Exploring the Active Shooter/Hostile Event Response (ASHER): Is Southington Prepared?

Glenn Dube

Southington Fire Department, Southington, Connecticut

Certification Statement

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

Signed: _____

Date: 11/1/19

Abstract

The problem was the Southington Fire Department lacked a procedure for active shooter/hostile event response (ASHER). This left the department at risk of not being able to adequately respond should an ASHER incident occur. The purpose of this research was to identify the components and best practices of active shooter/hostile event response procedures applicable to the Southington Fire Department. Descriptive methodology was used to guide the following research questions: (a) What are the national standards regarding active shooter/hostile event responses? (b) What are the components of an active shooter/hostile event response program? (c) What training is required to implement such a program? (d) What equipment is required to implement an active shooter/hostile event response? A literature review of ASHER incidents and programs was conducted. The procedures used to collect data were a questionnaire and two personal communications. The results showed that while the majority of departments had or were developing ASHER programs, a significant minority had no ASHER training or program. The recommendations were to: (a) develop a program and related procedures for Active Shooter/Hostile Event Response calls, (b) make use of existing strong interagency relationships to increase joint training opportunities across all response genres, including ASHER incidents, (c) develop a thorough cost analysis and budget impact of all aspects of an ASHER program and include those costs in future budget requests in order to continually and successfully support the program, (d) explore and apply for all possible grant funding streams in order to reduce the budget impact of an ASHER program, and (e) increase existing public education programs to include ASHER related awareness programs such as *Stop the Bleed* and location lockdown procedures.

TABLE OF CONTENTS

Exploring the Active Shooter/Hazardous Event Response (ASHER): Is Southington Prepared?

Acts of mass violence in the United States have become an issue that no fire department, regardless of size, can fail to prepare for or ignore. The communities affected by these incidents are as varied as the United States itself. Whether it is an outdoor concert in Las Vegas, Nevada, a church in a rural Texas town, or an elementary school in an affluent Connecticut suburb, it is inarguable that fire departments in every jurisdiction must be prepared for the possibility of an act of mass violence striking their jurisdiction.

An active shooter/hostile event response (ASHER) incident involves all aspects of the public safety realm. Fire departments, police departments, and EMS agencies respond and interact with each other, as well as agencies at both the state and federal level. It is therefore crucial that local agencies are well versed, equipped, and trained in response to ASHER incidents.

The problem was the Southington Fire Department lacked a procedure for active shooter/hostile event response. The purpose of this research was to identify the components and best practices of active shooter/hostile event response procedures applicable to the Southington Fire Department. Descriptive methodology was used to guide the following research questions: (a) What are the national standards regarding active shooter/hostile event responses? (b) What are the components of an active shooter/hostile event response program? (c) What training is required to implement such a program? (d) What equipment is required to implement an active shooter/hostile event response program?

Background and Significance

Southington, Connecticut is a suburban community located in the Hartford metro area 15 miles west of the state capital (Southington.org, *Town profile*, 2016, p. 2). The population of the town is approximately 43,000 ("Southington history," n.d.). It is a predominately middle-class community consisting of slightly more than 17,000 residential occupancies and approximately 1,200 businesses (Southington.org, *Town profile*, 2016, p. 1). The average home sale price for the latest data year, 2013, was $267,800, which is approximately $35,000 higher than the Hartford County average. Median household income for the period 2012-2016 is $88,214 (Southington.org, *Town profile*, 2016, pp. 1-2). The Board of Education in Southington operates a total of 12 schools, consisting of eight elementary schools, two middle schools, one high school and one alternative education facility for high school age students (Southington schools' website, schools tab, n.d.). The system enrolls 6,500 students with a four-year graduation rate of 94.7% (Southington.org *Town profile*, 2016, p. 1). The town covers 36.8 square miles ("Southington history," n.d.), including two interstate highways, a community hospital, five extended care facilities, a ski area and an amusement park.

The Southington Fire Department is a combination organization consisting of approximately 94 members (60 volunteer and 34 career) operating out of four stations. Current shift staffing is seven with a minimum staffing of six, consisting of a battalion chief, one captain, one lieutenant and three to four firefighters per shift. Supplementing the on-duty firefighters are three companies of volunteer firefighters with career firefighters able to respond on overtime callback if the volunteer members are requested for a call. The department fleet consists of six engines, two ladders, one tanker, one heavy duty rescue, one light duty rescue, and nine staff vehicles. In 2018 the department responded to 2,323 calls for service (*National Fire Incident*

Reporting System, 2018). Ambulance transport and paramedic service is provided by American Medical Response (AMR) Ambulance, with both the fire and police departments providing supplemental first responder emergency medical care.

The Southington Police Department is a municipal organization consisting of approximately 68 uniformed officers (Southington Police Department, 2017). In addition to the uniformed members, Southington's 911 center is located within the police department. It is staffed by 14 dispatchers, with two to three individuals working per shift, depending on the time of day (Southington Police Department, 2017). While the fire and police departments enjoy an excellent collaborative working relationship, there is currently little joint training occurring between the two organizations. Additionally, training between either of the departments and AMR is nonexistent.

One of the often-referenced mass shooting events in United States history was the attack at Columbine High School in Littleton, Colorado on April 20, 1999. The attack, which killed 13 and wounded 21 in the span of 15 minutes (Jefferson County Sheriff Office [JCSO], 2000) stunned the nation. It was carried on live television stations nationwide, allowing audiences to experience what was happening in real time.

The phenomenon of mass shootings in America has continued to persist throughout the two decades since Columbine, with the frequency of the events increasing over the years. Connecticut, the third smallest state in the nation, has not been spared ASHER incidents. The state's first mass shooting event occurred in 1974 when two men robbing a New Britain bakery shot and killed six people ("Nine Dead in Shooting," 2010). Connecticut's next ASHER event occurred a year prior to Columbine, when a disgruntled state lottery employee went on a

shooting and stabbing spree inside lottery headquarters in Newington. He killed four coworkers before taking his own life as police arrived on scene (Springer, 1998).

In early August 2010 in Manchester, an employee of a local beer distributor was fired after a disciplinary hearing for stealing beer from the company. Without warning, he produced a gun from his lunchbox and shot ten of his coworkers, killing eight. He also committed suicide as police officers arrived ("Nine Dead in Shooting," 2010). The worst ASHER event in Connecticut's history, and one of the worst school shootings in United States history, occurred on December 14, 2012 when an armed man forced his way into Sandy Hook Elementary School in Newtown after murdering his mother in their nearby home. In the brief rampage that followed, the assailant shot his way into the locked school and murdered 20 first grade students and six staff members (Ray, n.d.). As police arrived on scene the shooter took his own life (Ray, n.d.).

Five years before Sandy Hook, Newington police stopped a planned attack on Newington High School, narrowly avoiding the town's second ASHER attack in less than a decade (De La Torre & Spencer, 2007). A high school student saw a YouTube video that showed teens firing guns and setting off explosives. He recognized some of the teens and, concerned, told his parents, who then alerted police. When one student's home was raided by police, they found a stockpile of weapons and explosives, detailed plans of the school and a "hit list" of 60 students and staff. The high school's principal described the incident as a "possible catastrophe" that had been avoided (De La Torre & Spencer, 2007).

The Sandy Hook massacre has had long reaching effects on many aspects of Connecticut society. Additionally, the proximity of these ASHER locations to Southington is impossible to ignore. New Britain borders Southington. Newington and Manchester are 12 miles and 27 miles

away respectively (MapQuest website, n.d.). Sandy Hook Elementary in Newtown is 30 miles from Southington (MapQuest website, n.d.).

This research is linked to the National Fire Academy's Executive Analysis of Fire Service Operations in Emergency Management (EAFSOEM) course Unit 1, core capabilities list (National Fire Academy [NFA], 2016, p. 1-6). All five of the capabilities: (a) prevent, (b) protect, (c) mitigate, (d) respond, and (e) recover pertains to what ASHER programs are trying to achieve. This research further links to EAFSOEM Unit 1 regarding Multiagency Coordination Systems (MACS) and Joint Information Systems (JIS) (NFA, 2016, p. 1-9-10).

This research is also linked to the United States Fire Administration (USFA) Strategic Plan for fiscal years 2019-2023 goals one and two (United States Fire Administration [USFA], 2019). Goal 1 looks to "build a culture of preparedness in the fire and emergency medical services" (USFA 2019, p. 13). The plan directs organizations to identify and address risks, increase resilience and strengthen interagency partnerships (USFA, 2019, p. 13). Goal two directs organizations to adopt an all hazards mindset through professional development, improved responder safety and "data driven decision making" (USFA, 2019, p. 14).

Literature Review

In order to explore the problem, a literature review was conducted. This review included, but was not limited to, internet searches of the terms (a) active shooter, (b) mass casualty, (c) rescue task force, and (d) ballistic personal protective equipment. Items reviewed included (a) NFPA standards, (b) trade journal articles, (c) standard operating procedures and guidelines and (d) after action and topic specific reports. The literature review began with an exploration of the active assailant and mass violence history reports in recent years.

The Federal Bureau of Investigation (FBI) commissioned a study of active shooter incidents in the United States between 2000 and 2013, finding that a total of 160 ASHER incidents occurred during that period (*A Study of Active Shooter*, 2013). The study found that there is an upward trend of these incidents, with the average incidents per year increasing from an average of 6.4 incidents per year during the first seven years of the study to 16.4 annual incidents in the last seven years of the study (*A Study of Active Shooter*, 2013, p. 6). The FBI also found that ASHER incidents occurred in 40 of the 50 states and the District of Columbia, with 60% of the incidents ending prior to the arrival of law enforcement (*A Study of Active Shooter*, 2013, p. 6).

The report finds that in 158 out of the 160 incidents only a single shooter was involved, and in 64 cases, the shooter(s) committed suicide, usually at the scene (*A Study of Active Shooter*, 2013, p. 7). A large number of these incidents are very short in duration, five minutes or less. The FBI's study was able to determine the time of the event in 63 of the incidents. They found that 44 of those incidents ended in five minutes or less and 23 lasted two minutes or less (*A Study of Active Shooter*, 2013, p. 8). This multiyear study illuminated several general trends; (a) shooters are usually male, (b) the assailants almost always are acting alone, (c) a large number of these incidents are very short in duration and often end before police can arrive and intervene (*A Study of Active Shooter*, 2013, pp. 6-12).

The latest data the FBI has published for ASHER incidents was for 2018, in which they designate 27 incidents as active shooter incidents across 16 states (*Active Shooter 2018*, 2018, p. 3). The trends identified in the original FBI study hold true through this report. The offenders were overwhelmingly male (23 of 27 incidents) and acted alone in 26 of the 27 events. In the 27th event it is not yet determined if the shooter had accomplices (*Active Shooter 2018*, 2018, p.

6). The 27 ASHER events in 2018 resulted in 85 people killed and 128 wounded, excluding the shooters according to the report (*Active Shooter 2018*, 2018, p. 5).

After the Pulse Nightclub shooting in Orlando, Florida in 2016 killed 49 and wounded 58 the public safety industry began to coalesce around the idea of a national standard for ASHER events (Bogosian, 2018). The National Fire Protection Association (NFPA) (2018) developed and released NFPA 3000 (PS) *Standard for an Active Shooter/Hostile Event Response (ASHER) Program* as a provisional standard (PS). The standard is designed around a comprehensive approach, emphasizing that all aspects of public safety agencies, including fire, police and EMS need to work in unison toward developing a local ASHER plan (Bogosian, 2018). Among the areas NFPA 3000 (PS) discusses are risk and resource assessment, competencies for all responding agencies, personal protective equipment (PPE), and recovery (Bogosian, 2018).

As a result of the increasing frequency and severity of ASHER events nationwide, the NFPA committee developing NFPA 3000 (PS) requested that publishing of the standard be expedited, resulting in NFPA 3000 (PS) being published in April 2018 as only the second provisional standard in the organization's history (*NFPA 3000 (PS)*, 2018, p. 3000-1). The standard contains 20 chapters, covering subjects from administration to recovery post incident (*NFPA 3000 (PS)*, 2018, p. 3000-4). Chapter 5, risk assessment, directs each community's Authority Having Jurisdiction (AHJ) to characterize the likelihood and impact of an ASHER event on that community. Demographics, critical infrastructure, and the effects of the number and types of injuries that may be encountered are some of what the risk assessment must include (*NFPA 3000 (PS)*, 2018, p. 3000-10).

Planning is a major component in the successful application of an organization's ASHER program. Chapter six of NFPA 3000 (PS) discusses in detail the planning process for ASHER.

The standard directs agencies to make use of "multiagency and multidiscipline relationships" in order to accomplish a four-step planning process consisting of: (a) a needs or gap assessment, (b) plan development, (c) implementation, and (d) evaluation (*NFPA 3000 (PS)*, 2018, p. 3000-11). The needs/gap analysis must consider the required competencies of responders with respect to ASHER aspects in addition to current organizational capabilities including mutual aid agreements. Any identified gaps between what an ASHER risk for the local municipality requires and what the department(s) involved can provide should then lead to a plan on how to fill that gap (*NFPA 3000 (PS)*, 2018, p. 3000-11). The completed plan needs to be "flexible" to adjust for changing requirements in the community (*NFPA 3000 (PS)*, 2018, p. 3000-11).

Standard Operating Procedures (SOPs) are a significant portion of the planning process outlined in NFPA 3000(PS). The presence of SOPs is designed to provide for increased safety, decision making effectiveness, response consistency and interoperability (*NFPA 3000 (PS)*, 2018, p. 3000-11). An ASHER program must also contain procedures outlining termination and post incident procedures including an immediate operational debrief and an after-action review that includes input from all responding agencies (*NFPA 3000 (PS)*, 2018, p. 3000-12). Paragraph 6.5.3 of the standard states that the post incident review must address four main areas of interest; "(a) assess and document actions, (b) restore capabilities, (c) address problems, and (d) improve the future state of preparedness and response capabilities" (*NFPA 3000 (PS)*, 2018, p. 3000-12).

With regard to a response to an ASHER incident, NFPA 3000 (PS) outlines extensive requirements that need to be included in the SOPs. Among the 17 subjects to be covered are expected items such as: (a) strategic and tactical objectives, (b) resource needs, and (c) mutual aid agreements. It also includes two areas that are fairly new to fire service consideration, social

media management and family reunification procedures (*NFPA 3000 (PS)*, 2018, p. 3000-12). The following two chapters, seven and eight, provide clarity on resource and incident management, including unified command requirements (*NFPA 3000 (PS)*, 2018, pp. 3000-12-13).

Guidelines for facility management of identified at risk facilities is the focus of chapter nine in NFPA 3000 (PS). Facilities must consider the number of occupants they have, how mobile they are, and how they are notified of an ASHER incident among other considerations (*NFPA 3000 (PS)*, 2018, p. 3000-13). With respect to an actual event, these at-risk facilities must develop plans for evacuation as well as securing people in place. Once these plans are developed the standard requires these facilities to practice the plans on an annual basis (*NFPA 3000 (PS)*, 2018, p. 3000-14).

An ASHER program is required to have a budget attached to it that covers the costs involved with response, recovery and maintaining the equipment and training involved. Communication centers are also discussed, with the standard outlining the requirements that the communications center be able to support the incident with interoperability and data management capability (*NFPA 3000 (PS)*, 2018, p. 3000-14). Whereas the previous chapter on planning was extremely detailed on the subjects that must be covered within the SOPs, Chapter 10 on budgeting and Chapter 11 on communications center support are more generalized, allowing organizations more flexibility in meeting the stated requirements.

The subject of law enforcement competencies required in the standard is briefly discussed in Chapter 12, and mainly states that law enforcement officers need to be trained in ASHER in conjunction with local agency procedures and applicable regulations and laws (*NFPA 3000 (PS)*, 2018, p. 3000-15). Arguably, the heart of NFPA 1300 (PS) is Chapter 13, which outlines

competencies for fire and emergency medical service (EMS) responders. The chapter begins with a description of incident zones similar to hazardous materials calls, with designated hot, warm and cold zones. It also states that emergency medical care will be provided based on the current threat level (*NFPA 3000 (PS)*, 2018, p. 3000-15).

Operations will vary based on the type of zone, and in all three zones NFPA 3000 (PS) states that members must be cognizant of the fact that the boundaries of each zone may be fluid (*NFPA 3000 (PS)*, 2018, p. 3000-15). Hot zone operations by fire/EMS personnel are limited, primarily based on the level of training and PPE these personnel will have available to them. The standard directs these members, to: (a) recognize if they are in a hot zone, (b) take measures to communicate that while defending themselves as they exit the zone, and (c) provide threat based medical care. Most fire/EMS offensive operations will occur in the warm zone. Personnel in the warm zone, while continually monitoring hot zone boundary changes, will determine the number of patients, resource needs, casualty collection point, and provide threat based medical care. Cold zone operations will include: (a) patient triage and treatment areas, (b) unified command post, (c) staging, and (d) reunification areas, etc. (*NFPA 3000 (PS)*, 2018, p. 3000-15).

Competencies for fire/EMS responders are extensively outlined in section 13.4.1.2 and describe 21 core areas that should be included as part of the ASHER program for an organization. Among the items responders should have knowledge of are: (a) communications, (b) resource and patient treatment, (c) transport capabilities, (d) proper application and use of PPE and ballistic personal protective equipment (BPE) (*NFPA 3000 (PS)*, 2018, p. 3000-16). Warm zone patient threat-based care options such as rescue task forces and law enforcement rescue teams are outlined as required knowledge for responders. This includes the ability to identify multiple types of threats, including improvised explosive devices (IEDs) and unexploded

ordinance. The ability to operate an offsite center such as family reunification centers is discussed, as is the transition to recovery operations (*NFPA 3000 (PS)*, 2018, p. 3000-16).

In addition to the general competencies discussed in the earlier section, NFPA 3000 (PS) further breaks down the possible events an organization will respond to and adds additional required abilities. When a vehicle is used as a weapon, i.e. a car bomb, fire/EMS responders must be able to identify vehicle borne IEDs, have knowledge in chemical, biological, radiological, nuclear and explosive (CBRNE) weapons as well as be able to determine building and vehicle stability (*NFPA 3000 (PS)*, 2018, p. 3000-16). If the event involves an IED, responders must be aware of "blast effects and associated injuries," awareness of multiple (secondary) devices and evacuation distances. A closely related possibility is an ASHER event that uses fire and smoke as a weapon. Responders to this incident will need to be aware of staffing requirements and procedures necessary to mitigate a fire incident, in addition to looking for possible additional IED type devices (*NFPA 3000 (PS)*, 2018, p. 3000-16). When operating within an atmosphere that is immediately dangerous to life and health (IDLH) the additional responsibilities of rapid intervention teams and proper PPE and decontamination procedures become relevant (*NFPA 3000 (PS)*, 2018, p. 3000-16).

The standard directs responders to provide threat-based care in accordance with the guidelines and protocols listed in Tactical Emergency Casualty Care (TECC) (*NFPA 3000 (PS)*, 2018, p. 3000-15). Tactical Emergency Casualty Care provides guidelines referenced in NFPA 3000 (PS) that detail actions for first responders with a duty to act (police officers and firefighters without EMS training) and those with basic life support (BLS) or advanced life support (ALS) training. For first responders with a duty to act, the TECC guidelines for hot zone operations direct them to move the patient to a safer or sheltered area if able, control any life-

threatening hemorrhage, and develop a rescue plan that considers a risk benefit analysis including manpower and conditions (Tactical Emergency Casualty Care [TECC], "First responder with duty to act," 2019). For operations within the warm zone and in preparation for evacuation the guidelines direct the responders to provide a basic first aid, with emphasis on bleeding and airway control. One of the primary goals in the document is to provide care while accepting minimal additional casualties and in coordination with the amount of care that can be provided in conjunction with the level of threat posed in that area (TECC "First responder with duty to act," 2019).

The guidelines for responders trained to the ALS or BLS level are more in depth than those for first responders in the warm and cold/evacuation zones, however the goals are the same in the hot zone; provide hemorrhage and airway care if able while moving the patient out of the hot zone (Tactical Emergency Casualty Care [TECC] "Guidelines for BLS/ALS," 2019). Among the patient interventions provided in the warm zone guidelines are intubation, intravenous (IV) access and appropriate medication courses. Providers are directed to make every effort in the warm and cold zones to "avoid additional preventable causes of death" (TECC "Guidelines for BLS/ALS," 2019).

Chapter 14 of the standard details PPE requirements, and it includes items that a generation ago would have been thought of as anathema to the fire service. The chapter states that the level of PPE be designated by the zone the members are operating in. For hot and warm zone operations members must be outfitted with "body armor, a means of communication and an identifying garment" (*NFPA 3000 (PS)*, 2018, p. 3000-17). The body armor requirement is dropped for cold zone operations unless deemed otherwise by "unified command" (*NFPA 3000 (PS)*, 2018, p. 3000-17).

The body armor issued to responding members must be a minimum of Level III-A body armor as defined by the "National Institute of Justice Standard (NIJ) 0101.06 *Ballistic resistance of body armor"* (*NFPA 3000 (PS)*, 2018, p. 3000-17). The body armor issued should also be models that have been tested by the NIJ , FBI, and Drug Enforcement Agency (DEA). In addition to the aforementioned body armor, a Rescue Task Force (RTF) team should also consider carrying a ballistic helmet and additional medical and communications gear. Care, maintenance and replacement of all ballistic personal protective equipment should also be performed in accordance with the appropriate NIJ standards (*NFPA 3000 (PS)*, 2018, p. 3000-17).

A training program is another component of an ASHER program. National Fire Protection Association 3000 (PS) advocates that all agencies expected to respond to an incident should participate in the training program. Wherever possible the training should take place at locations that are designated in the risk assessment as possible targets for ASHER events, in order to increase responder familiarization with actual sites within the jurisdiction (*NFPA 3000 (PS)*, 2018, p. 3000-17). The standard states that in addition to basing training on identified risks and tasks that need to be performed, the organization also needs to consider time available and the financial commitment to the overall program in order to build the training program. Lastly, the standard dictates that all training be thoroughly documented, and gives guidance on what items need to be included in the documentation, such as attendees and evolutions completed (*NFPA 3000 (PS)*, 2018, p. 3000-17).

ASHER programs should have a significant public education component according to the standard. Organizations should seek to provide education to the public on the type of threats, survival strategies, bleeding control and overall preparedness (*NFPA 3000 (PS)*, 2018, p. 3000-

18). The goals of the public education program should be to increase the "knowledge, skills and abilities of the public," helping to improve outcomes in an ASHER event (*NFPA 3000 (PS)*, 2018, p. 3000-18).

The standard also details the need for a public information policy, complete with only trained personnel releasing information to the public through a Joint Information Center (JIC) (*NFPA 3000 (PS)*, 2018, p. 3000-18). The JIC should be an "early consideration" of the unified command post and should be established at an offsite location away from the area of operations. Additionally, the standard advocates the use of social media platforms as a means of conveying information to, and receiving it from, the public. The organization should have an established social media policy. Also, a media area should be established at the ASHER location in the cold zone, with a Public Information Officer (PIO) controlling information flow to the media (*NFPA 3000 (PS)*, 2018, p. 3000-19).

Chapter 18 of NFPA 3000 (PS) describes the need to develop a continuity of operations plan for the affected location after an ASHER event. Whether it is a private business or a government location that was affected, much of that location's functions will be disrupted for a significant period of time. Chapter 18 provides a framework to create the continuity plan for this disruption period, focusing on the needs of the particular entity affected (*NFPA 3000 (PS)*, 2018, p. 3000-19).

Reflecting the inclusive and thorough nature of the standard, Chapter 19 directs organizations to include local receiving hospitals as a component of the ASHER program. It states hospitals that can receive patients from an ASHER event should work with the associated AHJ to develop a scalable and effective plan and that hospitals should be involved with training exercises. Additionally, hospitals included in the plan need to have a communications capability

that provides for two means of communication with the AHJ and that is tested monthly (*NFPA 3000 (PS)*, 2018, p. 3000-19). Hospitals must also include a site security plan for the facility and use an incident command center within the hospital if possible (*NFPA 3000 (PS)*, 2018, p. 3000-20).

NFPA 3000 (PS) devotes an extensive Chapter 20 to the recovery period that follows an ASHER event. It divides the recovery process into three phases: (a) immediate, (b) early, and (c) continued. Immediate recovery involves actions taken while most responders are still on scene and the scene is active. It involves items like damage assessments, victim and family reunification, evidence and scene preservation, etc. (*NFPA 3000 (PS)*, 2018, p. 3000-20). The designation of a state disaster recovery coordinator (SDRC) is also accomplished if needed in the immediate phase. The SDRC coordinates the "efforts of state, federal, and nongovernmental (NGO) organizations" in coordination with the unified command post (*NFPA 3000 (PS)*, 2018, p. 3000-20). A damage assessment is also developed in immediate recovery.

Early recovery builds on the items accomplished in immediate recovery. From the information gleaned during the assessment phase a resource needs list and resource needs analysis is developed (*NFPA 3000 (PS)*, 2018, p. 3000-21). The resource needs analysis is a comprehensive look at the total effects of the ASHER event, expanding beyond the number of dead and injured to also include evaluations of damaged property and infrastructure, business needs and mental health needs of all those involved, including responders and witnesses (*NFPA 3000 (PS)*, 2018, p. 3000-21). A significant consideration during early recovery is the management of volunteers and donations. Volunteers, both individuals and groups that arrive and want to help will need to be managed, as will any donations that arrive, particularly financial ones. The standard directs the AHJ to establish plans for managing both donations and

volunteers at specific coordination sites, and to have the JIC work with unified command to disseminate information regarding these procedures and collection points (*NFPA 3000 (PS)*, 2018, p. 3000-22).

As the efforts in early recovery become more established the transition begins to the continued recovery phase. Continued recovery deals with the long-term effects of the ASHER event on the community. In addition to creating a continued recovery committee if needed, this phase includes the restoration of damaged parts of the community, helping impacted businesses recover and working with victim assistance (*NFPA 3000 (PS)*, 2018, p. 3000-22). Victim assistance is a primary focus of the continued recovery phase, and the AHJ should consider establishing a victim services liaison or case manager. In addition, the standard also directs organizations to monitor the emotional and mental health of both victims and first responders. It recommends establishing a "family assistance center" to coordinate these services, which include counseling, victim compensation and legal and financial counseling (*NFPA 3000 (PS)*, 2018, p. 3000-22). Any needs that cannot be met by the AHJ should also be documented and appropriate agencies to provide victims and responders those needs should be identified. Lessons learned in the recovery phase should as be included as part of the after-action review according to the standard (*NFPA 3000 (PS)*, 2018, p. 3000-23).

The Arlington County, VA Fire Department was the pioneer in developing the concept of a Rescue Task Force (RTF) (Mueck, 2017). The RTF is comprised of a combination of fire/EMS personnel and police officers who provide force protection for the fire/EMS members. These teams assemble rapidly and then operate in the warm zone. The RTF does not initially triage, rather they provide rapid point of wound care while treating life threatening injuries on as many patients as possible during the active threat (Mueck, 2017). While Mueck (2017) writes

that there is “no one way” to build an RTF concept within a given organization, the same basic principles are found throughout a given RTF implementation (Mueck, 2017).

The RTF is preceded into the scene by Contact Teams. A Contact Team is made up of solely police officers, who enter the scene and rapidly engage the offender while clearing the building as they go. They also report any additional threats, such as IEDs, to the command post (Arlington County (VA) Fire Department, n.d.). Rescue Task Force fire/EMS members should be wearing BPE and carrying enough medical supplies to treat up to 14 patients. The police officers on the RTF position at the front and rear of the RTF and are responsible for movement and force protection only, they do not participate in medical care (Arlington County (VA) Fire Department, n.d.).

Communications come from both elements of the team, with the police officers transmitting the location(s) of the RTF and any encountered threats, while the fire/EMS team members communicate the number and location of the injured and the types of injuries. The initial contact teams will determine the need for RTF(s) to deploy. Once deployed the RTF members will move rapidly, stabilizing life-threatening injuries, positioning patients for airway management and moving to the next patient (Arlington County (VA) Fire Department, n.d.).

The unified command post will support the RTF operation by designating a Casualty Collection Point (CCP), providing a medical supply restocking area near the entry point and designating additional assets to assist as needed with evacuation. Once the RTF(s) have treated all available patients they will begin evacuating patients to the CCP (Arlington County (VA) Fire Department, n.d.). If the RTF runs out of medical supplies, they can evacuate a patient on the way to the supply area or transfer completely to evacuation as additional RTF(s) deploy into the warm zone (Arlington County (VA) Fire Department, n.d.).

Rescue task forces provide a critical element in victim survivability: speed. They "focus on needs and care of the victims, not responders" (Mueck, 2017). Among the lessons learned in the Columbine High School ASHER event was that victims who were wounded but otherwise may have been saved died while first responders staged outside waiting for formal police SWAT teams to arrive (Pignataro, 2019, p. 24). Among the challenges of the RTF concept are properly equipping fire/EMS members with the required equipment to operate in a hostile environment and the interagency training that necessarily must occur (Mueck, 2017).

The ballistic personal protective equipment required in NFPA 3000 (PS) must meet Level III-A of the National Institute of Justice standard for ballistic resistant body armor. It is tested against .357 and .44 caliber bullets (*Ballistic resistance of body armor*, 2008, p. 3). A random website search for the required body armor and helmet using the term "level III-A body armor and helmet" produced a published and pretax price range of $455-1,100 for the body armor and $250-800 for the helmet (Galls website, n.d.). The necessary medical equipment can come in numerous combinations and sizes in order to carry what is needed to rapidly stabilize up to 14 patients. These configurations vary widely based on departmental preference. The South Lake Tahoe (CA) Fire Department for example, carries an MCI intervention bag on each engine outfitted with enough medical supplies for 10-14 patients. The final cost per stocked bag is approximately $1,100 (George, 2019, p. 30). When considering the cost per company for BPE and medical gear, the monetary amount can rapidly become a big challenge to overcome. George (2019) called it "perhaps the most challenging part of this project" (p. 30).

Another critical aspect of a successful ASHER program was training. The rise of the ASHER epidemic in the United States has arguably presented public safety agencies with one of their most unique challenges. Historically, as challenges have risen in the fire service, they have

been met using solely the fire service and EMS agencies. When hazardous materials response became necessary, the fire service handled those situations. The recognition and development of emergency medicine transitioned to a largely fire service role. Technical rescue and Urban Search and Rescue also became a fire service responsibility.

Active Shooter/Hostile Event Response is different. A successful ASHER program and response requires four main areas of public safety work together: (a) fire service, (b) EMS, (c) law enforcement, and (d) emergency management. This requires the ability to work together in a high intensity, dynamic environment where the fire service or EMS have not had a previous offensive role and where the roles of each agency become blurred. Wood (2018) acknowledges the historically conservative nature of all disciplines in the public safety realm and contrasts that with how fast fire, EMS, and law enforcement are adapting to ASHER events. There have, however, been missteps despite the overall success of the RTF concept (Wood, 2018).

During the Pulse Nightclub shooting in Orlando in June 2016, in which 49 people were killed and an additional 58 were wounded, responding police had the shooter contained in a bathroom in the corner of the building and began asking for fire department paramedics to come into the club and begin removing patients (Wood, 2018). The police department had determined the club itself was the warm zone, yet fire department leadership on scene disagreed, determined the entire club was a hot zone and refused to let staged fire department units enter the scene. Fire department commanders also refused to allow their members access to the warm zone CCP across the street from the scene or to open a nearby fire station in the cold zone where ambulatory victims, with police protection present, had gathered (Wood, 2018). Orlando Fire Department was in the process of creating an ASHER program and had previously conducted joint training with the police department (Wood, 2018). However, the project had stalled and

ballistic gear bought by the fire department had never been distributed to the line members, nor had the procedure been implemented (Aboraya, 2018).

Two separate studies conducted in the wake of the Pulse ASHER event maintain that a faster EMS response may have saved lives, though the studies disagree on the exact number (Aboraya, 2018). City officials, including the fire chief and police department officials, strongly disagree with the contention that the fire department could have done anything different at Pulse. The fire chief continues to believe that the entire inside of the club was a hot zone, an area where RTFs are prohibited from operating. The fire department incident commander stated after the shooting that fire department members lacked formal training, an official procedure, and previously purchased BPE. The BPE was "locked in an EMS storage closet" at fire headquarters (Aboraya, 2018).

The lack of an established ASHER program led to fundamental communication issues between agencies at the Pulse shooting. The Orlando fire incident commander established a command post separate from the unified command post, resulting in miscommunication throughout the height of the incident (*After action review Pulse Nightclub*, 2018, p. 18). The miscommunications led to fire department units getting mixed messages about the status of the hot and warm zones and whether there were IEDs in the area. As a result, fire department units staged away from the scene for a period of time in accordance with older, established procedures regarding response to calls involving explosives. At this point, the fire command post and the unified command post both relocated, farther away from each other (*After action review Pulse Nightclub*, 2018, p. 19). Among the recommendations in the after-action review on the Orlando Fire Department response to the Pulse shooting was that agencies should work together at

executive levels in conducting training on ASHER responses in order to determine roles and responsibilities in an ASHER incident (*After action review Pulse Nightclub*, 2018, p. 33).

Miscommunication and mistakes due to lack of interagency cooperation also occurred during the school shooting at Marjory Stoneman Douglas High School in Parkland, Florida. The Coral Springs-Parkland Fire Department incident commander made at least six requests for staged rescue task forces to enter warm zones in the school to begin treating the wounded and every request was denied by the Sheriff Department incident commander (O'Matz & Huriash, 2018). Fire department personnel were not permitted into the school until much later in the operation, when only deceased victims remained inside the school. The fire department account was echoed by FBI resources on scene, who also complained that a lack of a unified command post led to serious operational hurdles, even after the shooter was confirmed to be in custody (O'Matz & Huriash, 2018). Multiple fire department requests for helicopter EMS transport from Palm Beach County and the US Coast Guard were also denied by the Sheriff Department incident commander, due to the concern that the shooter could pose a threat to aircraft (O'Matz & Huriash, 2018). More than a year before the Marjory Stoneman ASHER attack, the same sheriff department responded as the lead law enforcement agency to an ASHER shooting at Ft. Lauderdale International Airport. The lack of a unified command post was also cited in that incident as operationally problematic (O'Matz & Huriash, 2018).

Training and established procedures across agencies have paid obvious dividends in other ASHER events. On July 7, 2016 a shooter opened fire on police officers in Dallas, wounding 12 officers and two civilians and killing five officers. Both Dallas fire and police departments had been training together for ASHER events since 2014 and had been running actual exercises since early 2016 (Kayea, 2019, p. 28). In the months after this ASHER attack, Dallas fire and police

departments continued to build on the successes of their ASHER response, training a total a 3,000 firefighters and police officers in the city in ASHER responses. Dallas was able to fund a large portion of the training through grant programs (Kayea, 2019, p. 28). Among the lessons learned were the value of exposing police officers to the incident command system, which they don't regularly use, and clarifying common terminology between the two organizations (Kayea, 2019, p. 28).

Following the response in Manchester, Connecticut to the Hartford Distributors, Inc. (HDI) ASHER shooting, after action reviews by the AHJ identified unified command as an additional area of focus for training between the Manchester Fire-Rescue-EMS (MFRE) and Manchester police departments (*Lessons learned Hartford Distributors*, 2010). Manchester Fire-Rescue-EMS also identified the importance of unified command and strong communications between all responding agencies. Controlling the size of the unified command post and maintaining accountability were two additional identified areas where improvement was sought (*Lessons learned Hartford Distributors*, 2010).

The NFPA 3000 (PS) standard places a strong emphasis on mental health support for victims and responders as part of its outlined recovery process. Lessons learned from ASHER events bear out the need for such a strong emphasis. In the aftermath of the Sandy Hook Elementary School massacre, it is hard to overstate the emotional impact on Connecticut's residents and first responder community, especially the victim's families and those with close ties to the Newtown area. State officials were directed to form the Sandy Hook Advisory Commission to study what could be learned from the tragedy. Among their chief recommendations was to enact mental health programs to support affected communities throughout the recovery process (Kovner & Altimari, 2015).

The recommendations and the emphasis on mental health support for all involved given in NFPA 3000 (PS) are well supported by post ASHER events. The victims in Sandy Hook Elementary School, 20 first grade children and six adult educators, were each shot between three and 11 times with a semi-automatic AR-15 rifle at close range (Stebner, 2012). Dr. Jeremy Richman's six-year-old daughter Avielle died at Sandy Hook Elementary. In the years following her death, Dr. Richman and his wife appeared to be managing their loss as well as possible, starting a foundation in Avielle's name and working to research mental health issues related to ASHER events (Adams, 2019). Often after other ASHER events occurred Dr. Richman would speak of the effect that news would have on him and his wife, with each new incident reducing them to tears. Still, they continued on with their research and foundation (Adams, 2019). They had two more children. In March, 2019, seven years after Sandy Hook, Dr. Richman's body was found by workers near the foundation's office in Newtown town hall. He had committed suicide. At the time of his death, Dr. Richman's surviving children were four and two (Adams, 2019). Dr. Richman's death came within days of the news that two teenage survivors of the Parkland ASHER shooting had also committed suicide (Adams, 2019).

Mental health is a concern for first responders also. The Orlando Fire Department found after the Pulse ASHER shooting that the department was slow to provide mental health intervention to responders, a trend seen in other ASHER events (*After action review Pulse Nightclub*, 2018, p. 27). One firefighter, who was released from work the next morning without being provided mental health support reported feeling "all alone with no one to talk to" (*After action review Pulse Nightclub*, 2018, p. 28). Another firefighter mentioned in the report spoke of the impact the shooting had on his family, who were unable to reach him while he was on scene at Pulse Nightclub. He expressed strong concern that the department include firefighter's

family members with mental health support as well (*After action review Pulse Nightclub*, 2018, p. 28). Following the Capital Gazette newsroom ASHER shooting just outside Annapolis in Anne Arundel County Maryland, County Police Chief Tim Altomare spoke of the emotional impact and frustration felt on the scene by responders, stating that "twenty-year SWAT guys were crying" (Hermann, 2018). Chief Altomare further stated that among the items the department is studying for the after-action report would be whether the department's counseling services were meeting the needs of responding officers (Hermann, 2018).

Following the Hartford Distributors shooting in Manchester, MFRE also identified mental health support as a key area of focus. They found that a battalion chief-level officer not involved in the response should be assigned to coordinate critical incident stress support of responding members (*Lessons learned Hartford Distributors*, 2010). Other changes that were identified for future ASHER responses is to keep the involved companies out of service, using mutual aid coverage until off duty firefighters could be called back to staff apparatus, and to include member's families in the mental health support being offered. Furthermore, departments should be prepared to offer this support and "monitor responders for an extended period…for issues that arise" (*Lessons learned Hartford Distributors*, 2010, p. 3).

The literature review provided an indication of the complexity inherent in any successful ASHER program. It illuminated the depth and breadth of the road map provided by NFPA 3000 (PS) for AHJ's who are looking to build their own ASHER program. The concept of merging the separate disciplines of fire/EMS, law enforcement, and emergency management led to further questions. The equipment required to outfit RTFs within a department coupled with the associated cost was an expensive hurdle, as was the realization that departments cannot be

expected to respond to ASHER events successfully if they ignore the role mental health support must play for victims, responders and involved family members.

Procedures

The descriptive methodology was used to guide the data collection for this research. A questionnaire was developed and distributed using the online survey tool SurveyMonkey.com (Survey Monkey website, 2019). The questionnaire (Appendix A) consisted of ten questions. It was distributed through the International Association of Fire Chiefs (IAFC) Knowledge Net website, which has approximately 13,000 members. It was also distributed via the Connecticut Commission on Fire Prevention and Control (CFPC) email list serv, which was sent to approximately 4,200 recipients.

The questionnaire was designed with a fire service focus, and the two distribution groups selected provided both state and national level information gathering opportunities. The questionnaire (Appendix A) was opened on July 18, 2019 at 1651 hours and was closed on September 4, 2019 at 0910 hours. A total of 198 responses to the questionnaire were received. The responses represent 1.15% of the total sample size.

A personal interview via email with Manchester Fire-Rescue-EMS Chief David Billings (personal communication, October 21, 2019) (Appendix B) was requested by the author. Chief Billings was the Assistant Fire Chief at the time of the Hartford Distributors ASHER event in 2010 and has been heavily involved with the subsequent development of Manchester's ASHER program. Email correspondence occurred October 18-22, 2019 (Appendix B).

A personal interview with Southington (CT) Police Department (SPD) Lieutenant Keith Egan (personal communication, August 29, 2019) (Appendix C) was requested by the author. The interview was granted and conducted in person at Southington Police Headquarters on

August 29, 2109. Lieutenant Egan's responsibilities included development of ASHER procedures at SPD.

A limitation of the questionnaire was the low response rate percentage given the total number of the sample size. However, in contrast to the percentage of responses received is the total number of responses, nearly 200, and the detailed information that was provided by those respondents. A consideration with respect to limitations is the focus on percentage of sample size. Percentage of sample size is arguably not a sufficient metric to evaluate the quality of information that can be gleaned from what could otherwise be considered a prohibitively low return rate.

A second limitation with the questionnaire was that it does not include questions focused on law enforcement or emergency management personnel. The narrow focus of the questionnaire on fire service respondents was necessary to maintain a manageable scope of information for this research. It is arguable that additional questionnaires focused on emergency management and law enforcement personnel could provide additional insight into the ASHER process. A third limitation of the questionnaire was that it focused more closely on training and equipment, with less focus on mental health and recovery aspects. Widening the focus in future questionnaires would offer more comprehensive results on those areas.

Results

The four research questions guided the data collection goal of the questionnaire (Appendix A). The first two questions on the questionnaire were designed to establish a baseline description of the respondent's organizations and population of their jurisdiction. The majority of respondents, 60%, were from fully career fire departments. Another 36% of respondents were

from combination departments, either career combined with part time or career combined with volunteer. Only seven respondents, less than 4%, were from all volunteer departments.

Nearly half the respondents, 96 out of 198, were from departments that served a population (10,000-50,000) similar to Southington. The remainder of respondents were split fairly evenly across the population categories in the questionnaire (Appendix A), with 20 coming from small communities of 10,000 or less and 25 hailing from cities with populations of 250,000 or more. Rounding out the population categories were medium sized cities 50,000-100,000 with 36 respondents (18%) and large cities of 100,000-250,000 residents, with 21 respondents (11%).

The first research question asked: What are the national standards regarding active shooter/hostile event responses? Of the questionnaire respondents, most did not specifically mention NFPA 3000 (PS) or the NIJ requirements that are inherent in ballistic personal protective equipment (Appendix A). However, of the 132 respondents who reported their department has an ASHER program they described in their answers the various parts of the program outlined in NFPA 3000 (PS).

The questionnaire's respondents (Appendix A) that reported their departments had ASHER programs also reported that their departments trained using a variety of approaches. Nearly half, 48% used table top exercises while 2/3 of respondents reported employing full scale exercises as part of their training. Respondents also reported they trained with a multitude of other agencies. Those agencies included (a) law enforcement agencies, (b) mutual aid fire and EMS departments, (c) other local agencies such as public works and schools and (d) federal agencies. A majority of departments (67%) reported that they use the rescue task force model (Appendix A). The NFPA 3000 (PS) standard clearly advocates these types of training, tactics and equipment.

The second research question asked: What are the components of an active shooter/hostile event response program? Several questions in the questionnaire (Appendix A) addressed this question. Of the 198 total respondents, 132 answered that their department has an ASHER program. A third of respondents' departments do not have a formal ASHER program.

Training is a major component of ASHER. All but 30 of the respondents reported their departments do some type of training with regard to ASHER. Half reported they have table top exercises and 2/3 of departments run full scale training exercises (Appendix A). A notable percentage of departments (15%) do not do any training on ASHER events according to 30 of the respondents.

Respondents also described with whom they trained. Agencies listed included: (a) local, (b) regional, (c) state police, (d) mutual aid fire departments, and (e) EMS. Training frequency was outlined as well with respect to research question two, with respondents describing a full range of options, from departments who train frequently in ASHER to those who have not had formal training yet. Two thirds of respondents answered that their departments make use of the RTF component within their ASHER programs and the majority of departments supply their firefighters with BPE (Appendix A).

Research question three asked: What training is required to implement such a program? Part of an ASHER program is working across multiple agencies. Nearly all respondents that reported they have an ASHER program also reported they train with law enforcement agencies at the local, county and/or state level. Departments trained with EMS agencies according to 65% of respondents.

A much smaller percentage of the time, less than 10%, respondents reported their departments also include local or regional health departments or federal agencies such as the FBI

(Appendix A). Several respondents answering "other" to the training agencies question reported that they included mutual aid fire departments in their training. Other respondents reported they included local entities such as public works or the local school system.

Question seven in the questionnaire (Appendix A) referenced research question three by asking respondents to detail any hurdles they have encountered in their training program. Over half of the respondents cited scheduling challenges in completing training. Overtime costs were cited 73 times as an issue, and interagency conflicts were a problem for 47% of respondents. Some of the interagency conflicts cited were union grievances over training times between agencies and correspondingly, the difficulty in meshing police and fire schedules, which are often fundamentally different.

One respondent mentioned an interesting problem with the training component. The respondent detailed that the training, which is sometimes witnessed by the public, can actually cause fear in the population. The respondent stated that by varying training times and locations they were able to make the training "less visible," which helped allay concerns (Appendix A). In order to run full-scale exercises, the logistics and resources needed also posed challenges.

Research question four asked: What equipment is required to implement an active shooter/hostile event response?" Question eight of the questionnaire (Appendix A) directly addresses whether a department issues BPE. The majority of respondents, 117 out of 198 (60%), reported that their departments do provide BPE to their members. The remaining 81 reported that BPE is not issued by the department. Rescue task forces are used by 131 respondents' departments. It can be inferred that departments that use RTFs also provide the medical equipment that an RTF requires, despite the fact the questionnaire did not directly ask that question. One third of the respondents reported their departments do not use RTFs.

David Billings (personal communication, October 21, 2019) (Appendix B) stated that at the time of the HDI shooting in Manchester on August 3, 2010 Manchester public safety agencies did not have a formal ASHER program. In the wake of the shooting, it still took time for a formal program to develop. It wasn't until an FBI request to run a joint ASHER drill at Buckland Hills Mall, a major retail center in Manchester, that development of the MFRE program began in earnest. It was adopted two years later in 2016 (D. Billings, personal communication, October 21, 2019).

The public safety agencies in Manchester include two fire departments, a police department, emergency management, and a commercial ambulance service that provides transport and back up ALS care. Manchester Fire-Rescue-EMS provides ALS care for both fire districts. The Eighth Utilities District Fire Department is a combination organization in the north end of town. The challenges that needed to be overcome in the development of the ASHER program were significant according to Billings (personal communication, October 21, 2019) (Appendix B).

Among the challenges that needed to be discussed were: (a) police acceptance of the incident command system, (b) the structure and roles involved in the unified command post, (c) the roles of EMTs vs paramedics, (d) volunteer firefighters, and (e) RTFs. Billings (personal communication, October 21, 2019) (Appendix B) also stated that initial concerns among local union leadership were addressed in part by the "strong stance" of the International Association of Firefighters unwavering support of the RTF concept. One of the biggest drivers for the change was the shared experience of the HDI ASHER shooting. The mentality of "it can't happen here" no longer existed, and all agencies view the program as a priority (David Billings, personal communication, October 21, 2019) (Appendix B).

The finished ASHER program that was adopted by all agencies in Manchester in 2016 incorporates both the lessons learned from HDI and the core tenants of NFPA 3000 (PS). Billings stated that interagency training occurs annually. While the majority of training can be accomplished on shift, periodic large exercises do require a significant amount of planning and overtime. Ballistic personal protective equipment has been placed on each apparatus and all paramedics are trained in the RTF concept. A slight change in Manchester is that they refer to RTF as "rescue teams" in order to accommodate the police department, who are "not fluent in NIMS" (David Billings, personal communication, October 21, 2019) (Appendix B). Billings (personal communication, October 21, 2019) (Appendix B) stated that the primary lesson learned from the HDI ASHER attack was that public agencies in Manchester were "totally unprepared" for an event when one occurred in 2010.

Keith Egan (personal communication, August 29, 2019) (Appendix C) stated that the Southington Police Department, like SFD, does not currently have a formal ASHER program. Southington Police Department does work very closely with the Southington Board of Education on security plans for all local schools, and lock down drills occur in each school with some regularity. Local officers maintain an active role in the regional SWAT team, comprised of members from several area police departments, and currently SPD would rely on their tactics and procedures.

Joint training on a regular basis does not occur between SPD and SFD, despite the departments' excellent working relationship. Egan stated that scheduling training should not be tremendously difficult. SPD officers are not familiar with or formally trained in the RTF concept. There is willingness among SPD leadership, however, to address the ASHER program need. There is at also least one major business in town that has asked to train on ASHER with

SPD and SFD at their facility, a moderately sized four-story office building (K. Egan, personal communication, August 29, 2019).

Discussion

The staggering increase in ASHER attacks in the United States since the 1999 attack at Columbine High School cannot be ignored by any fire department, regardless of the size of the department or the community they protect. In the last seven years of a 13-year study to open the 21st Century the FBI found that there were 16.4 ASHER events annually in the United States (*A Study of Active Shooter*, 2013). That number jumped to 27 ASHER events in 2018 alone according to the latest available FBI data (*Active Shooter 2018*, 2018, p. 3).

It does not matter if you are a major city or a small town. A high school or a one room schoolhouse in Amish Country. A university campus or a major military base. ASHER events do not discriminate (*A Study of Active Shooter*, 2013). Every municipality is at risk and every department must prepare to respond. The questionnaire (Appendix A) reflected the growing awareness in the fire service of the need for ASHER programs, with 67% of respondents reporting their departments have an ASHER program.

There is often comfort found in the traditions of the fire service. The floors get washed on a certain day. Probationary firefighters clean the dishes and answer the station phone. And emergency calls are handled with the warm familiarity of recognition primed decision making dressed up in the cloak of "we have always done it this way." Law enforcement and EMS are no different. These agencies play on the same public safety team, yet they exist in distinct lanes. It is analogous to a football team. Offense, defense and special teams all play for the same team, yet they are very different specialties that don't mix particularly well. When was the last time

you saw a quarterback playing linebacker, or returning a punt? Change, when it comes, is often glacially slow and viewed with suspicion.

An ASHER event is different (Wood, 2018). To successfully respond to an ASHER event these public safety teams *must* operate in each other's lanes as one unit with clearly spelled out procedures and doctrine (Wood, 2018). There is no tolerance for the status quo or for organizations that are unwilling to leave their particular comfort zones. Police officers will need to adjust to an incident command system that is largely foreign to them. Firefighters and EMS assets will need to adjust to not being staged blocks away, but actively providing trauma care possibly down the hall from where contact teams are trading shots with an assailant. An ASHER response is like nothing else in the fire service.

Billings (personal communication, October 21, 2019) (Appendix B) spoke of that slow acceptance of change in Manchester, where even after the Hartford Distributors shooting it still took the multiple public safety agencies in the town a long period of time to accept the shared responsibilities an ASHER program requires. The questionnaire also indirectly reflected a slow acceptance ASHER by some departments, considering 1/3 of respondents report their departments do not have an ASHER program (Appendix A). Indeed, neither Southington Police or Fire Departments have an ASHER program (K. Egan, personal communication, August 29, 2019) (Appendix C). The police and fire departments in Southington have long had an excellent collaborative working relationship, although both departments are accustomed to staying in their respective lanes. Development of an ASHER program will involve clearing many of the same hurdles that Billings spoke of in Manchester's experience (Appendix B).

Arguably, it was that familiarity with the status quo that led to so many miscues in the response to the Pulse ASHER in Orlando. The unified command post did not include the fire

department incident commander until hours after the outcome of the incident was decided. As a result, fire department units got erroneous information, and staged away according to not just procedure, but long-established accepted practice. If there are bullets or bombs involved, the fire department stages out of the way (*After action review Pulse Nightclub*, 2018).

Staging away from the scene when violence is involved until the scene is secure has long been accepted practice not just in Orlando, but throughout the fire service. Nearly 41% of respondents to the questionnaire reported that their departments do not issue BPE and 33% of respondents' departments do not have an ASHER program at all (Appendix A). It is arguable, in light of those responses, that a repeat of the actions taken in Orlando is likely were an ASHER event to happen within those respondents' jurisdictions.

Orlando had been working on an ASHER procedure, but like so many departments, that process had gotten bogged down and change had stalled (Wood, 2018). When the Pulse attack began, the opportunity to enact the ASHER program response was lost, and the speculation on the end results of that inaction will not soon fade for the families and responders involved (Aboraya, 2018). The similarities in the response failures at Marjory Stoneman Douglas High School are eerie (Wood, 2018). Whereas in Orlando, the mistakes were attributed to the fire department, in Parkland it was the Broward County Sheriff Department's initial incident commander who bore the brunt of the criticism after it became public that she refused to allow equipped, trained and ready RTFs to deploy into the school (O'Matz & Huriash, 2018). The Broward Sheriff took more criticism for the lack of effective unified command posts at both Marjorie Stoneman and Ft. Lauderdale International Airport.

The mistakes made in the three ASHER events in Florida are contrasted by the successful deployment of unified assets during the Dallas ASHER attack on the Dallas Police Department

(Kayea, 2019, p. 28). While there were lessons learned and updates made to the ASHER program in the months after the attack, Dallas public safety entities can point to that response as a successful one (Kayea, 2019, p. 28). The evolution of the Manchester, CT ASHER program in the years following the HDI ASHER attack is another example of a positive outcome that is achievable if all agencies are willing to approach change with an open mind, and work in lanes that their organizations may not be familiar, or comfortable, with (David Billings, personal communication, October 21, 2019). Research data further supported that position, with nearly all respondents reporting that their departments train with law enforcement agencies, either local, state or federal (Appendix A).

Progress toward a national standard did represent a positive outcome from the lessons learned at Pulse, which became the impetus for the development of the first consensus standard dealing with ASHER, NFPA 3000 (PS), (2018). NFPA 3000 (PS) is an extremely comprehensive document that provides a step by step road map for organizations looking to create an ASHER program (*NFPA 3000 (PS)*, 2018). The standard emphasizes unified command and interagency training and communication. It details the type of BPE that must be used to protect members and adapts the hot, warm, and cold zone approach common to hazardous material response. The concept of rescue task forces is also prominently featured (*NFPA 3000 (PS)*, 2018). The questionnaire did not specifically ask respondents if they were aware of the existence of NFPA 3000 (PS). However, based on the data returned in the questionnaire describing (a) the number of ASHER programs, (b) the different types of agencies that departments train with and (c) the varied type of training described it is arguable that respondents are familiar with the intent and spirit of the still new NFPA 3000 (PS) standard (Appendix A).

The Arlington County (VA) Fire Department (n.d.) is credited with the creation of the RTF concept, which is central to much of a fire department's role in an ASHER event. A well-equipped RTF, applying the procedures outline in tactical emergency casualty care, can make an enormously positive impact on an ASHER event by treating life threatening hemorrhage and airway issues rapidly while operating in the acceptable risk level of the warm zone (TECC Guidelines for BLS/ALS, 2019). The RTF concept is critical to a successful ASHER response.

One of the obvious impediments to beginning an ASHER program, other than the issue of interagency change, is cost. Equipping an engine company of three to four firefighters with enough BPE will cost somewhere in the range of $2,500-4,000 (Galls website, n.d.). Along with the cost of the BPE is stocking the medical supplies needed for an RTF, which will likely be several hundred dollars (George, 2019). Departments are finding ways to fund that however, as the questionnaire showed that 59% of respondents' departments provide BPE to members and 67% make use of rescue task forces (Appendix A). Some departments have found funding streams through grants, such as in Dallas (Kayea, 2019, p. 28).

Mental health care for responders and victims and their families is strongly advocated for in NFPA 3000 (PS). There is more than ample evidence that departments and communities ignore the need for mental health follow up care at their peril (*NFPA 3000 (PS)*, 2018). Orlando Fire Department identified the impact of the Pulse shooting on both their firefighters and the firefighter's families in their review of the incident (*After action review Pulse Nightclub*, 2018). Similarly, MFRE identified the immediate need for mental health "first aid" be overseen by a battalion chief level officer who is not at the scene, and for follow up to continue in both the short and long term (*Lessons learned Hartford Distributors*, 2010).

The breathtaking horror that was the violence at Sandy Hook Elementary School is still hard to comprehend nearly a decade later. Firefighters know the toll it can take to see violence on a daily basis. And yet, the student victims at Sandy Hook were six and seven years old. (Stebner, 2012). There is no getting used to that level of carnage, no matter how hardened a first responder you are.

The questionnaire (Appendix A) did not delve into the subject of mental health effects, focusing on other aspects of ASHER, mainly training and equipment and those associated challenges. The majority of departments have ASHER programs, and for those that do, they report the same general challenges in managing them. Training hurdles, interagency buy in, budget pressures brought on by training induced overtime were all common answers (Appendix A). What was surprising, was the number of respondents that report their departments do not have an ASHER program. Fully one third of respondents, 65 departments, report they do not have an ASHER program (Appendix A). Southington's fire and police departments fall into that last category, a fact that was the impetus for the author selecting this subject to research. Southington Police Department does have interest from the business community and the schools to increase their awareness and preparation for ASHER events (K. Egan, personal communication, August 29, 2019). There are numerous examples of what to do and what not to do with regard to ASHER responses and training. The SFD and SPD have an outstanding working relationship at all levels of both organizations. Both departments have the willingness and buy in internally to create an ASHER program. All that remains is to take the initial steps in creating a program that all hope never needs to be deployed.

Recommendations

The following recommendations were derived from the research and presented to the leadership of the Southington Fire Department. The first recommendation was: Develop a program and related procedures for Active Shooter/Hostile Event Response calls. The second recommendation was: Make use of existing strong interagency relationships to increase joint training opportunities across all response genres, including ASHER incidents.

The third recommendation was: Develop a thorough cost analysis and budget impact of all aspects of an ASHER program, and include those costs in future budget requests in order to continually and successfully support the program. The fourth recommendation was: Explore and apply for all possible grant funding streams in order to reduce the budget impact of an ASHER program. The fifth recommendation was: Increase existing public education programs to include ASHER related awareness programs such as *Stop the Bleed* and location lockdown procedures.

As this research progressed it was notable how many departments of all sizes still do not have formal ASHER programs. The mass violence epidemic in the nation does not look to be stopping anytime soon, and all public safety agencies need to be ready to react to this new threat. In fact, there were several ASHER events nationwide while this research was being completed.

The aspect of how change occurs in a department with respect to a new and rapidly increasing threat is an area that this research only lightly explored. A second area that this research did not delve more deeply into is the long-term mental health effects of an ASHER event on responders, victim's and victim's families. The author feels that both of these areas are worthy of future exploration and hopes that readers elect to further that research.

References

Nine Dead in shooting at Connecticut beer distributor. (2010). Retrieved from http://www.nbcnews.com/id/38535909/ns/us_news-crime_and_courts/t/dead-shooting-conn-beer-distributor/#.XakAGC2ZMl4

A study of active shooter incidents in the United States between 2000 and 2013. (2013). Retrieved from https://www.fbi.gov/file-repository/active-shooter-study-2000-2013-1.pdf/view

Aboraya, A. (2018). At pulse nightclub, a death toll that might not have been so high. Retrieved from https://www.npr.org/2018/09/26/651629197/at-pulse-nightclub-a-death-toll-that-might-not-have-been-so-high

Active shooter incidents in the United States in 2018. (2018). Retrieved from https://www.fbi.gov/file-repository/active-shooter-incidents-in-the-us-2018-041019.pdf/view

Adams, T. (2019). Sandy Hook's tragic legacy: Seven years on, a loving father is the latest victim. Retrieved from https://www.theguardian.com/us-news/2019/mar/31/sandy-hook-shooting-suicide-parents-fake-news-conspiracy

After action review of the Orlando Fire Department response to the attack at Pulse Nightclub. (2018). Retrieved from http://www.cityoforlando.net/fire/wp-content/uploads/sites/4/2018/11/OFD-After-Action-Review-Final5b98855d.pdf

Arlington County (VA) Fire Department. (n.d.). *ACFD rescue task force* [Lecture notes]. Retrieved from https://www.nfpa.org/-/media/Files/News-and-Research/Resources/External-links/First-responders/Urban-Fire-Forum/UFF-Rescue-task-force-operations-2013.ashx?la=en

Ballistic resistance of body armor: NIJ standard-0101.06. (2008). Retrieved from https://www.ncjrs.gov/pdffiles1/nij/223054.pdf

Bogosian, G. (2018, July 10). New standard protects EMS and the community from active shooters and other threats. *JEMS*. Retrieved from https://www.jems.com/2018/07/10/nfpa-3000-the-new-standard-to-keep-communities-safe-from-active-shooters-and-other-threats/

De La Torre, V., & Spencer, M. (2007). Police: School attack foiled. Retrieved from https://www.courant.com/news/connecticut/hc-xpm-2007-02-15-0702150912-story.html

Galls website. (n.d.). Body armor price range. https://www.galls.com/gh-armor-prox-body-armor-package-level-iiia

George, K. (2019, June). Critical intervention bags: A tool for saving lives in mass-casualty incidents. *Fire Engineering*, *172*(6), 26-31.

Hermann, P. (2018). Anne Arundel police consider new gear, weapons to confront active shooters after Capital Gazette shooting. Retrieved from https://www.capitalgazette.com/news/crime/ac-cn-after-action-report-20180719-story.html

Jefferson County Sheriff Office. (2000). *JCSO official columbine report* [After action report]. Retrieved from School Shooters info website: https://schoolshooters.info/sites/default/files/jcso_official_columbine_report_0.pdf

Kayea, T. (2019, October). Active shooter plan: Dallas public safety groups unite in battle against terrorism. *Firehouse, 44*(10), 28.

Kovner, J., & Altimari, D. (2015). Sandy Hook panel issues safety, mental health recommendations. Retrieved from https://www.courant.com/news/connecticut/hc-sandy-hook-draft-0213-20150212-story.html

Lessons learned: Hartford Distributors Inc Active Shooter Incident. (2010). Manchester, CT: Manchester Fire Rescue EMS.

MapQuest website. (n.d.). Travel distances. https://www.mapquest.com/directions

Mueck, R. (2017). Active shooter incidents: The rescue task force concept. Retrieved from https://www.domesticpreparedness.com/healthcare/active-shooter-incidents-the-rescue-task-force-concept/

National Fire Academy. *Executive analysis of fire service operations in emergency management* student manual. (2016). In (Comp.), (pp. 1-1-1-59). Emmitsburg, MD: National Fire Academy.

National Fire Incident Reporting System [Fact Sheet]. (2018). Southington, CT: Southington Fire Department.

National Fire Protection Association. *NFPA 3000 (PS) Active shooter/hostile event response (ASHER) program*. (2018). Retrieved from https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=3000

O'Matz, M., & Huriash, L. J. (2018). Report: Sheriff's office denied paramedics entry to Parkland school during shooting. Retrieved from https://www.policeone.com/mass-casualty/articles/report-sheriffs-office-denied-paramedics-entry-to-parkland-school-during-shooting-OTS7Li0loUj9xw31/

Pignataro, C. (2019, February). EMS response to the active shooter. *Fire Engineering*, *172* (2), 24-29.

Ray, M. (n.d.). Sandy Hook Elementary School shooting. Retrieved October 17, 2019, from https://www.britannica.com/event/Newtown-shootings-of-2012

Southington history. (n.d.). Retrieved from http://www.southington.org/content/17210/56/default.aspx

Southington Police Department. (2017). http://www.southingtonpolice.com/index.html

Southington schools' website, schools tab. (n.d.). https://www.southingtonschools.org/schools

Southington website. *Town profile* 2016. (2016). Retrieved from http://www.southington.org/filestorage/17220/18046/18113/SouthingtonTownProfile2016.pdf

Springer, J. (1998, March 7). March 7, 1998: Worker kills four bosses, self at lottery site. *The Hartford Courant*. Retrieved from https://www.courant.com/breaking-news/hc-lottery-shooting-newington-1998-story.html

Stebner, B. (2012). 'The worst I've seen': Autopsies that moved veteran medical examiner to tears as report reveals each tiny body had been pumped with between three and eleven bullets. Retrieved from https://www.dailymail.co.uk/news/article-2248864/Sandy-Hook-shooting-Autopsy-report-reveals-26-victims-shot-times-EACH.html

Survey Monkey website. (2019). https://www.surveymonkey.com/dashboard/

Tactical emergency casualty care (TECC) guidelines for BLS/ALS providers. (2019). Retrieved October 23, 2019, from http://c-tecc.org/images/4-2019_TECC_ALS_BLS_Guidelines_.pdf

Tactical emergency casualty care (TECC) guidelines for first responders with a duty to act. (2019). Retrieved October 23, 2019, from http://c-tecc.org/images/4-2019_TECC_Guidelines_for_FR_with_a_duty_to_act.pdf

United States Fire Administration. *A prepared and resilient fire and emergency medical services: Strategic plan fiscal years 2019-2023*. (2019). Retrieved from https://www.usfa.fema.gov/downloads/pdf/publications/strategic_plan_2019-2023.pdf

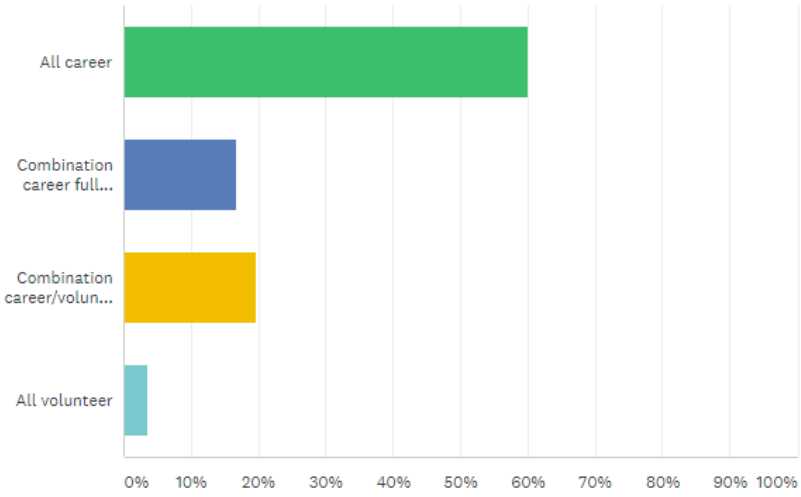
Wood, M. (2018). Fixing the rescue task force. Retrieved from https://www.policeone.com/active-shooter/articles/fixing-the-rescue-task-force-EesmgZQFEk25kTn0/

Appendix A

ASHER Questionnaire

How is your department staffed?

Answered: 198 Skipped: 0



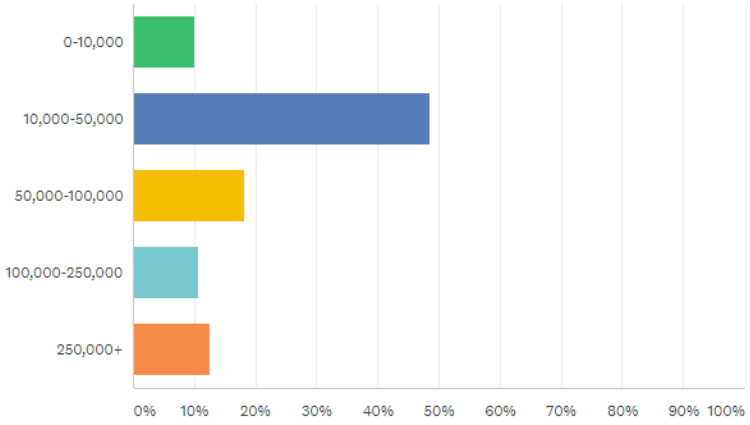
ANSWER CHOICES	RESPONSES	
All career	60.10%	119
Combination career full time/part time	16.67%	33
Combination career/volunteer	19.70%	39
All volunteer	3.54%	7
TOTAL		198

Q2

Customize Save as

What size population does your department protect?

Answered: 198 Skipped: 0



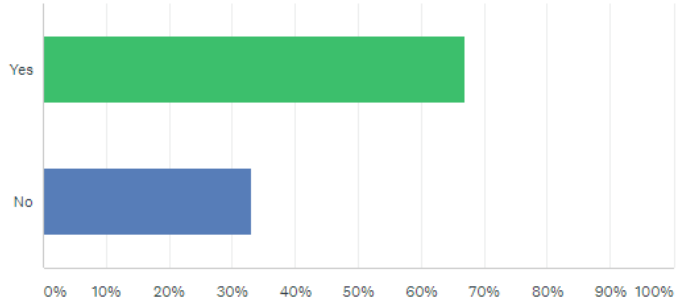
ANSWER CHOICES	RESPONSES	
0-10,000	10.10%	20
10,000-50,000	48.48%	96
50,000-100,000	18.18%	36
100,000-250,000	10.61%	21
250,000+	12.63%	25
TOTAL		198

Q3

Customize Save as

Does your department have an Active Assailant (Active Shooter) SOP/G?

Answered: 197 Skipped: 1



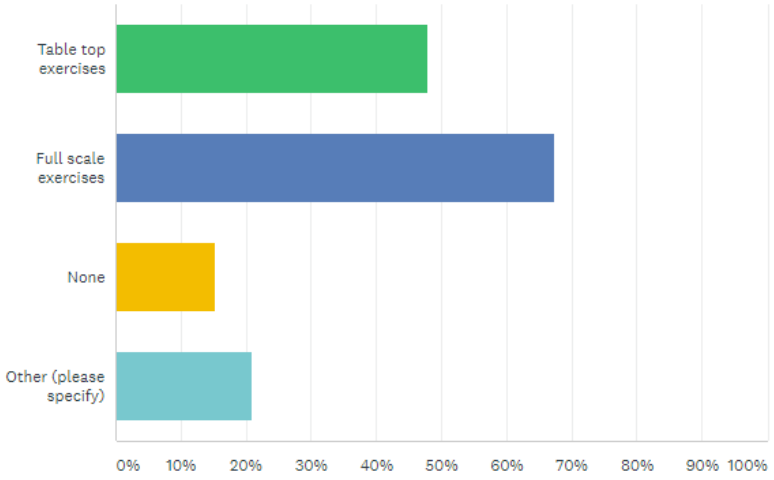
ANSWER CHOICES	RESPONSES	
Yes	67.01%	132
No	32.99%	65
TOTAL		197

Q4

Customize Save as

What type of training does your department do for Active Assailant incidents? (Select all that apply)

Answered: 196 Skipped: 2



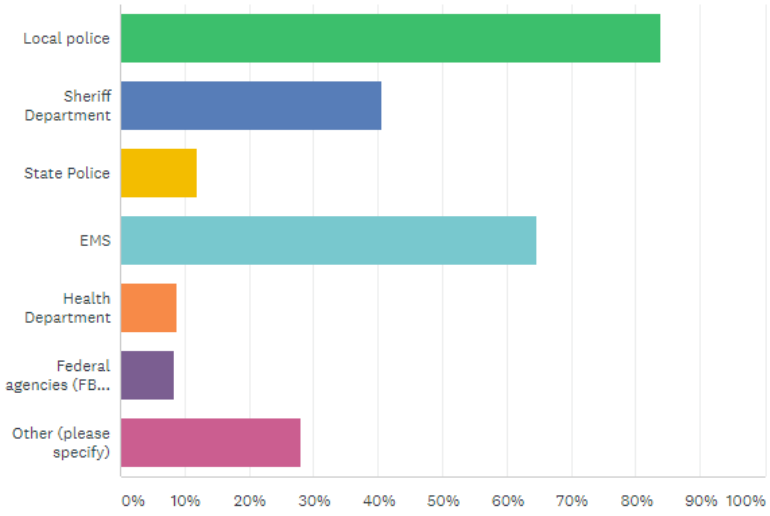
ANSWER CHOICES		RESPONSES	
Table top exercises		47.96%	94
Full scale exercises		67.35%	132
None		15.31%	30
Other (please specify)	Responses	20.92%	41
Total Respondents: 196			

Q5

Customize Save as

Does your department's SOP/G and training involve other agencies? (Check all that apply)

Answered: 192 Skipped: 6



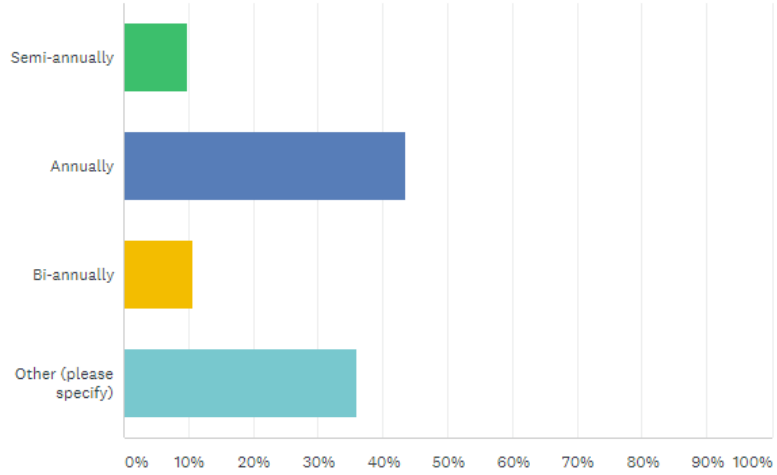
ANSWER CHOICES		RESPONSES	
Local police		83.85%	161
Sheriff Department		40.63%	78
State Police		11.98%	23
EMS		64.58%	124
Health Department		8.85%	17
Federal agencies (FBI, ATF, etc.)		8.33%	16
Other (please specify)	Responses	28.13%	54
Total Respondents: 192			

Q6

Customize Save as

How often does your department conduct Active Assailant training?

Answered: 195 Skipped: 3



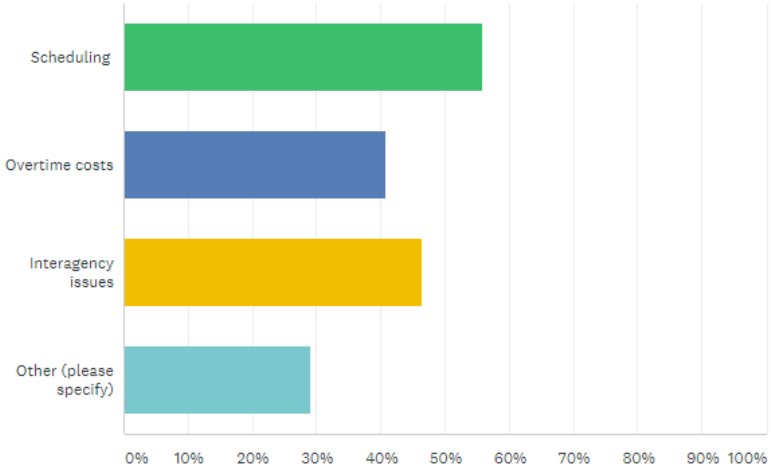
ANSWER CHOICES		RESPONSES	
Semi-annually		9.74%	19
Annually		43.59%	85
Bi-annually		10.77%	21
Other (please specify)	Responses	35.90%	70
TOTAL			195

Q7

Customize Save as

Has your department encountered problems conducting Active Assailant training due to: (Check all that apply)

Answered: 179 Skipped: 19



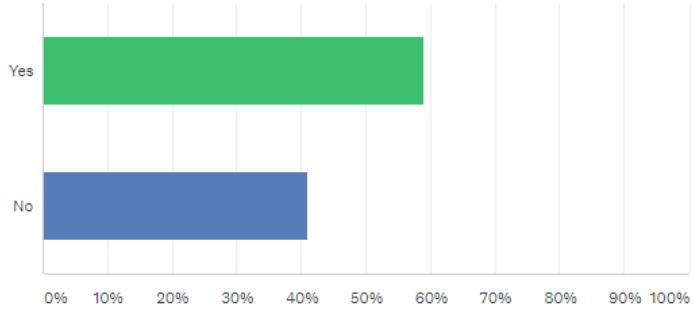
ANSWER CHOICES		RESPONSES	
Scheduling		55.87%	100
Overtime costs		40.78%	73
Interagency issues		46.37%	83
Other (please specify)	Responses	29.05%	52
Total Respondents: 179			

Q8

Customize Save as

Does your department equip members with ballistic PPE?

Answered: 198 Skipped: 0



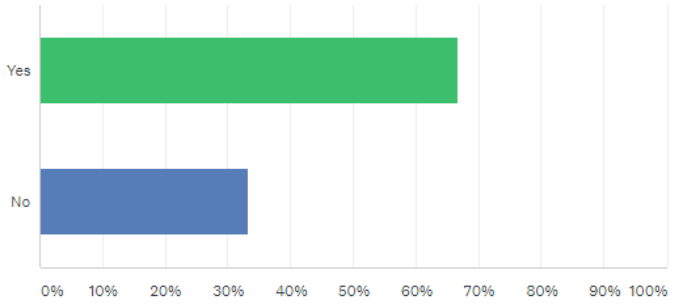
ANSWER CHOICES	RESPONSES	
Yes	59.09%	117
No	40.91%	81
TOTAL		198

Q9

Customize Save as

Does your department use Rescue Task Forces?

Answered: 196 Skipped: 2



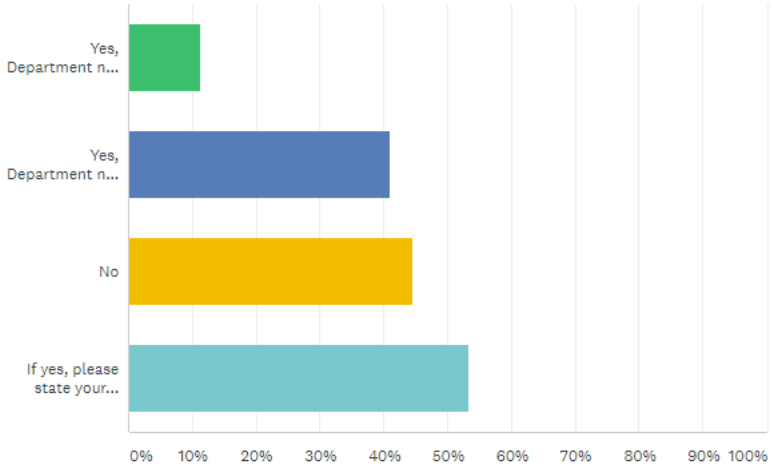
ANSWER CHOICES	RESPONSES	
Yes	66.84%	131
No	33.16%	65
TOTAL		196

Q10

Customize Save as

Would you like to include your department name and/or contact information for possible follow up questions?

Answered: 195 Skipped: 3



ANSWER CHOICES		RESPONSES	
Yes, Department name only		11.28%	22
Yes, Department name and ok to follow up		41.03%	80
No		44.62%	87
If yes, please state your department name and/or your contact information	Responses	53.33%	104
Total Respondents: 195			

Appendix B

Personal Interview- Chief David Billings, Manchester (CT) Fire-Rescue-EMS

Conducted via email October 18-22, 2019

From: Glenn Dube [mailto:gdube@southington.org]
Sent: Friday, October 18, 2019 2:53 PM
To: David Billings
Subject: RE: EFO ARP on ASHER

Thanks for the help!

1- When did MFRE initiate their Active Assailant program and how long did it take to develop and implement the program in conjunction with MPD, ASM and Emergency Management?
2- Did you encounter any agency or labor resistance to the development of the program?
3- How often do your members train on the procedure?
4- How do you designate Rescue Team members? Does each apparatus carry ballistic PPE?
5- What challenges have you encountered with training? For example, has overtime budgeting or scheduling challenges between agencies impacted training?
6- What were some of the lessons learned from Hartford Distributors, and how did you modify your program based on what your agencies learned?
7- Is there a published or available after action report from Hartford Distributors?

Thanks again for your help. Have a great weekend.

Glenn

Glenn Dube
Battalion Chief, A Shift
Southington (CT) Fire Department
860-490-5648 (cell)
860-621-3202 ext 8234 (work)

From: David Billings
Sent: Monday, October 21, 2019 3:51 PM
To: 'Glenn Dube'
Subject: RE: EFO ARP on ASHER

Chief: Lots to share! Here are some basic answers to your questions and some powerpoint presentations that we made regarding HDI. I'd be happy to elaborate on any specifics so feel free to call me. Good luck with your ARP.

When did MFRE initiate their Active Assailant program and how long did it take to develop and implement the program in conjunction with MPD, ASM and Emergency Management?
HDI occurred on August 3, 2010
We did some AAI planning following that but nothing congealed. The FBI contacted us in 2014 and wanted to do an exercise at the Buckland Mall. So we really started to build out our response plan in preparation for that. It still took until summer of 2016 for us to have an agreed upon, signed multi-agency policy (attached).

Did you encounter any agency or labor resistance to the development of the program?
Everyone agreed in concept but we had lots of challenges such as unified command structure, role of volunteers, role of paramedics vs. EMTs, getting the PD to accept ICS, etc. The Union did have some initial resistance, not wanting firefighters in a warm zone. The IAFF took a strong position of support for the RTF concept and that helped us locally to move ahead. Important to note that the RTFs are never allowed in the hot zone!

How often do your members train on the procedure?
Annual refresher with the PD on setup and operations of the RTF. Locally we use rescue teams instead of rescue task forces because the LEOs are not fluent in NICS.

How do you designate Rescue Team members? Does each apparatus carry ballistic PPE?
All medics are trained as members. Ballistic gear is on apparatus.

What challenges have you encountered with training? For example, has overtime budgeting or scheduling challenges between agencies impacted training?
Most training is done on-duty, we need to do a larger exercise and that will require lots of OT. Scheduling has mot been much of an issue. HDI eliminated the "can't happen here" mentality so all agencies see the training as a priority.

What were some of the lessons learned from Hartford Distributors, and how did you modify your program based on what your agencies learned?
Primary lesson was that we were totally unprepared. The powerpoints have some lessons learned. I can elaborate some on those.

Is there a published or available after action report from Hartford Distributors?
Parts are attached

David Billings
Fire Chief
Emergency Management Director
Manchester Fire - Rescue – EMS
860-647-3266

Appendix C

Personal Interview- Lieutenant Keith Egan, Southington (CT) Police Department

Conducted in Southington, CT August 29, 2019

Question 1: Does SPD have an active shooter program or procedure in place?

Answer: No, not at this point. We have looked at it and are working on it but as of now there is no formal program in place. We use the regional SWAT team, and have several officers on that team. If we had an active shooter today, we would rely on the regional SWAT procedures.

Question 2: Does SPD do any joint training with AMR or any other town departments? The FD and PD haven't trained together much.

Answer: No, we don't have any formal training with AMR. We have strong working relationships with both AMR and fire; we just haven't done a lot of training together. We did do an initial active shooter drill at the high school last year, and fire and AMR were both involved in that. We are looking at more training together and to get this program in place.

Question 3: Would you anticipate scheduling training between the FD and PD would be a problem?

Answer: I don't think it would be much of a problem to schedule. There would be an overtime impact, more so for the FD possibly.

Question 4: Is the PD familiar with the concept of rescue task forces and active operations in the hot, warm and cold zones?

Answer: I've heard of them, but I am not very familiar with them yet.

Question 5: The PD has a peer support team for officers? How has that been received?

Answer: It has been welcomed by the officers and we make use of the team often. The department is completely supportive of the peer support team. It has worked really well for us.