The mission of the Hartford Consensus is to develop basic principles to improve victim survival by promoting more effective local responses to active shooter incidents. From the inception of this project following the 2012 Sandy Hook Elementary School tragedy, physicians from the Federal Bureau of Investigation (FBI) have worked with the American College of Surgeons Committee on Trauma in applying what is known about these incidents to the guidance developed by the consensus group.

At the initial meeting in 2013, the Hartford Consensus participants collectively observed that the elements of a more effective response to these events already exist in many communities. These components fall within the responsibilities of law enforcement, emergency medical services, and rescue services, as well as the emergency and surgical services of receiving hospitals. To be effective, these elements of the response must be organized, coordinated, and deployed through plans compatible with the resources currently available in a given community.

The capabilities of local public safety agencies, along with the organizational philosophies and risk tolerance of these agencies, vary across the country. Hospital capabilities also vary widely with respect to the ability to receive multiple simultaneous trauma cases, a particularly challenging problem in rural locations. In spite of these challenges, what we know about active shooter incidents tells us that these violent acts occur in communities of all sizes throughout the country and appear to be increasing in frequency. This history supports the need for emergency action planning in every community. No single approach to improving survival in active shooter incidents is universally applicable; however, common principles apply to response in any community.

Although these incidents have been well publicized for almost a half century, the 1999 Columbine High School incident was a sentinel event resulting in major changes in police response to hostage situations involving armed perpetrators.1,2 Many departments have adopted a model of rapid, dynamic engagement of active shooters as a lesson learned from Columbine. This approach by police, intended to minimize the number of victims by bringing the incident to a more rapid conclusion, alters the problems faced by the trauma care system that will receive casualties from the incident and has implications for both emergency medical services and receiving hospitals. In addition to ending the incident more quickly, this approach provides earlier access to victims requiring emergency hemorrhage control. The survival of this subset of victims presents challenges to all participants in the response system, from point of injury to definitive care in the surgical suite. The Hartford Consensus views hemorrhage control as second only to engaging and defeating the shooter and as key to improving the survival of victims of active shooter incidents.

The Hartford Consensus recommends that police departments train and equip their officers to perform initial hemorrhage control measures using hemostatic dressings and tourniquets. It also urges emergency medical and rescue services to train and equip their personnel to work more closely with the police in terms of both time and distance. The overarching result envisioned is fewer injuries because of rapid termination of the active shooter threat, followed by rapid control of externally compressible hemorrhage by police and emergency medical and rescue services, with expedited identification and evacuation to surgical intervention of victims with suspected internal hemorrhage.

The law enforcement community has made substantial gains in training and equipping officers to rapidly engage the active shooter threat and provide emergency hemorrhage control when the threat is terminated. As part of a presidential directive...
These violent acts occur in communities of all sizes throughout the country and appear to be increasing in frequency.
HARTFORD CONSENSUS COMPENDIUM

CHARACTERISTICS OF ACTIVE SHOOTER INCIDENTS, 2000–2012

<table>
<thead>
<tr>
<th>Locations</th>
<th>40% occurred in offices, stores, and industrial sites 29% occurred in schools and colleges</th>
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</thead>
<tbody>
<tr>
<td>Shooter</td>
<td>All involved a single shooter</td>
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<tr>
<td>Shooting</td>
<td>51% were still in progress on arrival of police</td>
</tr>
<tr>
<td>Engagement of shooter</td>
<td>43% of attackers continuing fire on officer arrival were fired upon by officers</td>
</tr>
<tr>
<td>Wounding of police</td>
<td>15% of officers engaging a shooter in exchange of fire were shot</td>
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Note: N = 110. In a 2000–2013 study (N = 160), less than 2 percent of incidents involved more than one shooter.


events occurred per year. Since 2009, that figure has increased threefold. A recent study by the Texas State University (TSU), San Marcos, conducted in concert with the Department of Justice, was based on police reports, public records, and media reports for 2000–2012. The increased frequency of incidents seen in this study is not explained by changes in case definition or solely on the basis of increased case reporting. Characteristics of active shooter incidents from 2000 to 2012 are presented in the table on this page.

The TSU study also observed that most active shooter incidents (40 percent) occurred in offices, stores, and industrial locations. Schools and colleges were the next most common locations for these events, at 29 percent. The assailant moved between multiple locations in almost one-fifth of incidents and had no apparent connection to the shooting location almost half of the time. Shooting was still in progress on arrival of the first responding officers half of the time. This initial response was often by one or two officers. Officers responding to shooting in progress engaged the shooter in 43 percent of cases. If the officer engaged the shooter, that officer was shot 15 percent of the time. All 110 incidents in the TSU study involved one attacker. In a study of 160 incidents, 98 percent involved a single shooter. In both studies the median number of victims was five.

Similarly, the effect of improvised explosive device (IED) attacks in the U.S. is not fully appreciated. The Boston Marathon bombing of 2013 is rightly remembered as a signal tragedy, but the number of injuries received by victims of IEDs from criminal behavior is not widely recognized. In the period from 1983 to 2002 there were more than 36,000 explosive incidents,

REFERENCES

continued on next page
Within the FBI itself, first aid training emphasizing hemorrhage control has been extended to all 13,000 special agents.

caus[...]

Relatively unsophisticated IEDs can have serious effects, as was the case in Boston, where 264 victims included 70 hospitalizations, 16 amputations, and three deaths. One estimate of the damage resulting from the Boston attack placed the economic impact at $400 million.

Unlike the threat of terrorist attacks envisioned after 9/11, which were thought more likely to occur at high-profile events in major urban areas or at installations of national infrastructure, these data indicate that any community of any size is at risk. No single preventive measure, such as hardening school buildings or training teachers in emergency response, will substitute as a comprehensive response plan. Active shooter incidents do not occur solely, or even predominately, in schools and institutions of higher education.

Community leaders, including law enforcement officials, emergency medical and rescue service chiefs, and hospital-based clinicians, all play key roles in the survival of victims of intentional mass casualty events. It is fortunate that the basic elements of an effective response are already present in much of the country, but the reaction to these events is as much a problem of organization and cooperative effort as it is a matter of police tactics and clinical acumen. It is also a test of community leadership and of common determination that knowing and dealing with a threat is far superior to dismissing it as unlikely to occur in one’s presence. These events, fortunately, are rare. However, although the individual risk to citizens is small, the demonstrable increase in active shooter incidents in recent years and the disproportionate potential effect of IEDs represent a continuing collective threat. It is within our power to address the threat appropriately.

REFERENCES (CONTINUED)


