

decontamination. The patient was extubated and discharged without sequelae.

**Results:** To our knowledge, no other human cases of transdermal cyanide poisoning have been reported. Cyanide interferes with mitochondrial oxidative phosphorylation pathways to cause toxicity and death if untreated. However, its effects via transdermal exposure are often delayed compared to exposure via more conventional inhalational routes. This makes recognition difficult and compounds the challenge of long turnaround time for blood cyanide tests. Increased transdermal absorption is possible through intact skin if moistened by sweat.

**Conclusion:** The potential for transdermal HAZMAT absorption from exposure to toxic fumes is underrecognized. It is crucial to maintain vigilance given the challenges in diagnosing transdermal cyanide toxicity and importance of initiating treatment early.

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### Current Disaster Triage Methods in Mass Casualty Incidents

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**Introduction:** Triage in a disaster scenario centers around doing the greatest good for the greatest number of people. There are a variety of triage systems, and to this date there is no US national endorsement of one system because triage is a dynamic procedure and there is no fixed rule for it. The Simple Triage and Rapid Treatment (START); Sort, Assess, Life-saving interventions, Treatment/Transport (SALT); Sacco; CareFlight; JumpSTART; and Pediatric Triage Tape (PTT) triage systems are discussed with emphasis on how they perform.

**Method:** There are approximately 20 adult and two pediatric triage systems that exist for primary disaster triage. The focus is on six primary triage systems. A literature search was performed using textbooks and original research.

**Results:** A basic assignment to immediate, delayed, minimal, or expectant can sort a large group of casualties in a matter of minutes, but improper category assignment can lead to under-triage or over-triage.

When assessed by a trained paramedic arriving at a Level 1 pediatric trauma center, SALT was found to be the most accurate triage system at 59% compared to JumpSTART, CareFlight, and TriageSieve. All triage systems exhibited under-triage rates of at least 33% and SALT had the highest over-triage rate at 6%. In another study, the START triage system was found to be 85% sensitive and 86% specific in predicting critical injury in designated trauma patients.

**Conclusion:** Mass casualty incidents are unfortunately becoming more common as the increasing numbers of violent attacks produce an overwhelming number of victims. One triage process may not work in all disasters, but first responders should be trained to evaluate for the most critical patients in a sea of evolving patient presentations. Furthermore, randomized, controlled

trials in real-world conditions are nearly impossible to perform given the specific circumstances of disasters.

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### Delphi Process Recommendations for Pediatric Disaster Medicine Training Curriculum Key Competencies

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**Introduction:** Children differ from adults, developmentally, physiologically, and psychologically. Additionally, children lack legal agency, and thus rely on adults to gain access to the health-care system and other resources. Though children are often the face of disaster relief, the desperate needs of children can fall through the cracks during disaster response. Many training programs for disaster responders do not give pediatric concerns and issues the appropriate attention they deserve. Pediatric disaster medicine is often minimally addressed in emergency medicine residencies and prehospital provider training. Furthermore, pediatric disaster supplies and protocols are often lacking and insufficient to meet the needs of children during and after disasters.

**Method:** This is a modified Delphi study. An initial set of pediatric disaster medicine competencies from a systematic review of PubMed, EMBase and the gray literature will be presented to an initial group of Subject Matter Experts (SMEs) comment, additions, and edits. This modified set of competencies will then be distributed to a large group of providers with experience in the field. Through a series of surveys, each competency in the curriculum will be rated. Those competencies which achieve a high overall rating will be reported.

**Results:** Data collection and analysis expected to be completed by April 2023.

**Conclusion:** This modified Delphi study will establish and prioritize a set of core competencies for pediatric disaster response based on expert recommendations. The use of such gold standard core competencies to develop discipline-role-specific pediatric disaster training can increase pediatric disaster workforce capacity and competency critically needed to improve pediatric disaster response.

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### Disaster Medical Responder's Course for Training of Field Medical Teams in Singapore

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