

Preparedness Activities for High Threat Events Requires Additional Study



The current guidance for preparing for high threat incidents, including active shooter events, has focused on preventing exsanguinating hemorrhage. The recommendation to distribute tourniquets and hemorrhage control supplies among law enforcement and responders originated from a review of preventable causes of death in Armed Services personnel during combat operations during the Vietnam War, which were confirmed during Operation Enduring Freedom/Operation Iraqi Freedom combat operations. The Health, Medical and Responder Safety SubGroup recommends further review and analysis of the causes of death from active shooter and high threat incidents that have occurred in the United States, with continued refinement of the systems of care and preparation for these types of events.

A preliminary study of the likely causes of death in random active shooter incidents in the United States suggests wound patterns that differ from those documented in the military combat database. In fact, the study investigators were unable to identify any cases of extremity trauma that resulted in exsanguinating hemorrhage. (Smith, Shapiro & Sarani, 2016)

There are several potential reasons for the differences in injury patterns between fatalities from military armed conflicts and active shooter incidents in the United States. One reason may be that military personnel normally wear ballistic protection that covers the head and upper torso, which civilians in an active shooter incident would not be wearing. Wound patterns and medical needs in active shooter situations may also differ from those in incidents involving improvised explosive devices.

Analyzing military combat wound data was a logical first step in developing preparedness plans for active shooter/high violence incidents. A closer examination may yield additional differences between military combat injuries and those that occur during civilian active shooter/high violence incidents. The InterAgency Board highly recommends additional study and data analysis to guide the continued development of our Nation's preparedness activities for these events. Such preparedness activities could include the following:

- Point of wounding care registry in high threat events linked to patient outcomes
- Identification/prediction of wounding characteristics given specific mechanisms of injury
- Qualitative linkages of emergency response agencies (fire, police, and emergency medical services) to trauma systems (emphasizing the importance of coordination)
- Citizen trauma intervention training, such as first care provider/active bystander training

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Analysis of data from active shooter/high violence events could enhance medical preparedness and improve the effectiveness of initiatives that address the needs of victims in these events.

Please contact the InterAgency Board at info@interagencyboard.us with any comments, feedback, and questions. Additional information on the InterAgency Board is available at www.interagencyboard.org.

Smith ER, Shapiro G, and Sarani B. (2016, March 8). The profile of wounding in civilian public mass shooting fatalities. *Journal of Trauma and Acute Care Surgery*. Advance online publication. doi: 10.1097/TA.0000000000001031