United States Active Shooter Events from 2000 to 2010:
Training and Equipment Implications

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Executive Summary

In the wake of the tragic active shooter attack at Sandy Hook Elementary School in Newtown, CT, police administrators are struggling both to respond to their citizens' concerns and to ensure that their departments are prepared should an attack happen in their jurisdictions. To provide administrators with accurate information to make informed policy decisions, we assessed every active shooter event that we were able to locate that occurred between 2000 and 2010. It is our hope that the information contained here will provide police administrators with the data needed to base their active shooter preparations on empirical evidence.

Key Research Findings
- 84 Active Shooter Events (ASEs) occurred between 2000 and 2010.
- The frequency of ASEs appears to be increasing.
- Business locations were the most frequently attacked (37%), followed by schools (34%), and public (outdoor) venues (17%).
- The median number of people killed during ASEs is 2. The median number shot is 4.
- The most commonly used weapon was a pistol (60%), followed by rifles (27%), and shotguns (10%).
- Attackers carried multiple weapons in 41% of the attacks.
- Body armor was worn in 4% of cases.
- Improvised Explosive Devices (IEDs) were brought to the scene in 2% of cases.
- Some shooters attempted to deny police access to the attack site through the use of barricades.
- The attacks ended before the police arrived 49% of the time. In 56% of the attacks that were still ongoing when the police arrived, the police had to use force to stop the killing.
- EMS entry to the attack site is often delayed because the police must conduct a thorough search of the scene in order to declare it secure.

Key Training Implications
- Outdoors – Officers must be prepared to operate outdoors.
- Expect a Fight – Training must not assume that the attacker will be dead or give-up without resistance.
- IED Awareness – Officers should be trained to identify IEDs and procedures for dealing with IEDs.
- Breaching – Officers should be taught skills that allow them to defeat barricades.
- Medical – Officers should be provided with training that will allow them to stabilize victims long enough for either EMS to enter the scene or for officers to transport victims to the EMS casualty collection point.

Key Equipment Implications
- Medical – Officers should be issued the equipment they need to provide immediate lifesaving aid.
- Hard Body Armor – Officers should be issued plate carriers to increase their survivability.
- Patrol Rifles – Officers should be equipped with rifles to allow them to more effectively resolve ASEs.

U.S. Active Shooter Attacks from 2000 to 2010: Training and Equipment Implications

Since the Columbine High School attack in 1999, Active Shooter Events (ASEs) have captured a substantial amount of public and police attention. While this attention waxes and wanes, the tragic attack at Sandy Hook Elementary School in Newtown, CT has brought ASEs back to the forefront of the public's attention. Police administrators across the country are responding to their citizens' concerns. The purpose of this report is to provide administrators with as complete a picture as possible of the ASEs from the last decade, so that police administrators can take a data-driven approach to their active shooter programs. This report will proceed by identifying the methodology used to identify and code active shooter events, presenting the results of this research, and finally discussing the implications of this information for training and equipping officers.

Methodology

Search Strategy

Lexis-Nexis was utilized to search news stories from 2000 to 2010 for active shooter events in the United States using the following search terms: Active shooter, mass shooting, shooting spree, spree shooting, business shooting, mall shooting, and school shooting. Possible active shooter events were identified from these searches and then evaluated to see if they met the following definition of an active shooter event: An active shooter event involves one or more persons engaged in killing or attempting to kill multiple people in an area (or areas) occupied by multiple unrelated individuals. At least one of the victims must be unrelated to the shooter. The primary motive appears to be mass murder; that is the shooting is not a by-product of an attempt to commit another crime. While many gang-related shootings could fall with-in this category, gang-related shootings were excluded from this study because gang related shootings are not considered to be active shooter events by the police (NYPD, 2011). Two coders examined each candidate event to see if it met this definition. They agreed 100% of the time regarding whether or not a case should be included or excluded. Through this process, we identified 84 active shooter events from 2000-2010. The breakdown of these events is presented in Figure 1. It is worth noting that while this report does not cover 2011 and 2012, our tracking indicates that the increased number of attacks continued in those years.

Figure 1. Frequency of ASEs by Year.
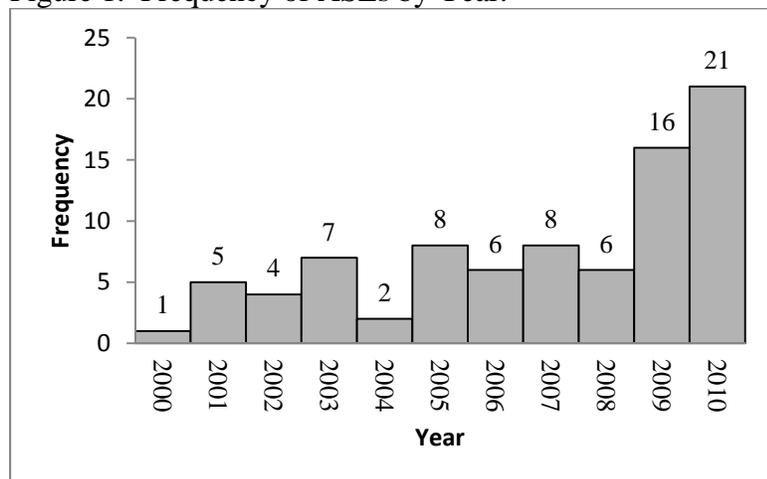
In order to examine the completeness of our list, we checked the events that we had identified against other lists/collections of active shooter events. For example, it is common in the wake of an active shooter event for newspapers to publish lists of similar events. We also compared our list of events to the list of shootings published in the NYPD (2011) report and other existing collections (Lieberman, 2008 and Smith & Supiano, 2008 for example). In no instance did we find a case in one of these other sources that we had not identified through our search process. While it is always possible that we missed a case, we believe that the collection of events presented here is close to the complete population of events that occurred in the United States in the last decade.

Data

In order to analyze the events, we first had to gather accurate data. The data presented here were taken from three sources: reports from the investigating agency(ies), the Supplemental Homicide Reports (SHR) produced by the FBI, and news stories. We considered the investigating agency reports to be the most valid data, followed by the SHRs, and news reports were considered the least reliable. If the data that we sought to code were reported in the agency reports, we used it. If the agency reports did not contain the data, we sought it in the SHRs, and finally, if the data was not available elsewhere, we obtained it from the news reports. When we were forced to use news reports, we used the most recent story that we could find. We believe that this improved the reliability of the information because this gave the story more time to mature and the reporter more time to gather accurate information. Overall, when a particular piece of data was available from all three sources, the reliability between the sources was quite high.

Agency reports were obtained through freedom of information requests. Out of the 84 events in the last decade that we identified, 42 (50%) agencies supplied us with the requested information. We were able to locate data on 46 of the 84 (55%) events in the SHRs. If the event did not include a homicide, it was not listed in the SHRs. Also, Florida is absent from all the SHRs and we were simply unable to locate 19 (23%) of the events. As mentioned previously, we used news stories to identify the events, so that we had news reports on all 84 events.

Coding

Next, we coded the information so that it could be analyzed. Two coders assessed the variables that are reported here. Coder agreement on the variables ranged from 77% to 100%. This is well above the 70% that is generally considered acceptable in social science research.

Results

The results presented here are focused on the information that we believe is most relevant to training and equipment considerations. More detailed information will be available in our forthcoming book (Active Shooter Events and Response from CRC Press). The results are divided into sub-sections that focus on the characteristics of the events, the shooter, and how the event was resolved.

Characteristics of the Events

Locations. Figure 2 shows the primary attack location of the ASEs. Businesses were the most frequently attacked location (37%), but schools were close behind (34%). It is also

important to note that 17% of the attacks occurred in what we defined as public venues. Our definition of these is an outdoor area. The other category includes attacks on churches, military bases or locations that are not schools, businesses, or outside. Not all of the ASEs occurred in a single location. About 20% of the attackers went mobile either by walking to another nearby location or driving to a different location.

Figure 2. Attack Locations.
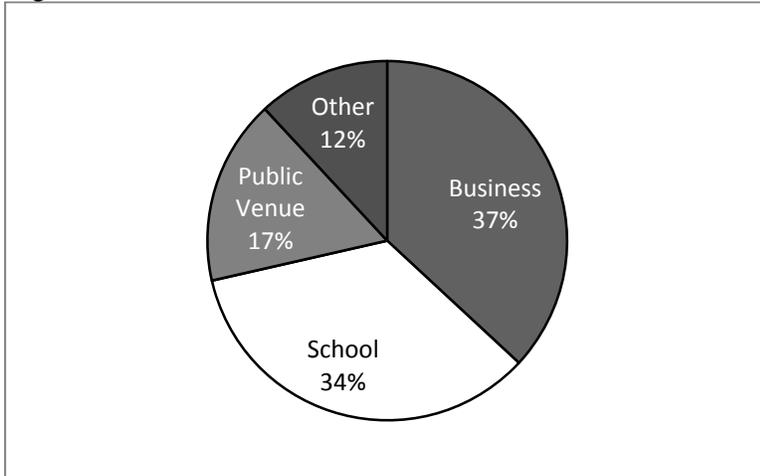
Number Shot and Killed. Figure 3 presents the number of people shot in each ASE. The number of people wounded in the events ranged from a low of 0 to a high of 48. Because the distribution of the data is not normal, the median (or middle value) is probably the best measure to summarize the average number shot. The median number of people shot was 4. The number of people killed follows a similar pattern. The number of deaths ranged from 0 to 32. The median number of deaths was 2.

Figure 3. Number of People Shot
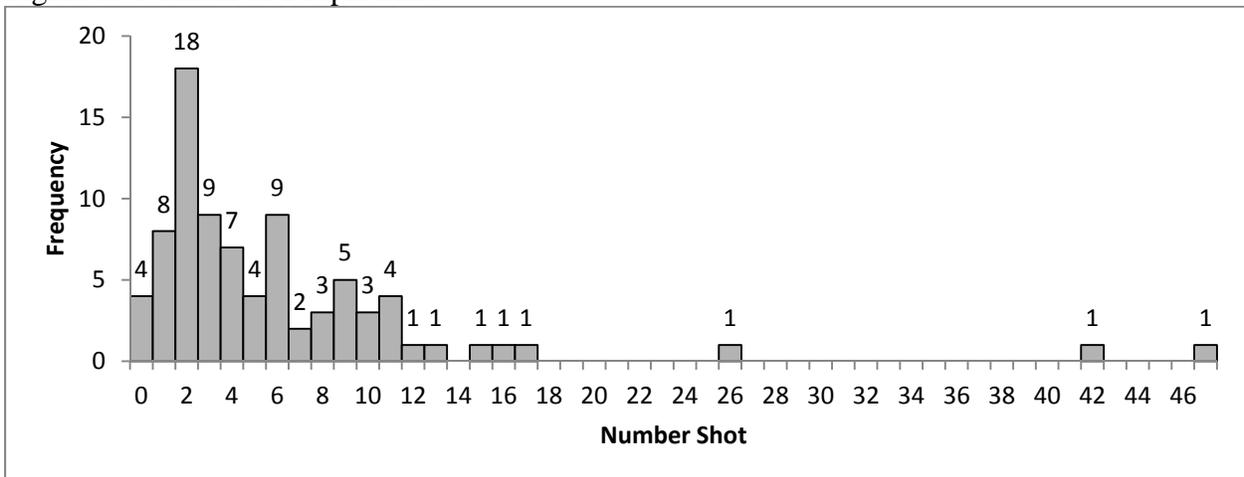
The Shooter

    Weaponry. The most powerful weapon carried by the attackers is presented in Figure 4. A pistol was the most powerful weapon used in the majority (60%) of the events. Rifles were used in 27% of the attacks and shotguns in 10%. In 41% of the events, where we were able to identify the weapon(s) that the attacker carried, the attacker carried multiple weapons.

Figure 4. Most Powerful Weapon
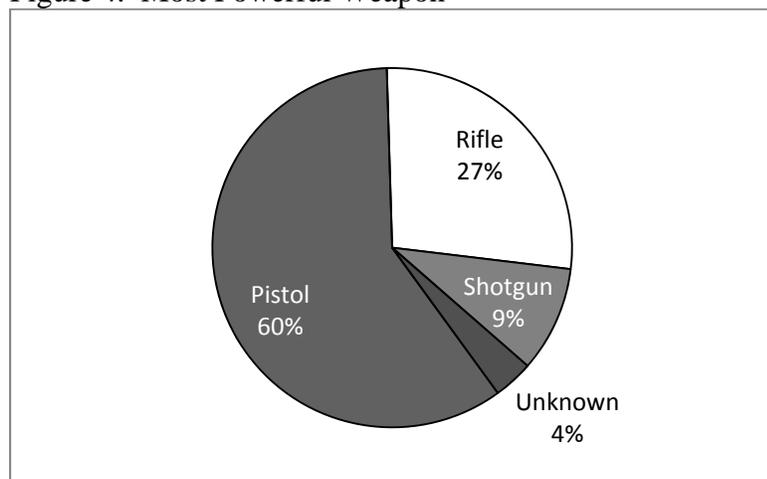
    Other Equipment. The shooters wore body armor in 4% of the attacks. In 2% of the attacks, the attacker brought Improvised Explosive Devices (IEDs) to the attack location.

    Other Behaviors. In at least three incidents, the shooter took actions that either slowed law enforcement entry into the building or prevented potential victims from escaping. These actions included chaining doors shut, barricading windows, and using a vehicle to block an exterior exit.

Resolution of Event

    We considered an event to be resolved when the attacker had stopped shooting people. We split the resolution of the event into two broad time frames. These were whether the event was resolved before the police arrived on scene or after. In the cases where we were able to make this determination, the attack was over before the police arrived 49% of the time.

    Figure 5 is a graphic representation of how these events were resolved. In the 41 events that ended before the police arrived, the attacker stopped the attack by killing himself on 21 occasions and simply left the scene in 4 cases. The potential victims at the attack site stopped the attacker themselves in 16 cases. In 13 of these cases, they physically subdued the attacker. In the other 3 cases, they shot the attacker.

    When the attack ended after the police arrived, the attacker was about equally likely to stop the attack himself (by surrendering or committing suicide) as he was to be stopped by police use of force. The attacker committed suicide in 13 instances and surrendered in 6. The police shot the attacker to resolve the event in 17 cases and subdued the attacker using other methods in 7.

Figure 5. Resolution of Active Shooter Events in the U.S. (2000-2010)
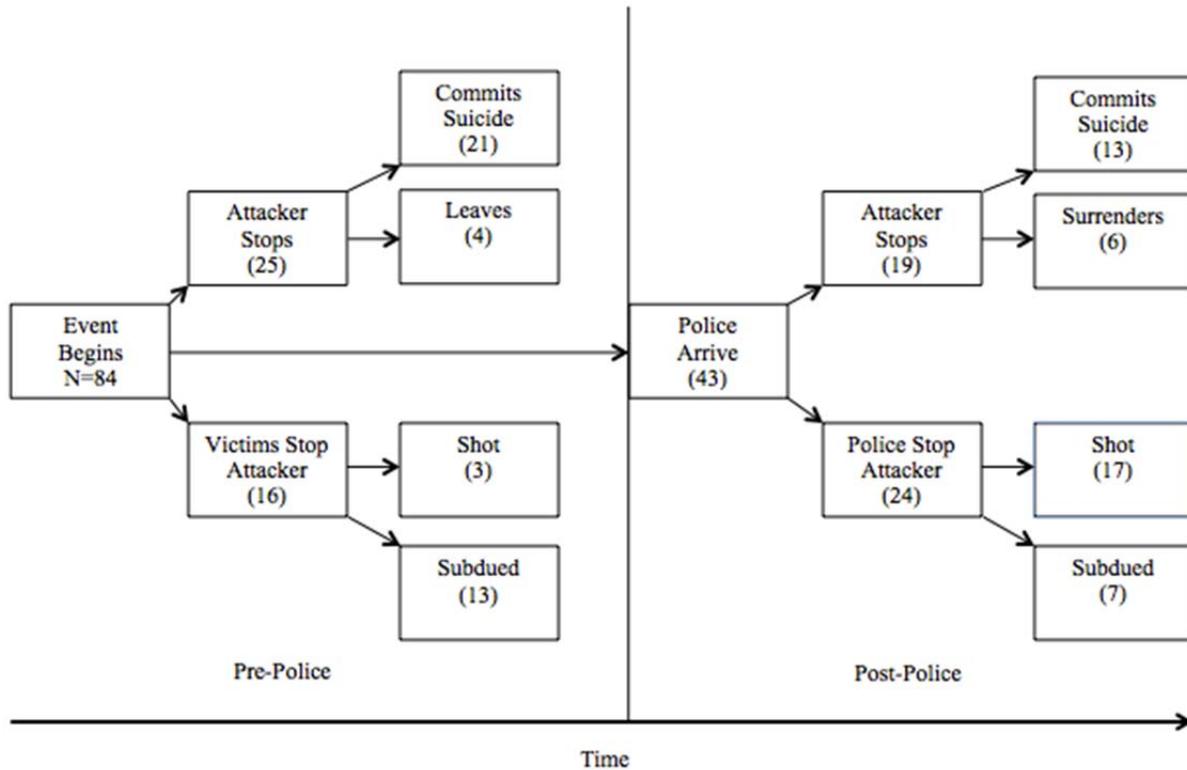
EMS Response

     Standing policy in most jurisdictions is that EMS personnel do not enter scenes that have not been declared secure. This creates an issue during many ASEs. Often the responding officers find the shooter and deal with him, but they are unable to declare the scene secure due to the conflicting suspect descriptions reported to 911 and first responders. In other cases, incorrect reports claiming that a shooter is at some other location are received. The result of this misinformation is that the police must often engage in a systematic search of the attack site before the scene can be declared secure. If the attack occurred in a large building, this search can take hours to complete. During this time, victims who have been shot are continuing to bleed and may hemorrhage to death.

Training and Implications

Outdoors

     Because approximately 1/5 of ASEs occur outdoors and 1/5 of attackers go mobile, training should address operating in outdoor environments. This is critical because the movement techniques and formations that work effectively outdoors are different from those that work indoors in close quarters battle (CQB) situations. Applying CQB tactics in an outdoor environment can be fatal.

Expect a Fight

Police used force to stop the killing in 28% of all the active shooter events that we identified. Deadly force was used in the majority (71%) of these cases. While it is true that many active shooters will kill themselves either before the police arrive or when the attacker becomes aware that the police are on scene, the shooter aggressively fights the responding police officers in many cases. Officers must be trained in tactics that will allow them to defeat the shooter should it become necessary. It is not enough to simply hope that the attacker has or will commit suicide.

IED Awareness

While IEDs are uncommon during active shooter events, they have still been encountered. Because of this, police officers should receive at least awareness level training regarding IEDs. This training should include the identification of and response to IED threats during an active shooter scenario.

Breaching

Because some attackers have attempted to prevent the police from entering attack locations by barricading doors and/or windows, responding officers should be taught basic breaching skills. The skills commonly taught to patrol officers fall into two categories: mechanical/manual and ballistic. Mechanical/Manual breaching involves the use of human powered tools (such as rams and pry bars) to gain entry. Ballistic breaching usually involves the use of a shotgun to breach into the attack location.

Medical

Because EMS will not enter an unsecured scene, police officers should be trained to deliver immediate lifesaving care that can stabilize victims until higher levels of care can be provided. This medical training primarily involves teaching officers to control hemorrhaging using a few simple adjuncts (including tourniquets). The Committee for Tactical Emergency Casualty Care (c-tecc.org) has developed standards for this type of training.

Equipment Implications

Medical

If officers are going to be trained to deliver immediate lifesaving care, they should receive the equipment needed to provide that care. The primary piece of equipment is a tourniquet. A variety of venders also sell wound care kits. This equipment has also saved lives during non-active shooter crises. For example, a patrol officer, on a motorist assist stop, was struck by a drunk driver in San Antonio, TX, severing the officer's leg. Another officer was immediately on scene and applied a tourniquet. The tourniquet stopped the bleeding and saved the injured officer's life.

Breaching

While officers can, in many cases, breach into an attack site using improvised tools, breaches can generally be created more quickly and reliably using inexpensive and commercially available breaching tools. These tools include pry bars, rams, sledgehammers, and Halligan Bars. A variety of shotgun breaching rounds are also widely available. These rounds are

typically designed both to enhance the breaching effectiveness of the round and prevent over-penetration that may injure unintended victims on the other side of the breach point.

Hard Body Armor

Because a substantial number of attackers are willing to fight responding officers and carry rifles that will defeat the standard soft body armor, there is a need to upgrade the defensive capabilities of the responding officers. Simply stated, hard body armor (i.e. a plate carrier) is needed to provide officers with ballistic protection from rifle rounds. Other equipment (such as medical gear) can often be attached to plate carriers allowing them to function as "go bags" during active shooter (or other critical) events. If we are going to ask officers to go into attack scenes and confront armed gunmen, we owe it to the responding officers to give them the best possible chance to survive and win the encounter.

Patrol Rifles

Approximately 1/5 of active shooter events happen in outdoor spaces. Engagements in these locations will often happen at distances beyond which most officers can effectively engage threats with a pistol. Additionally, many of the active shooter events that happen indoors occur in facilities with large open areas such as hallways in schools or courtyard areas in shopping malls. Rifles are far more accurate weapon systems than pistols and allow officers to place precision shots at much longer distances. Recall also that more than ¼ of attackers are armed with rifles themselves. At the very least, we should place officers on an equal footing with their adversaries.

While it is not common for active shooters to wear body armor, some do. Pistol fire will generally not penetrate this armor. A poignant example of this occurred during the North Hollywood shootout in 1997. During this shootout, two bank robbers with soft body armor were engaged by police officers with pistols for more than 20 minutes before SWAT members with rifles arrived and incapacitated the robbers. It is critical that responding officers be equipped to stop the killing as quickly as possible during ASEs.

References

Lieberman, J. A. (2008). School shootings: What every parent and educator needs to know to protect our children. New York: Kensington.

New York Police Department (2011). Active shooter: Recommendations and analysis for risk mitigation. New York: New York Police Department.

Smith, L. & Supiano, B. (2008, February 15). Major shootings on American college campuses. Chronicle of Higher Education.

Active Shooter

Events and Response

About the book:

The Columbine tragedy in 1999 and other more recent active shooter scenarios—including the 2012 shooting at Sandy Hook Elementary School on December 14, 2012—have led police agencies to reconsider what has been their traditional approach to these events. It has become increasingly apparent that a different strategy is needed to deal with Active Shooter Events (ASE), and that simply containing shooters is not an effective means to protect the public. Despite numerous ASE training programs which have sprung up throughout the United States, yet to date, no set of best practices has emerged. This book fills this void, dispelling common myths about ASEs and providing a definitive model for effective response to active shooter events.

Key features:

- Includes analysis and research of active shooter incidents and scenarios from the last several years to inform procedural best practices
- Offers tactical planning, protection, and law enforcement response options to mitigate the damage an active shooter can inflict
- Presents ideas for training and informing potential victims of active shooter scenarios about ways they can escape, hinder, or overcome active shooters in various situations
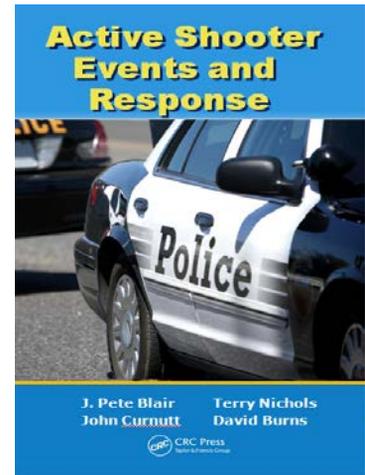
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