

POSTER 9-32

PICE Nomenclature: A New System to Describe Disasters

**Kristi L. Koenig, MD, FACEP,¹ Norman Dinerman, MD,² Alexander Kuehl, MD, MPH, FACS³*

1. Highland General Hospital/University of California-San Francisco, Oakland, California
2. Eastern Maine Medical Center, Bangor, Maine
3. New York Hospital/Cornell Medical Center, New York, New York

Purpose: To develop a nomenclature that concisely describes any disaster.

Methods: Instead of "disaster," a root word "PICE" (Potential Injury Creating Event) was chosen. Every category of PICE that exists then was considered, and descriptive modifiers were developed. Finally, the system was tested using examples.

Results:	Potential Injury Creating Event (PICE) Nomenclature		
A	B	C	PICE Stage
Static	Controlled	Local	0
Evolving	Disruptive	Regional	I
Dynamic	Paralytic	National	II
		International	III

A modifier is chosen from each column and a stage is assigned to each PICE. Column A describes the potential for additional casualties. Column B describes whether resources are overwhelmed, and if so, whether they simply must be augmented (disruptive), or whether they first must be reconstituted (paralytic). Column C describes the extent of geographic involvement. "Stage" refers strictly to the likelihood that outside medical assistance for direct casualties of the event will be needed. Stage 0 means there is little chance, Stage I means there is a small chance (place outside help on "alert"), Stage II means there is a moderate chance (place on "standby"), and Stage III means local medical resources are overwhelmed (dispatch outside resources, commit personnel, prepare remote hospitals). For example, a multiple-vehicle accident in a large city would be a "static, controlled, local PICE: Stage 0."

Conclusion: A new nomenclature for describing disasters is presented. A short phrase communicates the type and amount of outside assistance needed. The model is useful for disaster planning, management, and research.

POSTER 10-18

The Effect of Method of Airway Management on the Outcome of Prehospital Cardiopulmonary Arrest

**Ken Miller, MD, PhD, Kim Salness, MD, Betty O'Rourke, Roberta Maxwell, PhD*

University of California-Irvine Medical Center, Division of Emergency Medicine and the Orange County Emergency Medical Services Agency, California

Purpose: The effect of the method of airway management on prehospital survival of cardiopulmonary-arrest patients of apparent cardiac etiology was evaluated.

Methods: A prospective, prehospital, cardiac-arrest survival study using the Utstein style was conducted over a 20-month period. Patients excluded from the study were under 17 years old, convalescent home arrests, traumatic arrests, drowning, suicide, overdose, and airway obstruction. Patients also were excluded if no definitive airway management was required after some other resuscitative measure such as defibrillation, cardioversion, or brief CPR. The remaining patients (n = 1351) were classified into witnessed and unwitnessed arrest groups, then subdivided according to ECG rhythm: asystole, refractory ventricular fibrillation/tachycardia (VF/VT), and pulseless electrical activity/bradycardia. The preferred method of airway management was endotracheal intubation (ET). When this failed, options were the esophageal obturator airway (EOA) or continued bag-valve-mask (BVM) ventilation. The endpoint studied was prehospital return of spontaneous circulation (ROSC): palpable pulse and measurable blood pressure.

Results: The overall intubation success rate was 77%. The EOA was used in 17% of patients and BVM alone in 6%. The method of airway management did not influence outcome in any group except the witnessed, refractory VF/VT group; the group with the greatest survival to hospital discharge (13%). In this group, there was more ROSC among the intubated patients and fewer among the EOA patients than expected (Chi-square, $p = 0.015$). There was no difference between observed and expected ROSC in BVM patients.

Conclusions: The choice of airway management influenced prehospital ROSC only in those patients with the greatest survival potential based on ECG rhythm, and that in this patient population, survival with ET intubation was superior to that achieved with EOA ventilation.