Introduction
The recent mass casualty shooting events in America have had a profound effect on all segments of society. The medical, law enforcement, fire/rescue, and emergency medical services (EMS) communities have each felt the need to respond. It is important that these efforts occur in a coordinated manner to generate policies that will enhance survival of the victims of these events. Such policies must provide a synchronized multi-agency approach that is immediately available within the communities affected by such tragedies.

The American College of Surgeons (ACS) brought together senior leaders from all of the aforementioned disciplines to produce a document that will stimulate discussion and ultimately lead to strategies to improve survival for the victims. A day-long conference on April 2 in Hartford, CT, obtained input from medical, law enforcement, fire/rescue, EMS first responder, and military experts. The conference relied upon data and evidence from existing military and recent civilian experiences and was sensitive to the multiple agencies that play a role in responding to mass casualty shootings. The meeting, known as the Hartford Consensus Conference, produced this concept paper titled Improving Survival from Active Shooter Events. The purpose of this document is to promote local, state, and national policies to improve survival in these uncommon but horrific events. This short statement...
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describes methods to minimize loss of life in these terrible incidents.

**Statement of the problem**
Active shooter/mass casualty events are a reality in modern American life. As our experience with these events has accumulated, it has become clear that long-standing practices of law enforcement, fire/rescue, and EMS responses are not optimally aligned to maximize victim survival. Using existing tactics and evolving trauma concepts, the means of improving survival already exist, but have been underutilized. Now is the time to apply these lessons to active shooter events. While efforts to isolate or stop the active shooter remain paramount, early hemorrhage control is critical to improving survival.

**Early hemorrhage control to improve survival**
The response to shooting events has historically involved a segmented, sequential public safety operation first focused on law enforcement goals (stop the shooting), followed by the remainder of the incident, which is typically focused on response and recovery. As we go forward, initial actions to control hemorrhage should be part of the law enforcement response, and knowledge of hemorrhage control needs to be a core law enforcement skill. Maximizing survival requires an updated and integrated system that can achieve multiple objectives simultaneously.

Life-threatening injuries in active shooter incidents such as those in Fort Hood, Tucson, and Aurora are similar to those encountered in combat settings. Military experience has shown that the number one cause of preventable death in victims of penetrating trauma is hemorrhage. Tactical Combat Casualty Care (TCCC) programs, when implemented with strong leadership support, have produced dramatic reductions in preventable death. Recognizing that active shooter incidents can occur in any community, the Hartford Consensus encourages the use of existing emergency medical techniques and equipment, validated by over a decade of well-documented clinical evidence.

The Hartford Consensus recommends that an integrated active shooter response should include the critical actions contained in the acronym THREAT:

- Threat suppression
- Hemorrhage control
- Rapid Extrication to safety
- Assessment by medical providers
- Transport to definitive care

While some may view the addition of hemorrhage control skills as yet another training requirement in times of constrained financial resources, the concepts are simple, proven, and relatively inexpensive; many law enforcement agencies have already adopted them as best practices. Life-threatening bleeding from extremity wounds is best controlled initially through use of tourniquets, while internal bleeding resulting from penetrating wounds to the chest and trunk is best addressed through expeditious transport to a hospital setting. Optimal response to the active shooter includes identifying and teaching skill sets appropriate to each level of responder without regard to law enforcement or fire/rescue/EMS affilia-
HARTFORD CONSENSUS STATEMENT

The Hartford Consensus seeks to improve survival from active shooter events. The use of THREAT and a more integrated response by law enforcement, fire/rescue, and EMS offers communities a mechanism to minimize loss of life in these incidents.

Conclusion

The Joint Committee to Create a National Policy to Enhance Survivability From Mass Casualty Shooting Events. Left to right: Drs. Eastman, Butler, McSwain, Wade, Burns, Jacobs, and Fabbri.

Members of the joint committee working group, left to right: Drs. Butler, McSwain, Eastman, Fabbri, Jacobs, Wade, and Burns.

Integrated response

Care of the victims is a shared responsibility between law enforcement, fire/rescue, and EMS. Optimal outcomes depend on communication between public safety responders. The response to an active shooter event is a continuum that requires coordination between law enforcement and the medical/evacuation providers. Such coordination includes:

- Shared definitions of terms used in mass shooting events
- Jointly developed local protocols for responding to active shooter events
- Inclusion of active shooter events in tabletop and field exercises to improve familiarity with jointly developed protocols

Conclusion

The Hartford Consensus seeks to improve survival from active shooter events. The use of THREAT and a more integrated response by law enforcement, fire/rescue, and EMS offers communities a mechanism to minimize loss of life in these incidents.

The Joint Committee to Create a National Policy to Enhance Survivability From Mass Casualty Shooting Events. Left to right: Drs. Eastman, Butler, McSwain, Wade, Burns, Jacobs, and Fabbri.