

Introduction

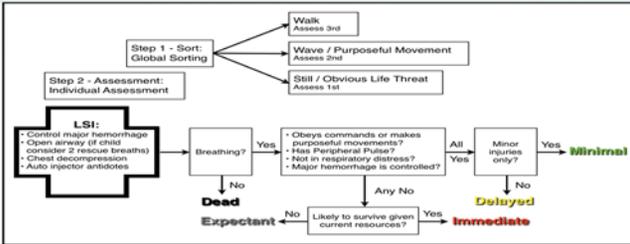


Figure 1. SALT MCI triage tool

- SALT (Sort, Assess, Life-saving interventions, Treatment/Transport) is a mass-casualty incident (MCI) triage tool developed by the Centers for Disease Control and Prevention in 2008
- Emergency Physicians and Emergency Medical Services (EMS) personnel have been shown to accurately apply the triage tool
- The ability of other first-responders (Fire, Police) to triage accurately using SALT has not yet been studied

Objective

- To determine if EMS, fire, and police trainees are able to accurately apply SALT to written MCI scenarios

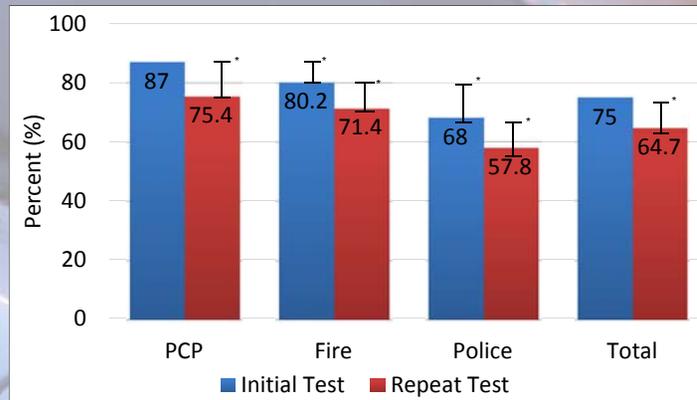
Methods

- A prospective cohort study of Primary Care Paramedic (PCP), Fire, and Police trainees from two colleges in Ontario, Canada (Lambton College, Fanshawe College)
- All trainees in their first year of respective training were invited to participate in the following:
 - 20-minute didactic session on SALT
 - 17-item test on SALT and its application in clinical scenarios immediately after didactic session
 - Identical test 3 months after initial test

- Initial didactic and testing sessions were completed between: Oct-2012 to Jan-2013
- Repeat testing sessions occurred between: Jan-2013 to Apr-2013

Results

- 459 trainees completed the test: PCP 116, Fire 82, Police 261
- Mean (SD) initial test score for all respondents was 75.0% (15.9)
- Test scores were higher for PCPs (87.0%) compared to Fire (80.2%) and Police (68.0%)
- Fire trainees scored significantly higher compared to Police trainees ($\Delta 12.2\%$; 95% CI: 8.3, 16.2)



* significant difference

Figure 2. Mean test scores by first-responder group and test iteration

- At three-month repeat test, all groups showed a significant decline in triage accuracy
- PCP and Fire test scores were similar at three months (75.4% vs 71.4%, $\Delta 4.0\%$; 95% CI: -2.1, 10.1)
- PCP and Fire significantly outperformed Police during both initial and repeat testing

		Truth					
		Dead	Expectant	Immediate	Delayed	Minimal	
Triage As	Dead						
	Expectant	Over		Critical	Critical	Critical	Critical
	Immediate	Over	Over		Over	Over	Over
	Delayed	Over	Over	Under			Over
	Minimal	Over	Over	Under	Under		

Figure 3. Error definition table

- For both initial and repeat testing, over-triage was the most common error, followed by under-triage, then critical error
- During initial testing, 13.5% of responses were over-triage errors, while 8.5% were under-triage errors
- Critical errors, defined as erroneous triage resulting in irrevocable detriment to patient morbidity or mortality, were rare, occurring only in 3% of responses

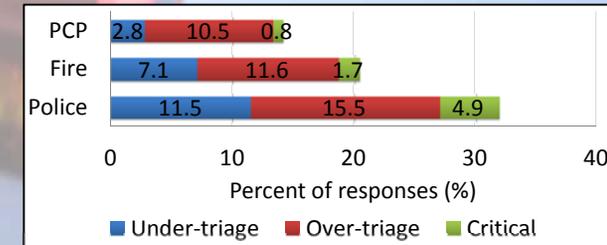


Figure 4. Initial test triage errors

Limitations

- Paper-based testing only
- Only 1st year trainees included in study

Conclusions

- EMS are able to accurately perform SALT triage
- Evidence suggests fire personnel may be able to accurately apply SALT
- Over-triage is the most common error, critical errors are rare
- Knowledge attrition is seen over time, SALT pocket-cards may aid in triage during MCI