DATE: March 1, 2022

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: Reza Vaezazizi, MD
Medical Director

SUBJECT: IMPLEMENTATION OF POLICIES/PROTOCOLS EFFECTIVE APRIL 1, 2022

The revised policies/protocols listed below are effective April 1, 2022.

ICEMA Reference Number and Name

4040R1 ST Elevation Myocardial Infarction Critical Care System Designation
4070R2 Stroke Critical Care System Designation
7010R4 Standard Drug and Equipment List - BLS/LALS/ALS
8050R1 Requests for Ambulance Redirection and Hospital Diversion
9010R1 Continuation of Care
10040 Paramedic Prehospital Utilization of Ultrasound - Trial Study NEW
11010R4 Medication - Standard Orders
11020R3 Procedure - Standard Orders
14010R3 Respiratory Emergencies - Adult
14140R1 Allergic Reactions - Pediatric

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

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

RV/LG/jlm

Enclosures

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I. PURPOSE

To establish standards for the designation of an acute care hospital as a ST Elevation Myocardial Infarction (STEMI) Receiving Center.

II. POLICY

Hospital requirements for Inland Counties Emergency Medical Agency (ICEMA) STEMI Receiving Center designation:

- Must be a full service general acute care hospital approved by ICEMA as a 9-1-1 receiving hospital.
- Must have a licensure as a Cardiac Catheterization Laboratory (Cath Lab).
- Must be accredited by the American College of Cardiology (ACC) as a Chest Pain Center with Primary Percutaneous Coronary Intervention (PCI).
- Must have a Cardiovascular surgical services permit.
- Must be in compliance with all requirements listed in the California Code of Regulations, Title 22, Division 9, Chapter 7.1, STEMI Critical Care System Regulations.

III. STAFFING REQUIREMENTS

The hospital will have the following positions filled prior to becoming a STEMI Receiving Center:

- **Medical Directors**
  The hospital shall designate two (2) physicians as co-directors who are responsible for the medical oversight and ongoing performance of the STEMI Receiving Center 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.

- **STEMI Program Manager**
  The hospital shall designate a qualified STEMI Program Manager. This individual is responsible for monitoring and evaluating the care of STEMI patients, the coordination of performance improvement and patient safety programs for the STEMI critical care system in conjunction with the STEMI medical director. The STEMI Program Manager must be trained or certified in critical care nursing or have at least two (2) years dedicated STEMI patient management experience.

- **On-Call Physician Consultants and Staff**
  On-call physicians consultants and staff must be promptly available within 30 minutes from notification. A daily roster must include the following on-call physician consultants and staff:
Interventional Cardiologist with privileges in PCI procedures.
Cardiovascular Surgeon with privileges in Coronary Artery Bypass Grafting.
Cath Laboratory Team.
Intra-aortic balloon pump nurse or technologist.

Registrar
To ensure accurate and timely data submission, hospitals must have a dedicated registrar to submit required data elements.

Depending on the volume this position may be shared between specialty cares.
Failure to submit data as outlined above, may result in probation, suspension, fines or rescission of STEMI Receiving Center Designation.

IV. INTERNAL STEMI RECEIVING CENTER POLICIES

The STEMI Receiving Center must have:

- The capability to provide STEMI patient care 24 hours per day, seven (7) days per week.
- A single call alert/communication system for notification of incoming STEMI patients, available 24 hours per day, seven (7) days per week (i.e., in-house paging system).
- A process for the treatment and triage of simultaneously arriving STEMI patients.
- A fibrinolytic therapy protocol to be used only in unforeseen circumstances when PCI of a STEMI patient is not possible.
- Prompt acceptance of STEMI patients from STEMI Referral Hospitals that do not have PCI capability. To avoid prolonged door to intervention time the STEMI base hospitals are allowed to facilitate redirection of STEMI patients to nearby STEMI receiving centers. Physician to physician contact must be made when redirecting patients.
- Acknowledgement that STEMI patients may only be diverted during the times of Internal Disaster in accordance to ICEMA Reference #8050 - Requests for Ambulance Redirection and Hospital Diversion (San Bernardino County Only).

V. 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. All hospitals including STEMI receiving centers must participate in Cardiac Arrest Registry to Enhance Survival (CARES).

VI. CONTINUOUS QUALITY IMPROVEMENT (CQI) PROGRAM

STEMI Receiving Centers 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 ICEMA policy, contractual agreement, California Regulations, and the ACC.

• Detailed review of cases requiring redirection of EMS STEMI patients to other STEMI Receiving Centers as a result of 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.

• 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.

• Programs in place to promote public education efforts specific to cardiac care.

VII. PERFORMANCE STANDARD

Designated STEMI Receiving Centers must comply with the California Code of Regulations, Title 22, Division 9, Chapter 7.1, STEMI Critical Care System, ICEMA policies, and the ACC performance measures, that exist and may change in the future.

VIII. DESIGNATION

• The STEMI Receiving Center applicant shall be designated after satisfactory review of written documentation, a potential site survey by ICEMA, and completion of a board approved agreement between the STEMI Receiving Center and ICEMA.

• Initial designation as a STEMI Receiving Center shall be in accordance with terms outlined in the agreement.

• Failure to comply with the approved agreement, or ICEMA policy may result in probation, suspension, fines or rescission of STEMI Receiving Center designation.

IX. REFERENCES

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>8050</td>
<td>Requests for Ambulance Redirection and Hospital Diversion (San Bernardino County Only)</td>
</tr>
</tbody>
</table>
STROKE CRITICAL CARE SYSTEM DESIGNATION

I. PURPOSE

To establish standards for the designation of an acute care hospital as a Stroke Receiving Center.

II. POLICY

Hospital requirements for Inland Counties Emergency Medical Agency (ICEMA) Stroke Receiving Center designation:

- Must be a full service general acute care hospital approved by ICEMA as a 9-1-1 receiving hospital.
- Must have certification as an Acute Ready, Primary, Thrombectomy Capable, or Comprehensive Stroke Center by The Joint Commission (TJC), Healthcare Facilities Accreditation Program (HFAP), or Det Norske Veritas (DNV) and proof of re-certification every two (2) years.
- Must be in compliance with all requirements listed in the California Code of Regulations, Title 22, Division 9, Chapter 7.2, Stroke Critical Care System for the requested level of designation.

III. STAFFING REQUIREMENTS

The hospital will have the following positions filled for all levels of designation prior to becoming a Stroke Receiving Center.

- **Medical Directors**
  
  The hospital shall designate two (2) physicians with hospital privileges as co-directors who are responsible for the medical oversight and ongoing performance of the Stroke Receiving Center 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.

- **Stroke Program Manager**
  
  The hospital shall designate a qualified Stroke Program Manager. This individual is responsible for monitoring and evaluating the care of Stroke patients, the coordination of performance improvement and patient safety programs for the Stroke critical care system in conjunction with the Stroke medical director. The Stroke Program Manager must be trained or certified in critical care nursing or have at least two (2) years dedicated to Stroke patient management experience.

- **On-Call Physicians Specialists/Consultants**
  
  On-Call physicians consultants and staff must be promptly available within 30 minutes from notification. A daily roster must include the following on-call physician consultants and staff:
  
  - 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.

Registrar

To ensure accurate and timely data submission, hospitals must have a dedicated registrar to submit required data elements.

Depending on the volume, this position may be shared between specialty cares.

Failure to submit data as outline above, may result in probation, suspension, fines or rescission of Stroke Receiving Center Designation.

IV. INTERNAL STROKE RECEIVING CENTER POLICIES

All levels of designation must have internal policies for the following:

- 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.
- A process for the treatment and triage of simultaneously arriving stroke patients.
- If neurosurgical services are not available in-house, the Stroke Receiving Center must have a rapid transfer agreement in place with a hospital that provides this service. Stroke Receiving Centers must promptly accept rapid transfer requests. Additionally, the Stroke Receiving Center must have a rapid transport agreement in place with an ICEMA approved EMS transport provider for that Exclusive Operation Area (EOA).
- Acknowledgement that stroke patients may only be diverted during the times of Internal Disaster in accordance to ICEMA Reference #8050 - Requests for Ambulance Redirection and Hospital Diversion (San Bernardino County Only).
- Emergent thrombolytic and tele-neurology protocol to be used by Neurology, Emergency, Pharmacy and Critical Care Teams.
- An alert/communication system for notification of incoming stroke patients, available 24 hours per day, seven (7) days per week (i.e., in-house paging system).

V. DATA COLLECTION

Designated Stroke Receiving Centers shall report all required data as determined by ICEMA and the Stroke Committee.

VI. CONTINUOUS QUALITY IMPROVEMENT (CQI) PROGRAM

Stroke Receiving Centers 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:
• Morbidity and mortality related to procedural complications.
• Review of all transfers.
• Tracking door-to-intervention times and adherence to minimum performance standards.
• Active participation in ICEMA Stroke CQI Committee and Stroke 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.
• Provide Continuing Education (CE) opportunities twice per year for referral hospitals and EMS field personnel in areas of pathophysiology, assessment, triage and management for stroke patients and report annually to ICEMA.
• Lead public stroke education and illness prevention efforts and report annually to ICEMA.

VII. PERFORMANCE STANDARDS

Designated Stroke Receiving Centers must comply with the California Code of Regulations, Title 22, Division 9, Chapter 7.2, Stroke Critical Care System, ICEMA policies, and the Performance Measures set forth by the accrediting agencies identified in Section II, that exist and may change in the future.

VIII. DESIGNATION LEVELS

• **Acute Stroke Ready Hospital:** A hospital able to provide the minimum level of critical care services for stroke patients in the emergency department, and are paired with one or more hospitals with a higher level of stroke services.

• **Primary Stroke Center:** A hospital that treats acute stroke patients, and identifies patients who may benefit from transfer to a higher level of care when clinically warranted.

• **Thrombectomy-Capable Stroke Center:** A primary stroke center with the availability to perform mechanical thrombectomy for the ischemic stroke patient when clinically warranted.

• **Comprehensive Stroke Center:** A hospital with specific abilities to receive diagnose and treat all stroke cases and provide the highest level of care for stroke patients.

**Acute Stroke Ready Hospitals**

To be considered for Acute Stroke Ready hospital designation, multiple variables will be taken into consideration and will be determined by the ICEMA Medical Director:

- What are the current needs of the community?
- How will this impact the overall care in the system?
- What is the location of the hospital, is there a prolonged distance to a primary thrombectomy or comprehensive stroke center?

The hospital must meet the following minimum criteria:

• Written transfer agreements.
• Written policies and procedures for emergent stroke services to include written protocols and standardized orders.

• A data-driven, continuous quality improvement process.

• Neuro imaging services (CT or MRI) with interpretation of imaging available 24 hours a day, seven (7) days a week, and 365 days a year.

• Laboratory services to include blood testing, electrocardiography, and x-ray services 24 hours a day, seven (7) days a week and 365 days a year.

• Provide IV thrombolytic treatment.

• A clinical Stroke Team available to see patient (in person or by tele-health) within 20 minutes of arrival to ED.

**Primary Stroke Centers**

• Stroke diagnosis and treatment capacity 24 hours a day, seven (7) days a week.

• A clinical Stroke Team available to see in person or via telehealth, a patient identified as a potential stroke patient within 15 minutes following patient’s arrival.

• Neuro imaging services capability that is available 24 hours a day, seven (7) days a week.

• Two (2) CT scanners and one (1) MRI scanner.

• Neuro imaging initiated within 25 minutes following arrival to ED.

• Laboratory services that are available 24 hours a day, seven (7) days a week.

**Thrombectomy Capable Centers** (in addition to Primary Stroke Center Requirements)

• The ability to perform mechanical thrombectomy for the treatment of ischemic stroke 24 hours a day, seven (7) days a week.

• Neuro interventionalist.

• Neuro radiologist.

• The ability to perform advanced imaging 24 hours a day, seven (7) days a week.

**Comprehensive Centers** (in addition to Primary and Thrombectomy Center Requirements)

• Neuro-endovascular diagnostic and therapeutic procedures available 24 hours a day, seven (7) days a week.

• Advanced imaging available 24 hours a day, seven (7) days a week.

• A stroke patient research program.
• A neurosurgical team capable of assessing and treating complex stroke and stroke-like syndromes.

• A written call schedule for attending neurointerventionalist, neurologist, or neurosurgeon providing availability 24 hours a day, seven (7) days a week.

IX. DESIGNATION

ICEMA designation as an Acute Stroke Ready Hospital, Primary, Thrombectomy Capable, or Comprehensive Stroke Center will be determined based on need and volume in the community. Designation will not be determined by current accreditation only; however, Stroke Receiving Centers must be accredited at least at an equivalent designation level being requested.

• The Stroke Receiving Center 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 certification as an Acute Ready Hospital, Primary Stroke Center Thrombectomy Capable Stroke Center or Comprehensive Stroke Center by TJC, HFAP or DNV.

• Initial designation as a Primary, Thrombectomy, Capable or Comprehensive Stroke Center shall be in accordance with terms outlined in the agreement.

• Failure to comply with the approved agreement, or ICEMA policy may result in probation, suspension, fines or rescission of the Stroke Receiving Center designation.

X. REFERENCE

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>8050</td>
<td>Requests for Ambulance Redirection and Hospital Diversion (San Bernardino County Only)</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Exchanged Medications/Solutions</th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenosine (Adenocard) 6 mg</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Adenosine (Adenocard) 12 mg</td>
<td></td>
<td>2</td>
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</tr>
<tr>
<td>Albuterol Aerosolized Solution (Proventil) - unit dose 2.5 mg</td>
<td>4 doses</td>
<td>4 doses</td>
<td>4 doses</td>
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</tr>
<tr>
<td>Albuterol MDI with spacer</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Aspirin, chewable - 81 mg tablet</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Atropine 1 mg preload</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Calcium Chloride 1 gm preload</td>
<td>1</td>
<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>Dextrose 10% in 250 ml Water (D10W)</td>
<td>2</td>
<td>2</td>
<td>2</td>
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</tr>
<tr>
<td>Diphenhydramine (Benadryl) 50 mg</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Epinephrine 0.15 mg Auto-Injector</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Epinephrine 0.3 mg Auto-Injector</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Epinephrine 1 mg/ml 1 mg</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Epinephrine 0.1 mg/ml 1 mg preload</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Glucagon 1 mg</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Glucose paste</td>
<td>1</td>
<td>1</td>
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<td>1</td>
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<tr>
<td>Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5 mg</td>
<td>4</td>
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<tr>
<td>Irrigating Saline and/or Sterile Water (1000 cc)</td>
<td>2</td>
<td>1</td>
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<td>2</td>
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<tr>
<td>Lidocaine 100 mg</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Lidocaine 2% Intravenous solution</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Magnesium Sulfate 10 gm</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
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<tr>
<td>Naloxone (Narcan) 2 mg preload</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Nitroglycerine (NTG) - Spray 0.4 mg metered dose and/or tablets (tablets to be discarded 90 days after opening)</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Nitroglycerine Paste 2% - 1 gm packets, or Nitroglycerine Paste 2% - 30 gm tube, or Nitroglycerine Paste 2% - 60 gm tube</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Normal Saline for Injection (10 cc)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Normal Saline 100 cc</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Normal Saline 250 cc</td>
<td>1</td>
<td>1</td>
<td>1</td>
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</tbody>
</table>
### Exchanged Medications/Solutions

<table>
<thead>
<tr>
<th></th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Saline 500 ml and/or 1000 ml</td>
<td>2000 ml</td>
<td>3000 ml</td>
<td>6000 ml</td>
<td></td>
</tr>
<tr>
<td>Ondansetron (Zofran) 4 mg Oral Disintegrating Tablets (ODT)</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ondansetron (Zofran) 4 mg IM/IV</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium Bicarbonate 50 mEq preload</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tranexamic Acid (TXA) 1 gm</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Non-Exchange Controlled Substance Medications
**MUST BE DOUBLE LOCKED**

<table>
<thead>
<tr>
<th></th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fentanyl</td>
<td>200-400 mcg</td>
<td>200-400 mcg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midazolam</td>
<td>20-40 mg</td>
<td>20-40 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ketamine</td>
<td>120-1000 mg</td>
<td>120-1000 mg</td>
<td></td>
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</tbody>
</table>

### AIRWAY/SUCTION EQUIPMENT

<table>
<thead>
<tr>
<th>Exchanged Airway/Suction Equipment</th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPAP circuits - all manufacturer’s available sizes</td>
<td>1 each</td>
<td>2 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>End-tidal CO2 device - Pediatric and Adult (may be integrated into bag)</td>
<td>1 each</td>
<td>1 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endotracheal Tubes cuffed - 6.0 and/or 6.5, 7.0 and/or 7.5 and/or 7.5 and/or 8.0 and/or 8.5 with stylet</td>
<td>2 each</td>
<td>2 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ET Tube holders - adult</td>
<td>1 each</td>
<td>1 each</td>
<td>2 each</td>
<td></td>
</tr>
<tr>
<td>Mask - Adult &amp; Pediatric non-rebreather oxygen mask</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
</tr>
<tr>
<td>Mask - Infant Simple Mask</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Nasal cannulas - pediatric and adult</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
</tr>
<tr>
<td>Naso/Orogastric feeding tubes - 5fr or 6fr, and 8fr</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
<tr>
<td>Naso/Orogastric tubes - 10fr or 12fr, 14fr, 16fr or 18fr</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
<tr>
<td>Nasopharyngeal Airways - (infant, child, and adult)</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
<tr>
<td>Needle Cricothyrotomy Device - Pediatric and adult or Needsles for procedure 10, 12, 14 and/or 16 gauge</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
<tr>
<td>One way flutter valve with adapter or equivalent</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oropharyngeal Airways - (infant, child, and adult)</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
<tr>
<td>Rigid tonsil tip suction</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Small volume nebulizer with universal cuff adaptor</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Suction Canister</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Suction catheters - 6fr, 8fr or 10fr, 12fr or 14fr</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
</tbody>
</table>
### Exchanged Airway/Suction Equipment

<table>
<thead>
<tr>
<th></th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilation Bags -</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant 250 ml</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pediatric 500 ml (or equivalent)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Adult</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Water soluble lubricating jelly</td>
<td></td>
<td>1</td>
<td>1</td>
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</tbody>
</table>

### Non-Exchange Airway/Suction Equipment

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<tr>
<th></th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulance oxygen source -10 L / min for 20 minutes</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>CPAP - (must be capable of titrating pressure between 2 and 15 cm H₂O)</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Flashlight/penlight</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Laryngoscope blades - #0, #1, #2, #3, #4 curved and/or straight</td>
<td>1 each</td>
<td>1 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laryngoscope handle with batteries - or 2 disposable handles</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Magill Forceps - Pediatric and Adult</td>
<td>1 each</td>
<td>1 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manual powered suction device</td>
<td>1</td>
<td></td>
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</tr>
<tr>
<td>Portable oxygen with regulator - 10 L / min for 20 minutes</td>
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</tr>
<tr>
<td>Portable suction device (battery operated)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pulse Oximetry device</td>
<td>(SEE OPTIONAL EQUIPMENT SECTION, PG. 5)</td>
<td>1</td>
<td>1</td>
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</tr>
<tr>
<td>Stethoscope</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wall mount suction device</td>
<td></td>
<td></td>
<td>(BLS TRANSPORT ONLY)</td>
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### IV/NEEDLES/SYRINGES/MONITORING EQUIPMENT

<table>
<thead>
<tr>
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<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conductive medium or Pacer/Defibrillation pads</td>
<td></td>
<td></td>
<td>2 each</td>
<td>2 each</td>
</tr>
<tr>
<td>Disposable Tourniquets</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>ECG electrodes</td>
<td></td>
<td></td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>EZ-IO Driver</td>
<td>1 each</td>
<td>1 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EZ-IO Needles:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 mm</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
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<tr>
<td>45 mm</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
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<tr>
<td>Glucose monitoring device with compatible strips and OSHA approved single use lancets</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>3-way stopcock with extension tubing</td>
<td></td>
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<tr>
<td>IV Catheters - sizes 14, 16, 18, 20, 22, 24</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
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</tr>
<tr>
<td>Macrodrip Administration Set</td>
<td></td>
<td></td>
<td>3</td>
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</tr>
<tr>
<td>Microdrip Administration Set (60 drops / cc)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Mucosal Atomizer Device (MAD) for nasal administration of medication</td>
<td>2</td>
<td>2</td>
<td>2</td>
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</table>
### Exchanged IV/Needles/Syringes/Monitor Equipment

<table>
<thead>
<tr>
<th>Item</th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Infusion Bag (disposable)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Razors</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Safety Needles - 20 or 21gauge and 23 or 25 gauge</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
<td></td>
</tr>
<tr>
<td>Saline Lock Large Bore Tubing Needleless</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Sterile IV dressing</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Syringes w/wo safety needles - 1 cc, 3 cc, 10 cc catheter tip</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
<td></td>
</tr>
<tr>
<td>Syringes w/wo safety needles - 1 cc, 3 cc, 10 cc, 20 cc, 60 cc catheter tip</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
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</tr>
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</table>

### Non-Exchange IV/Needles/Syringes/Monitor Equipment

<table>
<thead>
<tr>
<th>Item</th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-lead ECG Monitor and Defibrillator with TCP and printout</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Blood pressure cuff - large adult or thigh cuff, adult, child and infant (one of each size)</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Capnography monitor and supplies, may be integrated in the cardiac monitor</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Needle disposal system (OSHA approved)</td>
<td>1</td>
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<td>1</td>
<td>1</td>
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<tr>
<td>Thermometer - Mercury Free with covers</td>
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### OPTIONAL EQUIPMENT/MEDICATIONS

<table>
<thead>
<tr>
<th>Item</th>
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<th>LALS</th>
<th>ALS Non-Transport</th>
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</thead>
<tbody>
<tr>
<td>AED/defib pads - Adult (1), Pediatric (1)</td>
<td>1 each</td>
<td>1 each</td>
<td>1</td>
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<tr>
<td>Automatic CPR device (FDA approved)</td>
<td>1</td>
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</tr>
<tr>
<td>Automatic transport ventilator (Specialty Program Only - ICEMA approved device)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Backboard padding</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Buretrol</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Chemistry profile tubes</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Nerve Agent Antidote Kit (NAAK) - DuoDote or Mark I</td>
<td>3</td>
<td>3</td>
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<tr>
<td>EMS Tourniquet</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gum Elastic intubation stylet</td>
<td>1</td>
<td>2</td>
<td>2</td>
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</tr>
<tr>
<td>Hemostatic Dressings *</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>IO Needles - Manual, Adult and Pediatric, Optional</td>
<td>1 each</td>
<td>1 each</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>IV Infusion pump</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>IV warming device</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Manual IV Flow Rate Control Device</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Manual powered suction device</td>
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<tr>
<td>Multi-lumen peripheral catheter</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Needle Thoracostomy Kit (prepackaged)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Naloxone (Narcan) Nasal Spray 4 mg</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Pulse Oximetry device</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Translaryngeal Jet Ventilation Device</td>
<td>1</td>
<td>1</td>
<td>1</td>
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</tbody>
</table>
* Hemostatic Dressings
  - Quick Clot, Z-Medica
    - Quick Clot, Combat Gauze LE
    - Quick Clot, EMS Rolled Gauze, 4x4 Dressing, TraumaPad
  - Celox
    - Celox Gauze, Z-Fold Hemostatic Gauze
    - Celox Rapid, Hemostatic Z-Fold Gauze
  - HemCon ChitoFlex Pro Dressing

**NOTE:**

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

### DRESSING MATERIALS/OTHER EQUIPMENT/SUPPLIES

<table>
<thead>
<tr>
<th>Exchanged Dressing Materials/Other Equipment/Supplies</th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesive tape - 1 inch</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Air occlusive dressing</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ankle and wrist restraints, soft ties acceptable</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Antiseptic swabs/wipes</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Bedpan or fracture pan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urinal</td>
<td>1 (BLS TRANSPORT UNITS ONLY)</td>
<td>1 (BLS TRANSPORT UNITS ONLY)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cervical Collars - Rigid Pediatric and Adult all sizes or Adjustable Adult and Pediatric</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
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<tr>
<td>Cold Packs</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Emesis basin or disposable bags and covered waste container</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Head immobilization device</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>OB Kit</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pneumatic or rigid splints capable of splinting all extremities</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>4</td>
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<tr>
<td>Provodine/Iodine swabs/wipes or antiseptic equivalent</td>
<td>4</td>
<td>10</td>
<td>10</td>
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<tr>
<td>Roller bandages - 4 inch</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Sterile bandage compress or equivalent</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Sterile gauze pads - 4x4 inch</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Sterile sheet for Burns</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Universal dressing 10x30 inches</td>
<td>2</td>
<td>2</td>
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<td>2</td>
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<tr>
<td>Non-Exchange Dressing Materials/Other Equipment/ Supplies</td>
<td>BLS</td>
<td>LALS</td>
<td>ALS Non-Transport</td>
<td>ALS Transport</td>
</tr>
<tr>
<td>---------------------------------------------------------</td>
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</tr>
<tr>
<td>800 MHz Radio</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Ambulance gurney</td>
<td>1 (BLS TRANSPORT UNITS ONLY)</td>
<td>1</td>
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</tr>
<tr>
<td>Bandage shears</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Blood Borne Pathogen Protective Equipment - (nonporous gloves, goggles face masks and gowns meeting OSHA Standards)</td>
<td>2</td>
<td>1</td>
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<tr>
<td>Pediatric Emergency Measuring Tape (Broselow, etc.)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Drinkable water in secured plastic container or equivalent</td>
<td>1 gallon</td>
<td>1 gallon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long board with restraint straps</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pediatric immobilization board</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pillow, pillow case, sheets and blanket</td>
<td>1 set (BLS TRANSPORT UNITS ONLY)</td>
<td>1 set</td>
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<td></td>
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<tr>
<td>Short extrication device</td>
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<td>1</td>
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<td>1</td>
</tr>
<tr>
<td>Straps to secure patient to gurney</td>
<td>1 set (BLS TRANSPORT UNITS ONLY)</td>
<td>1 set</td>
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<td></td>
</tr>
<tr>
<td>Traction splint</td>
<td>1</td>
<td>1</td>
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<td>1</td>
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<tr>
<td>Triage Tags - ICEMA approved</td>
<td>20</td>
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</table>
REQUESTS FOR AMBULANCE REDIRECTION AND HOSPITAL DIVERSION

I. PURPOSE

To define policy and procedures for hospitals to request temporary redirection of advanced life support (ALS) ambulances.

II. POLICY

- Ambulance redirection based on hospital capacity, census or staffing is not permitted in the ICEMA region and will only be permitted as outlined in this policy.
- This policy applies to the 9-1-1 emergency system as a temporary measure and is not intended for utilization to determine destination for interfacility transports, including higher level of care transports.
- If a hospital meets internal disaster criteria, Trauma Center Diversion or any other specialty care centers with unique circumstances, immediate telephone notification must be made to the ICEMA Duty Officer by an administrative staff member who has the authority to determine that criteria has been met for redirection or diversion.
- Hospitals must notify EMS dispatch centers immediately via ReddiNet or available communication modalities.
- Hospitals must maintain a hospital redirection policy that conforms with this policy. The hospital policy shall include plans to educate all appropriate staff on proper utilization of redirection.
- Receiving hospitals cannot redirect an incoming ambulance and diversion/redirection is only permitted as outlined in this policy.
- Within 72 hours of an incident, the hospital must provide ICEMA with a written after action report indicating the reasons for internal disaster, plans activated, adverse patient consequences and the corrective actions taken. The report must be signed by the CEO or designated responsible individual.
- ICEMA may perform unannounced site visits to hospitals on temporary redirection status to ensure compliance with the request for ambulance redirection.
- ICEMA may randomly audit base hospital records to ensure redirected ambulance patients are transported to the appropriate destination.
- ICEMA staff may contact the hospital to determine the reasons for ambulance redirection, under this policy.
- ICEMA may remove any hospital from redirection status using ReddiNet if it is determined that the request is not consistent with this policy.

III. PROCEDURE

A request for redirection of ALS ambulances may be made for the following approved categories:

- CT Redirection (for Non-Specialty Care Centers).
When Non-Specialty Care Centers experience CT scanner failure, the hospital can go on ambulance redirection using the ReddiNet system for EMS patients who may require CT imaging.

● Trauma Center Diversion (for use by designated Trauma Centers only)
  ➢ The on duty trauma surgeon must be involved in the decisions regarding any request for trauma diversion.
  ➢ The trauma team and trauma surgeon (both first and second call) and are fully committed to the care of trauma patients in the operating room and are NOT immediately available for any additional incoming patients meeting approved trauma triage criteria.
  ➢ All operating rooms are occupied with critically injured patients that meet trauma triage criteria.
  ➢ All CT Scanners are inoperable due to scanner failure at a designated Trauma Center.
  ➢ Internal disaster.

NOTE: Diversion is canceled when all designated Trauma Centers are on Trauma Center Diversion.

● Internal Disaster Diversion
  ➢ Requests for Internal Disaster Diversion shall apply only to physical plant breakdown affecting the Emergency Department or significant patient services.

  NOTE: Examples of Internal Disaster Diversion include bomb threats, explosions, power outage and a nonfunctional generator, fire, earthquake damage, hazardous materials exposure, incidents involving the safety and/or security of a facility.

  ➢ Internal Disaster Diversion shall not be used for hospital capacity or staffing issues.
  ➢ Internal Disaster Diversion will stop all 9-1-1 transports into the facility.
  ➢ The hospital CEO or AOD shall be notified and notification documented in ReddiNet.
  ➢ If the hospital is a designated base hospital, the hospital should consider immediate transfer of responsibility for on-line direction to another base hospital. Notification must be made to the EMS provider.
  ➢ The affected hospital shall enter Internal Disaster Diversion status into ReddiNet immediately.
IV. EXCEPTIONS TO CT AND TRAUMA DIVERSION ONLY

- Basic life support (BLS) ambulances shall not be diverted.
- Ambulances on hospital property shall not be diverted.
- With the exception of Internal Disaster Diversion involving significant plant failure, patients exhibiting unmanageable problems (i.e., difficult to manage airway, uncontrolled hemorrhage, cardiopulmonary arrest) in the field, shall be transported to the closest emergency department.
CONTINUATION OF CARE

I. PURPOSE

To develop a system that ensures the rapid transport of patients upon arrival at a receiving hospital that requires urgent transfer to a higher level of care.

This policy shall only be used for:

- Rapid transport of STEMI, stroke and trauma patients from referral hospitals to the appropriate Specialty Care Center.
- Specialty Care Center to Specialty Care Center when higher level of care is required.
- EMS providers that are transporting unstable patients to a STEMI, Stroke or Trauma Center but need to stop at the closest receiving hospital for stabilization before continuing to a Specialty Care Center.

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

II. INCLUSION CRITERIA

- Patients meeting ICEMA Reference #9040 - Trauma Triage Criteria, who arrive at a non-trauma hospital.
- Upon recognition of any critically injured patient that require urgent transfer from one trauma receiving center to a higher level of care trauma receiving center.
- Patients requiring subspecialty services that are not a requirement for trauma center designation (i.e., reimplantation, hand surgery, burn, etc.) are not covered by this policy and must be managed through the normal interfacility transfer process compliant with all applicable regulations.
- Any patient with a positive STEMI requiring EMS transport to a STEMI Receiving Center (refer to ICEMA Reference #4040 - ST Elevation Myocardial Infarction Critical Care System Designation).
- Any patient with a positive mLAPSS requiring EMS transport to a Stroke Receiving Center, (refer to ICEMA Reference #4070 - Stroke Critical Care System Designation).
- Any stroke patient identified with a Large Vessel Occlusion (LVO) requiring rapid EMS transport to higher level of care for Endovascular Stroke Treatment.

III. INITIAL TREATMENT GOALS AT REFERRAL HOSPITAL

- 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.

➤ GOAL FOR USE OF CONTINUATION OF CARE POLICY

Less than 30 minutes at referral hospital (door-in/door-out).
Less than 30 minutes to complete ALS continuation of care transport.
Less than 30 minutes door-to-intervention at Specialty Care Center.
Less than 60 minutes for rapid identification of a LVO at a primary stroke center.

• Referral hospital shall contact the appropriate Specialty Care Center ED physician directly without calling for an inpatient bed assignment.

• Specialty Care Centers should route requests directly to the ED physician and bypass their transfer center triage process.

• EMS providers shall make contact with Specialty Care Centers to notify of the estimated time of arrival.

• Specialty Care Centers shall accept all referred STEMI, stroke and trauma patients meeting criteria in this policy unless they are on Internal Disaster as defined in ICEMA Reference #8050 - Requests for Ambulance Redirection and Hospital Diversion (San Bernardino County Only).

• The ED physician is the accepting physician at the Specialty Care Center and will activate the STEMI, Stroke or Trauma Team according to internal policies or protocols.

• The referral hospital 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 from ____ hospital to ____ STEMI, Stroke or Trauma Center”

Fire departments will not be dispatched for 9-1-1 continuation of care calls, the dispatchers will only dispatch transporting ALS ambulances.

• Referral hospital ED physician will provide a verbal report to the ED physician at the Specialty Care Center.

• Referral hospital will send all medical records, test results, radiologic evaluations to the Specialty Care Center. DO NOT DELAY TRANSPORT - these documents may be electronically submitted or faxed to the Specialty Care Center.

IV. SPECIAL CONSIDERATIONS FOR REFERRAL HOSPITALS

• If a patient arrives to a referral hospital via EMS field personnel, a physician may request that the transporting team remain and immediately transport the patient once minimal stabilization is completed.

• If a suspected stroke patient presenting to a non-designated stroke center is outside of the tPA administration window (greater than 4.5 hours from “last seen normal”), consider contacting nearest thrombectomy capable or comprehensive stroke center to determine the best destination. Then follow the 9-1-1 script.
• Unless medically necessary, avoid using medications or IV drips that are outside of the EMT-P scope of practice to avoid delays in transferring of patients.

• The referral hospital may consider sending one of its nurses or physician with the transporting ALS ambulance if deemed necessary due to the patient’s condition or scope of practice limitations per ICEMA Reference #8010 - Interfacility Transfer Guidelines.

• Do not call 9-1-1 dispatch if the patient requires Critical Care Transport (CCT) or Specialty Care Transport (SCT). The referral hospital must make direct contact with the EMS Providers Dispatch Center.

• Diversion is not permitted except for Internal Disaster. However, to avoid prolonged door-to-intervention times when STEMI, Stroke and Trauma Centers are over capacity, base hospitals may facilitate alternative STEMI, Stroke or Trauma Centers as the best destination for the patient. Base hospitals must ensure physician to physician contact when facilitating the use of an alternate destination.

V. REFERENCES

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>4040</td>
<td>ST Elevation Myocardial Infarction Critical Care System Designation (San Bernardino County Only)</td>
</tr>
<tr>
<td>4070</td>
<td>Stroke Critical Care System Designation (San Bernardino County Only)</td>
</tr>
<tr>
<td>8010</td>
<td>Interfacility Transfer Guidelines</td>
</tr>
<tr>
<td>8050</td>
<td>Requests for Ambulance Redirection and Hospital Diversion (San Bernardino County Only)</td>
</tr>
<tr>
<td>9040</td>
<td>Trauma Triage Criteria</td>
</tr>
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</table>
PARAMEDIC PREHOSPITAL UTILIZATION OF ULTRASOUND - TRIAL STUDY

I. PURPOSE

To establish authority and parameters for the prehospital use of Prehospital Point of Care Ultrasound (POCUS) as part of a trial study.

II. INCLUSION CRITERIA

Paramedic (EMT-P) application of POCUS should be considered to help guide treatment during any of the following conditions:

- Suspected Tension Pneumothorax as a result of blunt or penetrating traumatic injury.
  - Absent or decreased breath sounds, and
  - Signs of hemodynamic compromise (shock).

- Detection of intra-abdominal bleeding as a result of blunt or penetrating traumatic injury.

- Persistent cardiac arrest with fine ventricular fibrillation, asystole, or PEA.

III. CONTRAINDICATIONS

Any circumstance where application of POCUS, or interpretation of the trial study findings may delay patient care or transportation to the emergency department.

IV. PROCEDURE

EMT-Ps participating in the trial study must evaluate each patient to determine whether they meet criteria and indications for performing POCUS. This assessment is not intended to replace clinical judgement or currently employed techniques for treatment. It is intended to augment the paramedic’s diagnostic tools and verify or eliminate differential diagnoses considered.

Only EMT-Ps meeting the following criteria may utilize the POCUS:

- May only use the Butterfly IQ handheld ultrasound device approved for use in the trial study.

- Be authorized by an EMS provider who is participating in the trial study and has purchased the trial study equipment and supplies.

- Received training in use of the Butterfly IQ handheld ultrasound device and meets all trial study requirements.

V. DOCUMENTATION REQUIREMENTS

- ICEMA requirements for documentation and collection and submission of EMS data must be followed.

- All images captured by POCUS must be archived in the “cloud” for review.
- Users will complete the user implementation survey provided to them by the investigators of this trial study through their EMS provider.

- The Institutional Review Board (IRB) Trauma Center involved in the care of the transported patient, ICEMA, and Medical Director for the EMS provider involved in the patient care must be advised, and the Principal Investigator (PI) must be informed within 24 hours if either of the following occur:
  - Needle decompression in setting of normal lung sliding.
  - Termination of resuscitation efforts in the setting of fine v-fib mistaken for asystole.

VI. QUALITY ASSURANCE

- EMS providers, participating in the trial study, must review 100% of the uses for quality of imaging and proper application of the device and by verifying use it is within the approved IRB guidelines and ICEMA policy.

- The investigation team will review a sample of each provider’s studies obtained and verify the quality is adequate for the purposes of the trial study.
Medications listed in this protocol may be used only for the purposes referenced by the associated ICEMA Treatment Protocol.

**For Nerve Agent Antidote Kit (NAAK) or medications deployed with the ChemPack see Appendix I (Page 12).**

**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, 14040*

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

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

*Reference #s 4060, 7010, 7020, 14010, 14070*

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

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

*Reference #s 4060, 4080, 7010, 7020, 14010*

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

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

*Reference #s 7010, 7020, 14120, 14140, 14190*

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

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

*Reference #s 4060, 4080, 7010, 7020, 14120, 14140, 14190*

**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 4060, 4080, 5010, 7010, 7020, 14240*
Atropine (ALS) - Adult

Atropine, 1 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 4060, 4080, 7010, 7020, 13010, 14030, 14260

Atropine - Pediatric (ALS)

Organophosphate poisoning - Pediatrics less than 14 years of age:
Atropine, 0.05 mg/kg IV/IO not to exceed adult dose of 2 mg, repeat at 0.1 mg/kg increments every five (5) minutes if patient remains symptomatic.

Reference #s 4060, 4080, 7010, 7020, 13010

Calcium Chloride - Adult (ALS)

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

Reference #s 5010, 7010, 7020, 13010

For cardiac arrest with suspected hypocalcemia, hyperkalemia, hypermagnesemia or calcium channel blocker poisoning (base hospital order only):
Calcium Chloride, 1 gm (10 ml of a 10% solution) IV/IO.

Reference #s 7010, 7020, 14050

Calcium Chloride - Pediatric (ALS)

Calcium Channel Blocker Poisonings (base hospital order only):
Calcium Chloride, 20 mg/kg IV/IO over five (5) minutes.

Reference #s 7010, 7020, 13010

Dextrose - Adult (LALS, ALS)

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

Reference #s 4060, 4080, 5010, 7010, 7020, 8010, 13020, 13030, 14040, 14060

Dextrose - Pediatric (LALS, ALS)

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

Reference #s 5010, 7010, 7020, 13020, 13030, 14150, 14160, 14170
### Diphenhydramine - Adult (ALS)

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

*Reference #s 4060, 4080, 7010, 7020, 13010, 14010*

### Diphenhydramine - Pediatric (ALS)

**Allergic reaction:**

- 2 years to 14 years: 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, 14140*

### Epinephrine (0.3 mg) Auto-Injector - Adult and Pediatrics >30 kg (BLS, LALS-Specialty Program Only)

**Anaphylaxis (Severe Allergic Reactions), Severe Bronchospasm, Oropharyngeal Edema, Pending Respiratory Failure:**

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

*Reference # 14010*

### Epinephrine (0.15 mg) Auto-Injector - Pediatric 15 - 30 kg (BLS, LALS-Specialty Program Only)

**Anaphylaxis (Severe Allergic Reactions), Severe Bronchospasm, Oropharyngeal Edema, Pending Respiratory Failure:**

- Epinephrine, 0.15 mg IM. May repeat after 15 minutes one (1) time if symptoms do not improve.

*Reference #s 4060, 5010, 7010, 7020, 14120, 14140*

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

**Anaphylaxis (Severe Allergic Reactions), Severe Bronchospasm, oropharyngeal edema, Pending Respiratory Failure:**

- Epinephrine, 0.3 mg IM. May repeat after 15 minutes one (1) time if symptoms do not improve. Contact base hospital for patients with a history of coronary artery disease, history of hypertension or over 40 years of age prior to administration of Epinephrine.

*Reference # 14010*

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

**For persistent severe anaphylactic reaction:**

- Epinephrine (0.1 mg/ml), 0.1 mg slow IVP/IO. May repeat every five (5) minutes as needed to total dosage of 0.5 mg. Contact base hospital for patients with a history of coronary artery disease, history of hypertension or over 40 years of age prior to administration of Epinephrine.

*Reference # 14010*
Cardiac Arrest, Asystole, PEA:
Epinephrine (0.1 mg/ml), 1 mg IV/IO.

Reference #s 4060, 4080, 5010, 7010, 7020, 14010, 14050, 14260

Epinephrine (0.01 mg/ml) - Adult (ALS)

Post resuscitation, persistent profound nontraumatic shock and hypotension (Push Dose Epinephrine):
Prepare Epinephrine 0.01 mg/ml solution by mixing 9 ml of normal saline with 1 ml of Epinephrine 0.1 mg/ml in a 10 ml syringe. Administer 1 ml every one (1) to five (5) minutes titrated to maintain SBP more than 90 mm Hg.

Reference #s 4060, 4080, 5010, 7010, 7020, 14050, 14230

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

Anaphylaxis (Severe Allergic Reactions), Severe Bronchospasm, Pending Respiratory Failure:
Epinephrine, 0.01 mg/kg IM not to exceed adult dosage of 0.3 mg.

Reference #s 4060, 5010, 7010, 7020, 14120, 14140

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

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

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

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

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

Reference # 14200

Epinephrine (0.01 mg/ml) - Pediatric (ALS)

Post resuscitation, profound shock and hypotension (Push Dose Epinephrine):
Prepare Epinephrine 0.01 mg/ml solution by mixing 9 ml of normal saline with 1 ml of Epinephrine 0.1 mg/ml in a 10 ml syringe. Administer 0.1 ml/kg (do not exceed adult dosage), every one (1) to five (5) minutes. Titrate to maintain a SBP more than 70 mm Hg.

Reference #s 5010, 7010, 7020, 14150, 14230
Fentanyl - Adult (ALS)

**Chest Pain (Presumed Ischemic Origin):**
- Fentanyl, 50 mcg slow IV/IO over one (1) minute. May repeat every five (5) minutes titrated to pain, not to exceed 200 mcg.
- Fentanyl, 100 mcg IM/IN. May repeat 50 mcg every 10 minutes titrated to pain, not to exceed 200 mcg.

**Acute traumatic injuries, acute abdominal/flank pain, burn injuries, Cancer pain, Sickle Cell Crisis:**
- 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, or
- Fentanyl, 100 mcg IM/IN. May repeat 50 mcg every 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 10 minutes titrated to pain, not to exceed 200 mcg.

*Reference #s 3050, 4060, 4080, 5010, 7010, 7020, 11020, 13030, 14070, 14090, 14100, 14240*

Fentanyl - Pediatric (ALS)

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

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

*Reference #s 3050, 4080, 5010, 7010, 7020, 13030, 14180, 14190, 14240*

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

**Adult with blood glucose less than 80 mg/dL:**
- Glucose - Oral, one (1) tube for patients with an intact gag reflex and hypoglycemia.

*Reference #s 7010, 7020, 13020, 14060, 14080, 14230*

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

**Hypoglycemia - Neonates (0 - 4 weeks) with blood glucose less than 35 mg/dL or pediatric patients (more than 4 weeks) with glucose less than 60 mg/dL:**
- Glucose - Oral, one (1) tube for patients with an intact gag reflex and hypoglycemia.

*Reference #s 7010, 7020, 14170, 14160*
Glucagon - Adult (LALS, ALS)

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

*Beta blocker Poisoning (base hospital order only):*

Glucagon, 1 mg IV/IO

*Reference #s 4060, 4080, 7010, 7020, 13010, 13030, 14060*

Glucagon - Pediatric (LALS, ALS)

*Hypoglycemia, if unable to establish IV:*

Glucagon, 0.03 mg/kg IM/IN, if unable to start an IV. May be repeated one (1) time after 20 minutes for a combined maximum dose of 1 mg.

*Reference #s 7010, 7020, 13030, 14160, 14170*

*Beta blocker poisoning (base hospital order only):*

Glucagon, 0.03 mg/kg IV/IO

*Reference #s 4060, 4080, 7010, 7020, 13010*

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

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

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

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

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

*Reference #s 4060, 4080, 7010, 7020, 14010, 14070*

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

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

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

*Reference #s 7010, 7020, 14120, 14140, 14190*

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

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

*Reference #s 4060, 4080, 7010, 7020, 14120, 14140, 14190*
Ketamine - Adult (ALS)

*Acute traumatic injury, acute abdominal/flank pain, burn injuries, cancer related pain and sickle cell crisis:*
Ketamine, 0.3 mg/kg to a max of 30 mg in a 50 - 100 ml of NS via IV over five (5) minutes. May repeat one (1) time, after 15 minutes, if pain score remains at five (5) or higher. Do not administer IVP, IO, IM, or IN.

This is the official pain scale to be used in patient assessment and documented on the PCR.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
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<tbody>
<tr>
<td>No Pain</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Worst Pain</td>
</tr>
</tbody>
</table>

Reference #s 7010, 7020, 14100

Lidocaine - Adult (ALS)

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

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

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

May administer an additional 0.75 mg/kg slow IV/IO; maximum total dose of 3 mg/kg.

Reference #s 4060, 5010, 7010, 7020, 8010, 11020, 14040, 14050, 14090

Lidocaine - Pediatric (ALS)

*Cardiac Arrest:*
1 day to 8 years Lidocaine, 1.0 mg/kg IV/IO
9 to 14 years Lidocaine, 1.0 mg/kg IV/IO

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

Reference #s 5010, 7010, 7020, 14150

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 5010, 7010, 7020, 11020
Magnesium Sulfate (ALS)

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

Eclampsia (Seizure/Tonic/Clonic Activity):
Magnesium Sulfate, 4 gm IV/IO slow IV push over three (3) to four (4) minutes.
Magnesium Sulfate, 10 mg/min IV/IO drip to prevent continued seizures.

Reference #s 5010, 7010, 7020, 8010, 14210

Severe Asthma/Respiratory Distress (ALS) (base hospital order only):
Magnesium Sulfate, 2 gm slow IV drip over 20 minutes. Do not repeat.

Reference# 14010

Magnesium Sulfate - Pediatric (ALS)

Severe Asthma/Respiratory Distress (base hospital order only):
Magnesium Sulfate, 50 mg/kg slow IV drip over 20 minutes. Do not exceed the adult dosage of 2 gm total. Do not repeat.

Reference # 14120

Midazolam (Versed) - Adult (ALS)

Behavioral Emergencies, if patient meets criteria for potentially fatal and dangerous agitation:
Midazolam, 2.5 mg IV/IO/IN. May repeat in five (5) minutes, or
Midazolam, 5 mg IM. May repeat in 10 minutes.

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

Reference # 14110

Seizure:
Midazolam, 2.5 mg IV/IO/IN. May repeat in five (5) minutes for continued seizure activity, or
Midazolam, 5 mg IM. May repeat in 10 minutes for continued seizure activity.

Assess patient for medication related reduced respiratory rate or hypotension.

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

Pacing, synchronized cardioversion:
Midazolam, 2 mg slow IV/IO push or IN
CPAP:
Midazolam, 1 mg slow IV/IO push may be administered one (1) time for anxiety related to application of CPAP. Contact base hospital for additional orders.

Reference #s 4060, 4080, 7010, 7020, 11020, 13020, 14060, 14210

Midazolam (Versed) - Pediatric (ALS)

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

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

Assess patient for medication related reduced respiratory rate or hypotension.

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

Reference #s 7010, 7020, 14170

Naloxone (Narcan) - Adult (BLS)

For resolution of respiratory depression related to suspected opiate overdose:
Naloxone, 0.5 mg IM/IN, may repeat Naloxone 0.5 mg IM/IN every two (2) to three (3) minutes if needed.

For suspected Fentanyl overdose with respiratory depression:
Consider a loading dose of 4 mg IN Naloxone. If no signs of respiratory improvement, consider Naloxone 0.5 mg IM/IN every two (2) to three (3) minutes if needed.

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

Reference #s 7010, 7020, 8030, 14060

Naloxone (Narcan) - Adult (LALS, ALS)

For resolution of respiratory depression related to suspected opiate overdose:
Naloxone, 0.5 mg IV/IO/IM/IN, may repeat Naloxone 0.5 mg IV/IO/IM/IN every two (2) to three (3) minutes if needed.

For suspected Fentanyl overdose with respiratory depression:
Consider a loading dose of 4 mg IN Naloxone. If no signs of respiratory improvement, consider 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 4080, 7010, 7020, 14060
Naloxone (Narcan) - Pediatric (BLS)

*For resolution of respiratory depression related to suspected opiate overdose:*

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

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

*Reference #s 7010, 7020, 8030, 14150, 14160*

Naloxone (Narcan) - Pediatric (LALS, ALS)

*For resolution of respiratory depression related to suspected opiate overdose:*

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

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

*Reference #s 7010, 7020, 14150, 14160*

Nitroglycerin (NTG) (LALS, ALS)

Nitroglycerin, 0.4 mg sublingual/transmucosal.

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

Nitroglycerin Paste, 1 inch (1 gm) transdermal, may not repeat.

Nitroglycerin sublingual is the preferred route of administration for ACS. Nitro Paste is a one (1) time dose and intended for when sublingual cannot be easily administered (i.e., CPAP).

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

*Reference #s 4060, 4080, 7010, 7020, 14010, 14240*

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

*Nausea/Vomiting:*

Ondansetron, 4 mg slow IV/IO/ODT

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

All patients nine (9) and older: May administer Ondansetron 4 mg; may repeat two (2) times, at 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.
Oxygen (non-intubated patient per appropriate delivery device)

General Administration (Hypoxia):
Titrate Oxygen at lowest rate required to maintain SPO2 at 94%. Do not administer supplemental oxygen for SPO2 more than 95%.

Chronic Obstructive Pulmonary Disease (COPD):
Titrate Oxygen at lowest rate required to maintain SPO2 at 90%. Do not administer supplemental oxygen for SPO2 more than 91%.

Sodium Bicarbonate - Adult (ALS)

Tricyclic Poisoning (base hospital order only):
Sodium Bicarbonate, 1 mEq/kg IV/IO

For cardiac arrest with suspected metabolic acidosis, hyperkalemia or tricyclic poisoning (base hospital order only):
Sodium Bicarbonate, 50 mEq IV/IO

Sodium Bicarbonate - Pediatric (ALS)

Tricyclic Poisoning (base hospital order only):
Sodium Bicarbonate, 1 mEq/kg IV/IO

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

Signs of hemorrhagic shock meeting inclusion criteria:
Administer TXA 1 gm in 50 - 100 ml of NS via IV/IO over 10 minutes. Do not administer IVP as this will cause hypotension.

Reference #s 4080, 7010, 7020, 14090, 14180, 14220

Reference #s 12010, 13010, 13020, 13030, 14010, 14020, 14030, 14040, 14060, 14070, 14090, 14120, 14130, 14140, 14160, 14170, 14180, 14190, 14200, 14210, 14220, 14230, 14240

Reference #s 5010, 7010, 7020, 13010

Reference #s 7010, 7020, 14090
APPENDIX I

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

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

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

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

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

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

Weight-based dosing:

<table>
<thead>
<tr>
<th>Weight Range</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 6.8 kg (less than 15 lbs)</td>
<td>0.25 mg, IM using multi-dose vial</td>
</tr>
<tr>
<td>6.8 to 18 kg (15 to 40 lbs)</td>
<td>0.5 mg, IM using AtroPen auto-injector</td>
</tr>
<tr>
<td>18 to 41 kg (40 to 90 lbs)</td>
<td>1 mg, IM using AtroPen auto-injector</td>
</tr>
<tr>
<td>More than 41 kg (more than 90 lbs)</td>
<td>2 mg, IM using multi-dose vial</td>
</tr>
</tbody>
</table>

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

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

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

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

Reference #s, 13010, 13040

Diazepam (Valium) - Adult (ALS)

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

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

Reference # 13040
Diazepam (Valium) - Pediatric (ALS)

For seizures associated with nerve agent/organophosphate exposure ONLY with the deployment of the ChemPack:
   Diazepam 0.05 mg/kg IV

   Reference # 13040

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

Nerve agent exposure with associated symptoms:
   One (1) NAAK auto-injector IM into outer thigh. May repeat up to two (2) times every 10 to 15 minutes if symptoms persist.

   Reference #s 7010, 7020, 13010, 13040
PROCEDURE - STANDARD ORDERS

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

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

Continuous Positive Airway Pressure Device (CPAP) - Adult (EMT-P)
- Start at lowest setting and increase slowly until patient experiences relief or until a maximum of 15 cm H2O is reached.

External Jugular Vein Access (AEMT and EMT-P)
- Not indicated for patients eight (8) years of age and younger.
- Patient condition requires IV access and other peripheral venous access attempts are unsuccessful.

Blood Glucose Check (EMT, AEMT, and EMT-P)
- Should be assessed if the patient meets key indicators consistent with high or low blood sugar.

Intraosseous Insertion (AEMT pediatric patients only and EMT-P)
- EMT-Ps may administer Lidocaine slowly per ICEMA Reference #7040 - Medication - Standard Orders, to control infusion pain.
- Approved insertion sites:
  - Eight (8) years of age or younger (LALS and ALS):
    - Proximal Tibia - Anterior medial surface of tibia, 2 cm below tibial tuberosity.
Nine (9) years of age and older (ALS only):
  - Proximal Tibia - Anterior medial surface of tibia, 2 cm below tibial tuberosity.
  - Distal Tibia - Lower end of tibia, 2 cm above the medial malleolus.
  - Humeral Head (EZ IO only).
  - Anterior distal femur, 2 cm above the patella - Base hospital contact only.
  - Leave site visible and monitor for extravasation.

**Nasogastric/Orogastric Tube (EMT-P)**
- Use a water soluble lubricating jelly.
- Required for all full arrest patients.

**Needle Cricothyrotomy (EMT-P)**
- Absolute contraindication: Transection of the distal trachea.
- Monitor end-tidal CO\(_2\) and wave form capnography.
- Monitor pulse oximetry.
- Contact base hospital if unable to ventilate adequately and transport immediately to the closest hospital for airway management.

**Needle Thoracostomy (EMT-P)**
- In blunt chest trauma consider bilateral tension pneumothorax if pulse oximetry (SpO\(_2\)) reading remains low with a patent airway or with poor respiratory compliance.

**Oral Endotracheal Intubation - Adult (EMT-P)**
- Oral endotracheal intubation is permitted only in patients who are taller than the maximum length of a pediatric emergency measuring tape (Broselow, etc.) or equivalent measuring from the top of the head to the heal of the foot.
- Monitor end-tidal CO\(_2\) and wave form capnography.
- Monitor pulse oximetry.
- If unable to place ET after a maximum of three (3) intubation attempts (defined as placement of the laryngoscope in the mouth). If unsuccessful, continue with BVM airway management and transport to the nearest receiving hospital. If BVM is ineffective then attempt placement of supraglottic airway.
- Document verification of tube placement (auscultation, visualization, capnography).

**Supraglottic Airway - Adult (EMT-P)**
- Supraglottic airway is permitted only in patients who are unsuccessfully managed with BLS airway and oral endotracheal intubation.
• Supraglottic airway is permitted only in patients who are taller than the maximum length of a pediatric emergency measuring tape (Broselow, etc.) equivalent measuring from the top of the head to the heal of the foot.

• Monitor end-tidal CO₂ and wave form capnography.

• Monitor pulse oximetry.

• If unable to place after three (3) attempts (defined as placement of the soft gel into the mouth), continue with BLS airway and proceed to nearest receiving hospital.

• Document verification of SGA (auscultation, continuous capnography).

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

• Should be placed if patient meets the indicators, per ICEMA Reference #15010 - Trauma - Adult (Neuro Deficits present, Spinal Tenderness present, Altered Mental status, Intoxication, or Distracting Injury).

• An AEMT and/or EMT-P may remove if placed by BLS crew and it does not meet indicators.

**Synchronized Cardioversion (EMT-P)**

• For anxiety prior to cardioversion, consider Midazolam per ICEMA Reference #7040 - Medication - Standard Orders.

• For pain, consider Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.

• If rhythm deteriorates to v-fib, turn off the sync button and defibrillate.

• Select initial energy level setting at 100 joules or a clinically equivalent biphasic energy level per manufacture guidelines. Procedure may be repeated at 200, 300 and 360 joules or a clinically equivalent biphasic energy level per manufacture guidelines.

• With base hospital order, repeated cardioversion attempts at 360 joules or clinically equivalent biphasic energy level per manufacturer’s guidelines may be attempted.

**Transcutaneous Cardiac Pacing (EMT-P)**

• Start at a rate of 60 and adjust output to the lowest setting to maintain capture. Assess peripheral pulses and confirm correlation with paced rhythm.

• Reassess peripheral pulses. Adjust output to compensate for loss of capture.

• Increase rate **(not to exceed 100)** to maintain adequate tissue perfusion.

• For anxiety, consider Midazolam per ICEMA Reference #7040 - Medication - Standard Orders.

• For pain, consider Fentanyl per ICEMA Reference #7040 - Medication - Standard Orders.

• Contact the base hospital if rhythm persists or for continued signs of inadequate tissue perfusion.
Vagal Maneuvers (EMT-P)

- Relative contraindications for patients with hypertension, suspected STEMI, or suspected head/brain injury.

- Reassess cardiac and hemodynamic status. Document rhythm before, during and after procedure.

- If rhythm does not covert within ten (10) seconds, follow ICEMA Reference #11050 - Tachycardias - Adult.
CHRONIC OBSTRUCTIVE PULMONARY DISEASE

I. FIELD ASSESSMENT/TREATMENT INDICATORS

Symptoms of chronic pulmonary disease, wheezing, cough, pursed lip breathing, decreased breath sounds, accessory muscle use, anxiety, ALOC or cyanosis.

II. BLS INTERVENTIONS

- Reduce anxiety, allow patient to assume position of comfort.
- Administer oxygen as clinically indicated, obtain oxygen saturation on room air, or on home oxygen if possible.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, including advanced airway if indicated. Obtain oxygen saturation on room air or on home oxygen if possible.
- Administer Albuterol per ICEMA Reference #11010 - Medication - Standard Orders.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Administer Albuterol with Atrovent per ICEMA Reference #11010 - Medication - Standard Orders.
- Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #11020 - Procedure - Standard Orders.
  
  If systolic BP remains greater than 90 mm Hg, consider Midazolam per ICEMA Reference #11010 - Medication - Standard Orders for relief of anxiety related to CPAP mask.
- Consider advanced airway, refer to ICEMA Reference #11020 - Procedure - Standard Orders.

V. REFERENCES

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ACUTE ASTHMA/BRONCHOSPASM/ALLERGIC REACTION/ANAPHYLAXIS

I. FIELD ASSESSMENT/TREATMENT INDICATORS

History of prior attacks, possible toxic inhalation or allergic reaction, associated with wheezing, diminished breath sounds or cough.
II. BLS INTERVENTIONS (For severe asthma and/or anaphylaxis only)

- Reduce anxiety, allow patient to assume position of comfort.
- Administer oxygen as clinically indicated, humidified oxygen preferred.
- For anaphylaxis only, administer Epinephrine (0.3 mg auto-injector) per ICEMA Reference #11010 - Medication - Standard Orders.
- May repeat Epinephrine (0.3 mg auto-injector) per ICEMA Reference #11010 - Medication - Standard Orders, after 15 minutes one (1) time.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.
- Administer Albuterol per ICEMA Reference #11010 - Medication - Standard Orders.
- For signs of inadequate tissue perfusion, initiate IV bolus of 300 ml NS. If signs of inadequate tissue perfusion persist may repeat fluid bolus one (1) time.
- If no response to Albuterol, administer Epinephrine (1 mg/ml) per ICEMA Reference #11010 - Medication - Standard Orders.
- May repeat Epinephrine (1 mg/ml), per ICEMA Reference #11010 - Medication - Standard Orders, after 15 minutes one (1) time.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Administer Albuterol, with Atrovent per ICEMA Reference #11010 - Medication - Standard Orders.
- For suspected allergic reaction, consider Diphenhydramine per ICEMA Reference #11010 - Medication - Standard Orders.
- Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #11020 - Procedure - Standard Orders.
  
  If systolic BP remains greater than 90 mm Hg, consider Midazolam per ICEMA Reference #11010 - Medication - Standard Orders for relief of anxiety related to CPAP mask.
- If no response to Albuterol, administer Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders.
- May repeat Epinephrine (1 mg/ml) per ICEMA Reference #11010 - Medication - Standard Orders after 15 minutes one (1) time.
- For persistent severe anaphylactic reaction, administer Epinephrine (0.1 mg/ml) per
ICEMA Reference #11010 - Medication - Standard Orders.

- Consider advanced airway, refer to ICEMA Reference #11020 - Procedure - Standard Orders.

V. BASE HOSPITAL MAY ORDER THE FOLLOWING

- For severe asthma/respiratory distress that has failed to respond to the other previous treatments, administer Magnesium Sulfate per ICEMA Reference #11010 - Medication - Standard Orders.

VI. REFERENCES

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ACUTE PULMONARY EDEMA/CHF

I. FIELD ASSESSMENT/TREATMENT INDICATORS

History of cardiac disease, including CHF, and may present with rales, occasional wheezes, jugular venous distention and/or peripheral edema.

II. BLS INTERVENTIONS

- Reduce anxiety, allow patient to assume position of comfort.
- Administer oxygen as clinically indicated. For pulmonary edema with high altitude as a suspected etiology, descend to a lower altitude and administer high flow oxygen with a non re-breather mask.
- Be prepared to support ventilations as clinically indicated.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.
- Administer Nitroglycerine (NTG) per ICEMA Reference #11010 - Medication - Standard Orders. In the presence of hypotension (SBP less than 100), the use of NTG is contraindicated.
- If symptoms do not improve after NTG administration, consider Albuterol per ICEMA Reference #11010 - Medication - Standard Orders.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
• Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #11020 - Procedure - Standard Orders.

If systolic BP remains greater than 90 mm Hg, consider Midazolam per ICEMA Reference #11010 - Medication - Standard Orders for relief of anxiety related to CPAP mask.

• Consider advanced airway, refer to ICEMA Reference #11020 - Procedure - Standard Orders.

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ALLERGIC REACTIONS - PEDIATRIC (Less than 15 years of age)

I. FIELD ASSESSMENT/TREATMENT INDICATORS

- Signs and Symptoms of an acute allergic reaction.
- History of Exposure to possible allergen.

II. BLS INTERVENTIONS

- Recognize signs/symptoms of respiratory distress for age.
- Reduce anxiety, assist patient to assume POC.
- Oxygen administration as clinically indicated (humidified oxygen preferred).
- Assist patient with self-administration of prescribed Epinephrine device if available.
- For anaphylaxis only, administer Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders.
- May repeat Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders, after 15 minutes one (1) time.
- Assist patient with self-administration of prescribed Diphenhydramine.

III. LIMITED ALS (LALS) INTERVENTIONS - PEDIATRIC (Less than 15 years of age)

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.
- Albuterol per ICEMA Reference #11010 - Medication - Standard Orders.
- If no response to Albuterol, consider Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders.
- For symptomatic hypotension with poor perfusion, consider fluid bolus of 20 ml/kg of NS not to exceed 300 ml NS and repeat as indicated.
- Establish IV/IO access if indicated.
- For anaphylactic shock (e.g., no palpable radial pulse and a depressed level of consciousness), administer Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Albuterol with Atrovent per ICEMA Reference #11010 - Medication - Standard Orders.
- If no response to Albuterol and Atrovent, consider Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders.

- Administer Diphenhydramine per ICEMA Reference #11010 - Medication - Standard Orders for patients two (2) years of age or older.

- If apneic and unable to ventilate, consider oral endotracheal intubation per ICEMA Reference #11020 - Procedure - Standard Orders for patients who are taller than the maximum length of a pediatric emergency measuring tape (Broselow, etc.) or equivalent measuring from the top of the head to the heal of the foot.

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

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</table>
I. PURPOSE

To establish standards for the designation of an acute care hospital as a ST Elevation Myocardial Infarction (STEMI) Receiving Center.

II. POLICY

Hospital requirements for Inland Counties Emergency Medical Agency (ICEMA) STEMI Receiving Center designation:

- Must be a full service general acute care hospital approved by ICEMA as a 9-1-1 receiving hospital.
- Must have a licensure as a Cardiac Catheterization Laboratory (Cath Lab).
- Must be accredited by the American College of Cardiology (ACC) as a Chest Pain Center with Primary Percutaneous Coronary Intervention (PCI).
- Must have a Cardiovascular surgical services permit.
- Must be in compliance with all requirements listed in the California Code of Regulations, Title 22, Division 9, Chapter 7.1, STEMI Critical Care System Regulations.

III. STAFFING REQUIREMENTS

The hospital will have the following positions filled prior to becoming a STEMI Receiving Center:

- **Medical Directors**

  The hospital shall designate two (2) physicians as co-directors who are responsible for the medical oversight and ongoing performance of the STEMI Receiving Center 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.

- **STEMI Program Manager**

  The hospital shall designate a qualified STEMI Program Manager. This individual is responsible for monitoring and evaluating the care of STEMI patients, the coordination of performance improvement and patient safety programs for the STEMI critical care system in conjunction with the STEMI medical director. The STEMI Program Manager must be trained or certified in critical care nursing or have at least two (2) years dedicated STEMI patient management experience.

- **On-Call Physician Consultants and Staff**

  On-call physicians consultants and staff must be promptly available within 30 minutes from notification. A daily roster must include the following on-call physician consultants and staff:
 Interventional Cardiologist with privileges in PCI procedures.
 Cardiovascular Surgeon with privileges in Coronary Artery Bypass Grafting.
 Cath Laboratory Team.
 Intra-aortic balloon pump nurse or technologist.

 Registrar
To ensure accurate and timely data submission, hospitals must have a dedicated registrar to submit required data elements.

 Depending on the volume this position may be shared between specialty cares.
 Failure to submit data as outlined above, may result in probation, suspension, fines or rescission of STEMI Receiving Center Designation.

IV. INTERNAL STEMI RECEIVING CENTER POLICIES

The STEMI Receiving Center must have:

 The capability to provide STEMI patient care 24 hours per day, seven (7) days per week.
 A single call alert/communication system for notification of incoming STEMI patients, available 24 hours per day, seven (7) days per week (i.e., in-house paging system).
 A process for the treatment and triage of simultaneously arriving STEMI patients.
 A fibrinolytic therapy protocol to be used only in unforeseen circumstances when PCI of a STEMI patient is not possible.

 Prompt acceptance of STEMI patients from STEMI Referral Hospitals that do not have PCI capability. To avoid prolonged door to intervention time the STEMI base hospitals are allowed to facilitate redirection of STEMI patients to nearby STEMI receiving centers. Physician to physician contact must be made when redirecting patients.

 Acknowledgement that STEMI patients may only be diverted during the times of Internal Disaster in accordance to ICEMA Reference #8050 - Requests for Ambulance Redirection and Hospital Diversion (San Bernardino County Only).

V. 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. All hospitals including STEMI receiving centers must participate in Cardiac Arrest Registry to Enhance Survival (CARES).

VI. CONTINUOUS QUALITY IMPROVEMENT (CQI) PROGRAM

STEMI Receiving Centers 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 ICEMA policy, contractual agreement, California Regulations, and the ACC.
- Detailed review of cases requiring redirection of EMS STEMI patients to other STEMI Receiving Centers as a result of 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.
- 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.
- Programs in place to promote public education efforts specific to cardiac care.

VII. PERFORMANCE STANDARD

Designated STEMI Receiving Centers must comply with the California Code of Regulations, Title 22, Division 9, Chapter 7.1, STEMI Critical Care System, ICEMA policies, and the ACC performance measures, that exist and may change in the future.

VIII. DESIGNATION

- The STEMI Receiving Center applicant shall be designated after satisfactory review of written documentation, a potential site survey by ICEMA, and completion of a board approved agreement between the STEMI Receiving Center and ICEMA.
- Initial designation as a STEMI Receiving Center shall be in accordance with terms outlined in the agreement.
- Failure to comply with the approved agreement, or ICEMA policy may result in probation, suspension, fines or rescission of STEMI Receiving Center designation.

IX. REFERENCES

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STROKE CRITICAL CARE SYSTEM DESIGNATION (San Bernardino County Only)

I. PURPOSE

To establish standards for the designation of an acute care hospital as a Stroke Receiving Center.

II. POLICY

Hospital requirements for Inland Counties Emergency Medical Agency (ICEMA) Stroke Receiving Center designation:

- Must be a full service general acute care hospital approved by ICEMA as a 9-1-1 receiving hospital.

- Must have certification as an Acute Ready, Primary, Thrombectomy Capable, or Comprehensive Stroke Center by The Joint Commission (TJC), Healthcare Facilities Accreditation Program (HFAP), or Det Norske Veritas (DNV) and proof of re-certification every two (2) years.

- Must be in compliance with all requirements listed in the California Code of Regulations, Title 22, Division 9, Chapter 7.2, Stroke Critical Care System for the requested level of designation.

III. STAFFING REQUIREMENTS

The hospital will have the following positions filled for all levels of designation prior to becoming a Stroke Receiving Center.

- Medical Directors

  The hospital shall designate two (2) physicians with hospital privileges as co-directors who are responsible for the medical oversight and ongoing performance of the Stroke Receiving Center 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.

- Stroke Program Manager

  The hospital shall designate a qualified Stroke Program Manager. This individual is responsible for monitoring and evaluating the care of Stroke patients, the coordination of performance improvement and patient safety programs for the Stroke critical care system in conjunction with the Stroke medical director. The Stroke Program Manager must be trained or certified in critical care nursing or have at least two (2) years dedicated to Stroke patient management experience.

- On-Call Physicians Specialists/Consultants

  On-Call physicians consultants and staff must be promptly available within 30 minutes from notification. A daily roster must include the following on-call physician consultants and staff:

  - 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.

Registrar

To ensure accurate and timely data submission, hospitals must have a dedicated registrar to submit required data elements.

Depending on the volume, this position may be shared between specialty cares.

Failure to submit data as outlined above, may result in probation, suspension, fines or rescission of Stroke Receiving Center Designation.

IV. INTERNAL STROKE RECEIVING CENTER POLICIES

All levels of designation must have internal policies for the following:

- 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.
- A process for the treatment and triage of simultaneously arriving stroke patients.
- If neurosurgical services are not available in-house, the Stroke Receiving Center must have a rapid transfer agreement in place with a hospital that provides this service. Stroke Receiving Centers must promptly accept rapid transfer requests. Additionally, the Stroke Receiving Center must have a rapid transport agreement in place with an ICEMA approved EMS transport provider for that Exclusive Operation Area (EOA).
- Acknowledgement that stroke patients may only be diverted during the times of Internal Disaster in accordance to ICEMA Reference #8050 - Requests for Ambulance Redirection and Hospital Diversion (San Bernardino County Only).
- Emergent thrombolytic and tele-neurology protocol to be used by Neurology, Emergency, Pharmacy and Critical Care Teams.
- An alert/communication system for notification of incoming stroke patients, available 24 hours per day, seven (7) days per week (i.e., in-house paging system).

V. DATA COLLECTION

Designated Stroke Receiving Centers shall report all required data as determined by ICEMA and the Stroke Committee.

VI. CONTINUOUS QUALITY IMPROVEMENT (CQI) PROGRAM

Stroke Receiving Centers 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:
• Morbidity and mortality related to procedural complications.
• Review of all transfers.
• Tracking door-to-intervention times and adherence to minimum performance standards.
• Active participation in ICMA Stroke CQI Committee and Stroke 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.
• Provide Continuing Education (CE) opportunities twice per year for referral hospitals and EMS field personnel in areas of pathophysiology, assessment, triage and management for stroke patients and report annually to ICMA.
• Lead public stroke education and illness prevention efforts and report annually to ICMA.

VII. PERFORMANCE STANDARDS

Designated Stroke Receiving Centers must comply with the California Code of Regulations, Title 22, Division 9, Chapter 7.2, Stroke Critical Care System, ICMA policies, and the Performance Measures set forth by the accrediting agencies identified in Section II, that exist and may change in the future.

VIII. DESIGNATION LEVELS

• **Acute Stroke Ready Hospital**: A hospital able to provide the minimum level of critical care services for stroke patients in the emergency department, and are paired with one or more hospitals with a higher level of stroke services.

• **Primary Stroke Center**: A hospital that treats acute stroke patients, and identifies patients who may benefit from transfer to a higher level of care when clinically warranted.

• **Thrombectomy-Capable Stroke Center**: A primary stroke center with the availability to perform mechanical thrombectomy for the ischemic stroke patient when clinically warranted.

• **Comprehensive Stroke Center**: A hospital with specific abilities to receive diagnose and treat all stroke cases and provide the highest level of care for stroke patients.

**Acute Stroke Ready Hospitals**

To be considered for Acute Stroke Ready hospital designation, multiple variables will be taken into consideration and will be determined by the ICMA Medical Director:

- What are the current needs of the community?
- How will this impact the overall care in the system?
- What is the location of the hospital, is there a prolonged distance to a primary thrombectomy or comprehensive stroke center?

The hospital must meet the following minimum criteria:

• Written transfer agreements.
- Written policies and procedures for emergent stroke services to include written protocols and standardized orders.

- A data-driven, continuous quality improvement process.

- Neuro imaging services (CT or MRI) with interpretation of imaging available 24 hours a day, seven (7) days a week, and 365 days a year.

- Laboratory services to include blood testing, electrocardiography, and x-ray services 24 hours a day, seven (7) days a week and 365 days a year.

- Provide IV thrombolytic treatment.

- A clinical Stroke Team available to see patient (in person or by tele-health) within 20 minutes of arrival to ED.

Primary Stroke Centers

- Stroke diagnosis and treatment capacity 24 hours a day, seven (7) days a week.

- A clinical Stroke Team available to see in person or via telehealth, a patient identified as a potential stroke patient within 15 minutes following patient’s arrival.

- Neuro imaging services capability that is available 24 hours a day, seven (7) days a week.

- Two (2) CT scanners and one (1) MRI scanner.

- Neuro imaging initiated within 25 minutes following arrival to ED.

- Laboratory services that are available 24 hours a day, seven (7) days a week.

Thrombectomy Capable Centers (in addition to Primary Stroke Center Requirements)

- The ability to perform mechanical thrombectomy for the treatment of ischemic stroke 24 hours a day, seven (7) days a week.

- Neuro interventionalist.

- Neuro radiologist.

- The ability to perform advanced imaging 24 hours a day, seven (7) days a week.

Comprehensive Centers (in addition to Primary and Thrombectomy Center Requirements)

- Neuro-endovascular diagnostic and therapeutic procedures available 24 hours a day, seven (7) days a week.

- Advanced imaging available 24 hours a day, seven (7) days a week.

- A stroke patient research program.
A neurosurgical team capable of assessing and treating complex stroke and stroke-like syndromes.

A written call schedule for attending neurointerventionalist, neurologist, or neurosurgeon providing availability 24 hours a day, seven (7) days a week.

IX. DESIGNATION

ICEMA designation as an Acute Stroke Ready Hospital, Primary, Thrombectomy Capable, or Comprehensive Stroke Center will be determined based on need and volume in the community. Designation will not be determined by current accreditation only; however, Stroke Receiving Centers must be accredited at least at an equivalent designation level being requested.

- The Stroke Receiving Center 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 certification as an Acute Ready Hospital, Primary Stroke Center Thrombectomy Capable Stroke Center or Comprehensive Stroke Center by TJC, HFAP or DNV.

- Initial designation as a Primary, Thrombectomy, Capable or Comprehensive Stroke Center shall be in accordance with terms outlined in the agreement.

- Failure to comply with the approved agreement, or ICEMA policy may result in probation, suspension, fines or rescission of the Stroke Receiving Center designation.

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STANDARD DRUG AND EQUIPMENT LIST - BLS/LALS/ALS

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

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

### MEDICATIONS/SOLUTIONS

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</thead>
<tbody>
<tr>
<td>Adenosine (Adenocard) 6 mg</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Adenosine (Adenocard) 12 mg</td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Albuterol Aerosolized Solution (Proventil) - unit dose 2.5 mg</td>
<td>4 doses</td>
<td>4 doses</td>
<td>4 doses</td>
<td></td>
</tr>
<tr>
<td>Albuterol MDI with spacer</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1 SPECIALTY PROGRAMS ONLY</td>
</tr>
<tr>
<td>Aspirin, chewable - 81 mg tablet</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1 bottle</td>
</tr>
<tr>
<td>Atropine 1 mg preload</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Calcium Chloride 1 gm preload</td>
<td></td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Dextrose 10% in 250 ml Water (D10W)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Diphenhydramine (Benadryl) 50 mg</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Epinephrine 0.15 mg Auto-Injector</strong></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2 SPECIALTY PROGRAMS ONLY</td>
</tr>
<tr>
<td><strong>Epinephrine 0.3 mg Auto-Injector</strong></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2 SPECIALTY PROGRAMS ONLY</td>
</tr>
<tr>
<td>Epinephrine 1 mg/ml 1 mg</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Epinephrine 0.1 mg/ml 1 mg preload</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Glucagon 1 mg</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Glucose paste</td>
<td>1 tube</td>
<td>1 tube</td>
<td>1 tube</td>
<td>1 tube</td>
</tr>
<tr>
<td>Ipratropium Bromide Inhalation Solution (Atrovent) unit dose 0.5 mg</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Irrigating Saline and/or Sterile Water (1000 cc)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Lidocaine 100 mg</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Lidocaine 2% Intravenous solution</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Magnesium Sulfate 10 gm</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Naloxone (Narcan) 2 mg preload</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Nitroglycerine (NTG) - Spray 0.4 mg metered dose and/or tablets (tablets to be discarded 90 days after opening)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Nitroglycerine Paste 2% - 1 gm packets, <strong>or</strong></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Nitroglycerine Paste 2% - 30 gm tube, <strong>or</strong></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Nitroglycerine Paste 2% - 60 gm tube <strong>or</strong></td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Normal Saline for Injection (10 cc)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Normal Saline 100 cc</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Normal Saline 250 cc</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
### Exchanged Medications/Solutions

<table>
<thead>
<tr>
<th></th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Saline</td>
<td>500 ml</td>
<td>2000 ml</td>
<td>3000 ml</td>
<td>6000 ml</td>
</tr>
<tr>
<td>Ondansetron (Zofran)</td>
<td>4 mg Oral</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Disintegrating Tablets (ODT)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ondansetron (Zofran)</td>
<td>4 mg IM/IV</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>50 mEq preload</td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Tranexamic Acid (TXA)</td>
<td>1 gm</td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

### Non-Exchange Controlled Substance Medications

**MUST BE DOUBLE LOCKED**

<table>
<thead>
<tr>
<th></th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fentanyl</td>
<td>200-400 mcg</td>
<td>200-400 mcg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midazolam</td>
<td>20-40 mg</td>
<td>20-40 mg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ketamine</td>
<td>120-1000 mg</td>
<td>120-1000 mg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## AIRWAY/SUCTION EQUIPMENT

<table>
<thead>
<tr>
<th>Exchanged Airway/Suction Equipment</th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPAP circuits - all manufacture’s available sizes</td>
<td>1 each</td>
<td>2 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>End-tidal CO2 device - Pediatric and Adult (may be integrated into bag)</td>
<td>1 each</td>
<td>1 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endotracheal Tubes cuffed - 6.0 and/or 6.5, 7.0 and/or 7.5 and 8.0 and/or 8.5 with stylet</td>
<td>2 each</td>
<td>2 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ET Tube holders - adult</td>
<td>1 each</td>
<td>1 each</td>
<td>2 each</td>
<td></td>
</tr>
<tr>
<td>Mask - Adult &amp; Pediatric non-rebreather oxygen mask</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
</tr>
<tr>
<td>Mask - Infant Simple Mask</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Nasal cannulas - pediatric and adult</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
</tr>
<tr>
<td>Naso/Orogastric feeding tubes - 5fr or 6fr, and 8fr</td>
<td>1 each</td>
<td>1 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Naso/Orogastric tubes - 10fr or 12fr, 14fr, 16fr or 18fr</td>
<td>1 each</td>
<td>1 each</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasopharyngeal Airways - (infant, child, and adult)</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
<tr>
<td>Needle Cricothyrotomy Device - Pediatric and adult or Needles for procedure 10, 12, 14 and/or 16 gauge</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
<tr>
<td>One way flutter valve with adapter or equivalent</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oropharyngeal Airways - (infant, child, and adult)</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
<tr>
<td>Rigid tonsil tip suction</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Small volume nebulizer with universal cuff adaptor</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Suction Canister</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Suction catheters - 6fr, 8fr or 10fr, 12fr or 14fr</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
<tr>
<td>Ventilation Bags -</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Exchanged Airway/Suction Equipment

<table>
<thead>
<tr>
<th></th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant 250 ml</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pediatric 500 ml (or equivalent)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Adult</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Water soluble lubricating jelly</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### Non-Exchange Airway/Suction Equipment

<table>
<thead>
<tr>
<th></th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambulance oxygen source -10 L / min for 20 minutes</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>CPAP - (must be capable of titrating pressure between 2 and 15 cm H2O)</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Flashlight/penlight</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Laryngoscope blades - #0, #1, #2, #3, #4 curved and/or straight</td>
<td>1 each</td>
<td>1 each</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Laryngoscope handle with batteries - or 2 disposable handles</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Magill Forceps - Pediatric and Adult</td>
<td>1 each</td>
<td>1 each</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Manual powered suction device</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portable oxygen with regulator - 10 L /min for 20 minutes</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Portable suction device (battery operated)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pulse Oximetry device</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>(SEE OPTIONAL EQUIPMENT SECTION, PG. 5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stethoscope</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Wall mount suction device</td>
<td>1</td>
<td>(BLS TRANSPORT ONLY)</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
### Standard Drug and Equipment List - BLS/LALS/ALS

**Reference No. 7010R34**  
**Effective Date:** 10/01/2021-01/22  
**Supersedes:** 06/01/2021-10/01/21  
**Page 4 of 6**

#### Exchanged IV/Needles/Syringes/Monitor Equipment

<table>
<thead>
<tr>
<th>Item</th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Razors</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Safety Needles - 20 or 21 gauge and 23 or 25 gauge</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
</tr>
<tr>
<td>Saline Lock Large Bore Tubing Needleless</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Sterile IV dressing</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Syringes w/wo safety needles - 1 cc, 3 cc, 10 cc catheter tip</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
</tr>
<tr>
<td>Syringes w/wo safety needles - 1 cc, 3 cc, 10 cc, 20 cc, 60 cc catheter tip</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
<td>2 each</td>
</tr>
</tbody>
</table>

#### Non-Exchange IV/Needles/Syringes/Monitor Equipment

<table>
<thead>
<tr>
<th>Item</th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>12-lead ECG Monitor and Defibrillator with TCP and printout</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Blood pressure cuff - large adult or thigh cuff, adult, child and infant (one of each size)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Capnography monitor and supplies, may be integrated in the cardiac monitor</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Needle disposal system (OSHA approved)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Thermometer - Mercury Free with covers</td>
<td>1</td>
<td>1</td>
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</tbody>
</table>

#### Optional Equipment/Medications

<table>
<thead>
<tr>
<th>Item</th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>AED/defib pads - Adult (1), Pediatric (1)</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
<tr>
<td>Automatic CPR device (FDA approved)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Automatic transport ventilator (Specialty Program Only - ICEMA approved device)</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Backboard padding</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Buretrol</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Chemistry profile tubes</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Nerve Agent Antidote Kit (NAAK) - DuoDote or Mark I</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>EMS Tourniquet</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Gum Elastic intubation stylet</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Hemostatic Dressings *</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>IO Needles - Manual, Adult and Pediatric, Optional</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
<td>1 each</td>
</tr>
<tr>
<td>IV infusion pump</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>IV warming device</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Manual IV Flow Rate Control Device</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Manual powered suction device</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Multi-lumen peripheral catheter</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Needle Thoracostomy Kit (prepackaged)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Naloxone (Narcan) Nasal Spray 4 mg</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Pulse Oximetry device</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Translaryngeal Jet Ventilation Device</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Vacutainer</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
* Hemostatic Dressings
  - Quick Clot, Z-Medica
    - Quick Clot, Combat Gauze LE
    - Quick Clot, EMS Rolled Gauze, 4x4 Dressing, TraumaPad
  - Celox
    - Celox Gauze, Z-Fold Hemostatic Gauze
    - Celox Rapid, Hemostatic Z-Fold Gauze
  - HemCon ChitoFlex Pro Dressing

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

## DRESSING MATERIALS/OTHER EQUIPMENT/SUPPLIES

<table>
<thead>
<tr>
<th>Exchanged Dressing Materials/Other Equipment/Supplies</th>
<th>BLS</th>
<th>LALS</th>
<th>ALS Non-Transport</th>
<th>ALS Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adhesive tape - 1 inch</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Air occlusive dressing</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ankle and wrist restraints, soft ties acceptable</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Antiseptic swabs/wipes</td>
<td>10</td>
<td>10</td>
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<td>Cervical Collars - Rigid Pediatric and Adult all sizes or Cervical Collars - Adjustable Adult and Pediatric</td>
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<td>Cold Packs</td>
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<td>Provodine/Iodine swabs/wipes or antiseptic equivalent</td>
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<td>Roller bandages - 4 inch</td>
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<td>Sterile bandage compress or equivalent</td>
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<td>Sterile gauze pads - 4x4 inch</td>
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<td>Blood Borne Pathogen Protective Equipment - (nonporous gloves, goggles face masks and gowns meeting OSHA Standards)</td>
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<td>Long board with restraint straps</td>
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<td>Pediatric immobilization board</td>
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<td>Pillow, pillow case, sheets and blanket</td>
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<td>Short extrication device</td>
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<td>Straps to secure patient to gurney</td>
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<td>Traction splint</td>
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<td>Triage Tags - ICEMA approved</td>
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REQUESTS FOR AMBULANCE REDIRECTION AND HOSPITAL DIVERSION (San Bernardino County Only)

I. PURPOSE

To define policy and procedures for hospitals to request temporary redirection of advanced life support (ALS) ambulances.

II. POLICY

- Ambulance redirection based on hospital capacity, census or staffing is not permitted in the ICEMA region and will only be permitted as outlined in this policy.

- This policy applies to the 9-1-1 emergency system as a temporary measure and is not intended for utilization to determine destination for interfacility transports, including higher level of care transports.

- If a hospital meets internal disaster criteria, Trauma Center Diversion or any other specialty care centers with unique circumstances, immediate telephone notification must be made to the ICEMA Duty Officer by an administrative staff member who has the authority to determine that criteria has been met for redirection or diversion.

- Hospitals must notify EMS dispatch centers immediately via ReddiNet or available communication modalities.

- Hospitals must maintain a hospital redirection policy that conforms with this policy. The hospital policy shall include plans to educate all appropriate staff on proper utilization of redirection.

- Receiving hospitals cannot redirect an incoming ambulance and diversion/redirection is only permitted as outlined in this policy.

- Within 72 hours of an incident, the hospital must provide ICEMA with a written after action report indicating the reasons for internal disaster, plans activated, adverse patient consequences and the corrective actions taken. The report must be signed by the CEO or designated responsible individual.

- ICEMA may perform unannounced site visits to hospitals on temporary redirection status to ensure compliance with the request for ambulance redirection.

- ICEMA may randomly audit base hospital records to ensure redirected ambulance patients are transported to the appropriate destination.

- ICEMA staff may contact the hospital to determine the reasons for ambulance redirection, under this policy.

- ICEMA may remove any hospital from redirection status using ReddiNet if it is determined that the request is not consistent with this policy.

III. PROCEDURE

A request for redirection of ALS ambulances may be made for the following approved categories:

- CT Redirection (for Non-Specialty Care Centers).
When Non-Specialty Care Centers experience CT scanner failure, the hospital can go on ambulance redirection using the ReddiNet system for EMS patients who may require CT imaging.

- **Trauma Center Diversion (for use by designated Trauma Centers only)**
  - The on duty trauma surgeon must be involved in the decisions regarding any request for trauma diversion.
  - The trauma team and trauma surgeon (both first and second call) and are fully committed to the care of trauma patients in the operating room and are NOT immediately available for any additional incoming patients meeting approved trauma triage criteria.
  - All operating rooms are occupied with critically injured patients that meet trauma triage criteria.
  - All CT Scanners are inoperable due to scanner failure at a designated Trauma Center.
  - Internal disaster.

**NOTE:** Diversion is canceled when all designated Trauma Centers are on Trauma Center Diversion.

- **Internal Disaster Diversion**
  - Requests for Internal Disaster Diversion shall apply only to physical plant breakdown affecting the Emergency Department or significant patient services.

**NOTE:** Examples of Internal Disaster Diversion include bomb threats, explosions, power outage and a nonfunctional generator, fire, earthquake damage, hazardous materials exposure, incidents involving the safety and/or security of a facility.

  - Internal Disaster Diversion shall not be used for hospital capacity or staffing issues.
  - Internal Disaster Diversion will stop all 9-1-1 transports into the facility.
  - The hospital CEO or AOD shall be notified and notification documented in ReddiNet.
  - If the hospital is a designated base hospital, the hospital should consider immediate transfer of responsibility for on-line direction to another base hospital. Notification must be made to the EMS provider.
  - The affected hospital shall enter Internal Disaster Diversion status into ReddiNet immediately.
IV. EXCEPTIONS TO CT AND TRAUMA DIVERSION ONLY

- Basic life support (BLS) ambulances shall not be diverted.
- Ambulances on hospital property shall not be diverted.
- With the exception of Internal Disaster Diversion involving significant plant failure, patients exhibiting unmanageable problems (i.e., difficult to manage airway, uncontrolled hemorrhage, cardiopulmonary arrest) in the field, shall be transported to the closest emergency department.
CONTINUATION OF CARE (San Bernardino County Only)

I. PURPOSE

To develop a system that ensures the rapid transport of patients upon arrival at a receiving hospital that requires urgent transfer to a higher level of care.

This policy shall only be used for:

- Rapid transport of STEMI, stroke and trauma patients from referral hospitals to the appropriate Specialty Care Center.
- Specialty Care Center to Specialty Care Center when higher level of care is required.
- EMS providers that are transporting unstable patients to a STEMI, Stroke or Trauma Center but need to stop at the closest receiving hospital for airway stabilization before continuing to a Specialty Care Center.

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

II. INCLUSION CRITERIA

- Patients meeting ICEMA Reference #9040 - Trauma Triage Criteria, who arrive at a non-trauma hospital.
- Upon recognition of any critically injured patient that require urgent transfer from one trauma receiving center to a higher level of care trauma receiving center.
- Patients requiring subspecialty services that are not a requirement for trauma center designation (i.e., reimplantation, hand surgery, burn, etc.) are not covered by this policy and must be managed through the normal interfacility transfer process compliant with all applicable regulations.
- Any patient with a positive STEMI requiring EMS transport to a STEMI Receiving Center (refer to ICEMA Reference #4040 - STElevation Myocardial Infarction Critical Care System Designation).
- Any patient with a positive mLAPSS requiring EMS transport to a Stroke Receiving Center, (refer to ICEMA Reference #4070 - Stroke Critical Care System Designation).
- Any stroke patient identified with a Large Vessel Occlusion (LVO) requiring rapid EMS transport to higher level of care for Endovascular Stroke Treatment.

III. INITIAL TREATMENT GOALS AT REFERRAL HOSPITAL

- 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.

➢ GOAL GUIDELINES FOR USE OF CONTINUATION OF CARE POLICY

- Less than 30 minutes at referral hospital (door-in/door-out).
- Less than 30 minutes to complete ALS continuation of care transport.
- Less than 30 minutes door-to-intervention at Specialty Care Center.
- Less than 60 minutes for rapid identification of a LVO at a primary stroke center.

• Referral hospital shall contact the appropriate Specialty Care Center ED physician directly without calling for an inpatient bed assignment.

• Specialty Care Centers should route requests directly to the ED physician and bypass their transfer center triage process.

• EMS providers shall make contact with Specialty Care Centers to notify of the estimated time of arrival.

• Specialty Care Centers shall accept all referred STEMI, stroke and trauma patients meeting criteria in this policy unless they are on Internal Disaster as defined in ICEMA Reference #8050 - Requests for Ambulance Redirection and Hospital Diversion (San Bernardino County Only).

• The ED physician is the accepting physician at the Specialty Care Center and will activate the STEMI, Stroke or Trauma Team according to internal policies or protocols.

• The referral hospital 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 from _____ hospital to _____ STEMI, Stroke or Trauma Center”

Fire departments will not be dispatched for 9-1-1 continuation of care calls, the dispatchers will only dispatch transporting ALS ambulances.

• Referral hospital ED physician will provide a verbal report to the ED physician at the Specialty Care Center.

• Referral hospital will send all medical records, test results, radiologic evaluations to the Specialty Care Center. DO NOT DELAY TRANSPORT - these documents may be electronically submitted or faxed to the Specialty Care Center.

IV. SPECIAL CONSIDERATIONS FOR REFERRAL HOSPITALS

• If a patient arrives to a referral hospital via EMS field personnel, a physician may request that the transporting team remain and immediately transport the patient once minimal stabilization is completed.

• If a suspected stroke patient presenting to a non-designated stroke center is outside of the tPA administration window (greater than 4.5 hours from “last seen normal”), consider contacting nearest thrombectomy capable or comprehensive stroke center to determine the best destination. Then follow the 9-1-1 script.
- Unless medically necessary, avoid using medications or IV drips that are outside of the EMT-P scope of practice to avoid delays in transferring of patients.

- The referral hospital may consider sending one of its nurses or physician with the transporting ALS ambulance if deemed necessary due to the patient’s condition or scope of practice limitations per ICEMA Reference #8010 - Interfacility Transfer Guidelines.

- Do not call 9-1-1 dispatch if the patient requires Critical Care Transport (CCT) or Specialty Care Transport (SCT). The referral hospital must make direct contact with the EMS Providers Dispatch Center.

- Diversion is not permitted except for Internal Disaster. However, to avoid prolonged door-to-intervention times when STEMI, Stroke and Trauma Centers are over capacity, base hospitals may facilitate alternative STEMI, Stroke or Trauma Centers as the best destination for the patient. Base hospitals must ensure physician to physician contact when facilitating the use of an alternate destination.

V. REFERENCES

<table>
<thead>
<tr>
<th>Number</th>
<th>Name</th>
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<tbody>
<tr>
<td>4040</td>
<td>ST Elevation Myocardial Infarction Critical Care System Designation (San Bernardino County Only)</td>
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<tr>
<td>4070</td>
<td>Stroke Critical Care System Designation (San Bernardino County Only)</td>
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<td>8010</td>
<td>Interfacility Transfer Guidelines</td>
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<td>8050</td>
<td>Requests for Ambulance Redirection and Hospital Diversion (San Bernardino County Only)</td>
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<td>9040</td>
<td>Trauma Triage Criteria</td>
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PARAMEDIC PREHOSPITAL UTILIZATION OF ULTRASOUND - TRIAL STUDY

I. PURPOSE
To establish authority and parameters for the prehospital use of Prehospital Point of Care Ultrasound (POCUS) as part of a trial study.

II. INCLUSION CRITERIA
Paramedic (EMT-P) application of POCUS should be considered to help guide treatment during any of the following conditions:

- Suspected Tension Pneumothorax as a result of blunt or penetrating traumatic injury.
  - Absent or decreased breath sounds, and
  - Signs of hemodynamic compromise (shock).
- Detection of intra-abdominal bleeding as a result of blunt or penetrating traumatic injury.
- Persistent cardiac arrest with fine ventricular fibrillation, asystole, or PEA.

III. CONTRAINDICATIONS
Any circumstance where application of POCUS, or interpretation of the trial study findings may delay patient care or transportation to the emergency department.

IV. PROCEDURE
EMT-Ps participating in the trial study must evaluate each patient to determine whether they meet criteria and indications for performing POCUS. This assessment is not intended to replace clinical judgement or currently employed techniques for treatment. It is intended to augment the paramedic's diagnostic tools and verify or eliminate differential diagnoses considered.

Only EMT-Ps meeting the following criteria may utilize the POCUS:

- May only use the Butterfly IQ handheld ultrasound device approved for use in the trial study.
- Be authorized by an EMS provider who is participating in the trial study and has purchased the trial study equipment and supplies.
- Received training in use of the Butterfly IQ handheld ultrasound device and meets all trial study requirements.

V. DOCUMENTATION REQUIREMENTS

- ICEMA requirements for documentation and collection and submission of EMS data must be followed.
- All images captured by POCUS must be archived in the “cloud” for review.
• Users will complete the user implementation survey provided to them by the investigators of this trial study through their EMS provider.

• The Institutional Review Board (IRB) Trauma Center involved in the care of the transported patient, ICEMA, and Medical Director for the EMS provider involved in the patient care must be advised, and the Principal Investigator (PI) must be informed within 24 hours if either of the following occur:
  - Needle decompression in setting of normal lung sliding.
  - Termination of resuscitation efforts in the setting of fine v-fib mistaken for asystole.

VI. QUALITY ASSURANCE

• EMS providers, participating in the trial study, must review 100% of the uses for quality of imaging and proper application of the device and by verifying use it is within the approved IRB guidelines and ICEMA policy.

• The investigation team will review a sample of each provider’s studies obtained and verify the quality is adequate for the purposes of the trial study.
MEDICATION - STANDARD ORDERS

Medications listed in this protocol may be used only for the purposes referenced by the associated ICEMA Treatment Protocol.

For Nerve Agent Antidote Kit (NAAK) or medications deployed with the ChemPack see Appendix I (Page 12).

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, 14040

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

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

Reference #s 4060, 7010, 7020, 14010, 14070

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

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

Reference #s 4060, 4080, 7010, 7020, 14120, 14140, 14190, 14010

Albuterol (Proventil) - Pediatric (LALS, ALS)

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

Reference #s 7010, 7020, 14120, 14140, 14190

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

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

Reference #s 4060, 4080, 7010, 7020, 14120, 14140, 14190

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 4060, 4080, 5010, 7010, 7020, 14240
**Atropine (ALS) - Adult**

Atropine, **0.5–1 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 4060, 4080, 7010, 7020, 13010, 14030, 14260

**Atropine - Pediatric (ALS)**

**Organophosphate poisoning - Pediatrics less than 14 years of age:**
Atropine, 0.05 mg/kg IV/IO not to exceed adult dose of 2 mg, repeat at 0.1 mg/kg increments every five (5) minutes if patient remains symptomatic.

Reference #s 4060, 4080, 7010, 7020, 13010

**Calcium Chloride - Adult (ALS)**

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

Reference #s 5010, 7010, 7020, 13010

For cardiac arrest with suspected hypocalcemia, hyperkalemia, hypermagnesemia or calcium channel blocker poisoning (base hospital order only):
Calcium Chloride, 1 gm (10 ml of a 10% solution) IV/IO.

Reference #s 7010, 7020, 14050

**Calcium Chloride - Pediatric (ALS)**

**Calcium Channel Blocker Poisonings (base hospital order only):**
Calcium Chloride, 20 mg/kg IV/IO over five (5) minutes.

Reference #s 7010, 7020, 13010

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

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

Reference #s 4060, 4080, 5010, 7010, 7020, 8010, 13020, 13030, 14040, 14060

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

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

Reference #s 5010, 7010, 7020, 13020, 13030, 14150, 14160, 14170
Diphenhydramine - Adult (ALS)

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

Referenced #s 4060, 4080, 7010, 7020, 13010, 14010

Diphenhydramine - Pediatric (ALS)

**Allergic reaction:**
- 2 years to 14 years: 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.

Referenced #s 7010, 7020, 14140

Epinephrine (0.3 mg) Auto Injector - Adult and Pediatrics >30 kg (BLS, LALS-Specialty Program Only)

**Anaphylaxis (Severe Allergic Reactions), Severe Bronchospasm, Oropharyngeal Edema, Pending Respiratory Failure:**
- Epinephrine, 0.3 mg IM. May repeat after 15 minutes one (1) time if symptoms do not improve.

Referenced # 14010

Epinephrine (0.15 mg) Auto Injector - Pediatric 15 - 30 kg (BLS, LALS-Specialty Program Only)

**Anaphylaxis (Severe Allergic Reactions), Severe Bronchospasm, Oropharyngeal Edema, Pending Respiratory Failure:**
- Epinephrine, 0.15 mg IM. May repeat after 15 minutes one (1) time if symptoms do not improve.

Referenced #s 4060, 5010, 7010, 7020, 14120, 14140

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

**Anaphylaxis (Severe Allergic Reactions), Severe Bronchospasm, Oropharyngeal edema, Pending Respiratory Failure:**
- Severe Bronchospasm, Asthma Attack, Pending Respiratory Failure, Severe Allergic Reactions:
- Epinephrine, 0.3 mg IM. May repeat after 15 minutes one (1) time if symptoms do not improve. Contact base hospital for patients with a history of coronary artery disease, history of hypertension or over 40 years of age prior to administration of Epinephrine.

Referenced # 14010

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

**For persistent severe anaphylactic reaction:**
- Epinephrine (0.1 mg/ml), 0.1 mg slow IV/IO. May repeat every five (5) minutes as needed to total dosage of 0.5 mg. Contact base hospital for patients with a history of coronary artery disease, history of hypertension or over 40 years of age prior to administration of Epinephrine.

Referenced # 14010
Cardiac Arrest, Asystole, PEA:
Epinephrine (0.1 mg/ml), 1 mg IV/IO.

Reference #s 4060, 4080, 5010, 7010, 7020, 14010, 14050, 14260

Epinephrine (0.01 mg/ml) - Adult (ALS)

Post resuscitation, persistent profound nontraumatic shock and hypotension (Push Dose Epinephrine):
Prepare Epinephrine 0.01 mg/ml solution by mixing 9 ml of normal saline with 1 ml of Epinephrine 0.1 mg/ml in a 10 ml syringe. Administer 1 ml every one (1) to five (5) minutes titrated to maintain SBP more than 90 mm Hg.

Reference #s 4060, 4080, 5010, 7010, 7020, 14010, 14050, 14230

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

Anaphylaxis (Severe Allergic Reactions), Severe Bronchospasm, Pending Respiratory Failure:
Epinephrine, 0.01 mg/kg IM not to exceed adult dosage of 0.3 mg.

Reference #s 4060, 5010, 7010, 7020, 11010, 14050, 14230

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

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

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

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

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

Reference # 14200

Epinephrine (0.01 mg/ml) - Pediatric (ALS)

Post resuscitation, profound shock and hypotension (Push Dose Epinephrine):
Prepare Epinephrine 0.01 mg/ml solution by mixing 9 ml of normal saline with 1 ml of Epinephrine 0.1 mg/ml in a 10 ml syringe. Administer 0.1 ml/kg (do not exceed adult dosage), every one (1) to five (5) minutes. Titrate to maintain a SBP more than 70 mm Hg.

Reference #s 5010, 7010, 7020, 11010, 14150, 14230
Fentanyl - Adult (ALS)

*Chest Pain (Presumed Ischemic Origin):*
Fentanyl, 50 mcg slow IV/IO over one (1) minute. May repeat every five (5) minutes titrated to pain, not to exceed 200 mcg.

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

*Acute traumatic injuries, acute abdominal/flank pain, burn injuries, Cancer pain, Sickle Cell Crisis:*
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 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 10 minutes titrated to pain, not to exceed 200 mcg.

*Reference #s 3050, 4060, 4080, 5010, 7010, 7020, 11020, 13030, 14070, 14090, 14100, 14240*

Fentanyl - Pediatric (ALS)

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

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

*Reference #s 3050, 4080, 5010, 7010, 7020, 13030, 14180, 14190, 14240*

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

*Adult with blood glucose less than 80 mg/dL:*
Glucose - Oral, one (1) tube for patients with an intact gag reflex and hypoglycemia.

*Reference #s 7010, 7020, 13020, 14060, 14080, 14230*

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

*Hypoglycemia - Neonates (0 - 4 weeks) with blood glucose less than 35 mg/dL or pediatric patients (more than 4 weeks) with glucose less than 60 mg/dL:*
Glucose - Oral, one (1) tube for patients with an intact gag reflex and hypoglycemia.

*Reference #s 7010, 7020, 14170, 14160*
Glucagon - Adult (LALS, ALS)

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

Beta blocker Poisoning (base hospital order only):

Glucagon, 1 mg IV/IO

Reference #s 4060, 4080, 7010, 7020, 13010, 13030, 14060

Glucagon - Pediatric (LALS, ALS)

Hypoglycemia, if unable to establish IV:

Glucagon, 0.03 mg/kg IM/IN, if unable to start an IV. May be repeated one (1) time after 20 minutes for a combined maximum dose of 1 mg.

Reference #s 7010, 7020, 13030, 14160, 14170

Beta blocker poisoning (base hospital order only):

Glucagon, 0.03 mg/kg IV/IO

Reference #’s 4060, 4080, 7010, 7020, 13010

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

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

Reference #s 7010, 7020, 14010, 14070

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

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

Reference #s 4060, 4080, 7010, 7020, 14010, 14070

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

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

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

Reference #s 7010, 7020, 14120, 14140, 14190

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

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

Reference #s 4060, 4080, 7010, 7020, 14120, 14140, 14190
Ketamine - Adult (ALS)

Acute traumatic injury, acute abdominal/flank pain, burn injuries, cancer related pain and sickle cell crisis:
Ketamine, 0.3 mg/kg to a max of 30 mg in a 50 - 100 ml of NS via IV over five (5) minutes. May repeat one (1) time, after 15 minutes, if pain score remains at five (5) or higher. Do not administer IVP, IO, IM, or IN.

This is the official pain scale to be used in patient assessment and documented on the PCR.

Reference #s 7010, 7020, 14100

Lidocaine - Adult (ALS)

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

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

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

May administer an additional 0.75 mg/kg slow IV/IO; maximum total dose of 3 mg/kg.

Reference #s 4060, 5010, 7010, 7020, 8010, 11020, 14040, 14050, 14090

Lidocaine - Pediatric (ALS)

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

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

Reference #s 5010, 7010, 7020, 14150

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 5010, 7010, 7020, 11020
Magnesium Sulfate (ALS)

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

**Eclampsia (Seizure/Tonic/Clonic Activity):**
Magnesium Sulfate, 4 gm IV/IO slow IV push over three (3) to four (4) minutes.
Magnesium Sulfate, 10 mg/min IV/IO drip to prevent continued seizures.

*Reference #s 5010, 7010, 7020, 8010, 14210*

**Severe Asthma/Respiratory Distress (ALS) (base hospital order only):**
Magnesium Sulfate, 2 gm slow IV drip over 20 minutes. Do not repeat.

*Reference # 14010*

Magnesium Sulfate - Pediatric (ALS)

**Severe Asthma/Respiratory Distress (base hospital order only):**
Magnesium Sulfate, 50 mg/kg slow IV drip over 20 minutes. Do not exceed the adult dosage of 2 gm total. Do not repeat.

*Reference # 14120*

Midazolam (Versed) - Adult (ALS)

**Behavioral Emergencies, if patient meets criteria for potentially fatal and dangerous agitation:**
Midazolam, 2.5 mg IV/IO/IN. May repeat in five (5) minutes, or
Midazolam, 5 mg IM. May repeat in 10 minutes.

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

*Reference # 14110*

**Seizure:**
Midazolam, 2.5 mg IV/IO/IN. May repeat in five (5) minutes for continued seizure activity, or
Midazolam, 5 mg IM. May repeat in 10 minutes for continued seizure activity.

Assess patient for medication related reduced respiratory rate or hypotension.

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

**Pacing, synchronized cardioversion:**
Midazolam, 2 mg slow IV/IO push or IN
CPAP:
Midazolam, 1 mg slow IV/IO push may be administered one (1) time for anxiety related to application of CPAP. Contact base hospital for additional orders.

Reference #s 4060, 4080, 7010, 7020, 11020, 13020, 14060, 14210

Midazolam (Versed) - Pediatric (ALS)

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

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

Assess patient for medication related reduced respiratory rate or hypotension.

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

Reference #s 7010, 7020, 14170

Naloxone (Narcan) - Adult (BLS)

For resolution of respiratory depression related to suspected opiate overdose:
Naloxone, 0.5 mg IM/IN, may repeat Naloxone 0.5 mg IM/IN every two (2) to three (3) minutes if needed.

For suspected Fentanyl overdose with respiratory depression:
Consider a loading dose of 4 mg IN Naloxone. If no signs of respiratory improvement, consider Naloxone 0.5 mg IM/IN every two (2) to three (3) minutes if needed.

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

Reference #s 7010, 7020, 8030, 14060

Naloxone (Narcan) - Adult (LALS, ALS)

For resolution of respiratory depression related to suspected opiate overdose:
Naloxone, 0.5 mg IV/IO/IM/IN, may repeat Naloxone 0.5 mg IV/IO/IM/IN every two (2) to three (3) minutes if needed.

For suspected Fentanyl overdose with respiratory depression:
Consider a loading dose of 4 mg IN Naloxone. If no signs of respiratory improvement, consider 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 4080, 7010, 7020, 14060
Naloxone (Narcan) - Pediatric (BLS)

For resolution of respiratory depression related to suspected opiate overdose:

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

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

Reference #s 7010, 7020, 8030, 14150, 14160

Naloxone (Narcan) - Pediatric (LALS, ALS)

For resolution of respiratory depression related to suspected opiate overdose:

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

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

Reference #s 7010, 7020, 14150, 14160

Nitroglycerin (NTG) (LALS, ALS)

Nitroglycerin, 0.4 mg sublingual/transmucosal.

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

Nitroglycerin Paste, 1 inch (1 gm) transdermal, may not repeat.

Nitroglycerin sublingual is the preferred route of administration for ACS. Nitro Paste is a one (1) time dose and intended for when sublingual cannot be easily administered (i.e., CPAP).

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

Reference #s 4060, 4080, 7010, 7020, 14010, 14240

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

Nausea/Vomiting:

Ondansetron, 4 mg slow IV/IO/ODT

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

All patients nine (9) and older: May administer Ondansetron 4 mg; may repeat two (2) times, at 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.
Oxygen (non-intubated patient per appropriate delivery device)

*General Administration (Hypoxia):*
Titrate Oxygen at lowest rate required to maintain SPO₂ at 94%. Do not administer supplemental oxygen for SPO₂ more than 95%.

*Chronic Obstructive Pulmonary Disease (COPD):*
Titrate Oxygen at lowest rate required to maintain SPO₂ at 90%. Do not administer supplemental oxygen for SPO₂ more than 91%.

Sodium Bicarbonate - Adult (ALS)

*Tricyclic Poisoning (base hospital order only):*
Sodium Bicarbonate, 1 mEq/kg IV/IO

Reference #s 5010, 7010, 7020, 13010

For cardiac arrest with suspected metabolic acidosis, hyperkalemia or tricyclic poisoning (base hospital order only):
Sodium Bicarbonate, 50 mEq IV/IO

Reference #s 7010, 7020, 14050

Sodium Bicarbonate - Pediatric (ALS)

*Tricyclic Poisoning (base hospital order only):*
Sodium Bicarbonate, 1 mEq/kg IV/IO

Reference #s 7010, 7020, 13010

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

*Signs of hemorrhagic shock meeting inclusion criteria:*
Administer TXA 1 gm in 50 - 100 ml of NS via IV/IO over 10 minutes. Do not administer IVP as this will cause hypotension.

Reference #s 7010, 7020, 14090
APPENDIX I

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

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

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

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

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

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

Weight-based dosing:

<table>
<thead>
<tr>
<th>Weight Range</th>
<th>Dose</th>
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<tbody>
<tr>
<td>Less than 6.8 kg</td>
<td>0.25 mg, IM</td>
</tr>
<tr>
<td>6.8 to 18 kg</td>
<td>0.5 mg, AtroPen</td>
</tr>
<tr>
<td>18 to 41 kg</td>
<td>1 mg, AtroPen</td>
</tr>
<tr>
<td>More than 41 kg</td>
<td>2 mg, multi-dose vial</td>
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</tbody>
</table>

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

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

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

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

Reference #s 11010, 13010, 13040

Diazepam (Valium) - Adult (ALS)

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

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

Reference # 13040
Diazepam (Valium) - Pediatric (ALS)

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

Diazepam 0.05 mg/kg IV

Reference # 13040

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

Nerve agent exposure with associated symptoms:

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

Reference #s 7010, 7020, 13010, 13040
PROCEDURE - STANDARD ORDERS

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

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

Continuous Positive Airway Pressure Device (CPAP) - Adult (EMT-P)
- Start at lowest setting and increase slowly until patient experiences relief or until a maximum of 15 cm H₂O is reached.

External Jugular Vein Access (AEMT and EMT-P)
- Not indicated for patients eight (8) years of age and younger.
- Patient condition requires IV access and other peripheral venous access attempts are unsuccessful.

Blood Glucose Check (EMT, AEMT, and EMT-P)
- Should be assessed if the patient meets key indicators consistent with high or low blood sugar.

Intraosseous Insertion (AEMT pediatric patients only and EMT-P)
- EMT-Ps may administer Lidocaine slowly per ICEMA Reference #7040 - Medication - Standard Orders, to control infusion pain.
- Approved insertion sites:
  - Eight (8) years of age or younger (LALS and ALS):
    - Proximal Tibia - Anterior medial surface of tibia, 2 cm below tibial tuberosity.
Nine (9) years of age and older (ALS only):

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

- Leave site visible and monitor for extravasation.

Nasogastric/Orogastric Tube (EMT-P)

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

Needle Cricothyrotomy (EMT-P)

- Absolute contraindication: Transection of the distal trachea.
- Monitor end-tidal CO₂ and wave form capnography.
- Monitor pulse oximetry.
- Contact base hospital if unable to ventilate adequately and transport immediately to the closest hospital for airway management.

Needle Thoracostomy (EMT-P)

- In blunt chest trauma consider bilateral tension pneumothorax if pulse oximetry (SpO₂) reading remains low with a patent airway or with poor respiratory compliance.

Oral Endotracheal Intubation - Adult (EMT-P)

- Oral endotracheal intubation is permitted only in patients who are taller than the maximum length of a pediatric emergency measuring tape (Broselow, etc.) or equivalent measuring from the top of the head to the heal of the foot.
- Monitor end-tidal CO₂ and wave form capnography.
- Monitor pulse oximetry.
- If unable to place ET after a maximum of three (3) intubation attempts (defined as placement of the laryngoscope in the mouth). If unsuccessful, continue with BVMBLS airway management and transport to the nearest receiving hospital. If BVM is ineffective then attempt placement of supraglottic airway.
- Document verification of tube placement (auscultation, visualization, capnography).

Supraglottic Airway - Adult (EMT-P)

- Supraglottic airway is permitted only in patients who are unsuccessfully managed with BLS airway and oral endotracheal intubation.
Supraglottic airway is permitted only in patients who are taller than the maximum length of a pediatric emergency measuring tape (Broselow, etc.) equivalent measuring from the top of the head to the heal of the foot.

Monitor end-tidal CO₂ and wave form capnography.

Monitor pulse oximetry.

If unable to place after three (3) attempts (defined as placement of the soft gel into the mouth), continue with BLS airway and proceed to nearest receiving hospital.

Document verification of SGA (auscultation, continuous capnography).

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

- Should be placed if patient meets the indicators, per ICEMA Reference #15010 - Trauma - Adult (Neuro Deficits present, Spinal Tenderness present, Altered Mental status, Intoxication, or Distracting Injury).
- An AEMT and/or EMT-P may remove if placed by BLS crew and it does not meet indicators.

Synchronized Cardioversion (EMT-P)

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

Transcutaneous Cardiac Pacing (EMT-P)

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

- Relative contraindications for patients with hypertension, suspected STEMI, or suspected head/brain injury.

- Reassess cardiac and hemodynamic status. Document rhythm before, during and after procedure.

- If rhythm does not covert within ten (10) seconds, follow ICEMA Reference #11050 - Tachycardias - Adult.
CHRONIC OBSTRUCTIVE PULMONARY DISEASE

I. FIELD ASSESSMENT/TREATMENT INDICATORS

Symptoms of chronic pulmonary disease, wheezing, cough, pursed lip breathing, decreased breath sounds, accessory muscle use, anxiety, ALOC or cyanosis.

II. BLS INTERVENTIONS

- Reduce anxiety, allow patient to assume position of comfort.
- Administer oxygen as clinically indicated, obtain oxygen saturation on room air, or on home oxygen if possible.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, including advanced airway if indicated. Obtain oxygen saturation on room air or on home oxygen if possible.
- Administer Albuterol per ICEMA Reference #11010 - Medication - Standard Orders.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Administer Albuterol with Atrovent per ICEMA Reference #11010 - Medication - Standard Orders.
- Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #11020 - Procedure - Standard Orders.

If systolic BP remains greater than 90 mm Hg, consider Midazolam per ICEMA Reference #11010 - Medication - Standard Orders for relief of anxiety related to CPAP mask.

- Consider advanced airway, refer to ICEMA Reference #11020 - Procedure - Standard Orders.

V. REFERENCES

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ACUTE ASTHMA/BRONCHOSPASM/ALLERGIC REACTION/ANAPHYLAXIS

I. FIELD ASSESSMENT/TREATMENT INDICATORS

History of prior attacks, possible toxic inhalation or allergic reaction, associated with wheezing, diminished breath sounds or cough.
II. BLS INTERVENTIONS (For severe asthma and/or anaphylaxis only)

- Reduce anxiety, allow patient to assume position of comfort.
- Administer oxygen as clinically indicated, humidified oxygen preferred.
  - For anaphylaxis only, administer Epinephrine (0.3 mg auto-injector) per ICEMA Reference #11010 - Medication - Standard Orders.
  - May repeat Epinephrine (0.3 mg auto-injector) per ICEMA Reference #11010 - Medication - Standard Orders, after 15 minutes one (1) time.

III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.
- Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.
- Administer Albuterol per ICEMA Reference #11010 - Medication - Standard Orders.
- For signs of inadequate tissue perfusion, initiate IV bolus of 300 ml NS. If signs of inadequate tissue perfusion persist may repeat fluid bolus one (1) time.
  - If no response to Albuterol, administer Epinephrine (1 mg/ml) per ICEMA Reference #11010 - Medication - Standard Orders. Contact base hospital for patients with a history of coronary artery disease, history of hypertension or over 40 years of age prior to administration of Epinephrine.
  - May repeat Epinephrine (1 mg/ml), per ICEMA Reference #11010 - Medication - Standard Orders, after 15 minutes one (1) time.

IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Administer Albuterol, with Atrovent per ICEMA Reference #11010 - Medication - Standard Orders.
  - For suspected allergic reaction, consider Diphenhydramine per ICEMA Reference #11010 - Medication - Standard Orders.
  - Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #11020 - Procedure - Standard Orders.
  - If systolic BP remains greater than 90 mm Hg, consider Midazolam per ICEMA Reference #11010 - Medication - Standard Orders for relief of anxiety related to CPAP mask.
  - If no response to Albuterol, administer Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders. Contact base hospital for patients with a history of coronary artery disease, history of hypertension or over 40 years of age prior to administration of Epinephrine.
The document provides guidelines for managing respiratory emergencies in adult patients, specifically focusing on anaphylactic reactions and acute pulmonary edema/CHF.

### RESPIRATORY EMERGENCIES - ADULT

- May repeat Epinephrine (1 mg/ml) per ICEMA Reference #11010 - Medication - Standard Orders after 15 minutes one (1) time.

- For persistent severe anaphylactic reaction, administer Epinephrine (0.1 mg/ml) per ICEMA Reference #11010 - Medication - Standard Orders.

- Consider advanced airway, refer to ICEMA Reference #11020 - Procedure - Standard Orders.

### V. BASE HOSPITAL MAY ORDER THE FOLLOWING

- For severe asthma/respiratory distress that has failed to respond to the other previous treatments, administer Magnesium Sulfate per ICEMA Reference #11010 - Medication - Standard Orders.

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### ACUTE PULMONARY EDEMA/CHF

#### I. FIELD ASSESSMENT/TREATMENT INDICATORS

History of cardiac disease, including CHF, and may present with rales, occasional wheezes, jugular venous distention and/or peripheral edema.

#### II. BLS INTERVENTIONS

- Reduce anxiety, allow patient to assume position of comfort.

- Administer oxygen as clinically indicated. For pulmonary edema with high altitude as a suspected etiology, descend to a lower altitude and administer high flow oxygen with a non-re-breather mask.

- Be prepared to support ventilations as clinically indicated.

#### III. LIMITED ALS (LALS) INTERVENTIONS

- Perform activities identified in the BLS Interventions.

- Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.

- Administer Nitroglycerine (NTG) per ICEMA Reference #11010 - Medication - Standard Orders. In the presence of hypotension (SBP less than 100), the use of NTG is contraindicated.

- If symptoms do not improve after NTG administration, consider Albuterol per ICEMA Reference #11010 - Medication - Standard Orders.
IV. ALS INTERVENTIONS

- Perform activities identified in the BLS and LALS Interventions.
- Place patient on Continuous Positive Airway Pressure (CPAP), refer to ICEMA Reference #11020 - Procedure - Standard Orders.

  If systolic BP remains greater than 90 mm Hg, consider Midazolam per ICEMA Reference #11010 - Medication - Standard Orders for relief of anxiety related to CPAP mask.

- Consider advanced airway, refer to ICEMA Reference #11020 - Procedure - Standard Orders.

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<td>11020</td>
<td>Procedure - Standard Orders</td>
</tr>
</tbody>
</table>
I. FIELD ASSESSMENT/TREATMENT INDICATORS
   • Signs and Symptoms of an acute allergic reaction.
   • History of Exposure to possible allergen.

II. BLS INTERVENTIONS
   • Recognize signs/symptoms of respiratory distress for age.
   • Reduce anxiety, assist patient to assume POC.
   • Oxygen administration as clinically indicated (humidified oxygen preferred).
   • Assist patient with self-administration of prescribed Epinephrine device if available.
     For anaphylaxis only, administer Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders.
   • May repeat Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders, after 15 minutes one (1) time.
   • Assist patient with self-administration of prescribed Diphenhydramine.

III. LIMITED ALS (LALS) INTERVENTIONS - PEDIATRIC (Less than 15 years of age)
   • Perform activities identified in the BLS Interventions.
   • Maintain airway with appropriate adjuncts, obtain oxygen saturation on room air if possible.
   • Albuterol per ICEMA Reference #11010 - Medication - Standard Orders.
   • If no response to Albuterol, consider Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders.
   • For symptomatic hypotension with poor perfusion, consider fluid bolus of 20 ml/kg of NS not to exceed 300 ml NS and repeat as indicated.
   • Establish IV/IO access if indicated.
   • For anaphylactic shock (e.g., no palpable radial pulse and a depressed level of consciousness), administer Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders.

IV. ALS INTERVENTIONS
   • Perform activities identified in the BLS and LALS Interventions.
   • Albuterol with Atrovent per ICEMA Reference #11010 - Medication - Standard Orders.
• If no response to Albuterol and Atrovent, consider Epinephrine per ICEMA Reference #11010 - Medication - Standard Orders.

• Administer Diphenhydramine per ICEMA Reference #11010 - Medication - Standard Orders for patients two (2) years of age or older.

• If apneic and unable to ventilate, consider oral endotracheal intubation per ICEMA Reference #11020 - Procedure - Standard Orders for patients who are taller than the maximum length of a pediatric emergency measuring tape (Broselow, etc.) or equivalent measuring from the top of the head to the heal of the foot.

• Base hospital may order additional medication dosages and additional fluid boluses.

V. REFERENCES

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