Non-Transport	ALS Transport
AED/defib pads - <u>Adult (1), Pediatric (1)</u>	<u>21 each</u>	<u>21 each</u>		
Ammonia Inhalants			2	2
Automatic CPR device (FDA approved)	1	1	1	1
Automatic ventilator (ICEMA approved)			1	1
Backboard padding	1	1	1	1
Buretrol			1	1
Chemistry profile tubes			3	3
CyanoKit (Specialty Program Only)			1	1
EMS Tourniquet	1		1	1
Endotracheal Tubes, cuffed - 2.5, 3.0, 3.5 with stylet			SPECIALTY PROGRAMS ONLY	SPECIALTY PROGRAMS ONLY
Endotracheal Tubes, cuffed - 4.0 or 4.5, 5.0 or 5.5 with stylet			SPECIALTY PROGRAMS ONLY	SPECIALTY PROGRAMS ONLY
Gum Elastic intubation stylet			2	2
Hemostatic Dressings *	1	1	1	1
IO Needles - Manual, Adult and Pediatric, Optional		Pediatric sizes only or EZ-IO needles and drivers	1 each	1 each
IV infusion pump			1	1
IV warming device		1	1	1
Manual IV Flow Rate Control Device			1	1
Manual powered suction device	1	1	1	1
Multi-lumen peripheral catheter			2	2
Needle Thoracostomy Kit (prepackaged)			2	2
Pitocin			20 units	20 units
Pulse Oximetry device	1			
Translaryngeal Jet Ventilation Device			1	1
Vacutainer			1	1

## \* Hemostatic Dressings

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

**Note:**

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

**DRESSING MATERIALS/OTHER EQUIPMENT/SUPPLIES**

<b>Exchanged Dressing Materials/Other Equipment/Supplies</b>	<b>BLS</b>	<b>LALS</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
Adhesive tape - 1 inch	2	2	2	2
Air occlusive dressing	1	1	1	1
Ankle and wrist restraints, soft ties acceptable	1		<u>1</u>	1
Antiseptic swabs/wipes		10	10	10
<del>Bedpan or fracture pan</del>	1 (BLS TRANSPORT UNITS ONLY)			1
Urinal	1 (BLS TRANSPORT UNITS ONLY)			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

<b>Non-Exchange Dressing Materials/Other Equipment/Supplies</b>	<b>BLS</b>	<b>LALS</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
800 MHz Radio		1	1	1
<del>Ambulance gurney</del>	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
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
<del>Pillow, pillow case, sheets and blanket</del>	1 set (BLS TRANSPORT UNITS ONLY)			1 set

<b>Non-Exchange Dressing Materials/Other Equipment/Supplies</b>	<b>BLS</b>	<b>LALS</b>	<b>ALS Non-Transport</b>	<b>ALS Transport</b>
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 - CAL Chiefs or ICEMA approved	20	20	20	20



## EMS AIRCRAFT STANDARD DRUG & 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	<u>1</u> <u>30</u> mg
<u>Adenosine (Adenocard) 12 mg</u> <u>Adrenaline (Epinephrine) 1:1,000</u>	<u>2</u> <u>2</u> mg
<u>Adrenaline (Epinephrine) 1:10,000</u>	<u>3</u> mg
Albuterol Aerosolized Solution (Proventil) - unit dose 2.5 mg	<u>3</u> <u>4</u> doses
Aspirin, chewable - 81 mg tablet	1 bottle
Atropine 1 mg preload	<u>2</u> <u>3</u> mg
Calcium Chloride <u>1 gm preload</u>	<u>1</u> <u>1</u> gm
<u>Dextrose 10% in 250 ml Water (D10W) *</u>	<u>2</u>
Dextrose 25% <u>2.5 gm preload *</u>	<u>2</u> <u>5</u> gm
Dextrose 50% <u>25 gm preload *</u>	<u>2</u> <u>50</u> gm
Diphenhydramine (Benadryl) 50 mg	<u>1</u> <u>50</u> mg
<u>Dopamine 400 mg</u>	<u>1</u>
<u>Epinephrine 1:1,000</u>	<u>2</u>
<u>Epinephrine 1:10,000</u>	<u>2</u>
Glucagon <u>1 mg</u>	<u>1</u> <u>1</u> mg
Glucopaste	1 tube
<u>Intropin (Dopamine)</u>	<u>200</u> mg
Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5 mg	<u>3</u> <u>4</u>
Lidocaine <u>100 mg</u>	<u>3</u> <u>300</u> mg
Lidocaine 1 gm or 1 bag pre-mixed 1 gm/250 cc D5W	1 gm
<u>Lidocaine 2% Intravenous solution</u>	<u>1</u>
Lidocaine 2% (Viscous)	<u>1</u> <u>dose</u> <u>2</u>
Magnesium Sulfate 10 gms	<u>1</u> <u>10</u> gms
Naloxone (Narcan) <u>2 mg preload</u>	<u>2</u> <u>4</u> mg
Nitroglycerin - Spray 0.4 mg metered dose and/or tablets (tablets to be discarded 90 days after opening.)	1
Normal Saline for Injection (10 cc)	2
Normal Saline 250 ml	1
Normal Saline 500 ml and/or 1000 ml	<u>2</u> <u>4</u> <u>000</u> ml
Ondansetron (Zofran) 4 mg Oral Disintegrating Tablets (ODT)	4
Ondansetron (Zofran) 4 mg IM/ IV	4
Phenylephrine HCL - 0.5 mg per metered dose	1 bottle
Procainamide <u>1 gm</u>	<u>1</u> <u>1</u> gm
Sodium Bicarbonate <u>50 mEq preload</u>	<u>2</u> <u>100</u> mEq

MEDICATIONS/SOLUTIONS	AMOUNT
Verapamil <u>5 mg (Isoptin)</u>	<u>3-15 mg</u>

\* All EMS providers must transition to Dextrose 10% (D10W) by June 1, 2015. Between December 1, 2014 and June 1, 2015, EMS providers may carry reduced quantities of D50 and D25 provided a minimum of 50 gm is available in combination of all concentrations.

CONTROLLED SUBSTANCE MEDICATIONS-MUST BE DOUBLE LOCKED	AMOUNT
<u>Fentanyl **</u>	<u>200-400 mcg</u>
Midazolam	20-40 mg
Morphine Sulfate - vials 10 mg **	20-60 mg

\*\* All EMS providers must transition to Fentanyl by June 1, 2015. Between December 1, 2014 and June 1, 2015, EMS providers must stock either Fentanyl or Morphine but not both.

AIRWAY/SUCTION EQUIPMENT	AMOUNT
Aircraft Oxygen source -10 L /min for 20 minutes	1
BAAM Device	1
C-PAP circuits - all manufacture's available sizes	1 each
End-tittle CO2 device - pediatric and adult (may be integrated into bag)	1 each
Endotracheal tubes, uncuffed - 2.5, 3.0, 3.5 with stylet	2 each
Endotracheal Tubes, uncuffed - 4.0 or 4.5, 5.0 or 5.5 with stylet	2 each
Endotracheal Tubes cuffed - 6.0 and/or 6.5, 7.0 and/or 7.5 and 8.0 and/or 8.5 with stylet	2 each
ET Tube holders - pediatric and adult	1 each
Flashlight/penlight	1
King LTS-D Adult: Size 3 (yellow) Size 4 (red) Size 5 (purple)	1 each
King Ped: 12-25 kg: Size 2 (green) 25-35 kg: Size 2.5 (orange)	1 each
Laryngoscope handle with batteries - or 2 disposable handles	1
Laryngeal blades - #0, #1, #2, #3, #4 curved and/or straight	1 each
Magill Forceps - Pediatric and Adult	1 each
Nasal Cannulas - infant, pediatric and adult	2 each
Naso/Orogastric tubes - 10fr or 12fr, 14fr, 16fr or 18fr	1 each
Naso/Orogastric feeding tubes - 5fr or 6fr, and 8fr	1 each
Nasopharyngeal Airways - infant, child, and adult	1 each
Needle Cricothyrotomy Device (Approved) - Pediatric and adult <i>or</i>	1 each
Needles for procedure 10, 12, 14 and/or 16 gauge	2 each
Non Re-Breather O <sub>2</sub> 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) <i>and/or</i> Wall mount suction device	1 each
Pulse Oximetry device	1
Small volume nebulizer with universal cuff adaptor	<u>12</u>
Stethoscope	1

<b>AIRWAY/SUCTION EQUIPMENT</b>	<b>AMOUNT</b>
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
<del>Ridged</del> <u>Yankauers</u> tonsil tip <u>suction</u>	1
<b>IV/NEEDLES/SYRINGES/MONITORING EQUIPMENT</b>	<b>AMOUNT</b>
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 <i>or</i> Adult and Pediatric Pacer/Defibrillation pads	2 each
ECG - Pediatric and Adult	20 patches
EZ IO Needles and Driver 15 mm, 25 mm, and 45 mm	2 each 1 each
3-way stopcock with extension tubing	2
IO Needles - Manual, Adult and Pediatric, <u>Optional</u>	1 each
IV Catheters - sizes 14, 16, 18, 20, 22, 24	2 each
Glucose monitoring device	1
Macro drip Administration Set <del>(10 drops/ml)</del>	3
Micro drip Administration Set (60 drops/ml)	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, <del>60 ml catheter tip</del>	2 each
<u>Syringe - 60 ml catheter tip</u>	<u>2</u>
Thermometer - Mercury free with covers	1

<b><u>DRESSING MATERIALS/OTHER EQUIPMENT SUPPLIES</u></b>	<b><u>AMOUNT</u></b>
<u>Adhesive tape - 1 inch</u>	<u>2</u>
<u>Air occlusive dressing</u>	<u>1</u>
<u>Aircraft stretcher or litter system with approved FAA straps that allows for Axial Spinal Immobilization</u>	<u>1</u>
<u>Ankle and wrist restraints, soft ties acceptable</u>	<u>1</u>
<u>Antiseptic swabs/wipes</u>	
<u>Bandage shears</u>	<u>1</u>
<u>Blanket or sheet</u>	<u>2</u>
<u>Blood Borne Pathogen Protective Equipment - (nonporous gloves, goggles face masks and gowns meeting OSHA Standards)</u>	<u>2</u>
<u>Cervical Collars - Rigid Pediatric &amp; Adult all sizes</u>	<u>1 each</u>
<u>or</u>	
<u>Cervical Collars - Adjustable Adult and Pediatric</u>	<u>1 each</u>
<u>Emesis basin or disposable bags and covered waste container</u>	<u>1</u>
<u>Head immobilization device</u>	<u>1</u>

<b><u>DRESSING MATERIALS/OTHER EQUIPMENT SUPPLIES</u></b>	<b><u>AMOUNT</u></b>
<u>OB Kit</u>	<u>1</u>
<u>Pneumatic or rigid splints capable of splinting all extremities</u>	<u>4</u>
<u>Provodine/Iodine swabs/wipes or antiseptic equivalent</u>	
<u>Roller bandages - 4 inch</u>	<u>3</u>
<u>Sterile bandage compress or equivalent</u>	<u>6</u>
<u>Sterile gauze pads - 4x4 inch</u>	<u>4</u>
<u>Sterile Sheet for Burns</u>	<u>2</u>
<u>Traction splint</u>	<u>1</u>
<u>Universal Dressing 10x30 inches</u>	<u>2</u>

<b><u>OPTIONAL EQUIPMENT/MEDICATIONS</u></b>	<b><u>Amount</u></b>
Ammonia Inhalants	2
Automatic ventilator (Approved)	1
Backboard padding	1
BLS AED/defib pads	1
Chemistry profile tubes	3
CyanoKit (Specialty Program Only)	SPECIALTY PROGRAMS ONLY
D5W in bag	1
Endotracheal tubes, cuffed - 2.5, 3.0, 3.5 with stylet	SPECIALTY PROGRAMS ONLY
Endotracheal Tubes, cuffed - 4.0 or 4.5, 5.0 or 5.5 with stylet	SPECIALTY PROGRAMS ONLY
Hemostatic Dressing *	1
IV infusion pump	1
IV warming device	1
Manual powered suction device	1
Medical Tourniquet	1
Needle Thoracostomy Kit (prepackaged)	2
<u>Pediatric immobilization board</u>	<u>1</u>
Pitocin	2
Translaryngeal Jet Ventilation Device	1
Vacutainer	1

## \* Hemostatic Dressings

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

**Note:**

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

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



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## MEDICATION - STANDARD ORDERS

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### **Adenosine (Adenocard) - Adult (ALS)**

*Stable narrow-complex SVT or Wide complex tachycardia:*

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

*Reference #s 7010, 7020, 11050*

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

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

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

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

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

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

### **Albuterol - Pediatric (LALS, ALS)**

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

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

### **Aspirin, chewable (LALS, ALS)**

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

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

### **Atropine (ALS)**

Atropine, 0.5 mg IV IOP. 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 P, 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)~~**

~~Dextrose 50% 25 gm IV of 50%~~

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

**Dextrose - Adult (LALS) (ALS)**

~~Dextrose 50% 25 gm IV/IO of 50%~~ Dextrose 10%/250 ml (D10W 25 g) IV/IO Bolus

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

**Dextrose - Pediatric (LALS, ALS)**

~~For neonates (0 - 4 weeks), if blood glucose < 35 mg/dL:~~

~~Dextrose 25% (0.25 gm/ml) Diluted 1:1, give 0.5 gm/kg (4 ml/kg) IV/IO~~

~~For patient < 10 kg and > 4 weeks, if blood glucose < 60 mg/dL:~~

~~Dextrose 25% (0.25 gm/ml), give 0.5 gm/kg (2 ml/kg) IV/IO~~

~~For patient > 10 kg and < 25kg, if glucose less than 60 mg/dL:~~

~~Dextrose 50% (0.5 gm/mL) Diluted 1:1, give 0.5 gm/kg (2 ml/kg) IV/IO~~

~~For patient > 25 kg, if glucose less than 80 mg/dL:~~

~~Dextrose 50% (0.5 gm/mL) Diluted 1:1, give 0.5 gm/kg (2 ml/kg) IV/IO~~

Dextrose 10%/250 ml (D10W 25 g) 0.5 g/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*

**Dopamine - Adult (ALS)**

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

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

**Dopamine - Pediatric (ALS)**

*Post resuscitation continued signs of inadequate tissue perfusion:*

9 to 14 years

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

*Reference #s 7010, 7020, 14040*

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

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

~~Acute Asthma, Bronchospasm, Allergic reaction, Anaphylaxis:~~

Epinephrine, 0.3 mg IM

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

*For Persistent severe anaphylactic shock:*

Epinephrine (1:10,000), 0.1 mg slow IVP/IO. May repeat every 5 minutes as needed to total dosage of 0.5 mg.

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

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

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

*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, 11010, 14010, 14030*

### **Epinephrine (1:10,000) - Pediatric (ALS)**

*Anaphylactic Shock (no palpable radial pulse and depressed level of consciousness):*  
Epinephrine (1:10,000), 0.01 mg/kg IV/IO, no more than 0.1 mg per dose. May repeat to a maximum of 0.5 mg.

*Cardiac Arrest:*

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

9 to 14 years      Epinephrine (1:10,000), 1.0 mg IV/IO

*Newborn Care:*

Epinephrine (1: 10,000), 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 (1:10,000), 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 (1:10,000), 0.5 mcg/kg/min IV/IO drip

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

### **Fentanyl - Adult (ALS)**

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.

Fentanyl - Pediatric (ALS)

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

Fentanyl, 1-2 mcg/kg IM/IN, may repeat every ten (10) minutes titrated to pain not to exceed 200 mcg.

Reference #s 2020, 6090, 6110, 7010, 7020, 7030, 9120, 10110, 10120, 11060, 11100, 13030, 14070, 15010, 15020

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

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

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

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

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

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

**Glucagon - Adult (LALS, ALS)**

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

*Betablocker Poisoning:*

Glucagon, 1 mg IV IOP (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 Inhalation Solution (Atrovent) - Adult (ALS) use with Albuterol**

Atrovent ~~nebulized~~, 0.5 mg ~~may repeat two (2) times nebulized~~. Administer one dose only.

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

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

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

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

*Reference #s 6090, 6110, 7010, 7020*

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

1 day to 12 months Atrovent ~~nebulized~~, 0.25 mg. ~~may repeat two (2) times~~ Administer one (1) dose only.

1 year to 14 years Atrovent ~~nebulized~~, 0.5 mg. ~~may repeat two (2) times~~ Administer one (1) dose only.

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

**Lidocaine - Adult (ALS)**

*Intubation, King Airway, NG/OG, for suspected increased intracranial pressure (ICP) ~~brain injury~~:*

Lidocaine, 1.5 mg/kg IV/IO

*VT/VF:*

Initial Dose: Lidocaine, 1.5 mg/kg IV/IO

May administer an additional 0.75 mg/kg IV/IO, repeat once in five (5) to ten (10) minutes for refractory VF.

Repeat 0.75 mg/kg every five (5) to ten (10) minutes; maximum total dose of 3 mg/kg.

***Refractory VF:***

~~Lidocaine, 0.75 mg/kg IV/IO, repeat once in five (5) to ten (10) minutes; maximum three (3) doses or total of 3 mg/kg.~~

***VT/VF Infusion:***

~~Lidocaine, 1–4 2 mg/min (30–50 mcg/kg/min) IV/IO drip~~

***V-Tach, Wide Complex Tachycardias – with Pulses:***

~~Lidocaine, 1.5 1 mg/kg slow IV/IO;~~

~~repeat at 0.5 mg/kg every ten (10) minutes until maximum dose of 3 mg/kg administered given.~~

May administer an additional 0.75 mg/kg IV/IO, repeat once in five (5) to ten (10) minutes for refractory VF

Initiate infusion of Lidocaine 2 mg/min IV/IO drip.

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

**Lidocaine - Pediatric (ALS)**

*Intubation, King Airway, NG/OG, for suspected ~~brain injury~~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.

*Reference #s 2020, 7010, 7020, 14040*

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

*Pain associated with IO ~~insertion~~infusion:*

Lidocaine ~~2%~~, 0.5 mg/kg slow IO push over two (2) minutes, not to exceed 50-40 mg total.

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

**Magnesium Sulfate (ALS)***Polymorphic Ventricular Tachycardia:*

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

*Eclampsia (Seizure/Tonic/Clonic Activity):*

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

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

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

**Midazolam - Adult (ALS)***Seizure:*

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

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

Assess patient for medication related reduced respiratory rate or hypotension.

Maximum of three (3) doses using any combination of IM/IN/IV/IO may be administered/given 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, IV/IN

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

**Midazolam - Pediatric (ALS)***Seizures:*

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

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

Assess patient for medication related reduced respiratory rate or hypotension.

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

*Reference #s 7010, 7020, 14060*

### **Morphine ~~Sulfate~~ - Adult (ALS)**

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

#### *Isolated Extremity Trauma, Burns:*

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

Morphine ~~Sulfate~~, 10 mg IM.

#### *Pacing, synchronized cardioversion:*

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

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

### **Morphine ~~Sulfate~~ - Pediatric (ALS)**

Morphine ~~Sulfate~~, 0.1 mg/kg IV/IO not to exceed 2 mg increments, for a total of 5 mg, or

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

#### *Burns:*

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

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

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

### **Naloxone (Narcan) - Adult (LALS, ALS)**

#### *Resolution of respiratory depression related to suspected narcotic overdose:*

Naloxone, 0.5 mg IV/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~~given.

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

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

*Resolution of respiratory depression related to suspected narcotic overdose:*

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

9 to 14 years      Naloxone, 0.5 mg IV/IO

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

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

### **~~Naloxone (Narcan) - Pediatric (ALS)~~**

~~*Resolution of respiratory depression related to suspected narcotic overdose:*~~

~~1 day to 8 years      Naloxone, 0.1 mg/kg IV/IO~~

~~9 to 14 years      Naloxone, 0.5 mg IV/IO~~

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

~~*Reference #s 7010, 7020, 14040, 14050*~~

### **Nitroglycerin (LALS, ALS)**

Nitroglycerin, 0.4 mg sublingual/transmucosal

One (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~~give a total of 4 mgs of Ondansetron prior to base hospital contact.

All patients nine (9) and older: may administer/give Ondansetron 4 mg and may repeat twice, 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*

### **Phenylephrine HCL (ALS)**

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

*Reference #s 7010, 7020, 10050*

### **Procainamide (ALS)**

*SVT, V-Tach or Wide Complex Tachycardias:*

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

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

### **Sodium Bicarbonate (ALS)**

*Tricyclic Poisoning:*

Sodium Bicarbonate, 1 mEq/kg IV/P/IO

*Reference #s 2020, 7010, 7020, 13010*

### **Verapamil (ALS)**

*SVT if adenosine is ineffective:*

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

*Reference #s 7010, 7020, 11050*



## ~~NURSE STAFFED UNITS~~ CRITICAL CARE INTERFACILITY TRANSPORT GUIDELINES

### I. PURPOSE

To establish criteria for the approval of Critical Care Transport (CCT) providers including nurse staffed Advanced Life Support (ALS) Interfacility Transport/CCT unit operation within San Bernardino, Inyo or Mono Counties. ~~To state the requirements for nurse staffed ALS Interfacility transport units meeting all local, county, ICEMA and State requirements.~~

### AUTHORITY

~~Title 22, Division 2.5, Sections 1797.52, 1797.178, 1798.170, and 1798.172 of the California Health and Safety Code.~~

### II. PROGRAM APPROVAL

1. Requests for approval must be made in writing sixty (60) days prior to the anticipated starting date of service ~~to the Executive Director of ICEMA and include:~~ The request must include:
  - a. Proposed identification and location of the nurse-staffed unit.
  - b. All procedures and protocols.
  - c. Documentation of qualifications for the Medical Director.
  - d. Documentation of qualifications for the Nurseing Coordinator.
  - e. Continuous Quality Improvement Plan. ~~Quality assurance plan.~~
  - f. Agreement to comply with all ICEMA policies and procedures for transport of critical patients.
2. ICEMA will notify the applicant in a timely manner, if any further documentation is needed. ICEMA will notify the applicant in writing within ten (10) working days following receipt of request for approval if any further documentation is needed.
3. The applicant shall be notified in writing of approval or denial of the program. The applicant shall be notified in writing within thirty (30) days of receipt of complete package of the approval or denial of the program.

## ~~REQUIREMENTS FOR REGISTERED NURSE PERSONNEL~~

- ~~1. RN currently licensed to practice in the State of California.~~
- ~~2. At the provider's option, an RN may be employed by the ambulance provider or be a contract employee.~~
- ~~3. Current BLS, ACLS and PALS certification from the American Heart Association or equivalent.~~
- ~~4. A minimum of two (2) years experience in an ICU or ED in the previous three (3) years, prior to employment with the ambulance provider~~
- ~~5. Successful completion of an in-house orientation program related to ICEMA protocols, procedures and Endotracheal Intubation training~~
- ~~6. Certification in any of the following is desirable but not required: Certified Emergency Nurse (CEN); Critical Care Registered Nurse (CCRN); Mobile Intensive Care Nurse (MICN).~~
- ~~7. Documentation of continuing education requirement:~~
  - ~~a. Minimum of ninety six (96) hours of ICU or ED experience per year.~~
  - ~~b. Minimum of two (2) successful Endotracheal Intubations every two (2) years.~~
  - ~~c. Maintain current California State RN license, BLS, ACLS and PALS certification.~~

### III. EQUIPMENT

~~In addition to the items required by California Administrative Code, Title XXII, The EMS provider shall provide, at a minimum, the following equipment:~~

- ~~1. ALS ~~e~~Equipment per ~~ICEMA Protocol~~ Reference #7010 - BLS/LALS/ALS & BLS Standard Drug & Equipment List. ~~for ALS Transport.~~~~
- ~~2. Cardiac monitor **with external pacemaker.**~~
- ~~3. Infusion pump(s).~~
- ~~4. 2. Back-up power source.~~

#### IV. **MEDICAL DIRECTOR**

1. Medical Director: A full or part-time physician licensed in the State of California and qualified by training and experience with practice, within the last five (5) years, ~~experience~~ in emergency or acute critical care medicine, ~~within the last five (5) years.~~ The ICEMA Medical Director must approve the candidate for medical director. The duties of the medical director shall include but not be limited to:
  - a. Sign and approve, in advance, all medical protocols to be followed by the registered nurses (RN) ~~RN~~ at the ALS level.
  - b. Ensure the ongoing training of all nurse staff ~~medical personnel~~ involved.
  - c. Ensure the quality of patient transfers being conducted by the provider, including familiarity with SB612 and COBRA laws.
  - d. Ensure that continuous quality improvement/assurance outcome audits are ~~being~~ conducted.

#### V. **NURSEING COORDINATOR**

12. ~~Nursing-Nurse~~ Nurseing Coordinator: A full or part-time RN employed as a Nurseing Coordinator qualified by training and/or experience in emergency or acute critical care medicine, within the last five (5) years, in emergency or acute critical care nursing. The duties of the Nurseing Coordinator shall include but not be limited to:
  - a. Sign and approve, in advance, all nursing procedures to be followed by the RN at the ALS level.
  - b. Provide ongoing training to all CCT personnel ~~of all medical personnel involved.~~
  - c. Ensure quality of patient transfers ~~through being conducted by the provider~~ continuous quality improvement/assurance outcome audits ~~by conducting patient care audits.~~

#### VI. **PROCEDURES/PROTOCOLS**

1. Each ~~company-CCT provider providing~~ utilizing nurse staffed ALS units shall develop and maintain procedures for the hiring and training of nursing personnel.

2. Each provider must develop a manual to include the following:
  - a. Malpractice insurance coverage.
  - b. Identity and accessibility of the ~~Physician~~ Medical Director and ~~Nurse~~ Nursing Coordinator.
  - c. Vehicle inventory lists.
  - d. Copies of all related interfacility transfer paperwork.
  - e. Statement of responsibility of the sending physician for the patient during transfer and in accordance with COBRA and SB612 laws.
  - f. Guidelines for change in patient destination due to patient condition.
  - g. Protocols (Standing Orders) based on ACLS, PALS and/or NALS guidelines.
3. Procedures and protocols shall be subject to review by ICEMA.

## VII. CONTINUOUS QUALITY IMPROVEMENT~~QUALITY ASSURANCE~~

1. Submit to ICEMA a continuous quality improvement (CQI) plan, quarterly and annual reports to ICEMA. ~~Submit to ICEMA a quality improvement plan and submit quarterly reports to ICEMA.~~
2. All transports resulting in poor patient outcome shall be reviewed in a timely manner following the occurrence.
3. Periodic staff conferences on audits and outcomes are required in order to improve or revise protocols.
4. Records of all these activities shall be kept by the provider and be made available for inspection and audit by ICEMA.
5. ICEMA shall perform periodic on-site audits of records to ensure compliance with this policy.
6. Non-compliance with ICEMA policies and/or protocols may lead to suspension or revocation of ICEMA approval of the EMS provider's CCT program. ~~Non-compliance with this policy may cause ICEMA to suspend or revoke approval of a nurse-staffed ALS interfacility transport unit.~~

### **EMS AIR AMBULANCE STAFFING**

~~Provider shall staff all responding critical care transports with at least (2) ICEMA ALS accredited//authorized personnel serving as the Medical Crew. Personnel shall receive designation from ICEMA after receiving training as specified and approved by ICEMA.~~

~~Training shall include, but not be limited to:~~

- ~~a. EMS system and communications procedures.~~
- ~~b. The prehospital care system(s) within which they operate including local medical and procedural protocols.~~
- ~~c. Use of onboard medical equipment.~~
- ~~d. Continuing education as required by their licensure or certification.~~

~~Registered nurses (RN) must be authorized by ICEMA as Mobil Intensive Care Nurse – Flight (MICN CCT) personnel per ICEMA Reference # \*\*\* Critical Care Transport Nurse Authorization, in addition to any additionally required training that an EMS aircraft CCT provider may require.~~

~~4. Paramedics must be accredited/accredited by ICEMA as an Emergency Medical Technician Paramedic (EMT P) per ICEMA Reference # 1040 Requirements/Requirements For EMT P Accreditation in addition to any additionally required training that the CCT provider may require.~~



## CONTINUATION OF CARE (San Bernardino County Only)

### I. PURPOSE

To develop a system that ensures the rapid transport of patients at the time of symptom onset or injury, to receiving the most appropriate definitive care. This system of care consists of public safety answering point (PSAP) providers, EMS providers, referral hospitals (RH), Specialty Care Centers (Trauma, Cardiovascular ST Elevation Myocardial Infarction (STEMI) or Stroke), ICEMA and EMS leaders combining their efforts to achieve this goal.

This policy shall only be used for:

- Rapid transport of Trauma, STEMI and Stroke patients from RH to Specialty Care Center.
- Specialty Care Center to Specialty Care Center when higher level of care is required.
- EMS providers transporting unstable patients requiring transport to a Specialty Care Center to stop at any closest paramedic receiving hospital for airway stabilization, and continue on to a Specialty Care Center.

It is not to be used for any other form of interfacility transfer of patients.

### ~~II. AUTHORITY~~

~~California Health and Safety Code, Division 2.5, 1797.204  
California Code of Regulations, Title 22~~

### III. DEFINITIONS

**Neurovascular Stroke Receiving Centers (NSRC):** A licensed general acute care hospital designated by ICEMA's Governing Board as a NSRC.

**Referral Hospital (RH):** Any licensed general acute care hospital that is not an ICEMA designated TC, SRC or NSRC.

**Specialty Care Center:** ICEMA designated Trauma, STEMI or Stroke Center.

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

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

#### **III.V. INCLUSION CRITERIA**

- Any patient meeting ICEMA Trauma Triage Criteria, (refer to ICEMA Reference #15030 - Trauma Triage Criteria and Destination Policy) arriving at a non-trauma hospital by EMS or non-EMS transport.
- Any patient with a positive ~~STEMI~~ ~~ST-elevation-MI~~ requiring EMS transport to a SRC (refer to ICEMA Reference #6070 - Cardiovascular ST Elevation Myocardial Infarction "STEMI" Receiving Centers Criteria and Destination Policy).
- Any patient with a positive mLAPSS or stroke scale requiring EMS transport to ~~a the~~ NSRC (refer to ICEMA Reference #6100 - Neurovascular Stroke Receiving Centers Criteria and Destination Policy).

#### **IV. INITIAL TREATMENT GOALS AT RH**

- Initiate resuscitative measures within the capabilities of the facility.
- Ensure patient stabilization is adequate for subsequent transport.
- Do not delay transport by initiating any diagnostic procedures that do not have direct impact on immediate resuscitative measures.

##### **➤ TIMELINES**

< 30 minutes at RH (door-in/door-out).

< 30 minutes to complete ALSparamedic continuation of care transport.

< 30 minutes door-to-intervention at RC Specialty Care Center.

- RH shall contact the appropriate Specialty Care Center ED physician directly without calling for an inpatient bed assignment. Refer to Section IV - attachment SRH-SRC Buddy System Table.
- EMS providers shall make Specialty Care Center ~~Base Station~~ base hospital contact.
- The Specialty Care Centers shall accept all referred trauma, stroke and STEMI patients unless they are on Internal Disaster as defined in ICEMA Reference #8060 - Requests for Hospital Diversion Policy (San Bernardino County Only).

- The Specialty Care Center ED physician is the accepting physician at the Specialty Care Center and will activate the internal Trauma, STEMI, or Stroke Team according to internal TC, SRC or NSRC policies or protocols.
- RH ED physician will determine the appropriate mode of transportation for the patient. ~~If ground transportation is > 30 minutes consider the use of an air ambulance. Requests for air ambulance shall be made to 9-1-1 and normal dispatching procedures will be followed; however, the air ambulance Continuation of Care patient will be transported to the Specialty Care Center identified by the RH.~~
- Simultaneously call 9-1-1 and utilize the following script to dispatch:  
  
**“This is a Continuation of Care run from \_\_\_ hospital to \_\_\_ Trauma, STEMI or Stroke Center”**  
  
*Dispatchers will only dispatch transporting paramedic units without any fire apparatus.*
- RH must send all medical records, test results, radiologic evaluations to the Specialty Care Center. DO NOT DELAY TRANSPORT - these documents may be FAXED to the Specialty Care Center.

## **VI. SPECIAL CONSIDERATIONS**

- If the patient has arrived at the RH via EMS field personnel, the RH ED physician may request that the transporting team remain ~~with patient~~ and immediately transport the patient~~them~~ once minimal stabilization is done at the RH.
- EMT-Ps may only transport patients on Dopamine, Lidocaine and Procainamide drips. Heparin and Integrillin drips are not within the ~~paramedic-EMT-P~~ scope of practice and require a “critical care transport” nurse to be in attendance. Unless medically necessary, avoid using medication drips that are outside of the ~~paramedic-EMT-P~~ scope of practice to avoid any delays in transferring of patients.
- The RH may consider sending one of its nurses with the transporting ~~paramedic-ALS~~ unit if deemed necessary due to the patient’s condition or scope of practice.
- \_\_\_\_\_ Nurse staffed ~~ALS critical care (ground or air) transport~~ units (ground or air) maybe used; but may create a delay due to availability. Requests for a~~of~~ nurse staffed ~~critical care ALS transport~~ units must be made directly to the Critical Care ~~†Transporter agency (CCT) provider~~ by landline.
- Specialty Care Center diversion is not permitted except for internal disaster. However, Specialty Care Center base hospitals are allowed to facilitate

redirecting of EMS patients to nearby SRCs, NSRCs or TCs when the closest Specialty Care Center is over capacity to avoid prolonged door-to-intervention times. Specialty Care Center base hospitals shall ensure physician to physician contact when redirecting patients.

**VII. SPECIALTY CARE CENTER - REFERRAL HOSPITAL BUDDY SYSTEM TABLE**

NEUROVASCULAR STROKE RECEIVING CENTERS (NSRC)	NEUROVASCULAR STROKE REFERRAL HOSPITALS (NSRH)
Arrowhead Regional Medical Center	<ul style="list-style-type: none"> <li>• Barstow Community Hospital</li> <li>• Community Hospital of San Bernardino</li> <li>• Desert Valley Hospital</li> <li>• Kaiser Fontana Medical Center</li> <li>• St. Bernardine Medical Center</li> <li>• St. Mary Medical Center</li> </ul>
Desert Regional Medical Center	<ul style="list-style-type: none"> <li>• Colorado River Medical Center</li> <li>• Hi-Desert Medical Center</li> </ul>
Loma Linda University Medical Center	<ul style="list-style-type: none"> <li>• Bear Valley Community Hospital</li> <li>• J.L. Pettis VA Hospital (Loma Linda VA)</li> <li>• Mountains Community Hospital</li> <li>• St. Mary Medical Center</li> <li>• Victor Valley Global Medical Center</li> <li>• Weed Army Community Hospital at Fort Irwin</li> </ul>
Pomona Valley Hospital Medical Center	<ul style="list-style-type: none"> <li>• Chino Valley Medical Center</li> <li>• Montclair Hospital Medical Center</li> </ul>
Redlands Community Hospital	<ul style="list-style-type: none"> <li>• Bear Valley Community Hospital</li> <li>• Community Hospital of San Bernardino</li> <li>• St. Bernardine Medical Center</li> </ul>
San Antonio Community Hospital	<ul style="list-style-type: none"> <li>• Chino Valley Medical Center</li> <li>• Kaiser Ontario Medical Center</li> <li>• Montclair Hospital Medical Center</li> </ul>
STEMI RECEIVING CENTER (SRC)	STEMI REFERRAL HOSPITAL (SRH)
Desert Valley Hospital	<ul style="list-style-type: none"> <li>• Barstow Community Hospital</li> <li>• Victor Valley Global Medical Center</li> <li>• Weed Army Community Hospital at Fort Irwin</li> </ul>
Loma Linda University Medical Center	<ul style="list-style-type: none"> <li>• Arrowhead Regional Medical Center</li> <li>• Bear Valley Community Hospital</li> <li>• J. L. Pettis VA Hospital (Loma Linda VA)</li> <li>• Redlands Community Hospital</li> </ul>
Pomona Valley Hospital Medical Center	<ul style="list-style-type: none"> <li>• Chino Valley Medical Center</li> <li>• Montclair Hospital Medical Center</li> </ul>
San Antonio Community Hospital	<ul style="list-style-type: none"> <li>• Chino Valley Medical Center</li> <li>• Kaiser Ontario Medical Center</li> <li>• Montclair Hospital Medical Center</li> </ul>
St. Bernardine Medical Center	<ul style="list-style-type: none"> <li>• Colorado River Medical Center</li> <li>• Community Hospital of San Bernardino</li> <li>• Kaiser Fontana Medical Center</li> <li>• Mountains Community Hospital</li> </ul>
St. Mary Medical Center	<ul style="list-style-type: none"> <li>• Barstow Community Hospital</li> <li>• Bear Valley Community Hospital</li> <li>• Hi-Desert Medical Center</li> <li>• Robert E. Bush Naval Hospital-29 Palms</li> <li>• Victor Valley Global Medical Center</li> </ul>

### VIII. REFERENCES

<u>Number</u>	<u>Name</u>
6070	Cardiovascular <u>ST Elevation Myocardial Infarction “STEMI”</u> Receiving Centers <u>Criteria and Destination Policy</u>
<u>6100</u>	<u>Neurovascular Stroke Receiving Centers “NSRC” Criteria and Destination Policy</u>
8060	Requests for Hospital Diversion Policy (San Bernardino County <u>Only</u> )
15030	Trauma Triage Criteria and Destination Policy



## NAUSEA AND VOMITING

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Nausea.
- Vomiting.
- Prophylactic treatment of narcotic induced nausea and/or vomiting.

### II. CONTRAINDICATIONS

**Patients under 4 years of age.**

Known sensitivity to Ondansetron or other 5-HT3 antagonists:

- Granisetron (Kytril)
- Dolasetron (Anzemet)
- Palonosetron (Aloxi)

### III. ALS PROCEDURE

- Assess patient for need for anti-emetic therapy.
- Maintain airway.
- Position of comfort.
- Oxygen.
- Cardiac monitoring in patients with history of cardiac problems.

### ~~DOSAGE: PATIENTS FOUR (4) YEARS OLD TO ADULT~~

- ~~1. Ondansetron per ICEMA Reference #7040 - Medication - Standard Orders.~~
- ~~2. May give/administer Ondansetron when giving morphine or IV to prevent nausea or vomiting.~~

### IV. DOCUMENTATION

~~Document patient response. Documentation will be done on the patient care record (OIA or ePCR). The patient's response to the medication and vital signs will be documented on the PCR.~~



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## SUSPECTED ACUTE MYOCARDIAL INFARCTION (AMI)

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### I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Chest pain (typical or atypical).
- Syncopal episode.
- History of previous AMI, Angina, heart disease, or other associated risk factors.

### II. BLS INTERVENTIONS

- Recognition of signs/symptoms of suspected AMI.
- Reduce anxiety, allow patient to assume position of comfort.
- Oxygen as clinically indicated.
- Obtain O<sub>2</sub> saturation.
- May assist patient with self-administration of Nitroglycerin and/or Aspirin.

### III. LIMITED ALS (LALS) INTERVENTIONS

- Aspirin per ICEMA Reference #7040 - Medication - Standard Orders.
- Consider early vascular access.
- For patients with chest pain, signs of inadequate tissue perfusion and clear breath sounds, administergive 300 ml NS bolus, may repeat.
- Nitroglycerin per ICEMA Reference #7040 - Medication - Standard Orders.
- Consider establishing a saline lock en route on same side as initial IV.
- Complete thrombolytic checklist, if time permits.
- Contact base hospital.

#### IV. ALS INTERVENTIONS

- Aspirin per ICEMA Reference #7040 - Medication - Standard Orders.
- Consider early vascular access.
- For patients with chest pain, signs of inadequate tissue perfusion and clear breath sounds, administer 300 ml NS bolus, may repeat.
- 12-Lead Technology:
  - Obtain 12-lead ECG. Do not disconnect 12-lead cables until necessary for transport.
  - If signs of inadequate tissue perfusion or if inferior wall infarct is suspected, obtain a right-sided 12-lead (V4R).
  - If right ventricular infarct (RVI) is suspected with signs of inadequate tissue perfusion, consider 300ml NS bolus, may repeat. Early consultation with base hospital or receiving hospital in rural areas is recommended. (Nitrates are contraindicated in the presence of RVI or hypotension.)
  - With documented ST segment elevation in two (2) or more contiguous leads, contact STEMI base hospital for destination decision while preparing patient for expeditious transport, refer to ICEMA Reference #6070 - Cardiovascular “STEMI” Receiving Centers. In Inyo and Mono Counties, the assigned base hospital should be contacted for STEMI consultation.
  - Repeat 12-lead at regular intervals, but do not delay transport of patient. If patient is placed on a different cardiac monitor for transport, transporting provider should obtain an initial 12-lead on their cardiac monitor and leave 12-lead cables in place throughout transport.
  - EMS field personnel shall ensure that a copy of the 12-lead ECG is scanned or attached as a permanent part of the patient’s ePCR or OIA and submit to ICEMA if patient is going to a SRC as a suspected STEMI.
- Nitroglycerin per ICEMA Reference #7040 - Medication - Standard Orders. Utilize Morphine Sulfate or Fentanyl for pain control when Nitroglycerin is contraindicated.

- Morphine Sulfate or Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders. Consider concurrent administration of Nitroglycerin with Morphine Sulfate or Fentanyl if there is no pain relief from the initial Nitroglycerin administration. Contact base hospital for further Morphine Sulfate or Fentanyl orders.
- Consider establishing a saline lock as a secondary IV site.
- Make early STEMI notification to the STEMI Receiving Center.
- In Radio Communication Failure (RCF), may administer~~give~~ up to an additional 10 mg Morphine Sulfate in 2 mg increments with signs of adequate tissue perfusion or administer an additional 100 mcg of Fentanyl in 50 mcg increments with signs of adequate tissue perfusion.

## V. REFERENCES

<u>Number</u>	<u>Name</u>
6070	Cardiovascular “STEMI” Receiving Centers
7040	Medication - Standard Orders



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## BURNS - ADULT (15 years of age and older)

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

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

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

Refer to ICEMA Reference #8130 - Destination Policy.

### II. BLS INTERVENTIONS

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

#### A. Manage Special Considerations

- **Thermal Burns:** Stop the burning process. Do not break blisters. Cover the affected body surface with dry, sterile dressing or sheet.
- **Chemical Burns:** Brush off dry powder, if present. Remove any contaminated or wet clothing. Irrigate with copious amounts of saline or water.
- **Tar Burns:** Cool with water, do not remove tar.
- **Electrical Burns:** Remove from electrical source (without endangering self) with a nonconductive material. Cover the affected body surface with dry, sterile dressing or sheet.

- **Eye Involvement:** Continuous flushing with NS during transport. Allow patient to remove contact lenses if possible.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death On Scene.

### III. LIMITED ALS (LALS) INTERVENTIONS

- Advanced airway as indicated.
- King Airway contraindicated in airway burns.
- Airway Stabilization:  
  
Burn patients with respiratory compromise or potential for such, will be transported to the closest most appropriate receiving hospital for airway stabilization.
- IV access (warm IV fluids when available).
  - *Unstable:* BP <90mmHG and/or signs of inadequate tissue perfusion, start 2<sup>nd</sup> IV access.  
  
IV NS 250 ml boluses, may repeat to a maximum of 1000 ml.
  - *Stable:* BP >90mmHG and/or signs of adequate tissue perfusion.  
  
IV NS 500 ml/hour.
  - Transport to appropriate facility.
    - *Minor Burn Classification:* Transport to the closest most appropriate receiving hospital.
    - *Moderate Burn Classification:* Transport to the closest most appropriate receiving hospital.
    - *Major Burn Classification:* Transport to the closest most appropriate Burn Center (San Bernardino County contact ARMC).
    - *Critical Trauma Patient (CTP) with Associated Burns:* Transport to the most appropriate Trauma Center.
- Burn patients with associated trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.

A. **Manage Special Considerations**

- **Electrical Burns:** Place AED on patient.
  - Electrical injuries that result in cardiac arrest shall be treated as medical arrests.
- **Respiratory Distress:** Use BVM as needed and transport to the nearest facility for airway control. Contact receiving hospital ASAP. Nebulized Albuterol with Atrovent per ICEMA Reference #7040 - Medication - Standard Orders.
- **Deteriorating Vital Signs:** Transport to the closest most appropriate receiving hospital. Contact base hospital.
- **Pulseness and Apneic:** Transport to the closest most appropriate receiving hospital and treat according to ICEMA policies. Contact base hospital.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.
- **Precautions and Comments:**
  - High flow oxygen is essential with known or potential respiratory injury. Beware of possible smoke inhalation.
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces, as additional injury will result.
- **Base Hospital Orders:** May order additional fluid boluses.

IV. **ALS INTERVENTIONS**

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

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

- Monitor ECG.
- IV/IO Access (Warm IV fluids when available).
  - *Unstable:* BP <90mmHG and/or signs of inadequate tissue perfusion, start 2<sup>nd</sup> IV access.  
  
*IV/IO NS 250 ml boluses, may repeat to a maximum of 1000 ml.*
  - *Stable:* BP >90mmHG and/or signs of adequate tissue perfusion.  
  
*IV/IO NS 500 ml/hour.*
- Treat pain as indicated.

**Pain Relief:** Morphine ~~Sulfate~~ or ~~Fentanyl~~ per ICEMA Reference #7040 - Medication - Standard Orders. Document BPs every five (5) minutes while medicating for pain and reassess the patient.

- Transport to appropriate facility:
  - *CTP with associated burns,* transport to the closest Trauma Center.
  - Burn patients with associated trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.
- Insert nasogastric/orogastric tube as indicated.
- Refer to Section V - Burn Classifications below.

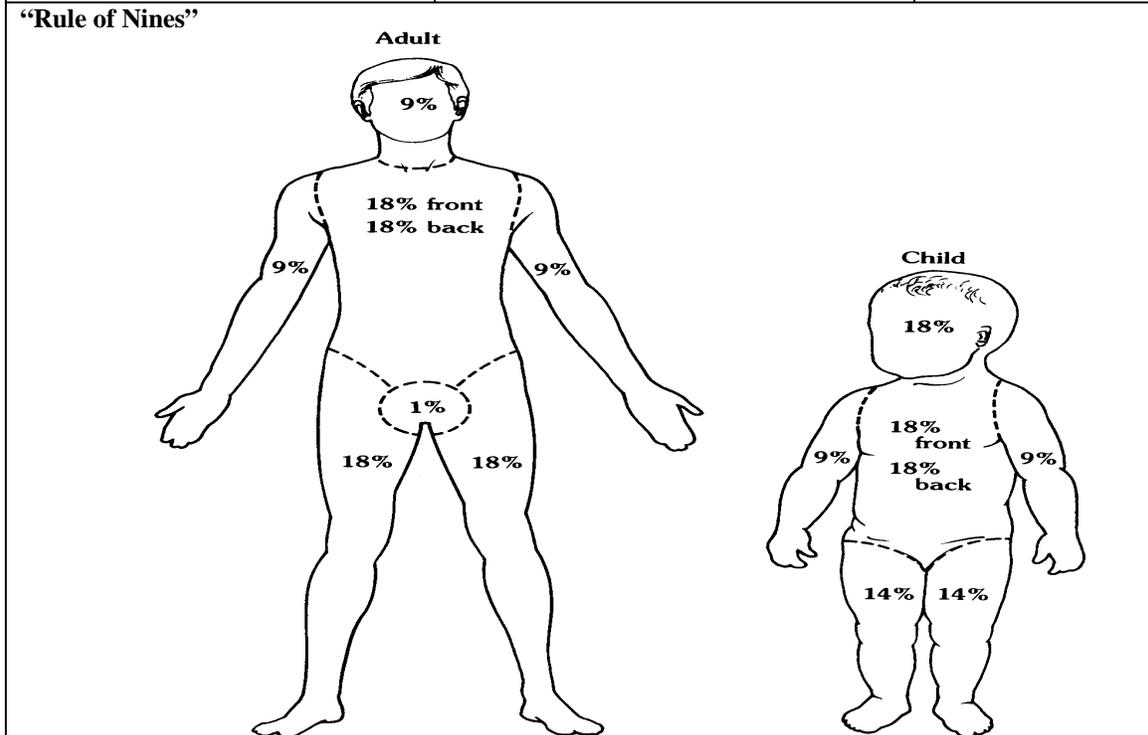
**A. Manage Special Considerations**

- **Electrical Burns:** Monitor for dysrhythmias, treat according to ICEMA protocols.
  - Electrical injuries that result in cardiac arrest shall be treated as medical arrests.
- **Respiratory Distress:** Intubate patient if facial/oral swelling are present or if respiratory depression or distress develops due to inhalation injury.
  - Albuterol with Atrovent per ICEMA Reference #7040 - Medication - Standard Orders.
  - Administer humidified oxygen, if available.

- Apply capnography.
- Awake and breathing patients with potential for facial/inhalation burns are not candidates for nasal tracheal intubation. CPAP may be considered, if indicated, after consultation with base hospital.
- **Deteriorating Vital Signs:** Transport to the closest receiving hospital. Contact base hospital.
- **Pulseness and Apneic:** Transport to the closest receiving hospital and treat according to ICEMA policies. Contact base hospital.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.
- **Precautions and Comments:**
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces, as additional injury will result.
- **Base Hospital Orders:** May order additional medications, fluid boluses and CPAP.

**V. BURN CLASSIFICATIONS**

ADULT BURN CLASSIFICATION CHART	DESTINATION	
<p><b><u>MINOR</u> - ADULT</b></p> <ul style="list-style-type: none"> <li>• &lt; 10% TBSA</li> <li>• &lt; 2% Full Thickness</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL</b></p>	
<p><b><u>MODERATE</u> - ADULT</b></p> <ul style="list-style-type: none"> <li>• 10 - 20% TBSA</li> <li>• 2 - 5% Full Thickness</li> <li>• High Voltage Injury</li> <li>• Suspected Inhalation Injury</li> <li>• Circumferential Burn</li> <li>• Medical problem predisposing to infection (e.g., diabetes mellitus, sickle cell disease)</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL</b></p>	
<p><b><u>MAJOR</u> - ADULT</b></p> <ul style="list-style-type: none"> <li>• &gt;20% TBSA burn in adults</li> <li>• &gt; 5% Full Thickness</li> <li>• High Voltage Burn</li> <li>• Known Inhalation Injury</li> <li>• Any significant burn to face, eyes, ears, genitalia, or joints</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE BURN CENTER</b></p> <p>In San Bernardino County, contact: Arrowhead Regional Medical Center (ARMC)</p>	



**VI. REFERENCES**

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
9010	General Patient Care Guidelines
10190	ICEMA Approved Skills
11070	Adult Cardiac Arrest
12010	Determination of Death on Scene
15030	Trauma Triage Criteria and Destination Policy



## STROKE TREATMENT - ADULT

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

Patient exhibiting signs/symptoms of a possible stroke. These signs may include: speech disturbances, altered level of consciousness, parasthesias, new onset seizures, dizziness unilateral weakness and visual disturbances.

### II. LIMITED ALS (LALS)/ALS INTERVENTIONS

- Vascular access.
- Obtain blood glucose.
- **Modified Los Angeles County Prehospital Stroke Screen (mLAPSS):** A screening tool used by EMS field personnel~~prehospital care providers~~ to assist in identifying patients who may be having a stroke.

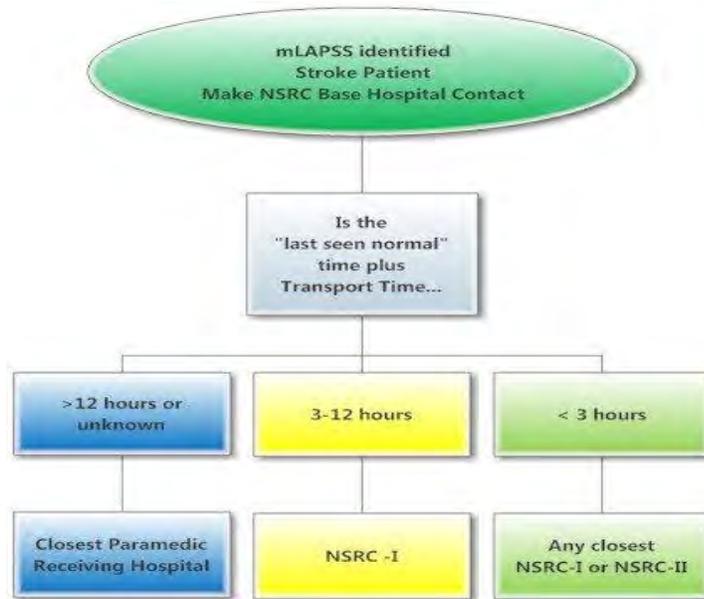
**mLAPSS Criteria:** The patient is mLAPSS positive, if “yes” on Criteria #1 - 5 and exhibits unilateral weakness on Criteria #6.

<u>mLAPSS Criteria</u>	<u>Yes</u>	<u>No</u>	
<u>1. Age over 40 years?</u>			
<u>2. No prior history of seizure disorder?</u>			
<u>3. New onset of neurologic symptoms in last 24 hours?</u>			
<u>4. Patient was ambulatory at baseline prior to event?</u>			
<u>5. Blood glucose between 60 and 400?</u>			
<u>6. Exam (look for obvious asymmetry):</u>	<u>Normal-Bilaterally</u>	<u>Right</u>	<u>Left</u>
• <u>Facial Smile/Grimace</u>	<input type="checkbox"/> <u>    </u>	<input type="checkbox"/> <u>Droop</u> <input type="checkbox"/> <u>Normal</u>	<input type="checkbox"/> <u>Droop</u> <input type="checkbox"/> <u>Normal</u>
• <u>Grip</u>	<input type="checkbox"/> <u>    </u>	<input type="checkbox"/> <u>Weak Grip</u> <input type="checkbox"/> <u>Normal</u>	<input type="checkbox"/> <u>Weak Grip</u> <input type="checkbox"/> <u>Normal</u>
	<input type="checkbox"/> <u>    </u>	<input type="checkbox"/> <u>No Grip</u> <input type="checkbox"/> <u>Normal</u>	<input type="checkbox"/> <u>No Grip</u> <input type="checkbox"/> <u>Normal</u>
• <u>Arm Weakness</u>	<input type="checkbox"/> <u>    </u>	<input type="checkbox"/> <u>Drifts Down</u> <input type="checkbox"/> <u>Normal</u>	<input type="checkbox"/> <u>Drifts Down</u> <input type="checkbox"/> <u>Normal</u>
		<input type="checkbox"/> <u>Falls Down</u> <input type="checkbox"/> <u>Rapidly</u> <input type="checkbox"/> <u>Normal</u>	<input type="checkbox"/> <u>Falls Down</u> <input type="checkbox"/> <u>Rapidly</u> <input type="checkbox"/> <u>Normal</u>

- ~~Ask when “last seen normal” or without stroke symptoms. Refer to Section V–Stroke Patient Destination Decision Tree below.~~
- ~~If “last seen normal” plus transport time is greater than twelve (12) hours, transport to the closest receiving hospital.~~
- ~~If “last seen normal” plus transport time is less than twelve (12) hours, or a “wake-up stroke”, transport to closest NSRC.~~
  - ~~No history of seizures or epilepsy.~~
  - ~~Age greater than or equal to 40. If less than 40, with suspected stroke, continue mLAPSS assessment, make NSRC base hospital contact for destination.~~
  - ~~At baseline, patient is not wheelchair bound or bedridden.~~
  - ~~Blood glucose between 60–400 mg/dl.~~
  - ~~Motor Exam: Examine for obvious asymmetry unilateral weakness (exam is positive, if one (1) or more of the following are present):~~
    - ~~Facial smile/Grimace asymmetry~~
    - ~~Grip asymmetry~~
    - ~~Arm strength asymmetry~~
- ~~In San Bernardino County, if Stroke Scale is positive, initiate “Stroke Alert”, contact NSRC base hospital and transport immediately.~~
- ~~If mLAPSS negative and stroke is still suspected, contact NSRC base hospital.~~
- ~~Obtain and document on scene family phone number.~~
- ~~Consider 12-lead ECG (ALS only).~~
- **Thrombolytic Assessment:** If time is available, and the patient or family can provide the information, assess the patient using the criteria listed below and report to ED personnel:

<b>Thrombolytic Assessment Criteria</b>	<b>Yes</b>	<b>No</b>
Onset greater than 4 hours?	<del>Yes</del>	<del>No</del>
History of recent bleeding?	<del>Yes</del>	<del>No</del>
Use of anticoagulant?	<del>Yes</del>	<del>No</del>
Major surgery or serious trauma in the previous fourteen (14) days?	<del>Yes</del>	<del>No</del>
Sustained systolic blood pressure above 185 mm Hg?	<del>Yes</del>	<del>No</del>
Recent stroke or intracranial hemorrhage?	<del>Yes</del>	<del>No</del>

~~V. STROKE PATIENT DESTINATION DECISION TREE~~



III. REFERENCE

<u>Number</u>	<u>Name</u>
11080	Altered Level of Consciousness/Seizures - Adult



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## COLD RELATED EMERGENCIES

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### I. FIELD ASSESSMENT/TREATMENT INDICATORS

#### MILD HYPOTHERMIA

- Decreased core temperature.
- Cold, pale extremities.
- Shivering, reduction in fine motor skills.
- Loss of judgment and/or altered level of consciousness or simple problem solving skills.

#### SEVERE HYPOTHERMIA

- Severe cold exposure or any prolonged exposure to ambient temperatures below 36 degrees with the following indications:
  - Altered LOC with associated behavior changes.
  - Unconscious.
  - Lethargic.
- Shivering is generally absent.
- Blood pressure and heart sounds may be unobtainable.

#### SUSPECTED FROSTBITE

- Areas of skin that is cold, white, and hard to touch.
- Capillary refill greater than two (2) seconds.
- Pain and/or numbness to affected extremity.

### II. BLS INTERVENTIONS

- Remove from cold/wet environment; remove wet clothing and dry patient.
- Begin passive warming.

- Insulate and apply wrapped heat packs, if available, to groin, axilla and neck. This process should be continuous.
- Maintain appropriate airway with oxygen as clinically indicated (warm, humidified if possible).
- Assess carotid pulse for a minimum of one (1) to two (2) minutes. If no pulse palpable, place patient on AED. If no shock advised, begin CPR.
- Insulate to prevent further heat loss.
- Elevate extremity if frostbite is suspected.
- Do not massage affected extremity.
- Wrap affected body part in dry sterile gauze to prevent further exposure and handle with extreme care.

### III. LIMITED ALS INTERVENTIONS

- Advanced airway as clinically indicated.
- Obtain vascular access.
- Obtain blood glucose level, if indicated administer:
  - ADULT/PEDIATRIC
    - Dextrose per ICEMA Reference #7040 - Medication - Standard Orders.
    - May repeat blood glucose level. Repeat Dextrose per ICEMA Reference #7040 - Medication - Standard Orders.
    - Glucagon per ICEMA Reference #7040 - Medication - Standard Orders if unable to establish IV.
- Obtain vascular access and administer fluid bolus.
  - Nine (9) years and older: 300 ml warmed NS, may repeat.
  - Birth to eight (8) years: 20 ml/kg warmed NS, may repeat.
- Contact base hospital.

### IV. ALS INTERVENTIONS

- Obtain vascular access.

- Cardiac monitor.
- If clinically indicated, obtain blood glucose. If hypoglycemic administer:
  - ADULT/PEDIATRIC
    - Dextrose per ICEMA Reference #7040 -Medication - Standard Orders.
    - Glucagon per ICEMA Reference #7040 - Medication - Standard Orders, if unable to establish IV.
- For complaints of pain in affected body part:
  - ADULT/PEDIATRIC
    - Morphine or Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.
- In Radio Communication Failure, may repeat above dosage of Morphine or Fentanyl.
- Advanced airway as clinically indicated.
- Obtain vascular access and administer fluid bolus.
  - Nine (9) years and older: 500 ml warmed NS, may repeat.
  - Birth to eight (8) years: 20 ml/kg warmed NS, may repeat.
- Obtain rhythm strip for documentation.
- For documented VF, Pulseless V-Tach:
  - Defibrillate one (1) time at manufacturer recommended dose. Do not defibrillate again until patient has begun to warm.
- For documented asystole:
  - Begin CPR.
  - May give additional fluid bolus.
- Contact base hospital.

## V. REFERENCE

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders



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## BURNS - PEDIATRIC (Less Than 15 Years of Age)

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

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

### I. FIELD ASSESSMENT/TREATMENT INDICATORS

Refer to ICEMA Reference #8130 - Destination Policy.

### II. BLS INTERVENTIONS

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

#### A. Manage Special Considerations

- **Thermal Burns:** Stop the burning process. Do not break blisters. Cover the affected body surface with dry, sterile dressing or sheet.
- **Chemical Burns:** Brush off dry powder, if present. Remove any contaminated or wet clothing. Irrigate with copious amounts of saline or water.
- **Tar Burns:** Cool with water, do not remove tar.
- **Electrical Burns:** Remove from electrical source (without endangering self) with a nonconductive material. Cover the affected body surface with dry, sterile dressing or sheet.

- **Eye Involvement:** Continuous flushing with NS during transport. Allow patient to remove contact lenses if possible.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.

### III. LIMITED ALS (LALS) INTERVENTIONS

- Airway Stabilization (as indicated). Burn patients with respiratory compromise or potential for such, will be transported to the closest receiving hospital for airway stabilization.
- IV/IO Access (warm IV fluids when available).
  - *Unstable:* Vital signs (age appropriate) and/or signs of inadequate tissue perfusion consider starting a second IV or saline lock. Administer 20 ml/kg NS bolus IV/IO, may repeat one (1) time.
  - *Stable:* Vital signs (age appropriate) and/or signs of adequate tissue perfusion.
  - < 5 years of age: IV NS 150 ml/hour
  - > 5 years of age - < 15 years of age: IV NS 250 ml/hour
- Transport to appropriate facility:
  - Critical trauma patients with associated burns or burn patients sustaining critical trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.
- Refer to Section V - Burn Classifications below.

#### A. Manage Special Considerations

- **Respiratory Distress:**
  - Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.
  - Administer humidified oxygen, if available.
- **Deteriorating Vital Signs:** Transport to the closest receiving hospital. Contact base hospital.

- **Pulseness and Apneic:** Transport to the closest receiving hospital and treat according to ICEMA protocols. Contact base hospital.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.
- **Precautions and Comments:**
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces as additional injury will result.
  - Do not apply cool dressings or allow environmental exposure, since hypothermia will result in a young child.

#### IV. ALS INTERVENTIONS

- Advanced airway (as indicated).
  - **Airway Stabilization:** Burn patients with respiratory compromise or potential for such, will be transported to the closest receiving hospital for airway stabilization.
- Monitor ECG.
- IV/IO Access (Warm IV fluids when available).
  - *Unstable:* Vital signs (age appropriate) and/or signs of inadequate tissue perfusion consider starting a second IV or saline lock. Administer 20 ml/kg NS bolus IV/IO, may repeat one (1) time.
  - *Stable:* Vital signs (age appropriate) and/or signs of adequate tissue perfusion.
  - < 5 years of age: IV NS 150 ml/hour
  - > 5 years of age - < 15 years of age: IV NS 250 ml/hour
- Treat pain as indicated.
  - Morphine or Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.

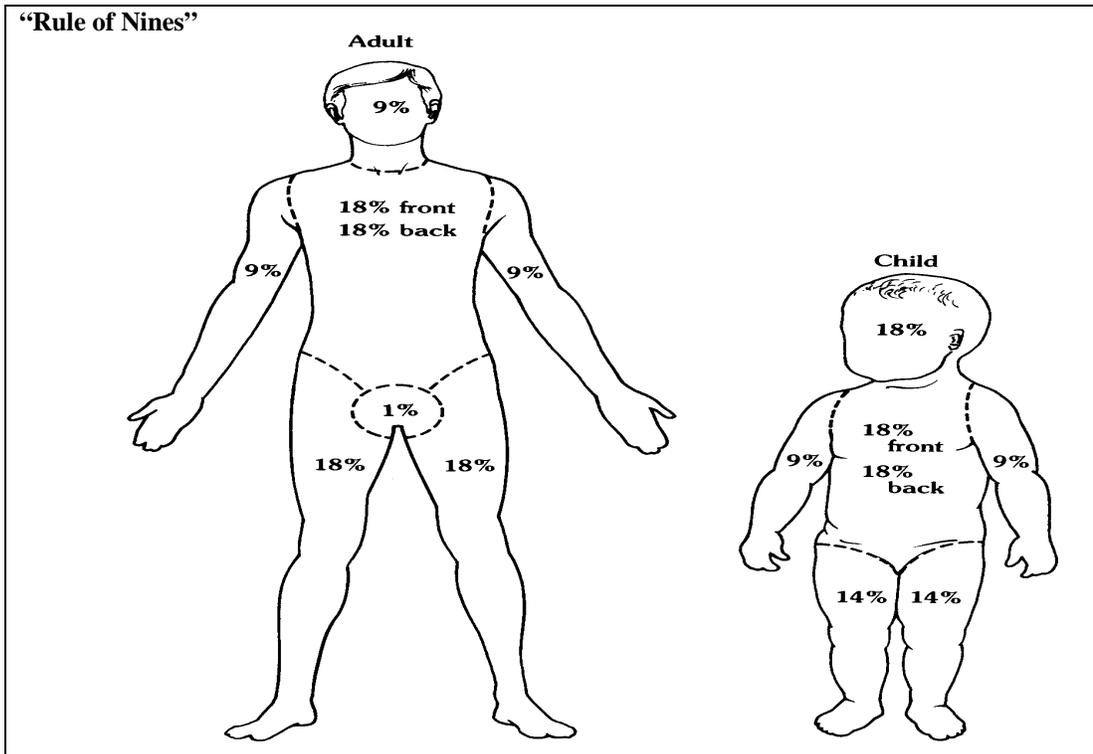
- Document vital signs every five (5) minutes while medicating for pain, and reassess the patient.
- Transport to appropriate facility:
  - Critical trauma patients with associated burns or burn patients sustaining critical trauma, should be transported to the closest Trauma Center. Trauma base hospital contacted shall be made.
  - Insert nasogastric/orogastric tube as indicated.
- Refer to Section V - Burn Classifications below.

**A. Manage Special Considerations**

- **Respiratory Distress:** Intubate patient if facial/oral swelling are present or if respiratory depression or distress develops due to inhalation injury.
  - Albuterol per ICEMA Reference #7040 - Medication - Standard Orders.
  - Administer humidified oxygen, if available.
- **Deteriorating Vital Signs:** Transport to the closest receiving hospital. Contact base hospital.
- **Pulseness and Apneic:** Transport to the closest receiving hospital and treat according to ICEMA protocols. Contact base hospital.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.
- **Precautions and Comments:**
  - Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
  - Do not apply ice or ice water directly to skin surfaces as additional injury will result.
  - Do not apply cool dressings or allow environmental exposure, since hypothermia will result in a young child.

V. BURN CLASSIFICATIONS

PEDIATRIC BURN CLASSIFICATION CHART	DESTINATION
<p><b>MINOR - PEDIATRIC</b></p> <ul style="list-style-type: none"> <li>• &lt; 5% TBSA</li> <li>• &lt; 2% Full Thickness</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL</b></p>
<p><b>MODERATE - PEDIATRIC</b></p> <ul style="list-style-type: none"> <li>• 5 - 10% TBSA</li> <li>• 2 - 5% Full Thickness</li> <li>• High Voltage Injury</li> <li>• Suspected Inhalation Injury</li> <li>• Circumferential Burn</li> <li>• Medical problem predisposing to infection (e.g., diabetes mellitus, sickle cell disease)</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE RECEIVING HOSPITAL</b></p>
<p><b>MAJOR - PEDIATRIC</b></p> <ul style="list-style-type: none"> <li>• &gt; 10% TBSA</li> <li>• &gt; 5% Full Thickness</li> <li>• High Voltage Burn</li> <li>• Known Inhalation Injury</li> <li>• Any significant burn to face, eyes, ears, genitalia, or joints</li> </ul>	<p><b>CLOSEST MOST APPROPRIATE BURN CENTER</b></p> <p>In San Bernardino County, contact: Arrowhead Regional Medical Center (ARMC)</p>



**VI. REFERENCES**

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
8130	Destination Policy
12010	Determination of Death on Scene



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## TRAUMA - ADULT (15 years of age and older)

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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.
- Oxygen and/or ventilate as needed, O<sub>2</sub> saturation (if BLS equipped).
- Keep patient warm.
- For a traumatic full arrest, an AED may be utilized, if indicated.
- Transport to ALS intercept or to the closest receiving hospital.

#### A. Manage Special Considerations

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

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

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

- Penetrating trauma without any NSAID indicators are not candidates for spinal immobilization using long board.
- **Abdominal Trauma:** Cover eviscerated organs with saline dampened gauze. Do not attempt to replace organs into the abdominal cavity.
- **Amputations:** Control bleeding. Rinse amputated part gently with sterile irrigation saline to remove loose debris/gross contamination. Place amputated part in dry, sterile gauze and in a plastic bag surrounded by ice (if available). Prevent direct contact with ice. Document in the narrative who the amputated part was given to.  
  
**Partial Amputation:** Splint in anatomic position and elevate the extremity.
- **Bleeding:**
  - Apply direct pressure and/or pressure dressing.
  - To control life-threatening bleeding of a severely injured extremity, consider application of tourniquet when direct pressure or pressure dressing fails.
- **Chest Trauma:** If a wound is present, cover it with an occlusive dressing. If the patient's ventilations are being assisted, dress wound loosely, (do not seal). Continuously reevaluate patient for the development of tension pneumothorax.
- **Flail Chest:** Stabilize chest, observe for tension pneumothorax. Consider assisted ventilations.
- **Fractures:** Immobilize above and below the injury. Apply splint to injury in position found except:
  - **Femur:** Apply traction splint if indicated.
  - **Grossly angulated long bone with distal neurovascular compromise:** Apply gentle unidirectional traction to improve circulation.
  - **Check and document distal pulse before and after positioning.**
- **Genital Injuries:** Cover genitalia with saline soaked gauze. If necessary, apply direct pressure to control bleeding. Treat amputations the same as extremity amputations.

- **Head and Neck Trauma:** Place brain injured patients in reverse Trendelenburg (elevate the head of the backboard 15 - 20 degrees), if the patient exhibits no signs of shock.
  - **Eye:** Whenever possible protect an injured eye with a rigid dressing, cup or eye shield. Do not attempt to replace a partially torn globe, stabilize it in place with sterile saline soaked gauze. Cover uninjured eye.
  - **Avulsed Tooth:** Collect teeth, place in moist, sterile saline gauze and place in a plastic bag.
- **Impaled Object:** Immobilize and leave in place. Remove object if it interferes with CPR, or if the object is impaled in the face, cheek or neck and is compromising ventilations.
- **Pregnancy:** Where axial spinal stabilization precaution is indicated, the board should be elevated at least 4 inches on the right side for those patients who have a large pregnant uterus, usually applies to pregnant females  $\geq 24$  weeks of gestation.
- **Traumatic Arrest:** CPR if indicated. May utilize an AED if indicated.
- **Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.

### III. LIMITED ALS (LALS) INTERVENTIONS

- Advanced airway (as indicated).
  - **Unmanageable Airway:** Transport to the closest most appropriate receiving hospital when the patient requires advanced airway and an adequate airway cannot be maintained with a BVM device.
- Apply AED.
- IV Access (warm IV fluids when available).
  - **Unstable:** BP<90mmHG and/or signs of inadequate perfusion, start 2<sup>nd</sup> IV access.
  - **Stable:** BP>90mmHG and/or signs of adequate tissue perfusion.

**Blunt Trauma:**

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

**Penetrating Trauma:**

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

**Isolated Closed Head Injury:**

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

- Transport to appropriate hospital.

**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 using the acronym (NSAID):

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

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

- **Fractures:**

- **Isolated Extremity Trauma:** Trauma 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 voice prompts.
- B. Determination of Death on Scene:** Refer to ICEMA Reference #12010 - Determination of Death on Scene.
- *Severe Blunt Force Trauma Arrest:* If indicated, transport to the closest receiving hospital.
  - *Penetrating Trauma Arrest:* If indicated, transport to the closest receiving hospital.
  - If the patient does not meet the “Obvious Death Criteria” in ICEMA Reference #12010 - Determination of Death on Scene, contact the Trauma base 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.
- IV/IO Access (Warm IV fluids when available).
  - *Unstable:* BP <90mmHG and/or signs of inadequate perfusion, start 2<sup>nd</sup> IV access.
  - *Stable:* BP >90mmHG and/or signs of adequate tissue perfusion.

#### **Blunt Trauma:**

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

#### **Penetrating Trauma:**

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

#### **Isolated Closed Head Injury:**

- *Unstable:* IV NS 250 ml bolus, may repeat to a maximum of 500 ml
- *Stable:* IV NS TKO
- Transport to appropriate hospital.
- Insert nasogastric/orogastric tube as indicated.

A. **Manage Special Considerations**

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

N-euro Deficit(s) present?

S-pinal Tenderness present?

A-ltered Mental Status?

I-ntoxication?

Distracting Injury?

- Consider maintaining spinal alignment on the gurney, or using spinal axial immobilization on an awake, alert and cooperative patient, without the use of a rigid spine board.
- Penetrating trauma without any NSAID indicators are not candidates for spinal immobilization using long board.
- **Chest Trauma:** Perform needle thoracostomy for chest trauma with symptomatic respiratory distress.
- **Fractures:**
  - **Isolated Extremity Trauma:** Trauma without multisystem mechanism. Extremity trauma is defined as those cases of injury where the limb itself and/or the appendicular skeleton (shoulder or pelvic girdle) may be injured, e.g., dislocated shoulder, hip fracture or dislocation.
  - **Pain Relief:**
    - Morphine or 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 Morphine. 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 ( $\geq 15$  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**

<u>Number</u>	<u>Name</u>
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.

~~In~~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.
- ~~— Axial spinal stabilization as appropriate.~~
- Oxygen and/or ventilate as needed, O<sub>2</sub> 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 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 2<sup>nd</sup> IV access.  
  
Administer 20ml/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 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 2<sup>nd</sup> IV access.  
  
Administer 20ml/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 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:**
    - Morphine or 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 Morphine. Administer 20ml/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 ( $\geq 15$  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

<u>Number</u>	<u>Name</u>
7040	Medication - Standard Orders
10160	<del>Axial Spinal Stabilization</del>
12010	Determination of Death on Scene
14040	Cardiac Arrest - Pediatric
15030	Trauma Triage Criteria and Destination Policy