



Inland Counties Emergency Medical Agency

Serving San Bernardino, Inyo, and Mono Counties

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

DATE: October 31, 2013

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
Other Interested Parties

FROM: Tom Lynch
EMS Administrator

Reza Vaezazizi, MD
Medical Director

SUBJECT: PROTOCOLS FOR 30-DAY COMMENT

The following protocols have been reviewed and revised by the Specialty Care CQI Committees (Trauma, Stroke and STEMI) and are now available for public comment and recommendations.

ICEMA Reference #:

- 6100 - Stroke "NSRC" Receiving Centers
- 8040 - Continuation of Care of a STEMI Patient (DELETE)
- 8100 - Continuation of Trauma Care (DELETE)
- 8120 - Continuation of Care (NEW)
- 10160 - Axial Spinal Immobilization (DELETE)
- 12010 - Determination of Death on Scene
- 15010 - Trauma - Adult (15 Years of Age and Older)
- 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 Friday, November 29, 2013, at 5:00 pm.** Comments may be sent via hardcopy, faxed to (909) 388-5850 or via e-mail to Chris.Yoshida-McMath@cao.sbcounty.gov. Comments submitted and any revisions made will be presented at the December 10, 2013, Medical Advisory Committee (MAC) meeting.

TL/RV/jlm

Enclosures

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PROTOCOLS CHANGES FOR OCTOBER 31, 2013

Reference #	Title	Changes/Comments
NEW		
8120	Continuation of Care	Complete policy revision. This policy replaces ICEMA Reference #8100 and #8040.
1000 ACCREDITATION AND CERTIFICATION		
None		
2000 DATA COLLECTION		
None		
3000 EDUCATION		
None		
4000 QUALITY IMPROVEMENT		
None		
5000 MISCELLANEOUS SYSTEM POLICIES		
None		
6000 SPECIALTY PROGRAM/ PROVIDER POLICIES		
6100	Stroke "NSRC" Receiving Centers	<p>Formatting changes; clarified language throughout document.</p> <p>Section II: Removed duplicate definitions.</p> <p>Section III: Clarified acronyms.</p> <p>Section IV: Added tele-neurology. Removed waiver requirement for NSRC-II. Added maintenance of MRI services 24/7.</p> <p>Section IX: Added clarification on requirement.</p> <p>Section X: Changed timeframes based on current research.</p> <p>Section XI: Revised table to reflect changes in patient destination timeframe.</p>
7000 STANDARD DRUG & EQUIPMENT LISTS		
None		
8000 TRANSPORT/TRANSFERS AND DESTINATION POLICIES		
None		
9000 GENERAL PATIENT CARE POLICIES		
None		
10000 SKILLS		
None		

PROTOCOLS CHANGES FOR OCTOBER 31, 2013

Reference #	Title	Changes/Comments
11000 ADULT EMERGENCIES		
None		
12000 END OF LIFE CARE		
12010	Determination of Death on Scene	Formatting changes; clarified language throughout document. Section III: Criteria changed for determination of death on scene for severe blunt trauma patients.
13000 ENVIRONMENTAL EMERGENCIES		
None		
14000 PEDIATRIC EMERGENCIES		
None		
15000 TRAUMA		
15010	Trauma.- Adult (15 years of age and older)	Formatting changes; clarified language throughout document. Section II (A.): New section to include axial spinal precautions. Section IV: Changes in Determination of Death, see ICEMA Reference #12010.
15030	Trauma Triage Criteria and Destination Policy	Formatting changes; clarified language throughout document. Changed table format. Section IV (B): Criteria changed for determination of death on scene for severe blunt trauma patients.
DELETIONS		
8100	Continuation of Trauma Care	Deleted
8040	Continuation of Care of a STEMI Patient	Deleted
10160	Axial Spinal Immobilization	Deleted

PROTOCOLS CHANGES FOR OCTOBER 31, 2013

Below are some of the protocols/policies designated for review in the next few months. If there are specific protocols/policies recommended for review, please contact ICEMA.



STROKE “NSRC” RECEIVING CENTERS *(San Bernardino County Only)*

I. PURPOSE

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

II. DEFINITIONS

Interventional Neuroradiologic Capabilities: Facilities with qualified interventional radiologists and/or neurosurgeons able to administer inter-arterial tissue plasminogen activator and/or perform mechanical clot retrieval.

mLAPSS: Modified Los Angeles County Prehospital Stroke Screening Scale.

Neurovascular Stroke Base Station(s): Facilities that have TJC or HFAP Primary Stroke Center accreditation that also function as a Paramedic Base Station.

Neurovascular Stroke Receiving Centers (NSRC): ICEMA designated Level I or Level II receiving hospital for patients triaged as having a cerebral vascular event requiring hospitalization for treatment, evaluation and/or management of this event.

Neurovascular Stroke Referral Hospital(s) (NSRH): General acute care hospitals that refer possible stroke patients to NSRC.

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

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

~~TJC: The Joint Commission.~~

~~HFAP: Healthcare Facilities Accreditation Program.~~

~~CQI: Continuous Quality Improvement.~~

~~EMS: Emergency Medical Services.~~

~~CE: Continuous Education.~~

III. POLICY

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

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

IV. STAFFING REQUIREMENTS

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

- Medical Directors

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

- Nursing Coordinator

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

- On-Call Physicians Specialists/Consultants

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

- Radiologist experienced in neuroradiologic interpretations.
- On-call Neurologist and [/or tele-neurology services](#) available twenty-four (24) hours per day; seven (7) days per week.
- Additional requirements for:

NSRC-I
<ul style="list-style-type: none"> • Interventional neuroradiologist or Interventional vascular neurosurgeon and an angiogram suite available twenty-four (24) hours per day; seven (7) days per week. • Neurosurgeon available twenty-four (24) hours per day; seven (7) days per week.

NSRC-II:
<ul style="list-style-type: none"> • For NSCR II designation only, ICEMA will waive the on-call neurologist requirement, for tele-neurology, upon submission of the following written documentation: <ul style="list-style-type: none"> • Assessment of geographic and/or population based need. • Demonstration of active planning to obtain a twenty four (24) hours per day; seven (7) days per week call panel of neurologists. • Assurance of an in-person neurologist’s evaluation of stroke patients within twelve (12) hours of hospital admission. • Assurance of 100% QI of all tele-neurology patients. <p><i>Request for waiver must be re-submitted and re-evaluated by ICEMA every twelve (12) months.</i></p> • If neurosurgical services are not available in-house, the

facility must have a rapid transfer agreement in place with a facility that provides this service. The agreement must be on file with the ~~ICEMA local EMS agency~~. NSRC-Is must promptly accept rapid transfer requests from NSRC-IIs. Additionally, the facility must have a rapid transport agreement in place with an ICEMA permitted transport agency for that EOA.

V. INTERNAL HOSPITAL POLICIES

The hospital shall develop internal policies for the following situations:

- Stroke Team alert response policy upon EMS notification of a "Stroke Alert".
- Rapid assessment of stroke patient by Emergency and Neurology teams.
- Prioritization of ancillary services including laboratory and pharmacy with notification of "Stroke Alert".
- Arrangement for priority bed availability in Acute Stroke Unit or Intensive Care Unit (ICU) for "Stroke Alert" patients.

Acknowledges that stroke patients may **only** be diverted during the times of Internal Disaster in accordance to ~~protocol~~ ICEMA Reference #8060 - Requests for Hospital Diversion, (applies to physical plant breakdown threatening significant patient services or immediate patient safety issues i.e. bomb threat, earthquake damage, hazardous material or safety and security of the facility.) A written notification describing the event must be submitted to ICEMA within twenty-four (24) hours.

- Additional requirements for:

NSRC-I

- Emergent thrombolytic and mechanical therapy protocol to be used by Neurology, Emergency, Pharmacy, Interventional and Critical Care teams.
- Maintaining readiness of diagnostic computed tomography (CT), magnetic resonance imaging (MRI) and therapeutic resources such as an interventional suite upon notification of Stroke Team.

- Prompt acceptance of stroke patients from any NSRH as well as referral from NSRC-II to NSRC-I when interventional skills are required.

NSRC-II

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

VI. DATA COLLECTION

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

VII. CONTINUOUS QUALITY IMPROVEMENT PROGRAM

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

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

ICEMA will determine ~~utilize~~ current ~~Get with the Guidelines (GWTG)~~ performance indicators. Any specific or additional performance indicators will be determined in collaboration with the Stroke CQI Committee.

- Active participation in ICEMA Stroke CQI Committee activities.

VIII. PERFORMANCE STANDARDS

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

IX. DESIGNATION

- The NSRC applicant shall be designated by ICEMA after satisfactory review of written documentation, a potential site survey and completion of an agreement between the hospital and ICEMA.

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

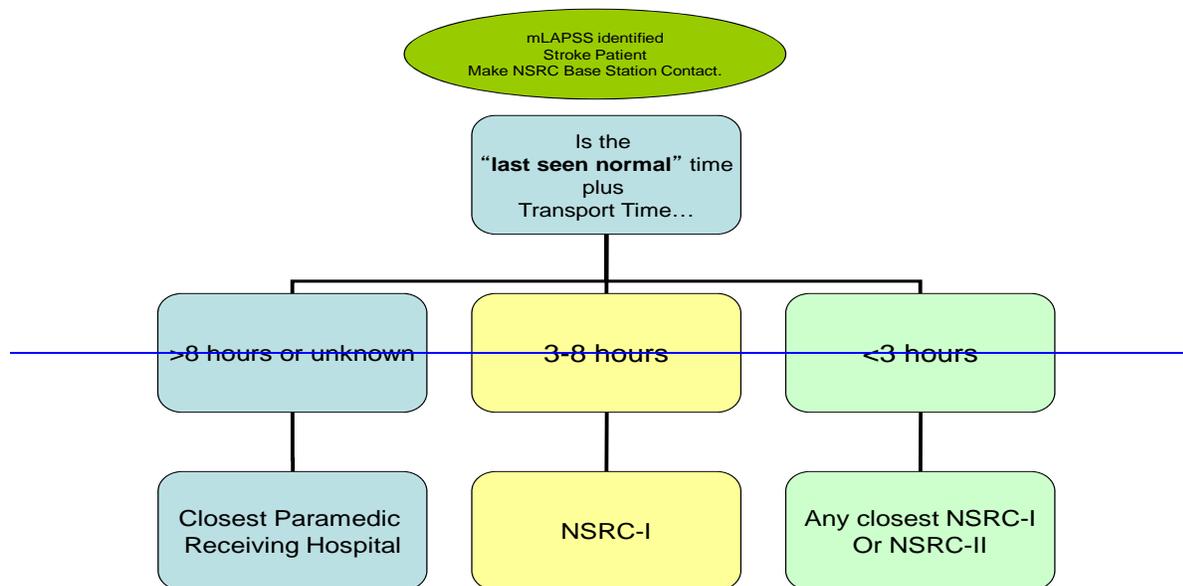
X. PATIENT DESTINATION

- A. The NSRC should be considered as the destination of choice if all of the following criteria are met:
- Stroke patients eligible for transport to NSRC (identified stroke patients) will be identified using the mLAPSS triage criteria.
 - Identified acute stroke patients with "last seen normal" time plus transport time equaling greater than ~~twelve (12) hours (8) eight~~ or if "last seen normal" time is unknown, transport to the closest paramedic receiving hospital.
 - Identified stroke patients with "last seen normal" time plus transport time ~~between (3) three to (8) eight~~ [between three \(3\) to twelve \(12\) hours](#) will be transported to NSRC-I.
 - Identified stroke patients with "last seen normal" time plus transport time less than (3) hours will be transported to any closest NSRC-I or NSRC-II.
 - NSRC Base Station contact is **mandatory** for all patients identified as a possible stroke patient.
 - The NSRC Base Station is the only authority that can direct a patient to a NSRC. The destination may be changed at NSRC Base Station discretion.
 - The NSRC Base Station, if different from the NSRC will notify the NSRC of the patient's pending arrival as soon as possible, to allow timely notification of Stroke Team.

- Air transport may be considered if ground transport is greater than thirty (30) minutes.
- B.** The following factors should be considered in determining choice of destination for acute stroke patients. NSRC Base Station contact and consultation is mandatory in these situations:
- Patients with unmanageable airway, unstable cardiopulmonary condition or in cardiopulmonary arrest should be transported to the closest paramedic receiving hospital.
 - Patients with obvious contraindication to thrombolytic therapy should be strongly considered for transport to closest NSRC-I.
 - Patients with hemodynamic instability and exhibiting signs of inadequate tissue perfusion should be transported to the closest paramedic receiving hospital.

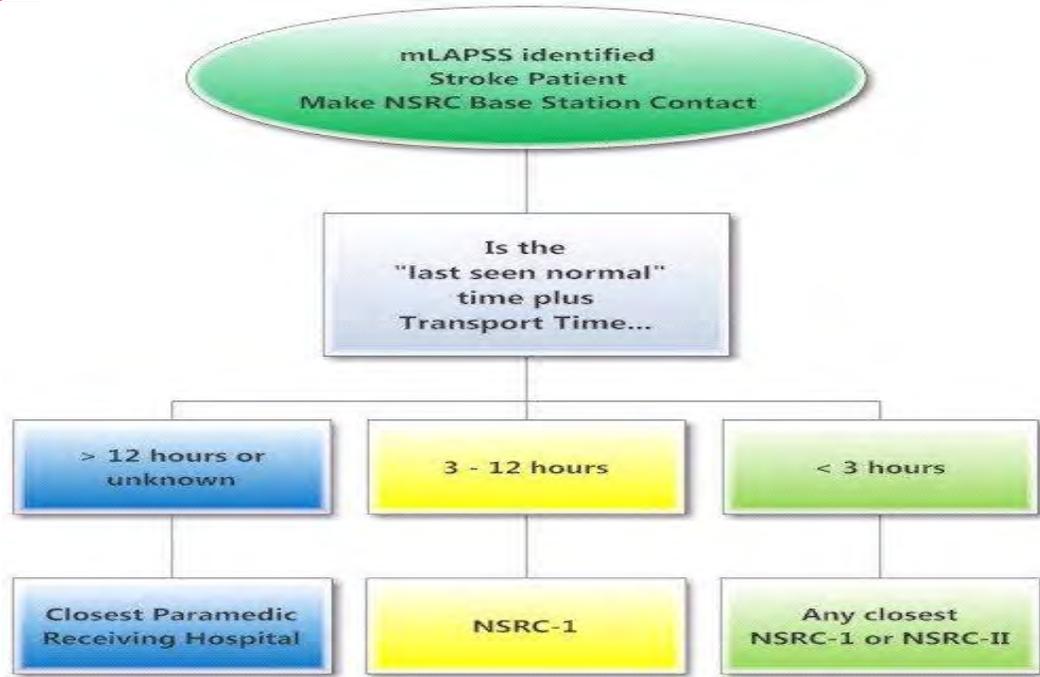
XI. STROKE PATIENT DESTINATION DECISION TREE

Delete Table



Stroke Decision Tree

New Table





CONTINUATION OF CARE OF A STEMI PATIENT (San Bernardino County Only)

THIS POLICY IS FOR HOSPITAL-TO-HOSPITAL STEMI TRANSPORT ONLY AND SHALL NOT BE USED FOR ANY OTHER REQUESTS FROM OTHER ENTITIES.

PURPOSE

To develop a system of care that is consistent with standards of achieving a door to balloon (D2B) time of less than 90 minutes. This system of care consists of STEMI Receiving Centers (SRC), STEMI Referral Hospitals (SRH), EMS field providers, ICEMA and EMS leaders combining their efforts to achieve this goal.

INITIAL TREATMENT GOALS

Patients arriving at SRH by non-EMS:

- <30 minutes at SRH Emergency Department (ED) (door in/door out).
- ECG obtained within 10 minutes of patient arrival.
- Consider transferring all STEMI patients who are candidates for primary PCI.
- First hospital D2B < 90 minutes.

TIMELINES

- <30 minutes at SRH (door in/door out).
- <30 minutes to complete paramedic interfacility transport.
- <30 minutes at SRC before balloon inflation.

If there are significant delays in transport to a SRC, administration of lytic agents may be considered in patients.

PROCEDURE FOR A CONTINUATION OF CARE OF A STEMI PATIENT TO SRC

CONTACT SRC ED PHYSICIAN DIRECTLY WITHOUT CALLING FOR AN INPATIENT BED ASSIGNMENT. Refer to attachment *SRH-SRC Buddy System Table*.

- The ED physician will be the accepting physician at the SRC.
- The SRC ED physician will contact the SRC interventional cardiologist panel per SRC facility protocol. SRC ED physicians and cardiologists have agreed to accept STEMI patients at all times irrespective of payer source unless the SRC is on internal disaster diversion in accordance with ICEMA Reference #8060 - San Bernardino County Requests for Hospital Diversion Policy.

1. Simultaneously call 9-1-1 and utilize following verbiage to dispatch:

**“This is a STEMI CONTINUATION OF CARE from _____
to _____ (Hospital)
(STEMI Hospital)**

Dispatchers will only dispatch transporting paramedic units without any fire apparatus.

2. Consider use of air ambulance if ground transportation is > 60 minutes. Requests for air ambulance shall be made to 9-1-1 and normal dispatching procedures will be followed; however, air ambulance STEMI patients will be transported to the SRC identified by the transferring ED.
3. Assess stability of airway and breathing, and intubate those at risk for respiratory failure prior to or during transport.
4. Patient must be kept NPO.
5. Provide continuous cardiac monitoring.
6. Send all required transfer paperwork including diagnostic lab, x-ray, physician and nursing notes with the transport team. However, do not delay transfer waiting for charting or lab results; these may be faxed to SRC later.

NOTE: CRITICAL CARE TRANSPORTS

EMT-Ps may transport patients on Dopamine, Lidocaine and Procainamide drips only. Heparin and Integrillin drips are not within the paramedic scope of practice and require a critical care transport nurse to be in attendance. At times, SRH may consider sending one of its nurses with the transporting paramedic unit if deemed necessary due to patient's condition. Nurse staffed critical care transport units may be available; however, they are subject to availability and delays. Unless medically necessary, avoid using medication drips that are outside of the paramedic scope of practice to avoid any delays in transferring of STEMI patients. Requests of nurse staffed critical care transfers must be made directly to the ambulance transporter.

REFERENCE

<u>Number</u>	<u>Name</u>
8060	San Bernardino County Requests for Hospital Diversion Policy



**STEMI REFERRAL HOSPITAL (SRH) -
STEMI RECEIVING CENTER (SRC)**

BUDDY SYSTEM

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



CONTINUATION OF TRAUMA CARE

THIS POLICY IS FOR CONTINUATION OF TRAUMA CARE PATIENTS FROM A REFERRAL HOSPITAL (RH) TO AN ICEMA DESIGNATED TRAUMA CENTER (TC) AND CONTINUATION OF TRAUMA CARE PATIENTS BETWEEN TCs WHEN A HIGHER LEVEL OF CARE IS REQUIRED; AND SHALL NOT BE USED FOR ANY OTHER FORM OF INTERFACILITY TRANSFER OF PATIENTS.

PURPOSE

To support a system of trauma care that is consistent with American College of Surgeons (ACS) standards and ensures the minimal time from patient injury to receiving the most appropriate definitive trauma care.

DEFINITIONS

1. **Trauma Center (TC)** - A licensed general acute care hospital designated by ICEMA's Governing Board as a trauma hospital in accordance with State laws, regulations and ICEMA policies.
2. **Referral Hospital (RH)** - Any licensed general acute care hospital that is not an ICEMA designated TC.

INCLUSION CRITERIA

Any patient meeting ICEMA Trauma Triage Criteria, (Reference ICEMA Policy #15030) arriving at a non-trauma hospital by EMS or non-EMS transport.

INITIAL TREATMENT GOALS (at RH)

1. Initiate resuscitative measures within the capabilities of the facility.
2. Ensure patient stabilization is adequate for subsequent transport.
3. Transfer timeline goal is <30 minutes door-to-door-out.
4. DO NOT DELAY TRANSPORT by initiating any diagnostic procedures that do not have direct impact on IMMEDIATE resuscitative measures.

5. RH ED physician will make direct physician-to-physician contact with the ED physician at the TC.
6. The TC will accept all referred trauma patients unless they are on Internal Disaster as defined in ICEMA Policy #8060.
7. The TC ED physician is the accepting physician at the TC and will activate the internal Trauma Team according to internal TC protocols.
8. RH ED physician will determine the appropriate mode of transportation for the patient. If ground transportation is >30 minutes consider the use of an air ambulance. Requests for air ambulance shall be made to 9-1-1 and normal dispatching procedures will be followed; however, the air ambulance continuation of trauma run patient will be transported to the TC identified by the RH.
9. Simultaneously call 9-1-1 and utilize the following script to dispatch:

“This is a Continuation of Trauma Run from ____ hospital to ____ Trauma Center”

Dispatchers will only dispatch transporting paramedic units without any fire apparatus.
10. RH must send all medical records, test results, radiologic evaluations to the TC. DO NOT DELAY TRANSPORT - these documents may be FAXED to the TC.

SPECIAL CONSIDERATIONS

1. If the patient has arrived at the RH via EMS, the RH ED physician may request that transporting team remain with patient and immediately transport them once the minimal stabilization is done at the RH.
2. The RH may consider sending one of its nurses with the transporting paramedic unit if deemed necessary due to the patient’s condition or scope of practice.
3. Nurse staffed critical care (ground or air) transport units maybe used; but may create a delay due to availability. Requests of nurse staffed critical care transport units must be made directly to the transporter agency by landline.

REFERENCE PROTOCOLS

<u>Protocol #</u>	<u>Protocol Name</u>
8060	San Bernardino County Requests for Hospital Diversion Policy
15030	Trauma Triage Criteria and Destination Policy



CONTINUATION OF CARE

(San Bernardino County Only)

I. PURPOSE

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

This policy shall only be used for:

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

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

II. AUTHORITY

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

III. DEFINITIONS

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

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

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

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

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

IV. INCLUSION CRITERIA

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

V. INITIAL TREATMENT GOALS AT RH

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

➤ TIMELINES

- < 30 minutes at RH (door-in/door-out).
 - < 30 minutes to complete paramedic continuation of care transport.
 - < 30 minutes door to intervention at RC.
- RH shall contact the appropriate Specialty Care Center ED physician directly without calling for an inpatient bed assignment. Refer to attachment SRH-SRC Buddy System Table.
- EMS providers shall make Specialty Care Center Base Station contact.
- The Specialty Care Centers shall accept all referred trauma, stroke and STEMI patients unless they are on Internal Disaster as defined in ICEMA Reference #8060 - Requests for Hospital Diversion Policy (San Bernardino County).
- The Specialty Care Center ED physician is the accepting physician at the Specialty Care Center and will activate the internal Trauma, STEMI, or Stroke Team according to internal TC, SRC or NSRC protocols.
- RH ED physician will determine the appropriate mode of transportation for the patient. If ground transportation is > 30 minutes consider the use of an air ambulance. Requests for air ambulance shall be made to 9-1-1 and normal

dispatching procedures will be followed; however, the air ambulance Continuation of Care patient will be transported to the Specialty Care Center identified by the RH.

- Simultaneously call 9-1-1 and utilize the following script to dispatch:

“This is a Continuation of Care run from ___hospital to ___Trauma, STEMI or Stroke Center”

Dispatchers will only dispatch transporting paramedic units without any fire apparatus.

- RH must send all medical records, test results, radiologic evaluations to the Specialty Care Center. DO NOT DELAY TRANSPORT - these documents may be FAXED to the Specialty Care Center.

VI. SPECIAL CONSIDERATIONS

- If the patient has arrived at the RH via EMS, the RH ED physician may request that transporting team remain with patient and immediately transport them once the minimal stabilization is done at the RH.
- EMT-Ps may only transport patients on Dopamine, Lidocaine and Procainamide drips. Heparin and Integrillin drips are not within the paramedic scope of practice and require a critical care transport nurse to be in attendance. Unless medically necessary avoid using medication drips that are outside of the paramedic scope of practice to avoid any delays in transferring of patients.
- The RH may consider sending one of its nurses with the transporting paramedic unit if deemed necessary due to the patient’s condition or scope of practice.
- Nurse staffed critical care (ground or air) transport units maybe used; but may create a delay due to availability. Requests of nurse staffed critical care transport units must be made directly to the transporter agency by landline.

VII. SPECIALTY CARE CENTER - REFERRAL HOSPITAL BUDDY SYSTEM TABLE

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

VIII. REFERENCES

<u>Number</u>	<u>Name</u>
6070	Cardiovascular "STEMI" Receiving Centers
8060	Requests for Hospital Diversion Policy (San Bernardino County).
15030	Trauma Triage Criteria and Destination Policy



AXIAL SPINAL STABILIZATION

FIELD ASSESSMENT/TREATMENT INDICATORS

Any patient in which axial spinal stabilization is clinically indicated, including but not limited to the following:

1. Patient meets Mechanism of injury as described in ICEMA Reference #15030 - Trauma Triage Criteria and Destination Policy.
2. Soft tissue damage associated with trauma and/or blunt trauma above the clavicles.
3. Unconscious patients where the mechanism of injury is unknown.
4. All intubated neonatal and pediatric patients.
5. Cervical pain or pain to the upper one-third (1/3) of the thoracic vertebrae. Spinal tenderness or pain, with or without movement of the head or neck, distal numbness, tingling, weakness or paralysis.
6. Altered mental status.
7. Appear to be under the influence of alcohol or other drugs (even if the patient is alert and oriented).
8. Additional sites of significant distracting pain or is experiencing emotional distress.
9. Less than four (4) years of age with appropriate injuries requiring axial spinal stabilization.
10. Unable to adequately communicate with the EMS personnel due to a language barrier or other type of communication difficulty.
11. Any other condition that may reduce the patient's perception of pain.

ALS and or LIMITED ALS personnel may remove patients placed in axial spinal stabilization by Emergency Medical Responders and BLS personnel if the patient does not meet **any** of the above indicators after a complete assessment and documentation on the patient care record.

INTERVENTIONS

1. Apply manual axial stabilization.
2. Assess and document distal function before and after application.
3. For pediatric patients: If the level of the patient's head is greater than that of the torso, use an approved pediatric spine board with a head drop or arrange padding on the board to keep the entire lower spine and pelvis in line with the cervical spine and parallel to the board.
4. For patients being placed on a board, consider providing comfort by placing padding on the backboard.
5. Any elderly or other adult patient who may have a spine that is normally flexed forward should be stabilized in patient's normal anatomical position.
6. When a pregnant patient in the third trimester is placed in axial spinal stabilization, place in the left lateral position to decrease pressure on the Inferior Vena Cava.
7. Certain patients may not tolerate normal stabilization positioning due to the location of additional injuries. These patients may require stabilization in their position of comfort. Additional materials may be utilized to properly stabilize these patients while providing for the best possible axial spinal alignment.

REFERENCE

<u>Reference #</u>	<u>Name</u>
15030	Trauma Triage Criteria and Destination Policy



DETERMINATION OF DEATH ON SCENE

I. PURPOSE

To identify situations when an EMT, AEMT or EMT-P may be called upon to determine death on scene.

II. POLICY

An EMT, AEMT or EMT-P may determine death on scene if **pulselessness and apnea** are present with any of the following criteria. The EMT-P is authorized to discontinue BLS CPR initiated at scene if a patient falls into the category of obvious death. If any ALS procedures are initiated, only the Base Station physician/designee may determine death in the field. In any situation where there may be doubt as to the clinical findings of the patient, BLS CPR must be initiated and the Base Station contacted, per ICEMA Reference #12020 - Withholding Resuscitate Measures Policy. When death is determined, the County Coroner must be notified along with the appropriate law enforcement agency.

III. DETERMINATION OF DEATH CRITERIA

- Decomposition.
- Obvious signs of rigor mortis such as rigidity or stiffening of muscular tissues and joints in the body, which occurs any time after death and usually appears in the head, face and neck muscles first.
- Obvious signs of venous pooling in dependent body parts, lividity such as mottled bluish-tinged discoloration of the skin, often accompanied by cold extremities.
- Decapitation.
- Incineration of the torso and/or head.
- Massive crush injury.
- Penetrating injury with evisceration of the heart, and/or brain.
- Gross dismemberment of the trunk.

PROCEDURE

- If the patient does not meet the Determination of Death criteria, appropriate interventions must be initiated.
- Resuscitation efforts shall not be terminated en route per Government Code 27491. The patient will be transported to the closest facility where determination of death will be made by hospital staff.
- Most victims of electrocution, lightning and drowning should have resuscitative efforts begun and transported to the appropriate Hospital/Trauma Center.
- Hypothermic patients should be treated per ICEMA Reference #13030 - Cold Related Emergencies under Severe Hypothermia.
- A DNR report form must be completed, if applicable per ICEMA Reference #12020 - Withholding Resuscitative Measures.
- **San Bernardino County Only:**

A copy of the patient care report must be made available for the Coroner. This will be transmitted to them, when posted, if the disposition is marked "Dead on Scene" and the Destination is marked "Coroner, San Bernardino County" on the electronic patient care report (ePCR). If unable to post, a printed copy of the ePCR, O1A or a completed *Coroners Worksheet of Death* must be left at the scene. The completed ePCR or O1A must be posted or faxed to the Coroner before the end of the shift.

LIMITED ALS (LALS) PROCEDURE

- All terminated LALS resuscitation efforts must have an AED event record attached to the patient care record report.
- All conversations with the Base Station must be fully documented with the name of the Base Station physician who determined death, times and instructions on the patient care report.

ALS PROCEDURE

- All patients in ventricular fibrillation should be resuscitated and transported unless otherwise determined by the Base Station physician/designee.
- Severe blunt force trauma, pulseless, without signs of life (palpable pulses and/or spontaneous respirations) and cardiac electrical activity less than 40 bpm ~~Traumatic cardiac arrest in the setting of severe blunt force trauma, or documented asystole in at least two (2) leads and no reported vital signs~~

~~(palpable pulses and/or spontaneous respirations)~~ during EMS encounter with the patient meets Determination of Death criteria.

- All terminated ALS resuscitation efforts must have an ECG attached to the patient care report.
- All conversations with the Base Station must be fully documented with the name of the Base Station physician who determined death, times and instructions on the patient care report.

IV. SUSPECTED SUDDEN INFANT DEATH SYNDROME (SIDS) INCIDENT

It is imperative that all EMS field personnel be able to assist the caregiver and local police agencies during a suspected SIDS incident.

A. PROCEDURE

1. Follow individual department/agency policies at all times.
2. Ask open-ended questions about incident.
3. Explain what you are doing, the procedures you will follow, and the reasons for them.
4. If you suspect a SIDS death, explain to the parent/caregiver what SIDS is and, if this is a SIDS related death nothing they did or did not do caused the death.
5. Provide the parent/caregiver with the number of the California SIDS Information Line: **1-800-369-SIDS (7437)**
6. Provide psychosocial support and explain the emergency treatment and transport of their child.
7. Assure the parent/caregiver that your activities are standard procedures for the investigation of all death incidents and that there is no suspicion of wrongdoing.
8. Document observations.

V. REFERENCES

<u>Number</u>	<u>Name</u>
12020	Withholding Resuscitative Measures
13030	Cold Related Emergencies



TRAUMA - ADULT (15 years of age and older)

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

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

I. **FIELD ASSESSMENT/TREATMENT INDICATORS**

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

II. **BLS INTERVENTIONS**

- Ensure thorough initial assessment.
- Ensure patent airway, protecting cervical spine.
- ~~Axial spinal stabilization as appropriate.~~
- Oxygen and/or ventilate as needed, O₂ saturation (if BLS equipped).
- Keep patient warm.
- For a traumatic full arrest, an AED may be utilized, if indicated.
- Transport to ALS intercept or to the closest receiving hospital.

A. **Manage Special Considerations**

- **Axial Spinal Immobilization:**
 - Consider axial spinal immobilization, if the patient meet(s) any of the following indicators using the acronym (NSAID):

N-euro Deficit(s) present?
S-pinal Tenderness present?
A-ltered Mental Status?
I-ntoxication?
D-istracting Injury?
 - Consider maintaining spinal alignment on the gurney, or using partial spinal axial immobilization on an awake, alert and cooperative patient, without the use of a rigid spine board.

➤ Penetrating head or neck trauma without any NSAID indicators are not candidates for spinal immobilization using long board

- **Abdominal Trauma:** Cover eviscerated organs with saline dampened gauze. Do not attempt to replace organs into the abdominal cavity.
- **Amputations:** Control bleeding. Rinse amputated part gently with sterile irrigation saline to remove loose debris/gross contamination. Place amputated part in dry, sterile gauze and in a plastic bag surrounded by ice (if available). Prevent direct contact with ice. Document in the narrative who the amputated part was given to.

Partial Amputation: Splint in anatomic position and elevate the extremity.

- **Bleeding:**
 - Apply direct pressure and/or pressure dressing.
 - To control life-threatening bleeding of a severely injured extremity, consider application of tourniquet when direct pressure or pressure dressing fails.
- **Chest Trauma:** If a wound is present, cover it with an occlusive dressing. If the patient's ventilations are being assisted, dress wound loosely, (do not seal). Continuously reevaluate patient for the development of tension pneumothorax.
- **Flail Chest:** Stabilize chest, observe for tension pneumothorax. Consider assisted ventilations.
- **Fractures:** Immobilize above and below the injury. Apply splint to injury in position found except:
 - **Femur:** Apply traction splint if indicated.
 - **Grossly angulated long bone with distal neurovascular compromise:** Apply gentle unidirectional traction to improve circulation.
 - **Check and document distal pulse before and after positioning.**

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

III. LIMITED ALS (LALS) INTERVENTIONS

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

- *Stable:* BP>90mmHG and/or signs of adequate tissue perfusion.

Blunt Trauma:

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

Penetrating Trauma:

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

A. Manage Special Considerations

Axial Spinal Immobilization:

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

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

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

- **Fractures**
 - **Isolated Extremity Trauma:** Trauma without multisystem mechanism. Extremity trauma is defined as those cases of injury where the limb itself and/or the appendicular skeleton (shoulder or pelvic girdle) may be injured, e.g., dislocated shoulder, hip fracture or dislocation.
 - Administer IV NS 250 ml bolus one (1) time.
- **Impaled Object:** Remove object upon Trauma Base Station physician order, if indicated.
- **Traumatic Arrest:** Continue CPR as appropriate.
 - Apply AED and follow the voice prompts.

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

- *Severe Blunt Force Trauma Arrest:* If indicated, transport to the closest receiving hospital.
- *Penetrating Trauma Arrest:* If indicated, transport to the closest receiving hospital.
- If the patient does not meet the “Obvious Death Criteria” in ICEMA Reference #12010 - “Determination of Death on Scene”, contact the Trauma Base Station for determination of death on scene for those patients who suffer a traumatic cardiac arrest in the setting of penetrating trauma and no reported vital signs (palpable pulse and/or spontaneous respirations) during the EMS encounter with the patient.
- Resuscitation efforts on a penetrating traumatic arrest victim are not to be terminated without Trauma Base 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.

- If the patient is not responsive to trauma-oriented resuscitation, consider medical etiology and treat accordingly.
- **Unsafe scene may warrant transport despite low potential for survival.**
- Whenever possible, consider minimal disturbance of a potential crime scene.
- **Base Station Orders:** May order additional fluid boluses.

IV. ALS INTERVENTIONS

- Advanced Airway (as indicated):
 - Unmanageable Airway: If an adequate airway cannot be maintained with a BVM device; **and** the paramedic is unable to intubate or perform a successful needle cricothyrotomy (if indicated), **then**, transport to the closest receiving hospital and follow ICEMA Reference #[8120 - Continuation of Care](#).
- Monitor ECG.
- IV/IO Access (Warm IV fluids when available).
 - *Unstable:* BP <90mmHG and/or signs of inadequate perfusion, start 2nd IV access.
 - *Stable:* BP >90mmHG and/or signs of adequate tissue perfusion.

Blunt Trauma:

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

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.

A. Manage Special Considerations

- **Axial Spinal Immobilization:**
 - ALS personnel should remove axial spinal immobilization devices from patients placed in full axial spinal immobilization precautions by first responders and BLS personnel if the patient does not meet any of the following indicators using the acronym (NSAID):
 - N-euro Deficit(s) present?
 - S-pinal Tenderness present?
 - A-ltered Mental Status?
 - I-ntoxication?
 - Distracting Injury?
 - Consider maintaining spinal alignment on the gurney, or using partial spinal axial immobilization on an awake, alert and cooperative patient, without the use of a rigid spine board.
 - Penetrating head or neck trauma without any NSAID indicators are not candidates for spinal immobilization using long board
- **Chest Trauma:** Perform needle thoracostomy for chest trauma with symptomatic respiratory distress.
- **Fractures:**
 - **Isolated Extremity Trauma:** Trauma without multisystem mechanism. Extremity trauma is defined as those cases of injury where the limb itself and/or the appendicular skeleton (shoulder or pelvic girdle) may be injured, e.g., dislocated shoulder, hip fracture or dislocation.
 - **IV Pain Relief:**

Morphine Sulfate 5 mg IV slowly. May repeat every five (5) minutes to a maximum of 20 mg, if the patient maintains a BP >90mmHG and shows signs of adequate tissue perfusion.

Document BPs every five (5) minutes while medicating for pain and reassess patient.

Consider Ondansetron 4 mg slow IVP/PO as prophylactic treatment of nausea and vomiting associated with narcotic administration.

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 (1) time.

➤ **IM Pain Relief:**

Morphine Sulfate 10 mg IM. Document vital signs and reassess patient.

Consider Ondansetron 4 mg IM/PO as prophylactic treatment of nausea and vomiting associated with narcotic administration.

- **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 (≥ 15 years of age) and significant facial trauma, trauma to the face or nose and/or possible basilar skull fracture are present, Trauma Base Station contact is required.
- **Impaled Object:** Remove object upon Trauma Base Station physician order, if indicated.
- **Traumatic Arrest:** Continue CPR as appropriate.

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

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

- *Severe Blunt Force Trauma Arrest:* If indicated, ~~transport to the closest receiving hospital~~ [pronounce on scene.](#)
- *Penetrating Trauma Arrest:* If indicated, transport to the closest receiving hospital.

- If the patient does not meet the “Obvious Death Criteria” in ICEMA Reference #12010 - Determination of Death on Scene, contact the Trauma Base 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.
 - **Unsafe scene may warrant transport despite low potential for survival.**
 - Whenever possible, consider minimal disturbance of a potential crime scene.
- **Base Station Orders:** May order additional medications and/or fluid boluses.

V. REFERENCES

<u>Number</u>	<u>Name</u>
8100	Continuation of Trauma Care
9010	General Patient Care Guidelines
10010	King Airway Device - Adult
10030	Oral Endotracheal Intubation - Adult
10050	Nasotracheal Intubation
10060	Needle Thoracostomy
10070	Needle Cricothyrotomy
10080	Insertion of Nasogastric/Orogastric Tube
10130	AED - BLS
10140	Intraosseous Infusion IO
10150	External Jugular Vein Access
10160	Axial Spinal Stabilization
11070	Cardiac Arrest - Adult
12010	Determination of Death on Scene
15030	Trauma Triage Criteria and Destination Policy



TRAUMA TRIAGE CRITERIA AND DESTINATION POLICY

I. 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.

II. AUTHORITY

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

III. DEFINITIONS

Adult Patients: A person appearing to be > 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.

IV. POLICY

A. Transportation For Patients Identified as a CTP:

- Adult patients will be transported to the closest Trauma Center.
- Pediatric patients will be transported to a Pediatric Trauma Center when there is less than a 20 minute difference in transport time to the Pediatric Trauma Center versus the closest Trauma Center.
- Helicopter transport shall not be used unless ground transport is expected to be greater than 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.
- Patients with an unmanageable airway shall be transported to the closest receiving hospital for airway stabilization. Trauma Base Station contact shall be made.
- Hospital Trauma Diversion Status: Refer to ICEMA Reference #8060 - San Bernardino County Hospital Diversion Policy.
- Multi-Casualty Incident: Refer to ICEMA Reference #5050 - Medical Response to a Multi-Casualty Incident Policy.
- CTP meeting physiologic or anatomic criteria with associated burns will be transported to the closest Trauma Center.

B. Trauma Triage Criteria of the CTP:~~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 Indicators:

- **Glasgow Coma Scale (GCS)/Level of Consciousness (LOC)**
 - **Adult**
 - GCS \leq 13
 - LOC > 3 minutes
 - nausea/vomiting in the setting of significant head trauma

- **Pediatric**
 - GCS \leq 13
 - any LOC
 - nausea/vomiting in the setting of significant head trauma

- **Respiratory**

- **Adult**
 - requiring assistance with ventilation **or**
 - hypoxic = O₂ saturation that is consistently < 90% **and a**
 - RR < 10 or > 29
- **Pediatric**
 - requiring assistance with ventilation **or**
 - hypoxic = O₂ saturation that is consistently < 90% **and a**
 - < 10 years: RR < 12 or > 40
 - < 1 year: RR < 20 or > 60

- **Hypotension**

- **Adult**
 - exhibits inadequate tissue perfusion
 - BP < 90 mmHG
 - tachycardia
- **Pediatric**
 - exhibits inadequate tissue perfusion
 - abnormal vital signs (according to age)

2. **Anatomic Indicators:**

- **Penetrating injuries to:**

- head
- neck
- chest
- abdomen/pelvis extremity proximal to the knee or elbow

- **Blunt chest trauma resulting in:**

- ecchymosis
- unstable chest wall
- flail chest

- **Severe tenderness to:**
 - head
 - neck
 - torso
 - abdomen
 - pelvis
- **Paralysis:**
 - traumatic
 - loss of sensation
 - suspected spinal cord injury
- **Abdomen:**
 - tenderness with firm and rigid abdomen on examination
- **Amputations:**
 - above the wrist
 - above the ankle
- **Fractures:**
 - evidence of two or more proximal long bone fractures (femur, humerus)
 - open fractures
 - two or more long bone fractures
- **Skull Deformity**
- **Major Tissue Disruption**
- **Suspected Pelvic Fracture**

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 destination. In some cases, a Trauma Base Station may direct a patient a non-trauma receiving hospital.

- **High Speed Crash:**

- initial speed > 40mph
- major auto deformity > 18 inches
- intrusion into passenger space compartment > 12 inches
- unrestrained passenger
- front axle rearward displaced
- bent steering wheel/column
- starred windshield

- **Vehicle Rollover:**

- complete rollover
- rollover multiple times
- unrestrained
- restrained with significant injuries or high rate of speed

- **Motorcycle Crash:**

- 20 mph **and/or**
- separation of rider from the bike with significant injury

- **Non-Motorized Transportation (e.g., bicycles, skate boards, skis, etc.):**

- with significant impact > 20 mph and/or
- pedestrian thrown >15 feet or run over

- **Pedestrian:**

- auto-pedestrian with significant impact > 10mph
- pedestrian thrown >15 feet or run over

- **Blunt Trauma to:**

- head
- neck
- torso

- **Extrication:**
 - 20 minutes with associated injuries
- **Death of Occupant:**
 - in same passenger space
- **Ejection:**
 - partial or complete ejection of patient from vehicle
- **Falls:**
 - **Adult**
 - ≥ 15 feet
 - **Pediatric**
 - 3 times the child's height or > 10 feet
- **Submersion with Trauma**

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 the destination for the following patients:

- pediatric < 9 years of age
- adult > 65 years of age
- ~~have known underlying history of~~ respiratory, cardiac, liver disease, or diabetes
- ~~have known underlying history of~~ hematologic or immunosuppressive conditions
- isolated extremity injury with neurovascular compromise (time sensitive injury)
- pregnant (~~greater than~~ ≥ 20 weeks in gestation)
- inability to communicate, e.g., language, psychological and/or substance impairment

C. Exceptions:

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

- **Unmanageable Airway:**
 - Transport to the closest receiving hospital when the patient **requires intubation:**
 - an adequate airway cannot be maintained with a BVM device; **and**
 - the paramedic is unable to intubate or if indicated, perform a successful needle cricothyrotomy.

- **Severe Blunt Force Trauma Arrest:**
 - Refer to ICEMA Reference #12010 - Determination of Death on Scene.
 - Severe blunt force trauma, pulseless, without signs of life and cardiac electrical activity less than 40 bpm
 - If indicated, Transport to the closest receiving hospital pronounce on scene.

 - If patient does not meet determination of death criteria, transport to closest receiving hospital.

- **Penetrating Trauma Arrest:**
 - Refer to ICEMA Reference #12010 Determination of Death on Scene.
 - If the patient does not meet the “*Obvious Death Criteria*” in the “ICEMA Reference #12010 - Determination of Death on Scene”, contact the Trauma Base hospital-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 hospital contact.

 - If indicated, transport to the closest receiving hospital.

- **Burn Patients:**
 - Refer to ICEMA Reference #8030 - Burn Criteria and Destination Policy.
 - Burn patients meeting CTP, **transport to the closest Trauma Center.**
 - Burn patients not meeting CTP, **transport to the closest receiving hospital or a Burn Center.**

- **EMS Aircraft Indications:**
 - An EMS aircraft may be dispatched for the following events:
 - MCI
 - Prolonged extrication time (> 20 minutes)
 - **Do Not Delay Patient Transport** waiting for an en route EMS aircraft.

- **EMS Aircraft Transport Contraindications:**
 - The following are contraindications for EMS aircraft patient transportation:
 - Patients contaminated with Hazardous Material who cannot be decontaminated and who pose a risk to the safe operations of the EMS aircraft and crew.
 - 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.
 - Stable patients.
 - Ground transport is < 30 minutes.
 - Traumatic cardiac arrest.
 - Other safety conditions as determined by pilot and/or crew.

- **Remote Locations:**
 - Remote locations may be exempted from specific criteria upon written permission from the **ICEMAEMS** Medical Director.

D. Considerations

- Scene time should be limited to 10 minutes under normal circumstances.
- Burn patients with associated trauma, should transported to the closest Trauma Center. Trauma Base Station contact shall be made.

E. Radio Contact

- If not contacted at scene, the receiving Trauma Center must be notified as soon as possible in order to activate the trauma team.
- CTP meeting all Trauma 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.
- In Inyo and Mono Counties, the assigned Base Station should be contacted for CTP consultation and destination.