I. PURPOSE: To guide out-of-hospital personnel in determining which patients require the services of a designated trauma center. To serve as the EMS system standard for triage and destination of patients suffering acute injury or suspected acute injury.


III. POLICY: These criteria apply to any patient who is injured or has a physical complaint related to trauma, and is assessed by EMS personnel at the scene.

A. Physiologic Criteria, Step 1:
   1. Glasgow Coma Scale less than 14
   2. Systolic blood pressure less than 90 mmHg
      (Less than 110 mmHg in patients older than 65 years of age)
   3. Respiratory rate less than 10 or greater than 29 breaths per minute
      (Less than 20 in infant younger than 1 year of age)

B. Anatomic Criteria, Step 2:
   1. Penetrating wounds to the head, neck, torso, or extremities proximal to the elbow or knee
   2. Flail chest
   3. Two or more proximal long bone fractures (femur or humerus)
   4. Crushed, degloved, or mangled extremity
   5. Amputations proximal to wrist or ankle
   6. Pelvic fractures
   7. Open or depressed skull fracture
   8. Paralysis
   9. Seat belt injury: significant bruising to neck, chest, or abdomen
   10. Diffuse abdominal tenderness as a result of blunt trauma

C. Mechanism of Injury Criteria, Step 3:
1. Adults: Greater than 20 feet (one story is equal to 10 feet)  
   Children less than 15 years old: Greater than 10 feet, or two times the height of the child

2. High-risk auto crash:
   a. Intrusion: interior measurement greater than 12 inches patient site or greater than 18 inches any occupant site
   b. Ejection: partial or complete from automobile
   c. Death in same passenger compartment

3. Auto-pedestrian/auto-bicyclist thrown, run over, or with greater than 20 mph impact

4. Unenclosed vehicle (e.g. motorcycle, bicycle, skateboard) crash greater than 20 mph

D. Other Criteria, Step 4 (these are considerations to be used by the base hospital in determining the appropriate destination hospital):
   1. Age greater than 65 years old
   2. Head injury with loss of consciousness AND on an anticoagulant or antiplatelet drug¹
   3. Burns with trauma mechanism
   4. Time sensitive extremity injury (open fracture, neurovascular compromise)
   5. Pregnancy greater than 20 weeks with known or suspected abdominal trauma
   6. Prehospital care provider or MICN judgment
   7. Amputation or partial amputation of any part of the hand²
   8. Penetrating injury to the globe of the eye, at risk for vision loss³

V. PROCEDURE:
   A. Any patient who is suffering from an acute injury or suspected acute injury shall have the trauma triage criteria applied.

   B. For patients who meet trauma triage criteria listed in Sections A, B, or C above, the closest trauma center is considered to be the base hospital for that patient. Paramedics shall make base hospital contact and provide patient report directly to the trauma center.

   C. Transportation units (both ground and air) shall transport patients who meet at least one of the trauma triage criteria in Sections A or B to the closest appropriate designated trauma center. If the closest trauma center is on internal disaster, these patients shall be transported to the next closest appropriate trauma center. If the closest trauma center is on CT diversion, the paramedic shall make early base contact and the MICN shall determine the most appropriate destination.

   D. For patients who meet trauma triage criteria in Section C, the paramedic shall make base hospital contact with the closest designated trauma center. Based on the paramedic's report of the incident and the patient's assessed injuries, the trauma center MICN or ED
physician shall direct destination to either the trauma center or the closest appropriate hospital.

E. Paramedics providing care for patients who are injured but meet only the trauma triage criteria listed in Section D above will contact the base hospital in whose catchment area the incident occurred. Destination will be determined by the base hospital MICN or ED physician. If the patient is directed other than to the regular catchment base hospital, the MICN will notify the receiving hospital or trauma center of an inbound patient and relay paramedic report.

F. A trauma patient without an effective airway may be transported to the closest available hospital with an emergency department for airway management prior to transfer to a designated trauma center. In this rare event, the paramedic will contact the base hospital in whose catchment area the incident occurred.

G. A patient who does not meet trauma triage criteria and who, in the judgment of a base hospital, has a high probability of requiring immediate surgical intervention or other services of a designated trauma center shall be directed to a designated trauma center.

1For a complete list of anticoagulant and antiplatelet drugs that should be considered for inclusion criteria in Step 4.2, please consult VC EMSA approved list.

2For patients with isolated traumatic amputations, partial or complete, of any portion of the hand (at or proximal to the DIP joint of any finger or any part of the thumb) see illustration, as long as bleeding is controlled and the amputated part may be transported with the patient, the regular catchment base hospital MICN may contact Los Robles Hospital and Medical Center (LRHMC) to determine the availability of a hand surgeon trained in microvascular replantation surgery. If a specialty hand surgeon is available at LRHMC and not at the regular catchment hospital, the MICN shall direct the patient to LRHMC.

3For patients with isolated penetrating injury to the globe of the eye, at risk for vision loss, the regular catchment base hospital MICN may direct the patient to Ventura County Medical Center (VCMC) for specialized ophthalmologic care and possible surgical intervention.
Ventura County Field Triage Decision Scheme
For patients with visible or suspected traumatic injuries

Measure vital signs and level of consciousness

STEP 1

1.1 Glasgow Coma Scale  < 14
1.2 Systolic Blood Pressure  < 90
1.3 Respiratory Rate  < 10 or > 29 breaths per minute
(< 20 in infant age < 1 year)

Assess anatomy of injury

STEP 2

2.1 All penetrating injuries to head, neck, torso and extremities proximal to elbow and knee
2.2 Flail chest
2.3 Two or more proximal long-bone fractures (femur, humerus)
2.4 Crushed, degloved, or mangled extremity
2.5 Amputation proximal to wrist and ankle
2.6 Pelvic fractures
2.7 Open or depressed skull fracture
2.8 Paralysis
2.9 Seat belt injury: significant bruising to neck, chest, or abdomen
2.10 Diffuse abdominal tenderness from blunt trauma

Assess mechanism of injury and evidence of high-energy impact

STEP 3

Falls
3.1.1 Adults: > 20 feet (one story is equal to 10 feet)
3.1.2 Children < 15 years old: > 10 feet, or two times the height of the child
High-risk auto crash
3.2.1 Intrusion > 12” patient site or > 18” any occupant site, including roof
3.2.2 Ejection: partial or complete from automobile
3.2.3 Death in same passenger compartment
3.3 Auto vs. pedestrian/bicyclist thrown, run over, or with > 20 mph impact
3.4 Unenclosed vehicle crash > 20 mph

Assess special patient or system considerations

STEP 4

4.1 Age > 65
4.2 Head injury with loss of consciousness AND on an anticoagulant or antiplatelet drug
4.3 Burns with trauma mechanism
4.4 Time sensitive extremity injury (open fracture, neurovascular compromise)
4.5 Pregnancy > 20 weeks with known or suspected abdominal trauma
4.6 Prehospital care provider or MICN judgment
4.7 Amputation or partial amputation of any part of the hand
4.8 Penetrating injury to the globe of the eye, at risk for vision loss

Transport to closest ED or by patient preference