
The problem
The World Health Organization classifies an event as a disaster when the normal conditions of existence are disrupted and the level of suffering exceeds the capacity of the hazard-affected community to respond to it. (1) Disasters and Mass Casualty Incidents (MCIs) recurrently cross-jurisdictional lines and involve responders from multiple agencies that may be using different triage methods. (2) It has been more than a decade since the events of September 11, 2001 and this year on August 31, 2015 will mark the 10th year anniversary of Hurricane Katrina, yet there is no single emergency protocol or triage system implemented across many states nor at the national level in the US (Figure 1). (2)

The science
For operational simplicity, interactions operational flow, and clinical efficiency, it is essential for all of the responders at a given incident to use the same triage method. The lack of consistency in disaster and MCI triage methodology can lead to errors that can cost lives or worsen the outcomes of those affected by disasters. (3)(4)

In 2006, the National Association of Emergency Medical Services Physicians (NAEMSP), with funding from the Centers for Disease Control and Prevention (CDC), convened the Sort-Assess-Lifesaving Interventions-Treatment/Triage (SALT) working group consisting of experts from national stakeholder organizations and make a proposal for a single casualty triage approach as a national standard. (2) The SALT working group found that, multiple triage methods have been developed and are in use in the US, such as Simple Triage and Rapid Treatment (START) and Jump START. (3) It was found that none of the triage systems had sufficient scientific evidence to justify national adoption. The development of a new system, SALT triage was an attempt at a system established on scientific basis and where science was unavailable, using expert consensus. (Figure 2) (2). The working group developed the Model Uniform Core Criteria (MUCC), to help ensure compatibility between primary triage tools and standardization. The MUCC consists of four general criteria (general considerations, global sorting, lifesaving interventions and individual assessment) and 24 specific criteria. The criteria are to be used to develop new triage systems, while new triage systems can be modified using these criteria to ensure interoperability (2).

The application to policy and practice
In a 2008 survey of State EMS Offices conducted by the Maryland Institute for Emergency Medical Services Systems (MIEMSS), 34 of 40 responding states reported that the START triage system was either mandated by the state or the most commonly used mass casualty triage system at the local level. (2) Only 18 (38%) states have developed and implemented state-wide protocols and triage guidelines for local Emergency Medical System (EMS) use. (2) Based on the results, the National EMS Advisory Counsel (NEMSAC) recommended the national adoption of the MUCC guidelines.

To this end, the use of SALT is supported by the National Disaster Life Support Foundation (NDLSF) and taught during the course and certification of Advanced Disaster Life Support. SALT has been deemed to be simple to use and easy to remember. (5) Other agencies that back the concept of SALT include 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 the State and Territory Injury Prevention Directors Association (6) into a nationally recognized triage standard

Did it make a difference?
Until now the use of SALT in triage research has been limited to simulation, which indicated that triage accuracy improved if a triage system contains all MUCC components. Improvement and national implementation of the MUCC plan for Disasters and MCI triage in the US could contribute to informing the development of an international model for triage and disasters. A national study of paramedical staff assessing the accuracy and speed of triage after being trained in SALT triage showed that the participants correctly applied SALT to 41 of the 52 patients (78.8% accuracy), with a mean triage time of 15 seconds per patient. (7) In another study of military and civilian responders who were taught SALT for 30 minutes during the mass-triage components of Advanced Disaster Life Support courses, there was an overall 83% accuracy in using the SALT tool, which was higher than the accuracy observed with other triage systems such as the Simple Treatment and Rapid Transport (START), START (48% and 75% accuracy respectively). The responders also felt confident in using SALT triage and believed it to be easier than the triage protocol they had been using prior to SALT. (8)

There is a strong recommendation from the CDC to develop and adopt a uniform standard that meets the MUCC criteria for triage systems. Currently, SALT is the only standard that qualifies. The widespread adoption of a single triage system can help to improve outcomes for patients, improve communication, enhance treatment, increase triage efficiency, and decrease the cost of treatment for the agencies involved. However, a gap in the evaluation of SALT triage in real life disasters at present exists.

Author: S. Toro, MSN, MBA, RN (University of Tennessee, College of Nursing)
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References


