

A systematic response to mass trauma: The public, organized first responders, and the American College of Surgeons

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The American College of Surgeons (ACS), through its Committee on Trauma, has worked for more than 40 years to improve the outcomes of traumatic injury through the development and accreditation of trauma centers and organized systems of trauma care throughout the U.S. Data from trauma centers are collected in the National Trauma Data Bank® to allow continuous evaluation and improvement of the care of injured patients. The Committee on Trauma also has a long track record in educating emergency technicians, paramedics, and surgeons through its courses in Prehospital Trauma Life Support and Advanced Trauma Life Support®.

Recognizing that increasing survivability after mass casualty events, such as the shootings at the Sandy Hook Elementary School in 2012 and the Boston Marathon bombing in 2013, must become a national priority, the ACS joined with a group of trauma surgeons and representatives of organized first responders from law enforcement, fire departments, emergency medical services, and the military who came together to frame an improved response system. Their deliberations, published as the Hartford Consensus, recommended an integrated response directed primarily at the control of life-threatening hemorrhage, as specified in the acronym THREAT (*T*hreat suppression, *H*emorrhage control, *R*apid *E*xtrication to safety, *A*ssessment by medical providers, and *T*ransport to definitive care).

A focus of the Hartford Consensus was extremity wounds and the use of kits containing tourniquets and hemostatic dressings on the one hand, and better coordination between law enforcement and medical teams in the triage of their efforts on the other.

In a follow-up meeting several months later, an expanded group of participants, the Hartford Consensus II, advanced the concept that the public—uninjured bystanders or minimally injured

victims—can have a critical role as rescuers. Along with the organized first responders of law enforcement, emergency medical services, and fire/rescue services, the public should be trained in the techniques of hemorrhage control with a focus on the use of tourniquets, pressure dressings, and hemostatic agents until transport and definitive treatment can be implemented. An important component of their thinking was that some lives may currently be lost through caution: the standard approach is to cordon off the zone of casualties, a wide “hot zone,” until it has been ensured that all threats have been suppressed. It was suggested that the plan should be modified to allow earlier access to victims outside the real hot zone, the location of the active shooter or possible bomb. Agreement on new systems of integration and coordination between law enforcement and other teams of responders is needed to ensure the mutual understanding and sequencing of roles.

Hartford Consensus III, which met in April 2015, was further expanded with representatives from the Department of Defense, the National Security Council, the Federal Emergency Management Agency, the Department of Homeland Security, the ACS, and the public. The tenets of the previous consensus conferences were upheld, but there was a critical addition: an emphasis on the role of the immediate responder—the inadvertent bystander—in controlling life-threatening external hemorrhage.

Organized first responders

Organized first responders—including members of law enforcement, fire services, and emergency medical services—can be equipped with hemorrhage control kits containing tourniquets and hemostatic aids. Combat soldiers do not go out on the battlefield

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without such kits. However, the public bystander who happens to be at the scene will not have immediate access to a formal tourniquet even if a kit could be placed in the trunk of every car or on the wall beside every automatic electrical defibrillator. The window of opportunity to save a life by controlling major arterial hemorrhage from an extremity wound may be as short as five minutes; there is no time to run to the car or find the location of a wall-mounted kit. Bystanders should be trained and empowered (given “permission,” as William Fabbri, MD, FACEP, Director of Operational Medicine of the Federal Bureau of Investigation, said) to go forward immediately—before and until a tourniquet kit can be found—and apply pressure to stem the bleeding temporarily until a tourniquet can be applied or use a belt or article of clothing as a makeshift tourniquet (the latter method is somewhat controversial). Lives were saved by such actions following the Boston Marathon bombing. Every bystander carries a set of tools at all times to control hemorrhage: his or her hands. Training in hemorrhage control should take its place alongside training to perform cardiopulmonary resuscitation or the Heimlich maneuver. As concluded in the Hartford Consensus III, immediate responders—the public bystanders—must follow the injunction “See Something, Do Something”; stated otherwise, “Stop the Hemorrhage; Save a Life.”

Next steps?

The messages of the Hartford Consensus Conferences need to be disseminated to major organizations, including the business community, and to the public. These groups—all of us—must be educated and trained in the imperatives and techniques of immediate response to catastrophic injury, particularly the control of life-threatening hemorrhage. To this end, the ACS, with the endorsement of its Board of Regents, is jointly sponsoring this compendium with the National Security Council, which has been charged by the White House to develop a policy to enhance the resiliency of the American public. It is intended that the present document will move the agenda forward. ♦

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