Model Uniform Core Criteria for Mass Casualty Incident Triage
Paramedic – Instructional Guideline Addendum
Standard set of guidelines that all mass casualty triage systems should follow.
The MUCC is intended to ensure consistency among responders when triaging patients at a mass casualty incident.
SALT Triage

Sort, Assess, Lifesaving Interventions, Treatment / Transport
Objectives

- Understand the SALT mass casualty triage method
Special

FOCUS

SALT Mass Casualty Triage

Concept Endorsed by the American College of Emergency Physicians, American College of Surgeons Committee on Trauma, American Trauma Society, National Association of EMS Physicians, National Disaster Life Support Education Consortium, and State and Territorial Injury Prevention Directors Association

It is recognized that there is a need for a national standard for mass casualty triage, because disasters frequently cross jurisdictional lines involving response from multiple agencies. After reviewing all of the existing triage systems, a consensus review panel found that there was insufficient evidence to support 1 system over the others. Using aspects of the existing systems and based on that evidence, SALT be asked to walk to a designated area and should be assigned last priority for individual assessment. Those who remain should be asked to wave (i.e., follow a command) or be observed for purposeful movement. Those who do not move (i.e., are still) and those with obvious life-threatening conditions should be assessed first because they are the most likely to need lifesaving interventions (Fig. 1).
What is Triage?

- French verb “trier” meaning “to sort”
- Assign priority when resources limited
  - Someone has to go last
- Greatest good for greatest number

Source: DoD Photo Library, Public Domain
- Easy to remember
- Easy to apply
- Practical in any environment
- Each patient visibly marked and easily recognizable
Mass casualty incident triage is “the process of prioritizing multiple victims when resources are not sufficient to treat everyone immediately.”
Triage systems and all of their components must apply to all ages and populations of patients.
Triage systems must be applicable across the broad range of mass casualty incidents in which there is a single location with multiple patients.
Triage systems must be simple, easy to remember, and amenable to quick memory aids.
Triage systems must be rapid to apply and practical for use in an austere environment.
History of Triage

• Concept: Dominique Jean Larrey
  – Surgeon-in-chief Napoleon’s Army
• 200 years later...
  – Dozens of systems
  – Many types of triage labels/tools
  – No standardization for mass casualty triage in United States
Development of SALT

- Part of CDC sponsored project
- Develop national standard for mass casualty triage
- Based upon best evidence
SALT Mass Casualty Triage

Step 1 – Sort: Global Sorting
- Walk
  Assess 3rd
- Wave / Purposeful Movement
  Assess 2nd
- Still / Obvious Life Threat
  Assess 1st

Step 2 – Assess: Individual Assessment

LSI:
- Control major hemorrhage
- Open airway (if child consider 2 rescue breaths)
- Chest decompression
- Auto injector antidotes

Breathing
- Yes
  - Obeys commands or makes purposeful movements?
  - Has Peripheral Pulse?
  - Not in respiratory distress?
  - Major hemorrhage is controlled?
  - All Yes → Minor Injuries only?
    - Yes → Minimal
    - No → Delayed
  - Any No → Likely to survive given current resources
    - Yes → Immediate
    - No → Expectant
- No → Dead
Casualties are now prioritized for individual assessment

- Priority 1: Still, and those with obvious life threat
- Priority 2: Waving/purposeful movements
- Priority 3: Walking
Step 2: Individual Assessment

- Provide Lifesaving Interventions
  - Control major hemorrhage
  - Open airway if not breathing (if child, consider 2 rescue breaths)
  - Chest decompression
  - Auto injector antidotes

Step 1 - Sort: Global Sorting

- Walk: Assess 3rd
- Wave / Purposeful Movement: Assess 2nd
- Still / Obvious Life Threat: Assess 1st

LSI:
- Control major hemorrhage
- Open airway (if child consider 2 rescue breaths)
- Chest decompression
- Auto injector antidotes

Breathing
- Yes: Obeys commands or makes purposeful movements?
  - All Yes: Minor Injuries only?
    - Yes: Minimal
    - No: Delayed
- No: Likely to survive given current resources?
  - Yes: Immediate
  - No: Expectant
Individual Assessment

**Triage Categories:**
- Immediate
- Delayed
- Minimal
- Expectant
- Dead

**Step 1 – Sort: Global Sorting**
- Walk
- Assess 3rd
- Wave / Purposeful Movement
- Assess 2nd
- Still / Obvious Life Threat
- Assess 1st

**Step 2 – Assess: Individual Assessment**

**LSI:**
- Control major hemorrhage
- Open airway (if child consider 2 rescue breaths)
- Chest decompression
- Auto injector antidotes

- Breathing:
  - Yes
  - No
  - Deaf

- Likely to survive given current resources:
  - Yes
  - No

- Major hemorrhage is controlled?
- Has Peripheral Pulse?
- Not in respiratory distress?
- Obeys commands or makes purposeful movements?

- Minor Injuries only?
- All
- Any No

- Expectant
- Immediate
- Delayed
- Minimal
Patient is not breathing after opening airway
- In Children, consider giving two rescue breaths
- If still not breathing must tag as dead

Tag dead patients to prevent re-triage

Do not move
- Except to obtain access to live patients
- Avoid destruction of evidence

If breathing conduct the next assessment
Immediate

- Serious injuries
- Immediately life threatening problems
- High potential for survival

Examples
- Tension pneumothorax
- Exposure to nerve agent
- Severe shortness of breath or seizures

Photo Source: www.swsahs.nsw.gov.au Public Domain
Immediate

- No to any of the following
  - Has a peripheral pulse?
  - Not in respiratory distress?
  - Hemorrhage is controlled?
  - Follows commands or makes purposeful movements?

- Likely to survive given available resources
No to any of the following

- Has a peripheral pulse?
- Not in respiratory distress?
- Hemorrhage is controlled?
- Follows commands or makes purposeful movements?

Unlikely to survive given available resources
DOES NOT MEAN DEAD!

Important for preservation of resources
- Should receive comfort care or resuscitation when resources are available

Serious injuries
- Very poor survivability even with maximal care in hospital or pre-hospital setting

Examples
- 90% body surface area burn
- Multiple trauma with exposed brain matter
Delayed

Examples
- Long bone fractures
- 40% BSA exposure to Mustard gas

Serious injuries
- Require care but management can be delayed without increasing morbidity or mortality

Photo Source: Phillip L. Coule, MD
Delayed

- Yes to all of the following
  - Has a peripheral pulse?
  - Not in respiratory distress?
  - Hemorrhage is controlled?
  - Follows commands or makes purposeful movements?
- Injuries are not Minor and require care
Yes to all of the following:
- Has a peripheral pulse?
- Not in respiratory distress?
- Hemorrhage is controlled?
- Follows commands or makes purposeful movements?

Injuries are Minor
Minimal

- Injuries require minor care or no care

- Examples
  - Abrasions
  - Minor lacerations
  - Nerve agent exposure with mild runny nose

Photo source: Phillip L. Coule, MD
After Patients are Categorized

- Prioritization process is dynamic
  - Patient conditions change
  - Correct misses
  - Resources change
Case Study

- Multiple GSW at Local Sporting Event
  - You and partner respond (one ambulance)
  - 8 casualties
  - The scene is safe and additional assistance has been requested
  - What do you do first:
Initial Sorting of Patients

- Walk
  - 2 patients

- Wave
  - 3 patients

- Still
  - 3 patients
- 29 yr male
  - GSW left chest, radial pulse present, severe respiratory distress
- 8 yr female
  - GSW head (through and through), visible brain matter, respiratory rate of 4, radial pulse present
- 50 yr male
  - GSW to abdomen, chest, and extremity, no movement or breathing
Waving

- **14 year male**
  - GSW right upper extremity, active massive hemorrhage, good pulses
  - **DELAYED**
  - ****after tourniquet

- **65 year male**
  - Severe chest pain, diaphoretic, obvious respiratory distress, no obvious GSW
  - **IMMEDIATE**

- **22 year female**
  - GSW right lower extremity, good pulses, no active bleeding
  - **DELAYED**
Walked

- 29 yr male
  - Superficial GSW in the skin of left upper extremity

- 37 yr male
  - GSW left hand. Exposed muscle, tendon and bone fragments, peripheral pulse present
What next?

- Another ambulance arrives and transports 2 of your immediate patients
- Your partner is providing care to the other immediate patient

What do you do next?

- Re-assess
Summary

- SALT Triage
  - Global Sort
  - Individual Assessment
    - Life Saving interventions
    - Assign Category
SALT Triage

Step 1 - Sort: Global Sorting

Step 2 – Assess: Individual Assessment

Lifesaving Interventions:
- Control major hemorrhage
- Open airway (if child consider 2 rescue breaths)
- Chest decompression

Step 3 – Treatment and/or Transport

Walk (Assess 3rd)
Wave/Purposeful Movement (Assess 2nd)
Still/Obvious Life Threat (Assess 1st)

Breathing

Likely to survive given current resources?

All

Minor injuries only?

Yes

Immediate

No

Expectant

Likely to survive given current resources?

Yes

Immediate

No

Expectant

Any no

Immediate

No

Expectant

Obeys commands or makes purposeful movements?
- Has peripheral pulse?
- Not in respiratory distress?
- Major hemorrhage is controlled?

Yes

Immediate

No

Minimal

Yes

Immediate

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Expectant

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Expectant

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Minimal

Delayd

No

Expectant

No

Minimal

Delayd
START Triage

Able to walk?
  Yes → Minimal
  No → Spontaneous Breathing?
    Yes → Obey s commands
    No → Position Airway
      No → Respiratory Rate?
        Yes → Immediate
        No → Immediate
      ≥30 → Immediate
      <30 → Perfusion?
        Radial Pulse absent or capillary refill >2 sec → Immediate
        Present or capillary refill <2 sec → Immediate
      Mental Status?
        Doesn’t obey commands → Immediate
        Obey s commands → Delayed
JumpSTART Triage

Secondary Triage
(evaluate infants first in secondary triage using entire algorithm)

- Able to walk?
  - Yes: Minimal
  - No: Position Airway
    - Respiratory Rate:
      - <15 or >45:
        - Immediate
      - 15-45:
        - Palpable Pulse?
          - Yes: Immediate
          - No: Immediate
    - Palpable pulse?
      - Yes: Immediate
      - No: Expectant

- Breathing?
  - No: Position Airway
    - APNEC:
      - Immediate
  - Some: 5 rescue breaths

- AVPU:
  - “A”, “V”, or “P” (Appropriate): Delayed
  - “P” (Inappropriate), Posturing or “U”: Immediate
Questions?