Tactical Triage

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Traditional Triage

• Numbers based
• Uses cards
• Requires full use of senses
• Predicated on physiological parameters
• Difficult to recall under significant stress
START Triage - A Cautionary Tale.....

‘START triage assumes that patients will be stratified across an acuity continuum (i.e. not all patients will be red). However based on START protocol... This grouping contained a significant percentage of the patient population on this particular night – enough so that this group by itself was overwhelming to most facilities’

Las Vegas AAR
Tactical Triage

Considerations:
- Low light
- Smoke
- Water/blood
- Dynamic threat
- Mass casualties
- Ballistic PPE
International Models of Tactical Triage

Modified Triage

RED or DEAD

Because of the type of injury pattern you are expecting to see in a ballistic environment a commander may invoke modified triage.

This may be because of the number of casualties, the speed required to assess a large number of casualties and the fact that some internal / penetrating injuries may be under triaged using the NASMed Triage Sieve.
International Models of Tactical Triage
2 Categories?

1995: Oklahoma Bombing

- EMS took patients with higher severity and Tx immediately without formal triage
- Concerns for further structural collapse and secondary IED's
2 Categories?

Israeli Approach:

'Get off the X'
International Models of Tactical Triage

Southern Nevada Fire Operations
Orange or Black

Sift and Sort

- Term used to describe the actions of the Force Protection Teams
- Sifting & Sorting is not triage.
- Formal Triage will be performed in an exterior medical area.

- Categories of patients:
  - Walking Wounded (no tag)
  - Litter (marked with an Orange tag)
  - Expectant (marked with Black tag)
C-TECC - ITC Operational Principles

Unless in a fixed patient collection point, triage in this phase of care should be limited to the following categories:

a. Uninjured or minimally injured and capable of ambulation/self-extraction

b. Deceased / expectant

c. All others
More Categories?

Careflight Triage Tool
More Categories?

**PRIMARY TRIAGE**

- **WALKING**: Yes → PRIORITY 3, No → DEAD
- **RESPIRATIONS**: Yes → POSITION AIRWAY, No → DEAD
- **POSITION AIRWAY**: Yes → RESPIRATIONS, No → DEAD
- **RESPIRATIONS**: Yes → PRIORITY 1, No → DEAD
- **UNDER 30/min**: Yes → CAPILLARY REFILL, No → PRIORITY 2
- **CAPILLARY REFILL**: Yes → CONTROL BLEEDING, No → PRIORITY 2
- **CONTROL BLEEDING**: Yes → PRIORITY 2, No → DEAD
- **OBEYS SIMPLE COMMANDS**: Yes → PRIORITY 2, No → DEAD

If you are unable to obtain a capillary refill, check the radial pulse. If absent then control any bleeding and prioritize the patient **PRIORITY 1**.
Science Behind RAMP

• GCS directly correlates with hospital discharge in trauma\(^1\)
  • But we are terrible at scoring GCS

• Following basic commands as substitute\(^2\)
  • Study of 29,573 patients found this the best overall indicator of survival from trauma

• Prehospital trauma patients presenting with absent radial pulse have a significantly higher mortality rate\(^3\)
  • Overall mortality of greater than 50%

• Lack of radial pulse and not following commands\(^4\)
  • 92% mortality rate

• Positive radial pulse and following basic commands\(^5\)
  • 95% survival rate
RAMP Triage Model
(Rapid Assessment of Mentation and Pulse)

Casualty without signs of obvious death

Casualty follows commands?

Yes

Radial pulse present?

Yes

Delayed

No

Urgent

No

Radial pulse present?

Yes

Urgent

No

Expectant/Deceased

Life Saving Interventions
*Control Massive Hemorrhage
*Open Airway
*Chest Decompression
Benefits of RAMP

• Rapid Identification of Most Severely Wounded

• Ease of use

• Easily taught

• No reliance on numbers or critical thinking

• Uses Scientific Evidence
START vs. RAMP
(19 Patient Scenario)

**START**
- Time at Patient
  - 59.53 Seconds
- Triage Accuracy
  - 58%
- Time Until All Reds Off Scene
  - 29:31

**RAMP**
- Time at Patient
  - 45.36 Seconds
- Triage Accuracy
  - 84%
- Time Until All Reds Off Scene
  - 20:17
Average time to apply lifesaving interventions (across both triage systems): 58.4 seconds

Time to conduct triage:
RAMP 24.7 seconds
SMART 50.3 seconds

Accuracy:
RAMP 98%
SMART 76%
Survey Results:
Avg RAMP 4.3/5
Avg SMART 2.69/5

Rate how comfortable you are currently in the application of RAMP/SMART triage:

Rate how easy the RAMP/SMART triage system is to recall and apply:

Rate how likely you would be to apply the RAMP/SMART triage system in an intentional mass violence incident:

How accurate do you think the RAMP/SMART triage system is for identifying the criticality of patients when applied in an intentional mass violence incident?

How fast do you think you can apply the RAMP/SMART triage system to patients in an intentional mass violence incident?
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C-TECC - ITC Operational Principles

Unless in a fixed patient collection point, triage in this phase of care should be conducted using RAMP methodology:

- Apply Lifesaving interventions

  - Assess ability to obey simple commands and presence/absence of radial pulse

  - Assign category:

    - Both: Green
    - One or the other: Red
    - Neither: Black
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References


