



# SAN BERNARDINO COUNTY EMERGENCY MEDICAL CARE COMMITTEE



Richard Sewell Training Center  
2824 East W Street - Building 302  
San Bernardino, CA 92408

September 15, 2011  
9:00 a.m.

## A G E N D A

### I. CALL TO ORDER

### II. APPROVAL OF MINUTES

July 21, 2011

### III. PRESENTATION

New ICEMA Data System - ImageTrend

INFO

### IV. ICEMA UPDATE

- A. Legislative Update
- B. EOA Contract Negotiations
- C. EMS MISS Status Report

INFO/ACTION

### V. ICEMA MEDICAL DIRECTOR

- A. STEMI Center Update
- B. Stroke Receiving Centers Update
- C. CQI Project - Pediatric Intubation
- D. Medication Shortage Update

INFO/ACTION

### VI. STANDING EMS SYSTEM MANAGEMENT REPORTS

- A. Quarterly Trauma Hospital Reports
- B. Base Hospital Quarterly Reports
- C. Hospital Bed Delay Reports
- D. Hospital Surveillance
- E. STEMI Reports

[www.icema.net](http://www.icema.net)

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### VII. OLD BUSINESS

- A. Utilization of PBC Trust Fund

ACTION/APPROVE

### VIII. NEW BUSINESS

- A. General Protocols (Comments will be distributed at meeting due to Comment Period)
  - 1. 11100 Burns-Adult
  - 2. 14070 Burns-Pediatric
  - 3. 15010 Trauma-Adult
  - 4. 15020 Trauma-Pediatric
  - 5. 15030 Trauma Triage Criteria and Destination Policy

ACTION/APPROVE

**IX. COMMITTEE/TASK FORCE REPORTS**

**X. OTHER/PUBLIC COMMENT**

**XI. COMMITTEE MEMBER REQUESTS FOR NEXT MEETING**

**XII. NEXT MEETING DATE AND LOCATION**

**November 17, 2011**

**Richard Sewell Training Center  
2824 East W Street Building 302  
San Bernardino, CA 92408**

**XIII. ADJOURNMENT**

*The San Bernardino County Emergency Medical Care Committee (EMCC) meeting facility is accessible to persons with disabilities. If assistive listening devices or other auxiliary aids or services are needed in order to participate in the public meeting, requests should be made through the Inland Counties Emergency Medical Agency at least three (3) business days prior to the EMCC meeting. The telephone number is (909) 388-5823, and office is located at 515 North Arrowhead Avenue, San Bernardino, CA.*



# SAN BERNARDINO COUNTY EMERGENCY MEDICAL CARE COMMITTEE



**Richard Sewell Training Center  
2824 East W Street - Building 302  
San Bernardino, CA 92408**

**July 21, 2011**

COMMITTEE	ORGANIZATION	EMS AGENCY STAFF	POSITION
<input checked="" type="checkbox"/> Jim Holbrook	EMS Training Institution	<input checked="" type="checkbox"/> Reza Vaezazizi	Medical Director
<input checked="" type="checkbox"/> Diana McCafferty	Private Ambulance Provider	<input checked="" type="checkbox"/> Virginia Hastings	Executive Director
<input checked="" type="checkbox"/> Margaret Peterson	Hospital Administrator	<input checked="" type="checkbox"/> Denice Wicker-Stiles	Assistant Administrator
<input checked="" type="checkbox"/> Stephen Miller	Law Enforcement	<input type="checkbox"/> George Stone	PBC Program Coordinator
<input checked="" type="checkbox"/> Michael Smith	Fire Chief	<input checked="" type="checkbox"/> Sherri Shimshy	EMS Nurse
<input checked="" type="checkbox"/> Troy Pennington	Physician -Level II	<input checked="" type="checkbox"/> Patricia Eickholt	EMS Nurse
<input checked="" type="checkbox"/> Art Andres	EMT-P - Public Sector	<input checked="" type="checkbox"/> Christine Yoshida-McMath	EMS Trauma Nurse
<input checked="" type="checkbox"/> Rick Britt	Communication	<input checked="" type="checkbox"/> Ron Holk	EMS Nurse
<input checked="" type="checkbox"/> Allen Francis	Nurse - MICN	<input checked="" type="checkbox"/> Mark Roberts	EMS Technical Consultant
<input type="checkbox"/> Pranav Kachhi	Physician - ER	<input checked="" type="checkbox"/> Jacquie Martin	Secretary
<input checked="" type="checkbox"/> Roy Cox	Air Ambulance Provider		
<input type="checkbox"/> Vacant	City Manager		
<input type="checkbox"/> Vacant	Consumer Advocate		
<input type="checkbox"/> Vacant	Physician - Level I		
<input type="checkbox"/> Vacant	EMT-P - Private Sector		
Patrick Apodaca	Barstow FD	Michael May	LLUMC/CH
Christina Bivona-Tellez	HASC	Leigh Overton	SB County Fire
Tony Grabow	Running Springs FD	Leslie Parham	SB County Fire
Jeff Grange	LLUMC	Joy Peters	ARMC
Joseph Guarrera	Apple Valley FD	Joe Powell	Rialto FD
Bill Jones	San Manuel FD	Art Rodriguez	Desert Ambulance
Ramon Lomeli	Morongo Basin Ambulance	Virginia Smith	SACH
Pam Martinez	Ontario FD	Bob Tyson	Redlands Community

**I. CALL TO ORDER**

The meeting was called to order at 9:03 a.m.

**II. APPROVAL OF MINUTES**

The May 19, 2011, EMCC meeting minutes were reviewed. Stephen Miller motioned to approve minutes; Diana McCafferty seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

### **III. ICEMA UPDATE**

#### **A. Legislative Update**

Virginia Hastings reported that she continues to attend meetings and conference calls regarding AB 210, which is the legislation that will hopefully resolve 1797.201 and 1797.224 issues, and Chapter 13 Task Force.

#### **B. EMS MISS Status Report**

EMS MISS Report is included in agenda packet for reference.

#### **C. EOA Contract Negotiations**

Virginia Hastings reported that discussions with the Fire Chiefs and private provider representatives have been slowed due to budgeting priorities and we hope to resume discussions in August.

#### **D. Ethics Training**

EMCC members due to expire have been sent e-mails and were reminded to complete the training by the expiration dates

#### **E. EMCC Membership**

Virginia Hastings reported that Supervisor Gonzales' office is actively reviewing applications for an EMT-P from the private sector and hopefully will be filled by the next meeting. The other vacancies are still actively being recruited. . Virginia requested everyone's assistance in recruiting for the other vacancies; City Manager, Consumer Advocate, and Trauma Physician from a Level I hospital.

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

#### **A. STEMI System Update**

Dr. Vaezazizi presented the annual STEMI data for 2010. The total number of STEMIs for 2010 was 851 with 608 (71%) arriving via EMS/9-1-1 system. Additionally, 643 patients were reported discharged home after intervention.

Dr. Vaezazizi noted that this data highlighted the pivotal role EMS system and accurate pre-hospital triage of STEMI patients plays in our very successful regional STEMI program.

**B. Stroke Receiving Centers Update**

Dr. Vaezazizi reported that there was a delay in the approval of the Stroke program. ICEMA has been asked to provide additional information to the Governing Board and hopes to return to the Board for approval soon. Once approved, the program is ready to be implemented. More updates to come.

**C. Paramedic Scope of Practice**

Dr. Vaezazizi reported that there will be a solicitation for public comment coming from EMSA regarding changes in regulations for paramedics. The proposal will discuss the following possible changes:

1. The removal of the current optional scope of practice as it is now and integrating most commonly used items into standard scope of practice.
2. Concept of Advanced Scope of Practice Paramedic and Critical Care Transfer Paramedic who will be able to monitor additional medication and devices during critical care transfers and perform advanced procedures including advanced airway procedures. There will be significant additional training associated with these special certifications which will also require accreditation at the LEMSA level as well as development of special protocols to support the advanced scope of practice.

**D. Upcoming CQI Project - Pediatric Intubation**

Dr. Vaezazizi reported that the CQI project is a study of pediatric intubations with focus on intense data collection on every case of intubation (14YO and under) and with focus on bi-annual training. The launch date is October 2011, with the education to be scheduled the first quarter of 2012. Tools are being developed for 100% monitoring.

**V. STANDING EMS SYSTEM MANAGEMENT REPORTS**

The following reports are available for review at [http://www.sbcounty.gov/sbcounty\\_reports.aspx](http://www.sbcounty.gov/sbcounty_reports.aspx):

- Trauma Reports (Quarterly)
- Base Hospital Statistics (Quarterly)
- Bed Delay Reports
- Prehospital Data Reports
- Reddinet Assessment Reports
- STEMI Center Reports

**VI. OLD BUSINESS**

**A. Utilization of PBC Trust Fund**

PBC Trust Fund Utilization report is included in the EMCC packet; there is a request for FY 2011-12 in the amount of \$40,000 to purchase printer paper and toner (for ePCR printing at hospitals).

Diana McCafferty motioned to endorse expenditure; Art Andres seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

**VII. NEW BUSINESS**

**A. Utilization of Fines & Forfeitures Funds for ImageTrend**

Utilization of Fines & Forfeitures Funds report is included in the EMCC packet; there is a request for endorsement of expenditure of funds in the amount of \$750,000 for the purchase of the new EMS data system from ImageTrend.

Stephen Miller motioned to endorse not-to-exceed \$750,000; Michael Smith seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

**B. General Protocols**

The following protocols were approved with no further discussion needed nor changes:

2. 1060 Certification Accreditation Review Policy
6. 6040 Lay Rescuer AED Implementation Guidelines
8. 8030 Burn Destination and Criteria Policy
11. 9110 Treatment of Patients with Airborne Infections and Transport Recommendations
12. 10060 Needle Thoracostomy
13. 10070 Needle Cricothyrotomy
14. 10110 Transcutaneous Cardiac Pacing
15. 10120 Synchronized Cardioversion
16. 10130 Automatic External Defibrillation (AED)-BLS
17. 11020 Airway Obstruction - Adult
18. 11040 Bradycardias - Adult

19. 11050 Tachycardias - Adult
20. 11060 Suspected Acute MI
21. 11070 Cardiac Arrest - Adult
22. 11090 Shock (Non-Traumatic)

Stephen Miller motioned to approve the above listed protocols; Michael Smith seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

The following protocols were approved after further discussion and with changes noted:

1. 1040 Requirements for EMT -P Accreditation

After further discussion, changes requested are as follows:

- a. On Page 1, Item 2.f.: To read ...current "AHA" Advanced Cardiac Life Support card.
- b. On Page 4, Item 3.d.: To read ...current "AHA" Advanced Cardiac Life Support card.

Michael Smith motioned to approve as amended; Art Andres seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

3. 3010 Annual Review Class (ARC)

After further discussion, no changes requested.

Diana McCafferty motioned to approve; Rick Britt seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

4. 5030 Procedure for Adoption of Protocols and Policies

After further discussion, changes requested are as follows:

- a. Page 1, Item 2: Remove last bullet that reads: “time critical protocols or policies.”
- b. Page 1, Item 2: To read “will be brought to next EMCC meeting.”

Michael Smith motioned to approve as amended; Diana McCafferty seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

5. 6030 AED Service Provider Policy - Public Safety

After further discussion, change requested is as follows:

- a. Page 1, Under PURPOSE: Add clarification related to “Firefighter” that this identifies that “Firefighter” is not a First Responder or above level Firefighter.

Diana McCafferty motioned to approve as amended; Michael Smith seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

7. 7030 Controlled Substance Policy

After further discussion, no changes requested.

Diana McCafferty motioned to approve; Allen Francis seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

9. 8060 San Bernardino County Requests for Hospital Diversion Policy

After further discussion, no changes requested.

Michael Smith motioned to approve; Roy Cox seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

10. 8080 Bed Delay Patient Destination Policy

After further discussion, no changes requested.

Michael Smith motioned to approve; Roy Cox seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

**C. AEMT Protocols**

The following protocols were approved with no further discussion needed nor changes:

1. 7010 AEMT ALS and BLS, Standard Drug and Equipment List
2. 9010 AEMT General Patient Guidelines
3. 9020 AEMT Physician on Scene
4. 9030 AEMT Responsibility for Patient Management
5. 9040 AEMT Reporting Incidents of Suspected Abuse Policy
6. 9050 AEMT Organ Donor Information
7. 9060 AEMT Local Medical Emergency
8. 9070 AEMT Applying Patient Restraints Guidelines
9. 9080 AEMT Care of Minors in the Field
10. 9090 AEMT Patient Refusal of Care Guidelines – Adult
11. 10010 AEMT King Airway Device (Perilaryngeal) – Adult
12. 10020 AEMT King Airway Device (Perilaryngeal) – Pediatric
13. 10130 AEMT Automatic External Defibrillation (AED)
14. 10160 AEMT Axial Spinal Stabilization
15. 10160 AEMT Axial Spinal Stabilization
16. 11010 AEMT Respiratory Emergencies – Adult
17. 11020 AEMT Airway Obstructions – Adult
18. 11030 AEMT Non-traumatic Hypertensive Crisis
19. 11060 AEMT Suspected Acute MI
20. 11070 AEMT Cardiac Arrest – Adult
21. 11080 AEMT Altered Level of Consciousness/Seizures – Adult

22. 11100 AEMT Burns – Adult
23. 12010 AEMT Determination Of Death on Scene
24. 12020 AEMT Withholding Resuscitative Measures  
-EMSA Do Not Resuscitate (DNR) Report Form  
-ICEMA Do Not Resuscitate (DNR) Report Form
25. 13010 AEMT Poisonings
26. 13020 AEMT Heat Related Emergencies
27. 13030 AEMT Cold Related Emergencies
28. 14030 AEMT Allergic Reactions – Pediatric
29. 14080 AEMT Obstetrical Emergencies
30. 14090 AEMT Newborn Care
31. 14100 AEMT Suspected Sudden Infant Death Syndrome Incident
32. 15010 AEMT Trauma – Adult
33. 15020 AEMT Trauma – Pediatric

Michael Smith motioned to approve; Allen Francis seconded.

MSC:

Ayes - 10

Noes - 0

Abstaining - 0

#### **VIII. COMMITTEE/TASK FORCE REPORTS**

None

#### **IX. OTHER/PUBLIC COMMENT**

None

#### **X. COMMITTEE MEMBER REQUESTS FOR NEXT MEETING**

- ImageTrend Presentation

#### **XI. NEXT MEETING DATE AND LOCATION**

**September 15, 2011**

**Richard Sewell Training Center**

**2824 East W Street, Building 302**

**San Bernardino, CA 92408**

#### **XII. ADJOURNMENT**

EMCC Meeting was adjourned at 11:15 a.m.

# Staff Report - EMCC

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## EMS Management Information & Surveillance System (MISS)

### ICEMA SERVER

ICEMA has received the follow:

1. 2009 - 176,236 ePCR's
2. 2010 - 196,506 ePCR's
3. January 1, 2011 - June 30, 2011 - 110,220 ePCR's
4. August 2011 - 19,100 ePCR's

### RFP - REPLACEMENT OF CURRENT EPCR SOFTWARE

ICEMA is currently in contract negotiations with ImageTrend. Once contracts are reviewed by required County departments the contracts will be moved to the Board of Supervisors for final approval. Target date for board approval is October 18, 2011.

### PENDING MOU's

Mono County Paramedic's - Mono County  
Crest Forest Fire Protection District – San Bernardino County

### PENDING DEPLOYMENTS

Symons Special Events - San Bernardino County  
Sheriff's Search and Rescue

### THIRD PARTY INTERFACE TO MISS

Currently, ICEMA is working with third party vendors to receive data from ePCR systems other than HealthWare Solutions. Below is the current status for providers who are sending or attempting to send data to ICEMA.

1. Desert Ambulance (Zoll tabletPCR) - data is being received daily.
2. Mercy Air (emsCharts) - data is being received daily.
3. ConFire (SUNPRO/ZOLL RMS) - providers continue to use paper 01As in the field. After the call, the data is entered into Sunpro RMS (Zoll data). ICEMA continues to work with ConFire to improve the import process.

Once approved, the following providers will be sending data to ICEMA as part of Confire:

1. Colton Fire Department
2. Loma Linda Fire Department
3. Redlands Fire Department
4. Rialto Fire Department
5. San Bernardino County Fire Department

We are receiving data from Confire and are in the validating process. The following departments are pending the outcome of Confire testing:

1. Chino Fire Department
2. Crest Forest Fire Protection District
3. Montclair Fire Department
4. Ontario Fire Department
5. Rancho Cucamonga Fire Department
6. Apple Valley Fire Protection District

Mark Roberts  
9/15/11

# Staff Report - EMCC

## UTILIZATION OF PBC TRUST FUND (LIQUIDATED DAMAGES)

*Current Balance (September 6, 2011): \$938,779.45*

### Incidental Expenses:

During the October 2010 meeting, the EMCC approved the use of liquidated damages for incidental expenses related to the MISS project or performance based contracts not to exceed \$5,000. There are no expenditures during this period to date (July 1 to September 1):

<b>APPROVED INCIDENTAL BUDGET</b>			<b>\$5,000</b>
<b>Expenses:</b>			
<b>Item</b>	<b>Vendor</b>	<b>Date</b>	<b>Amount</b>
<b>Total Spent</b>			<b>\$0</b>
<b>Incidental Account Balance Remaining</b>			<b>\$5000</b>

### Additional Expenses for FY 2011-12:

<b>APPROVED INCIDENTAL BUDGET</b>	<b>Vendor</b>	<b>Amount</b>	<b>\$40,000</b>
<b>Expenses FY 2011-12:</b>			
Paper	Staples	\$1,427	\$1,427
Toner	Daisy Wheel	\$2,976	\$2,976
<b>Subtotal</b>			<b>\$4,403</b>
<b>Remaining Balance</b>			<b>\$35,597</b>

### Trust Fund Expenditure History

September 2009	Printer Paper and Toner	\$28,000
January 2010	150 Ruggedized Flash Drives	\$5,000
May 2010	Printer Paper and Toner	\$25,000
July 2010	Additional Printers	\$5,177
January 2011	Printer Paper and Toner Increase	\$15,000
May 2011	Additional Printers	\$12,500

Ed Segura  
9/15/11



# Inland Counties Emergency Medical Agency

*Serving San Bernardino, Inyo, and Mono Counties*

*Virginia Hastings, Executive Director  
Reza Vaezazizi, M.D., Medical Director*

**DATE:** August 16, 2011

**TO:** EMS Providers – ALS, 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  
Other Interested Parties

**FROM:** Virginia Hastings  
ICEMA Executive Director

Reza Vaezazizi, M.D.  
ICEMA Medical Director

**SUBJECT: PROTOCOLS FOR PUBLIC COMMENT ENDS  
SEPTEMBER 14, 2011 AT 5 P.M.**

The following attached five (5) protocols have been reviewed and revised by the Trauma System Advisory Committee (TSAC), Protocol Education Committee (PEC) and Medical Advisory Committee (MAC) and are now available for public comment and recommendations:

Protocol Reference #:

- 11100 Burns-Adult
- 14070 Burns-Pediatric
- 15010 Trauma-Adult
- 15020 Trauma-Pediatric
- 15030 Trauma Triage Criteria and Destination Policy

ICEMA encourages all system participants to submit recommendations, in writing, to ICEMA during the comment period. **Written comments will be accepted until September 14, 2011 at 5 P.M.** Comments may be sent hardcopy, faxed to (909) 388-5825 or via email to Chris Yoshida-McMath, RN at [c.yoshida-mcmath@cao.sbcounty.gov](mailto:c.yoshida-mcmath@cao.sbcounty.gov). Comments submitted and any revisions made will be presented at the September 2011 Emergency Medical Care Committee (EMCC) meetings in all three counties.

VH/CYM/mae

Enclosure

c: File Copy



## BURNS – ADULT 15 Years of Age and Older

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

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

### FIELD ASSESSMENT/TREATMENT INDICATORS

Burn Criteria and Destination Policy #8030

### ADULT TREATMENT PROTOCOL: BURNS Base Station Contact Shaded in Gray

BLS INTERVENTIONS	ALS INTERVENTIONS
<ul style="list-style-type: none"> <li>• Break contact with causative agent (stop the burning process)</li> <li>• Remove clothing and jewelry quickly, if indicated</li> <li>• Keep patient warm</li> <li>• Estimate % TBSA burned and depth using the “Rule of Nines”                             <ul style="list-style-type: none"> <li>○ An individual’s palm represents 1% of TBSA and can be used to estimate scattered, irregular burns</li> </ul> </li> <li>• Transport to ALS intercept or to the closest receiving hospital</li> </ul> <p><u><i>BLS Continued</i></u></p>	<ul style="list-style-type: none"> <li>• Advanced airway as indicated</li> </ul> <p><b>Airway Stabilization:</b>                      Burn patients with respiratory compromise or potential for such, will be transported to the closest receiving hospital for airway stabilization</p> <ul style="list-style-type: none"> <li>• Monitor ECG</li> <li>• IV/IO Access: Warm IV fluids when avail</li> </ul> <p><i>Unstable:</i>                      BP&lt;90mmHG and/or signs of inadequate tissue perfusion, start 2<sup>nd</sup> IV access.</p> <ul style="list-style-type: none"> <li>○ IV NS 250ml boluses, may repeat to a maximum of 1000ml.</li> </ul> <p><i>Stable:</i>                      BP&gt;90mmHG and/or signs of adequate tissue perfusion.</p> <ul style="list-style-type: none"> <li>○ IV NS 500ml/hour</li> </ul> <li>• Treat pain as indicated</li> <p><b>IV Pain Relief:</b> Morphine Sulfate 5mg IV slowly and may repeat every 5 minutes to a maximum of 20mg when the patient maintains a BP&gt;90mmHG and signs of adequate tissue perfusion. Document BP’s every 5 minutes while medicating for pain and reassess the patient.</p>

**MANAGE SPECIAL CONSIDERATIONS:**

**Thermal Burns:** Stop the burning process. Do not break blisters. Cover the affected body surface with dry, sterile dressing or sheet.

**Chemical Burns:** Brush off dry powder, if present. Remove any contaminated or wet clothing. Irrigate with copious amounts of saline or water.

**Tar Burns:** Cool with water, do not remove tar.

**Electrical Burns:** Remove from electrical source (without endangering self) with a nonconductive material. Cover the affected body surface with dry, sterile dressing or sheet.

**BLS Continued**

**Eye Involvement:** Continuous flushing with NS during transport. Allow patient to remove contact lenses if possible.

**ALS Continued**

**IM Pain Relief:** Morphine Sulfate 10mg IM. Document vital signs and reassess the patient.

- Transport to appropriate facility: *CTP with associated burns:* transport to the closest trauma hospital.
- Burn patients with associated trauma, should be transported to the closest Trauma[YC1] Center. Trauma base station contacted shall be made.
- Insert nasogastric/oro gastric tube as indicated
- Refer to Burn Classification table[YC2].

**MANAGE SPECIAL CONSIDERATIONS:**

**Electrical Burns:** Monitor for dysrhythmias, treat according to [YC3]ICEMA protocols.

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

**ALS Continued**

**Respiratory Distress:** Intubate patient if facial/oral swelling are present or if respiratory depression or distress develops due to inhalation injury.

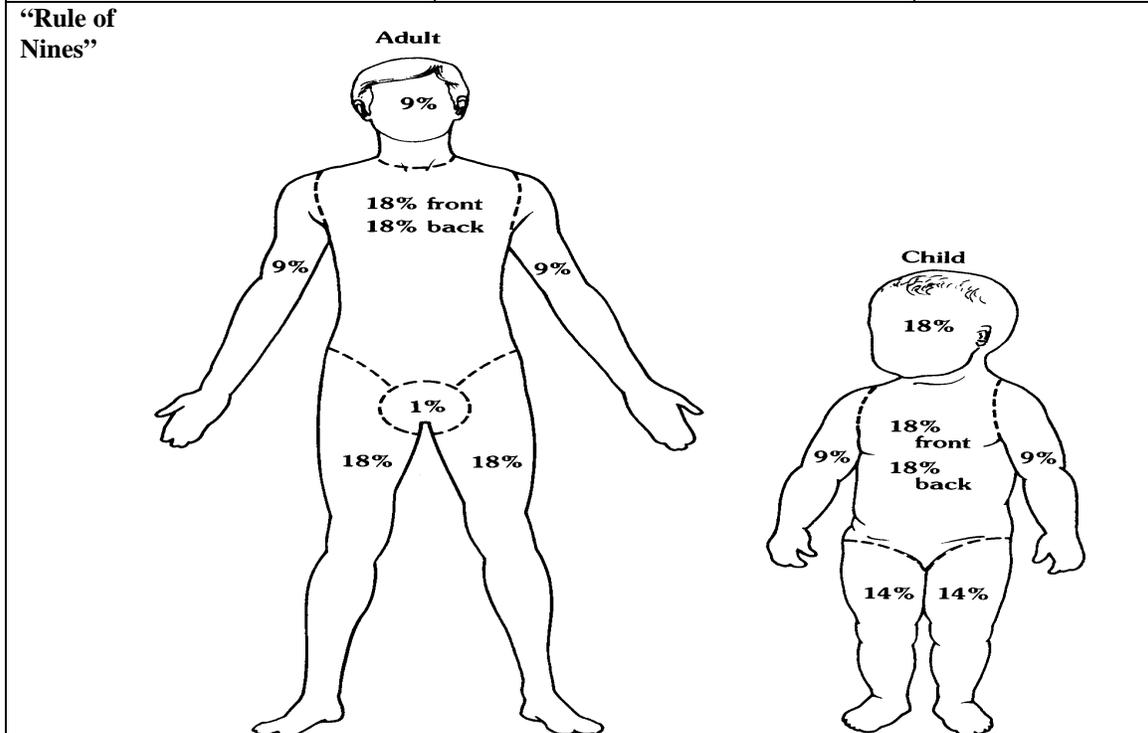
<p><b>Determination of Death on Scene:</b> Refer to Protocol # 12010 Determination of Death on Scene.</p>	<ul style="list-style-type: none"><li>• Nebulized Albuterol 2.5mg with Atrovent 0.5mg, may repeat two (2) times.</li><li>• Administer humidified O2, if available</li><li>• Consider capnography, if available.</li></ul> <p>Awake and breathing patients with potential for facial/inhalation burns are not candidates for nasal tracheal intubation. CPAP may be considered , if indicated, after consultation with base station hospital.</p> <p><b>Deteriorating Vital Signs:</b> Transport to the closest receiving hospital. <b>Contact base station.</b></p> <p><b>Pulseness and Apneic:</b> Transport to the closest receiving hospital and treat according to and ICEMA policies. <b>Contact base station.</b></p> <p><b>Determination of Death on Scene:</b> Refer to Reference Protocol # 12010 Determination of Death on Scene.</p> <p><b>Precautions and Comments:</b></p> <ul style="list-style-type: none"><li>• Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.</li><li>• Do not apply ice or ice water directly to skin surfaces, as additional injury will result.</li></ul> <p><b>Base Station Orders:</b> May order additional:</p> <ul style="list-style-type: none"><li>• medications;</li><li>• fluid boluses.</li></ul>
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## REFERENCE PROTOCOLS

<b><u>Protocol Number</u></b>	<b><u>Protocol Name</u></b>
9010	General Patient Care Guidelines
10150	External Jugular Vein Access
10030/10040	Oral Endotracheal Intubation
10080	Insertion of Nasogastric/Orogastric Tube
10060	Needle Thoracostomy
10140	Intraosseous Infusion IO
10050	Nasotracheal Intubation
10070	Needle Cricothyrotomy
10160	Axial Spinal Stabilization
10010/10020	King Airway Device
11070	Adult Cardiac Arrest
15030	Trauma Triage Criteria and Destination Policy
12010	Determination of Death on Scene

**BURN CLASSIFICATIONS**

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





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

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

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

### FIELD ASSESSMENT/TREATMENT INDICATORS

Burn Criteria and Destination Policy # 8030

### PEDIATRIC TREATMENT PROTOCOL: BURNS

in Gray

BLS INTERVENTIONS	ALS INTERVENTIONS
<ul style="list-style-type: none"> <li>• Break contact with causative agent (stop the burning process)</li> <li>• Remove clothing and jewelry quickly, if indicated</li> <li>• Keep patient warm</li> <li>• Estimate % TBSA burned and depth using the “Rule of Nines”               <ul style="list-style-type: none"> <li>○ An individual’s palm represents 1% of TBSA and can be used to estimate scattered, irregular burns</li> </ul> </li> <li>• Transport to ALS intercept or to the closest receiving hospital</li> </ul> <p><u><b>BLS Continued</b></u></p>	<ul style="list-style-type: none"> <li>• Advanced airway as indicated</li> </ul> <p><b>Airway Stabilization:</b>            Burn patients with respiratory compromise or potential for such, will be transported to the closest receiving hospital for airway stabilization.</p> <ul style="list-style-type: none"> <li>• Monitor ECG</li> <li>• IV/IO Access: Warm IV fluids when avail</li> </ul> <p><i>Unstable:</i>            Vital signs (age appropriate) and/or signs of inadequate tissue perfusion, start 2<sup>nd</sup> IV access.</p> <ul style="list-style-type: none"> <li>○ Administer 20ml/kg NS bolus IV/IO, may repeat once.</li> </ul> <p><i>Stable:</i>            Vital signs (age appropriate) and/or signs of adequate tissue perfusion.</p> <p>≤ <u><b>5 years of age</b></u></p> <ul style="list-style-type: none"> <li>○ IV NS 150ml/hour</li> </ul> <p>&gt; <u><b>5 years of age</b></u> - &lt; <u><b>15 years of age</b></u></p> <ul style="list-style-type: none"> <li>○ IV NS 250ml/hour</li> </ul> <ul style="list-style-type: none"> <li>• Treat pain as indicated</li> </ul>

**MANAGE SPECIAL CONSIDERATIONS:**

**Thermal Burns:** Stop the burning process. Do not break blisters. Cover the affected body surface with dry, sterile dressing or sheet.

**Chemical Burns:** Brush off dry powder, if present. Remove any contaminated or wet clothing. Irrigate with copious amounts of saline or water.

**BLS Continued**

**Tar Burns:** Cool with water, do not remove tar.

**Electrical Burns:** Remove from electrical source (without endangering self) with a nonconductive material. Cover the affected body surface with dry, sterile dressing or sheet.

**Eye Involvement:** Continuous flushing with NS during transport. Allow patient to remove contact lenses if possible.

**ALS Continued**

**IV Pain Relief:** Morphine Sulfate 0.1mg/kg IV/IO slowly, do not exceed 5mg increments, may repeat every 5 minutes to a maximum of 20mg IV/IO when the patient maintains age appropriate vital signs and adequate tissue perfusion. Document vital signs every 5 minutes while medicating for pain, and reassess the patient.

**IM Pain Relief:** Morphine Sulfate 0.2mg/kg IM, 10mg IM maximum. Document vital signs and reassess the patient.

- Transport to appropriate facility:

**CTP with associated burns:** transport to the closest trauma hospital.

- Burn patients with associated trauma, should be transported to the closest Trauma Center. Trauma base station contacted shall be made.
- Insert nasogastric/orogastric tube as indicated

Refer to Burn Classification Table.

**MANAGE SPECIAL CONSIDERATIONS:**

**ALS Continued**

**Electrical Burns:** Monitor for dysrhythmias, treat according to PALS guidelines and ICEMA policies.

- Electrical injuries that result in cardiac

**Determination of Death on Scene:** Refer to Protocol # 12010 Determination of Death on Scene.

arrest shall be treated as medical arrests.

**Respiratory Distress:** Intubate patient if facial/oral swelling are present or if respiratory depression or distress develops due to inhalation injury.

- 1 day to 12 months old – Nebulized Albuterol 2.5mg with Atrovent 0.25mg, may repeat two (2) times.
- 1 year to < 15 years old – Albuterol 2.5mg with Atrovent 0.5mg, may repeat two (2) times.
- Administer humidified O2, if available.
- Consider capnography, if available.

**Deteriorating Vital Signs:** Transport to the closest receiving hospital. Contact base station.

**Pulseness and Apneic:** Transport to the closest receiving hospital and treat according to ICEMA protocols. Contact base station.

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

**Precautions and Comments:**

- Contact with appropriate advisory agency may be necessary for hazardous materials, before decontamination or patient contact.
- Do not apply ice or ice water directly to skin surfaces as additional injury will result.

**ALS Continued**

- Do not apply cool dressings or allow environmental exposure, since hypothermia will result in a young child.

**Base Station Orders:** May order additional:

- medications;
- fluid boluses.

**REFERENCE PROTOCOLS**

<b><u>Protocol Number</u></b>	<b><u>Protocol Name</u></b>
9010	General Patient Care Guidelines
10150	External Jugular Vein Access
10030/10040	Oral Endotracheal Intubation
10080	Insertion of Nasogastric/Orogastric Tube
10060	Needle Thoracostomy
10140	Intraosseous Infusion IO
10050	Nasotracheal Intubation
10070	Needle Cricothyrotomy
10160	Axial Spinal Stabilization
10010/10020	King Airway Device
11070	Adult Cardiac Arrest
15030	Trauma Triage Criteria and Destination Policy
12010	Determination of Death on Scene

**BURN CLASSIFICATIONS**

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

**“Rule of Nines”**

**Adult**

- Head: 9%
- Front: 18%
- Back: 18%
- Arms: 9% each
- Groin: 1%
- Legs: 18% each

**Child**

- Head: 18%
- Front: 18%
- Back: 18%
- Arms: 9% each
- Legs: 14% each



## TRAUMA - ADULT (15 Years of Age and Older)

Any critical trauma patient (CTP) requires effective communication and rapid ~~transportation~~ transportation to the closest trauma center [YC1]. If not contacted at scene, the receiving trauma center must be notified as soon as possible in order to activate the trauma team.

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

### FIELD ASSESSMENT/TREATMENT INDICATORS

Trauma Triage Criteria and Destination Policy #15030

### ADULT TREATMENT PROTOCOL: TRAUMA Base Station Contact Shaded in Gray

BLS INTERVENTIONS	ALS INTERVENTIONS
<p>[YC2]</p> <ul style="list-style-type: none"> <li>• Ensure thorough initial assessment</li> <li>• Ensure patent airway, protecting cervical spine</li> <li>• Axial spinal stabilization as appropriate</li> <li>• Oxygen and/or ventilate as needed, O<sub>2</sub> saturation (if BLS equipped)</li> <li>• Keep patient warm</li> <li>• For a traumatic full arrest, an AED may be utilized, if indicated</li> <li>• Transport to ALS intercept or to the closest receiving hospital</li> </ul> <p><b><u>BLS Continued</u></b></p>	<ul style="list-style-type: none"> <li>• Advanced airway as indicated</li> </ul> <p><b>Unmanageable Airway:</b>        Transport to the closest receiving hospital when the patient and follow Continuation of Trauma Care Protocol Reference # 8100 [YC3]:</p> <p><b>REQUIRES INTUBATION:</b></p> <ol style="list-style-type: none"> <li>1. An adequate airway cannot be maintained with a BVM device; <b>AND</b></li> <li>2. The paramedic is unable to intubate or if indicated, perform a successful needle cricothyrotomy.</li> </ol> <ul style="list-style-type: none"> <li>• Monitor ECG</li> <li>• IV/IO Access: Warm IV fluids when avail</li> </ul> <p><i>Unstable:</i>        BP &lt; 90mmHG and/or signs of inadequate tissue perfusion, start 2<sup>nd</sup> IV access.</p> <p><i>Stable:</i>        BP &gt; 90mmHG and/or signs of adequate tissue perfusion.</p> <p><b>Blunt Trauma:</b>  <i>Unstable:</i> IV NS open until stable or 2000ml</p>

**MANAGE SPECIAL CONSIDERATIONS:**

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

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

- **Partial amputation:** Splint in anatomic position and elevate the extremity.

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

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

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

maximum is infused

*Stable:* IV NS TKO

**ALS Continued**

**Penetrating Trauma:**

*Unstable:* IV NS 500ml bolus one time

*Stable:* IV NS TKO

**Isolated Closed Head Injury:**

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

*Stable:* IV NS TKO

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

**MANAGE SPECIAL CONSIDERATIONS:**

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

**Fractures:**

**BLS Continued**

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

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

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

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

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

**Isolated Extremity Trauma:** Trauma without multisystem mechanism.

**ALS Continued**

Extremity trauma is defined as those cases of injury where the limb itself and/or the appendicular skeleton (shoulder or pelvic girdle) may be injured – e.g. dislocated shoulder, hip fracture or dislocation.

**IV Pain Relief:** Morphine Sulfate 5mg IV slowly and may repeat every 5 minutes to a maximum of 20mg when the patient maintains a BP>90mmHG and signs of adequate tissue perfusion. Document BP's every 5 minutes while medicating for pain and reassess the patient.

***NOTE:** Patients in high altitudes should be hydrated with IV NS prior to IV pain relief to reduce the incidents of nausea, vomiting, and transient hypotension, which are side effects associated with administering IV Morphine.*

- Administer IV NS 250ml bolus one time.

**IM Pain Relief:** Morphine Sulfate 10mg IM. Document vital signs and reassess the patient.

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

- **Base Station Orders:**

- When considering nasotracheal intubation ( $\geq 15$  years of age) and significant facial trauma, trauma to the face or nose and/or possible basilar skull fracture are present, trauma base hospital contact is required.

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

**BLS Continued**

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

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

**Determination of Death on Scene:** Refer to Protocol # 12010 Determination of Death on Scene.

**ALS Continued**

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

Follow Protocol # 11070 Adult Cardiac Arrest [YC4]

**Determination of Death on Scene:** Refer to Protocol # 12010 Determination of Death on Scene.

**-Severe Blunt Force Trauma Arrest:**

**IF INDICATED:** transport to the closest receiving hospital.

**-Penetrating Trauma Arrest:**

**IF INDICATED:** transport to the closest receiving hospital.

- If the patient does not meet the “Obvious Death Criteria” in the “*Determination of Death on Scene*” Protocol #12010, contact the trauma base station for determination of death on scene for those patients who suffer a traumatic cardiac arrest in the setting of penetrating trauma with documented asystole in at least two (2) leads, and no reported vital signs (palpable pulse and/or spontaneous respirations) during the EMS encounter with the patient.
- Resuscitation efforts on a penetrating traumatic arrest victim are not to be terminated without trauma base station contact.

**Precautions and Comments:**

- Electrical injuries that result in cardiac arrest shall be treated as medical arrests.
- Consider cardiac etiology in older patients in cardiac arrest with low probability of mechanism of injury.

	<p><b><u>ALS Continued</u></b></p> <ul style="list-style-type: none"> <li>○ [YC5] <b>Unsafe scene may warrant transport despite low potential for survival.</b></li> <li>○ Whenever possible, consider minimal disturbance of a potential crime scene.</li> </ul> <p><b>Base Hospital Station:</b> May order additional:</p> <ul style="list-style-type: none"> <li>• medications;</li> <li>• fluid boluses.</li> </ul>
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**REFERENCE PROTOCOLS**

<b><u>Protocol Number</u></b>	<b><u>Protocol Name</u></b>
8100	Continuation of Trauma Care
9010	General Patient Care Guidelines
10150	External Jugular Vein Access
10030/10040	Oral Endotracheal Intubation
10080	Insertion of Nasogastric/Orogastric Tube
10060	Needle Thoracostomy
10140	Intraosseous Infusion IO
10050	Nasotracheal Intubation
10070	Needle Cricothyrotomy
10160	Axial Spinal Stabilization
10010/10020	King Airway Device
11070	Adult Cardiac Arrest
15030	Trauma Triage Criteria and Destination Policy
12010	Determination of Death on Scene



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

Any critical trauma patient (CTP) requires effective communication and rapid ~~transportion~~ transportation to the closest trauma center<sup>[YC1]</sup>. If not contacted at scene, the receiving trauma center must be notified as soon as possible in order to activate the trauma team.

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

### FIELD ASSESSMENT/TREATMENT INDICATORS

Trauma Triage Criteria and Destination Policy #15030

### PEDIATRIC TREATMENT PROTOCOL: TRAUMA Base Station Contact Shaded in Gray

BLS INTERVENTIONS	ALS INTERVENTIONS
<ul style="list-style-type: none"> <li>• Ensure thorough initial assessment</li> <li>• Ensure patient airway, protecting cervical spine</li> <li>• Axial spinal stabilization as appropriate</li> <li>• Oxygen and/or ventilate as needed, O<sub>2</sub> saturation (if BLS equipped)</li> <li>• Keep patient warm and reassure</li> <li>• For a traumatic full arrest, an AED may be utilized, if indicated</li> <li>• Transport to ALS intercept or to the closest receiving hospital</li> <li>• .</li> </ul> <p><u><i>BLS Continued</i></u></p>	<ul style="list-style-type: none"> <li>• Advanced airway as indicated</li> </ul> <p><b>Unmanageable Airway:</b>        Transport to the closest most appropriate receiving hospital when the patient and follow Policy# 8100 Continuation of Trauma Care<sup>[YC3]</sup>:</p> <p><b>REQUIRES INTUBATION:</b></p> <ol style="list-style-type: none"> <li>1. An adequate airway cannot be maintained with a BVM device; <b>AND</b></li> <li>2. The paramedic is unable to intubate or if indicated, perform a successful needle cricothyrotomy (&gt;2yrs old).</li> </ol> <ul style="list-style-type: none"> <li>• Monitor ECG</li> <li>• IV/IO Access: Warm IV fluids when avail</li> </ul> <p><i>Unstable:</i>        Vital signs (age appropriate) and/or signs of inadequate tissue perfusion, start 2<sup>nd</sup> IV access.</p> <ul style="list-style-type: none"> <li>o Administer 20ml/kg NS bolus IV/IO, may repeat once.</li> </ul>

**MANAGE SPECIAL CONSIDERATIONS:**

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

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

- **Partial amputation:** Splint in anatomic position and elevate the extremity.

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

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

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

**BLS Continued**

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

*Stable:*

Vital signs (age appropriate) and/or signs of adequate tissue perfusion.

- o *Maintain* IV NS rate at TKO.

**ALS Continued**

- Transport to trauma hospital: PEDS patients identified as CTP will be transported to a pediatric trauma hospital when there is less than a 20 minute difference in transport time to the pediatric trauma hospital versus the closest trauma hospital.
- Insert nasogastric/orogastric tube as indicated

**MANAGE SPECIAL CONSIDERATIONS:**

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

**Fractures:**

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

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

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

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

BLS Continued

**Isolated Extremity Trauma:** Trauma without multisystem mechanism.

ALS Continued

Extremity trauma is defined as those cases of injury where the limb itself and/or the appendicular skeleton (shoulder or pelvic girdle) may be injured – e.g. dislocated shoulder, hip fracture or dislocation.

**IV Pain Relief:** Morphine Sulfate 0.1mg/kg IV/IO slowly, do not exceed 5mg increments, may repeat every 5 minutes to a maximum of 20mg IV/IO when the patient maintains age appropriate vital signs and adequate tissue perfusion. Document vital signs every 5 minutes while medicating pain and reassess the patient.

**NOTE:** Patients in high altitudes should be hydrated with IV NS prior to IV pain relief to reduce the incidents of nausea, vomiting, and transient hypotension, which are side effects associated with administering IV Morphine.

- Administer 20ml/kg NS bolus IV/IO one time.

**IM Pain Relief:** Morphine Sulfate 0.2mg/kg IM, 10mg IM maximum. Document vital signs and reassess the patient.

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

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

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

**Pediatric Patients:** If the level of the patient's head is greater<sup>[YC2]</sup> than that of the torso, use approved pediatric spine board with a head drop or arrange padding on the board so that the ears line up with the shoulders and keep the entire lower spine and pelvis in line with the cervical spine and parallel to the board.

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

**Determination of Death on Scene:** Refer to Protocol # 12010 Determination of Death on Scene.

**ALS Continued**

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

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

- Treat per Protocol # 14040 Pediatric Cardiac Arrest<sup>[YC4]</sup>.

**Determination of Death on Scene:** Refer to Protocol # 12010 Determination of Death on Scene.

**-Severe Blunt Force Trauma Arrest:**

**IF INDICATED:** transport to the closest receiving hospital.

**-Penetrating Trauma Arrest:**

**IF INDICATED:** transport to the closest receiving hospital.

- If the patient does not meet the "Obvious Death Criteria" in the "Determination of Death on Scene" Protocol #12010, contact the trauma base station for determination of death on scene for those patients who suffer a traumatic cardiac arrest in the setting of penetrating trauma with documented asystole in at least two (2)

	<p>leads, and no reported vital signs (palpable pulse and/or spontaneous respirations) during the EMS encounter with the patient.</p> <p><b><u>ALS Continued</u></b></p> <ul style="list-style-type: none"> <li>• Resuscitation efforts on a penetrating traumatic arrest victim are not to be terminated without trauma base station contact.</li> </ul> <p><b>Precautions and Comments:</b></p> <ul style="list-style-type: none"> <li>○ Electrical injuries that result in cardiac arrest shall be treated as medical arrests.</li> <li>○ Confirm low blood sugar in children and treat as indicated with altered level of consciousness.</li> <li>○ Suspect child maltreatment when physical findings are inconsistent with the history. Remember reporting requirements for suspected child maltreatment.</li> <li>○ <b>Unsafe scene may warrant transport despite low potential for survival.</b></li> <li>○ Whenever possible, consider minimal disturbance of a potential crime scene.</li> </ul> <p><b>Base Hospital Orders:</b> May order additional:</p> <ul style="list-style-type: none"> <li>• medications;</li> <li>• fluid boluses.</li> </ul>
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**REFERENCE PROTOCOLS**

<b><u>Protocol Number</u></b>	<b><u>Protocol Name</u></b>
8100	Continuation of Trauma Care
9010	General Patient Care Guidelines
10150	External Jugular Vein Access
10030/10040	Oral Endotracheal Intubation
10080	Insertion of Nasogastric/Orogastric Tube
10060	Needle Thoracostomy
10140	Intraosseous Infusion IO
10050	Nasotracheal Intubation
10070	Needle Cricothyrotomy
10160	Axial Spinal Stabilization
10010/10020	King Airway Device

14040	Pediatric Cardiac Arrest
15030	Trauma Triage Criteria and Destination Policy
12010	Determination of Death on Scene



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## TRAUMA TRIAGE CRITERIA AND DESTINATION POLICY

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### PURPOSE

To establish Trauma Triage Criteria that is consistent with the American College of Surgeons standards that will help identify trauma patients in the field, and based upon their injuries, direct their transport to an appropriate trauma center.

### AUTHORITY

Health and Safety Code, Division 2.5 California Code of Regulations, Title 22 Chapter 7.

### DEFINITIONS

Adult Patients: a person appearing to be  $\geq 15$  years of age.

Pediatric Patients: a person appearing to be  $< 15$  years of age.

Critical Trauma Patients (CTP): patients meeting ICEMA's Critical Trauma Patient Criteria.

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

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

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

### POLICY

#### A. TRANSPORTATION: For Patients Identified as a CTP

1. Adult patients will be transported to the closest YC1 trauma center.

2. Pediatric patients will be transported to a pediatric trauma center when there is less than a twenty (20) minute difference in transport time to the pediatric trauma center versus the closest trauma center.
3. Helicopter transport shall not be used unless ground transport is expected to be greater than thirty (30) minutes and EMS aircraft transport is expected to be significantly more expeditious than ground transport. If an EMS aircraft is dispatched, adherence to the Aircraft Destination Policy #14054 (in San Bernardino County) is mandatory.
4. Patients with an unmanageable airway shall be transported to the closest receiving<sup>[YC2]</sup> hospital for airway stabilization. Trauma base station contact shall be made.
5. Hospital trauma diversion status: Refer to Protocol #8060, San Bernardino County Hospital Diversion Policy.
6. Multi-Casualty Incident: Refer to Protocol #5050, Medical Response to a Multi-Casualty Incident Policy.
7. CTP meeting physiologic or anatomic criteria with associated burns will be transported to the closest<sup>[YC3]</sup> trauma center.

**B. CRITICAL TRAUMA PATIENT CRITERIA (CTP)**

A patient shall be transported to the closest trauma center when any one of the following physiologic and/or anatomic criteria is present following a traumatic event (trauma base station contact shall be made):

**1. Physiologic**

<i>INDICATORS</i>	<i>ADULT</i>	<i>PEDIATRIC</i>
<b>Glasgow Coma Scale (GCS) Level of Consciousness (LOC)</b>	<ul style="list-style-type: none"> <li>• GCS ≤ 13</li> <li>• LOC &gt; 3 minutes</li> <li>• nausea/vomiting<sup>[YC4]</sup> in the setting of significant head trauma.</li> </ul>	<ul style="list-style-type: none"> <li>• GCS ≤ 13</li> <li>• any LOC</li> <li>• nausea/vomiting<sup>[YC5]</sup> in the setting of significant head trauma</li> </ul>
<b>Respiratory</b>	<ul style="list-style-type: none"> <li>• requiring assistance with ventilation or</li> <li>• hypoxic = O<sub>2</sub> saturation that is consistently &lt; 90% <u>and a</u></li> <li>• RR &lt; 10 or &gt; 29</li> </ul>	<ul style="list-style-type: none"> <li>• requiring assistance with ventilation or</li> <li>• hypoxic = O<sub>2</sub> saturation that is consistently &lt; 90% <u>and a</u></li> <li>• &lt; 10 years: RR &lt; 12 or &gt; 40</li> <li>• &lt; 1 year: RR &lt; 20 or &gt; 60</li> </ul>
<b>Hypotension</b>	<ul style="list-style-type: none"> <li>• exhibits inadequate tissue perfusion</li> </ul>	<ul style="list-style-type: none"> <li>• exhibits inadequate tissue perfusion</li> </ul>

	<ul style="list-style-type: none"> <li>• BP &lt; 90mmHG</li> <li>• tachycardia</li> </ul>	<ul style="list-style-type: none"> <li>• abnormal vital signs (according to age)</li> </ul>
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**2. Anatomic**

<b>Penetrating Injuries to:</b>	<ul style="list-style-type: none"> <li>• head</li> <li>• neck</li> <li>• chest</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• abdomen/pelvis</li> <li>•</li> <li>• extremity proximal to the knee or elbow</li> <li>• [YC6]</li> </ul>
[YC7]		•
<b>Blunt Chest Trauma resulting in:</b>	<ul style="list-style-type: none"> <li>• ecchymosis</li> <li>• unstable chest wall</li> </ul>	<ul style="list-style-type: none"> <li>• flail chest</li> </ul>
<b>Severe Tenderness to:</b>	<ul style="list-style-type: none"> <li>• head</li> <li>• neck</li> <li>• torso</li> </ul>	<ul style="list-style-type: none"> <li>• abdomen</li> <li>• pelvis</li> </ul>
<b>Paralysis:</b>	<ul style="list-style-type: none"> <li>• traumatic</li> <li>• loss of sensation</li> </ul>	<ul style="list-style-type: none"> <li>• suspected spinal cord injury</li> </ul>
<b>Abdomen:</b>	<ul style="list-style-type: none"> <li>• tenderness with firm and rigid abdomen on examination</li> </ul>	
<b>Amputations:</b>	<ul style="list-style-type: none"> <li>• above the wrist</li> </ul>	<ul style="list-style-type: none"> <li>• above the ankle</li> </ul>
<b>Fractures:</b>	<i>ADULT</i>	<i>PEDIATRIC</i>
	<ul style="list-style-type: none"> <li>• evidence of two or more proximal long bone fractures (femur, humerus)</li> </ul>	<ul style="list-style-type: none"> <li>• open fractures</li> <li>• two or more long bone fractures</li> </ul>
<b>Skull Deformity</b> [YC8]	•	•
<b>Major Tissue Disruption</b> [YC9]	•	•
<b>Suspected Pelvic Fracture</b>		

**3. Mechanism of Injury**

- If a patient has one or more of the following mechanisms of injury **with** any of the above physiologic or anatomic criteria transport to the closest trauma center.
- If there are no associated physiologic or anatomic criteria and the potential CTP meets one or more of the following mechanisms of injury, contact a trauma base station for physician consultation to determine the patient [YC10] destination. In some cases, a trauma base station may direct a patient a non-trauma receiving hospital.

<b>High Speed Crash:</b>	<ul style="list-style-type: none"> <li>• initial speed &gt; 40mph</li> </ul>	<ul style="list-style-type: none"> <li>• unrestrained passenger</li> </ul>
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	<ul style="list-style-type: none"> <li>major auto deformity &gt; 18 inches</li> <li>intrusion into passenger space compartment &gt; 12 inches</li> </ul>	<ul style="list-style-type: none"> <li>front axle rearward displaced</li> <li>bent steering wheel/column</li> <li>starred windshield</li> </ul>
<b>Vehicle Rollover:</b>	<ul style="list-style-type: none"> <li>complete rollover</li> <li>rollover multiple times</li> <li>unrestrained</li> </ul>	<ul style="list-style-type: none"> <li>restrained with significant injuries or high rate of speed</li> </ul>
<b>Motorcycle Crash:</b>	<ul style="list-style-type: none"> <li>&gt; 20 mph and/or</li> </ul>	<ul style="list-style-type: none"> <li>separation of rider from the bike with significant injury</li> </ul>
<b>Non-Motorized Transportation (e.g., bicycles, skate boards, ski's etc.</b>	<ul style="list-style-type: none"> <li>with significant impact &gt; 20 mph[YC11] and/or[YC12]</li> </ul>	<ul style="list-style-type: none"> <li>pedestrian thrown &gt;15 feet or run over[YC13]</li> </ul>
<b>Pedestrian:</b>	<ul style="list-style-type: none"> <li>auto-pedestrian with significant impact &gt; 10mph</li> </ul>	<ul style="list-style-type: none"> <li>pedestrian thrown &gt;15 feet or run over</li> </ul>
<b>Blunt[YC14] Trauma to:</b>	<ul style="list-style-type: none"> <li>head</li> <li>neck</li> </ul>	<ul style="list-style-type: none"> <li>torso</li> </ul>
<b>Extrication:</b>	<ul style="list-style-type: none"> <li>&gt; 20 minutes with associated injuries</li> </ul>	
<b>Death of Occupant:</b>	<ul style="list-style-type: none"> <li>in same passenger space</li> </ul>	
<b>Ejection:</b>	<ul style="list-style-type: none"> <li>partial or complete ejection of patient from vehicle</li> </ul>	
<b>Falls:</b>	<i>ADULT</i>	<i>PEDIATRIC</i>
	<ul style="list-style-type: none"> <li>≥ 15 feet</li> </ul>	<ul style="list-style-type: none"> <li>&gt; 3 times the child's height or &gt; 10 feet</li> </ul>
<b>Submersion with Trauma</b>		

**4. Age and Co-Morbid Factors**

If the patient does not meet any of the above criteria, make trauma base station contact to determine if a trauma center should be[YC15] the destination for the following patients:

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| <ul style="list-style-type: none"> <li>pediatric &lt; 9 years of age</li> <li>adult &gt; 65 years of age</li> <li>have known underlying respiratory, cardiac, liver disease, or diabetes</li> <li>have known underlying hematologic or immunosuppressive conditions</li> <li>isolated extremity injury with neurovascular compromise (time sensitive injury)</li> <li>pregnant (greater than 20 weeks in gestation)</li> <li>inability to communicate, e.g. language, psychological and/or substance impairment</li> </ul> |
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**C. EXCEPTIONS**

The patient is identified as a CTP or a potential CTP, but presents with the following:

<p><b>Unmanageable Airway:</b> <u>Transport to the closest receiving hospital when the patient:</u></p>	<p><b><u>REQUIRES INTUBATION</u></b></p> <ul style="list-style-type: none"> <li>• an adequate airway cannot be maintained with a BVM device; <b>AND</b></li> <li>• the paramedic is unable to intubate or if indicated, perform a successful needle cricothyrotomy.</li> </ul>	
<p><b>Severe Blunt Force Trauma Arrest:</b></p> <ul style="list-style-type: none"> <li>• Refer to Protocol #12010 Determination of Death on Scene</li> </ul>	<ul style="list-style-type: none"> <li>• <b><u>IF INDICATED:</u></b> Transport to the closest receiving hospital</li> </ul>	
<p><b>Penetrating Trauma Arrest:</b></p> <ul style="list-style-type: none"> <li>• Refer to Protocol #12010 Determination of Death on Scene</li> </ul> <p>• If the patient does not meet the “<i>Obvious Death Criteria</i>” in the “<i>Determination of Death on Scene</i>” Protocol #12010, contact the trauma base hospital for determination of death on scene for those patients who suffer a traumatic cardiac arrest in the setting of penetrating trauma with documented asystole in at least two (2) leads, and no reported vital signs (palpable pulse and/or spontaneous respirations) during the EMS encounter with the patient.</p> <p>• Resuscitation efforts on a penetrating traumatic arrest victim are not to be terminated without trauma base hospital contact.</p>	<ul style="list-style-type: none"> <li>• <b><u>IF INDICATED:</u></b> Transport to the closest receiving hospital</li> </ul>	
<p><b>Burn Patients:</b></p> <ul style="list-style-type: none"> <li>• Refer to Protocol #8030 Burn Criteria and Destination Policy</li> </ul>	<p><b>Transport to the closest trauma center</b></p> <ul style="list-style-type: none"> <li>• Burn patients meeting CTP</li> </ul>	<p><b>Transport to the closest receiving hospital or a Burn Center</b> <small>YC16</small></p> <ul style="list-style-type: none"> <li>• Burn patients not meeting CTP</li> </ul>
<p><b>EMS Aircraft Indications:</b></p> <p><u>An EMS aircraft may be dispatched for the following events:</u></p>	<ul style="list-style-type: none"> <li>• MCI</li> <li>• Prolonged extrication time (&gt; twenty (20) minutes)</li> <li>• <b>Do Not Delay Patient Transport</b> waiting for an enroute EMS aircraft</li> </ul>	
<p><b>EMS Aircraft Transport Contraindications:</b></p> <p><u>The following are contraindications for EMS aircraft patient transportation:</u></p>	<ul style="list-style-type: none"> <li>• Patients contaminated with Hazardous Material who cannot be decontaminated and who pose a risk to the safe operations of the EMS aircraft and crew</li> <li>• Violent patients with psychiatric behavioral problems and uncooperative patients under the influence of alcohol and/or mind altering substances who may interfere with the safe operations of an EMS aircraft during flight</li> <li>• Stable patients</li> <li>• Ground transport is &lt; 30 minutes</li> </ul>	

	<ul style="list-style-type: none"> <li>• Traumatic cardiac arrest</li> <li>• Other safety conditions as determined by pilot and/or crew</li> </ul>
<b>Remote Locations:</b>	<ul style="list-style-type: none"> <li>• Remote locations may be exempted from specific criteria upon written permission from the EMS Medical Director.</li> </ul>

**D. CONSIDERATIONS**

1. Scene time should be limited to ten (10) minutes under normal circumstances.
2. Burn patients with associated trauma, should<sub>[YC17]</sub> transported to the closest trauma center<sub>[YC18]</sub>. Trauma base station contact shall be made.

**E. RADIO CONTACT**

1. If not contacted at scene, the receiving trauma center must be notified as soon as possible in order to activate the trauma team.  
  
CTP<sub>[YC19]</sub> meeting all Trauma<sub>[YC20]</sub> Triage Criteria (Physiologic, Anatomic, Mechanism of Injury, and/or Age and Co-Morbid Factors), a trauma base station shall be contacted in the event of patient refusal of assessment, care and/or transportation.
3. In Inyo and Mono Counties, the assigned base station should be contacted for CTP consultation and destination<sub>[YC21]</sub>.