EFFICACY POST-EVENT: MASS KILLING INTEGRATED RESPONSE TRAINING

By

Danny S. Jarrell

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

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ABSTRACT

Regarding the killing or attempted killing of people in confined and populated areas, whether defined as an active threat, active shooter, or active killer, the results for public safety professionals responding to these incidents are the same. The Federal Bureau of Investigation statistics indicate that many mass killing events involve the use of firearms(s) with no pattern or method to the killer's selection of victims. The increasing frequency of these events, coinciding with the high number of casualties, is forcing first responders to adopt improved operational responses. Developing procedures through the collaborative efforts between first responders (e.g., fire, emergency medical services, and law enforcement) now addresses a common, unified response goal known as "stop the killing, stop the dying." Stop the killing refers to eliminating the threat, whereas stop the dying refers to treating life-threatening injuries on casualties, both of which are performed expeditiously and at greater risk to all responders. However, where this unified response goal has been applied in agencies and departments nationwide, data is lacking on responder efficacy post-training during a real-world mass killing event. By utilizing qualitative research methodologies, I identified localities where mass killing incidents occurred postdelivery of mass killing response training. Through interviews, surveys, case studies, and after-action reviews, I measured actions, including knowledge, skills, and abilities acquired from the courses.

Keywords: direct threat, TCCC, TECC, incident command, indirect threat, rescue task force

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Dedication

This project is dedicated to the survivors, surviving family members, and friends of those brutally murdered in mass killings and to all responders of active threat/mass killing events who risk their lives to "Stop the Killing and Stop the Dying." I sincerely hope and pray the information collected herein will benefit the mitigators of future active-threat and mass-killing events with the intent of doing the greatest good for the most significant number. Additionally, I hope to aid future researchers in their endeavors to provide data on active threat responses and the rescue task force.

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EMS (Emergency Medical Services)

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After Action Report (AAR)

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Casualty Collection Point (CCP)

Ambulance Exchange Point (AEP)

CHAPTER ONE: INTRODUCTION

Overview

According to (Sauer, 2015), from 1966–2012, citizens of the United States comprised 5% of the entire global population and harbored nearly one-third of the world's mass shooters. Most criminal justice scholars, historians, and law enforcement officers are familiar with Charles Whitman. Whitman was the sniper who, armed with at least one rifle, climbed the University of Texas (UT) clock tower and began killing people from the observation deck on August 1, 1966 (Meeks, 2016). Before law enforcement (LE) officers could neutralize him, Whitman had murdered 14 people and injured 30 others. People unfamiliar with these types of incidents may not be aware that the UT clock tower incident was not the first U.S. mass killing. Seventeen years prior, on Tuesday, September 6, 1949, Howard Unruh murdered 13 people while wounding three others as he casually walked through his Camden, New Jersey neighborhood, in what became known as "the walk of death" (Sauer, 2015, para.4).

The term active-shooter, which became all too familiar in the late 20th to early 21st centuries, evolved into what presently is referred to as an active-threat, mass killing, or mass shooting. This most recent term, mass killing, is becoming preferred among Subject Matter Experts (SMEs) for single-event mass killings because it encompasses any mass killing event resulting from any weapon used by the assailant(s). The definitions are similar depending on which term is used, whether it is active-threat, active-shooter, mass killing, or mass shooter. Whereas active-shooter(s)/mass shooters utilize firearm(s) to actively engage in killing or attempting to kill three or more people in a confined and/or populated area during a single event, active-threat(s)/mass killers utilize improvised weapons, explosives, edged, and blunt weapons to include vehicles (C. Staff, 2022). The early 21st century ushered in adaptions to mass killings. Attackers, resolved to kill large numbers of people, realized

that firearms were not their only choice of weapon. Assailants began using edged weapons, bombs, and even vehicles to carry out their murderous plans. In a recent example, on April 7, 2020, Idris Abdus-Salaam, a 33-year-old truck driver from Durham, North Carolina, stabbed and killed three women with a knife at a travel center near Knoxville, Tennessee (Hickman, 2002). Another incident was on November 21, 2021, in Waukesha, Wisconsin; Darrell Brooks Jr. intentionally drove a red sport utility vehicle through a Christmas parade, killing six people and injuring 62 others (Bloom, 2021). Since 2000, Federal Bureau Investigation (FBI) statistics indicate mass killing incidents, specifically active shooters, are unpredictable, evolve quickly, and average less than 10 minutes in duration, with at least 66.9% of all these types of incidents ending before the arrival of LE officers (F. Staff, 2016a). The increasing frequency of these events, coinciding with the high number of casualties within a short duration, is forcing first responders (FRs) to adopt new ideas in their operational responses.

These ideas include one popular concept called the Rescue Task Force (RTF). Consisting of firefighters, Emergency Medical Service (EMS) personnel, and LE, these FRs integrate and work together to provide immediate medical care to casualties (Mueck, 2017). This concept should not be confused with Tactical EMS (TEMS), which focuses primarily on medical care for tactical LE personnel. In theory, the RTF should integrate easily into FR agencies in every locality nationwide (Mueck, 2017). Little evidence exists on the efficacy of this concept from the FRs' perspective, post response to a real-world event. The aim of this qualitative study was to analyze and evaluate FR perceptions of their preparedness after responding to a real-world active threat incident.

Background

Mass killings, whether occurring in educational, commercial, government, or public settings, affect not only those in the local community where these events occur but also the entire nation.

When mass killings occur in the United States, particularly in educational settings, the media, for the most part, refer to the Columbine High School massacre, which occurred on April 20, 1999. Once this subject is breached, the popular question is: What has changed since then? Although each mass killing event is different, there are always three commonalities: senseless loss of life, the public safety response, and the recovery. Regarding this popular question, what has changed?

This study did not focus on the types, locations, or numbers of deaths, casualties, or victims. This study, although providing an extensive background into the categories and demographics of mass killings, focused on developing the reader's foundation in understanding the entirety of this phenomenon. The primary focus was on the public safety response and the responders themselves. In 1999, at Columbine, the standard operating procedure for these types of incidents across the nation was for LE to "contain the situation and wait for Special Weapons and Tactics (SWAT) units to arrive, mobilize, and respond… which reflected thinking at the time and was appropriate for hostage incidents or other scenarios… because SWAT personnel are better equipped and trained in special tactics than are patrol officers" (Wexler, 2014, p. 1). Unbeknownst to responders at the time, "Columbine did not involve hostage takers; it involved two youths intent on quickly killing people at random… the resulting Columbine AAR concluded that a much faster response was needed for active-shooter incidents" (Wexler, 2014, p. 2). Public safety personnel currently receive training in responding to active shooters/threats as quickly and safely as possible. However, how do we know these improved responses are working? Are there gaps in the data that may expose weaknesses in training? Does this relate to weaknesses in the response?

There is limited information that can answer these questions. I could find no data or information explicitly addressing these questions. I aimed to extend and refine any existing knowledge in this area of study by conducting a qualitative research study utilizing contemporary

qualitative methods for interviewing and polling responders who have physically responded to a mass killing event, asking questions directly related to their response(s). Collection and dissemination of these data would be exceptionally beneficial for public safety responders, educators, and government entities across the nation, and ultimately, the results will reinforce public confidence in their emergency services.

Historical Contexts

Addressing the historical contexts of single-event mass killings throughout history would seem to be a challenge; however, more commonalities regarding these events are present than not. Data indicates that in the United States, guns are more likely to be the instrument of death in most mass killings. Statistically, regarding gun deaths in the United States as a whole, gun-related deaths by mass murderers only account for 0.2% of all homicides each year (Malcom, 2018). In an article published in the New York Times, the author Glenn Thrush stated:

> While mass shootings, defined by many experts as episodes involving four or more fatalities, represent a relatively small percentage of overall gun crimes, they have risen drastically in recent years, with at least eight of the 20 deadliest mass shootings in U.S. history taking place since 2014. (Thrush, 2022, para. 6)

Whether the mass killer(s) is a gunman, the driver of a vehicle, or a knife-wielding murderer, responders must be prepared to respond to dynamic environments. In any case, the priorities remain the same: stop the killing, stop the dying. The ability to adapt to whatever active threat is happening weighs heavily on responder efficacy. Efficacy is directly related to effectiveness, and measuring effectiveness through qualitative studies, such as this one, is the key to improving future responses to these incidents.

When referencing the term "active threat," images of killing or the attempted killing of people in confined and populated areas come to mind. Whether defined as an active threat, active shooter, mass shooter, or mass killer, the result for public safety professionals responding to these events is the same: perpetrator(s) are actively engaged in an attempt to murder people. The increasing frequency of these events, coinciding with a high number of casualties, is forcing FRs, identified as LE, Firefighters (FF), and EMS providers, to alter their traditional responses with a new goal to stop the killing and the dying. A paradigm shift in active-shooter responses occurred in 2007 when FRs collaborated, developing training designed to integrate single resources (e.g., fire, EMS, and LE) into working as one unit or "task force" during active threat incidents. As a result, FRs could now more appropriately stop the killing and stop the dying. This new concept for active threats is referred to as the RTF.

Social Contexts

Meindl (2017) stated that “Mass shootings are a particular problem in the United States, with one mass shooting occurring approximately every 12.5 days” (p. 368), with the media’s sensationalizing of these events becoming detrimental to our society. The term “generalized imitation” was proposed by Meindl’s study, which indicated how media reporting of a mass shooting could increase the likelihood of another shooting event. Regarding mass killings, their study is a model explaining how the media’s publicizing of the murderer’s behavior can influence another person to engage in similar behavior (Meindl, 2017). These authors made a strong argument for increasing public awareness of a link between the role that the media plays in perpetuating unintended acts of violence. Media outlets acknowledge responsibility for these acts but do not reside with them; however, studies indicate that “the media is an important vector in spreading these types

of behavior" (Meindl, 2017, p. 370). Another social aspect is how the public views public safety's response. Public safety is defined here as fire, LE, and EMS.

The public asks about the motives behind these mass killings and how they happen. The questions focus on how the event could have been prevented and how the response was managed. Two recent events where responses were scrutinized come to mind: one in Parkland, Florida, and the other in Uvalde, Texas. In the Parkland school shooting, "former Broward County Deputy Scot Peterson, 58, stood trial on child negligence charges for allegedly cowering outside the school while 17 people — including 14 students — were gunned down inside on Feb. 14, 2018" (Fitz-Gibbon, 2021, para. 2). In the Uvalde school shooting:

> Onlookers shouted, "Go in there! Go in there!" at officers outside of the school after the attack began. However, officers did not… at one point, federal marshals handcuffed a parent who encouraged officers to enter the premises… it took police an hour to stop him." (J. Fetcher, 2022, para. 19)

Official reports from the incident indicated that 11 officers stood by for 77 minutes just outside the classroom door while the shooter murdered 19 children and two teachers (Flores, 2022). Contemporary protocols deem these strategies unacceptable, and in both incidents, LE's lack of efficacy resulted in pathetic failures during the initial response, which gained nationwide attention, damaging both departments' public images. How public safety personnel respond to these incidents is reflected through the eyes of the public's image.

Regarding the social context, the public's awareness of a mass killing response's efficacy weighs heavily on public perception. According to Lacy Wallace, Ph.D., a researcher at Penn State University, documented active shooter prevention and preparation in Pennsylvania communities. Her study focused on "how members of the public perceive active shooter risk in their communities and

their perceptions of the effectiveness of common efforts to prevent and respond to active shooters" (Wallace, 2021, p. 5). Wallace referred to response efficacy in the social context as "whether individuals feel community efforts like training and drills are effective in preventing active shooter events or preparing the community and citizens to better respond to an active shooter event in progress" (Wallace, 2021, p. 9, para. 1). Wallace's results suggest that community or workplace efforts at preventing and responding to these threats may impact both individual perceptions and individual behaviors. Increasing community awareness of their local public safety's response preparations for responding to these incidents is extremely important in maintaining a positive image and yielding a sense of safety, security, and confidence in their responders. According to the Gun Violence Archive:

> There have already been more than 300 mass shootings this year in the United States … mass shootings, where four or more people — not including the shooter — are injured or killed, have averaged more than one per day so far this year… not a single week in 2022 has passed without at least four mass shootings. (Ledger, 2022, para. 1)

Theoretical Contexts

According to the vice president of the Institute for Constitutional Government, John Malcolm, "…while in other countries, bombings, mass stabbings, and car attacks frequently kill more people than even the deadliest mass shootings in the United States" (Malcom, 2018, para. 5.7). Now, consider this, what about incidents in the United States, where "other" instruments of death were used, such as those where vehicles were used in killing mass numbers of people, such as the Christmas parade in Waukesha, Wisconsin. Another example is the Boston Marathon Bombing, where pressure cooker IEDs were detonated, killing three and injuring 260, and even the Oklahoma City Murrah Federal Building bombing, where ammonium nitrate and fertilizer were detonated,

killing 168 while injuring 361 people. Therefore, scholars should be evaluating the historical context of "mass killings," not just that of active shooters.

A need exists to look closer at all mass killings, not just gun-related ones. If someone wants to commit a mass killing and they do not have access to a gun, determined individuals will find a way to commit mass murder. I argue that the core issue in mass killings does not lie in the means of killing. The problem lies in answering the question as to why the murderer was killed in the first place. With that said, active shooters account for more mass killings than any other instrument of death. There is a potential for responders to develop tunnel vision when only focusing on mass shootings versus mass killings during their preparedness planning. This study will include data indicating that the same response concepts would apply to other mass casualty active threat incidents, just as they do in a mass shooting.

Situation to Self

My motivation for conducting this study developed from my 36 years of combined experience in public safety services. Vivid memories still linger from watching the first K-12 school mass shootings in the United States, happening in Columbine, Colorado. While working as a Paramedic for the Richmond Ambulance Authority in the City of Richmond, Virginia, on April 20, 1999, I observed the Columbine massacre evolve live on television from the emergency department of Johnston Willis Hospital, just after dropping off a patient. From a medic's point of view, memories of disbelief that this was happening in front of my eyes and the feeling of helplessness were overwhelming. Immediately, thoughts of what I would do if this happened here came to mind. Since that infamous day in 1999, according to U.S. News, "fourteen mass shootings at U.S. schools since 1999's massacre at Columbine High School in Colorado have killed a total of 169 victims" (A. P. Staff, 2022, para. 2), thoughts of 'what would I do' in this instance unfortunately, still stir around in my head much too

often. Since that day, I strived to prepare myself and others for any mass killing occurring in communities across this country.

Many axioms for responding to active threats have been developed throughout the years since Columbine for educating public safety responders, educators, and the public; however, are these concepts accepted and established as a protocol based on their source of development and/or should responders and planners accept this training as truth? Should responders accept these procedures and protocols as practical, or is evidence necessary to prove they work? The philosophical study of values is axiology, which can be used as a tool in this study to observe and report the actual value in the strengths, weaknesses, and gaps of the operational response training to mass killings. In this study, I sought to find accepted and proven paradigms in active threat training through constructivism and pragmatic philosophical research methods.

Problem Statement

A problem exists within the FR community regarding the presence of evidence and supporting data concerning the 2007 paradigm shift response to active shooter/mass killing incidents. Despite the development of the RTF concept, which currently is the standard response nationwide, no published data exists addressing whether this concept or comparable concepts, which encompass the 2007 paradigm shift, are meeting the goals of stopping the killing and stopping the dying. The negative impact of this problem affects victims and responders alike. This problem is due to the inability to assess victim survival explicitly driven by this new concept, incident operation's command and control protocols, identifying potential gaps in preincident training, or even post-incident responder efficacy. A possible cause of this problem could be oversight-related, or maybe the RTF concept has not been initiated as it should, or perhaps the idea is working 100% of the time without eliciting any negative aspects. Perhaps a researcher who investigates, evaluates, and analyzes the perceptions of

FRs on their preparedness for an active-threat incident, based on training received, could identify the strengths and weaknesses of this concept while identifying improvement plans as needed. The perfect method to remedy this situation would be a qualitative study to validate and measure the efficacy of active threat training among First Responders nationwide.

Purpose Statement

The purpose of this qualitative study was two-fold. First, I evaluated and analyzed the perceptions of FRs regarding their preparedness during an active-threat incident based on the training received. Secondly, I determined the effectiveness of contemporary active-threat response plans post the 2007 paradigm shift in FR preplanning and training. During this study, my central purpose was to assess the retention of the participants' knowledge, skills, and abilities received during their initial training for active-threat responses, coinciding with identifying the efficacy of this training during real-world operations in active-threat environments while evaluating the effectiveness of contemporary active-threat response plans post-2007. At this stage in the research, the central phenomenon was determining responder efficacy post training while operating in a real-world, active-threat response and whether or not the RTF concept is practical during real-world operations. The central concept being determined from this study was the efficacy of a responder's retention of active-threat training, coinciding with how effective this training endured while operating within their agency's active-threat/mass-killing operational preplans, with the hope of identifying how each of these phenomena functioned during real-world implementation. This qualitative research study was justified by empirical and grounded theory.

From an empirical viewpoint, data obtained did not primarily originate from numbers. The empirical means of gathering data utilize direct and indirect observation or experience from the participant(s). The grounded theory, developed for gathering data from the field, involves studying a

process, an action, or an interaction involving many individuals. The grounded theory was the most suitable theoretical explanation for linking the relationship between theory and the focus of this inquiry. The theory was appropriate because this study encompassed and relied on the participants' situational perspectives and critical decision-making, where their situational effectiveness was measured through their training efficacy. As previously stated, no data currently exists from the implementation of the RTF concept during mass killing responses. Because of this lack of data, "The grounded theory method may offer insight when there is no existing theory, which may offer an explanation for a phenomenon that you are studying" (Delve, 2022b, para. 4). Additionally, according to Delve (2022b), "The grounded theory is a qualitative method that enables researchers to study a particular phenomenon or process and discover new theories that are based on the collection and analysis of real-world data" (para. 1). The grounded theory has an increasing presence in medical qualitative research. According to a 2011 article in the BMC Medical Research Methodology Journal:

> Qualitative research is increasingly popular in health and medicine; additionally, by employing grounded theory methodology rigorously, medical researchers can better design and justify their methods and produce high-quality findings that will be more useful to patients, professionals, and the research community. (Sbaraini et al., 2011, p. 1)

Due to mass killing incidents, while viewing this phenomenon from a social context, grounded theory remains the methodology of choice for this research to justify and prove whether the RTF concept is beneficial. Utilizing grounded theory can also elicit new theories based on collecting and analyzing real-world data obtained from respondents.

Significance of Study

The implications of this study convey contributions to active threat preparedness and training while applying theoretical and empirical concepts. The data obtained during this study either confirm

or contradict various aspects of current theoretical and empirical active threat preparedness and training. For instance, many articles refer to the RTF as a concept. Data on whether the RTF concept has been evaluated as an effective tool during an active threat is currently lacking. It is essential to compare concepts and theories to understand the etymology and context.

Concepts are abstract notions. According to Koshal (2014), "Concepts are a way of thinking based on general ideas rather than on real things and events; concepts need not be tested; concepts morph and change" (para. 4). Regarding the theoretical aspects:

> A theory is a collection of explanations about a particular subject; the main component of a theory is that it must be able to be tested, proved, and/or disproved; theories are not considered facts; they are the best-educated guess surrounding a particular phenomenon; theories are explained by significant evidence, where concepts are lacking this evidence. (Koshal, 201 para. 4)

With this baseline context in mind, could this be why the RTF is a concept and not a theory?

A 2017 article from the Domestic Preparedness Journal indicated the concept as:

> The Rescue Task Force (RTF) concept came from the Arlington County (Virginia) Fire Department. Looking at active shooter events nationwide, these fire department leaders created a model that enables emergency medical services (EMS) to provide emergency medical intervention faster and within the Incident Command System (ICS) construct. (Mueck, 2017, para. 1)

Current literature reflects this view, and very few articles, if any, address the success of implementing the RTF concept and whether the desired outcomes were ever met. I was unable to find any source that addressed demonstrated real-world results. This study addressed this lack of data through qualitative research methods by studying responders who have been through active threat

training and responded to a real-world incident. The acquired skills of the responders were utilized, addressing the theoretical aspects of active threat training and responses. Next is a discussion on the empirical aspects of this subject.

The very nature of empirical studies is to gain knowledge using direct and indirect observation or experience (C. Staff, 2022). Regarding addressing the empirical needs for this study, I collected empirical data using various research questions, which determined the study's objectives. The data's reliability depended on the research questions and how they were answered. Theoretically, this empirical data should be representative of a larger population of responders and reflective of their responses in similar training and responses to real-world incidents. To my knowledge, no other studies exist that are similar to or address this particular quest for data. The preceding brings to the forefront a valuable question: What is the practical significance of this study? The practical significance of this study's results is found in how they will affect the communities where active threats occurred, the organizations that responded, and the responders themselves. The significance is also related to prompting possible changes to training curricula while supporting the dynamic phenomena of a mass killing and its response.

Research Questions

Operational strategies and tactics regarding active threat incidents are continuing to evolve. Modern active threat training places primary FRs in austere environments (e.g., LE, FF, and EMS). Until buildings and open areas are clear of threats, traditional methods such as standing by or staging in a safe area or cold zone are now an idea of the past. Since 2007, the police, FFs, and EMS have trained together, working as a unified team during these incidents (D. Staff, 2008). Contemporary incidents of this type typically place FFs and EMS in nontraditional roles while operating in what is now called the "warm zone" or areas still considered to be of medium risk to their safety (Iselin,

2009, para. 6–7; Metropolitan Police Department, 2013). No data exist regarding a trained responder's perception of their preparedness to respond to a real-world active threat event after attending present-day active threat training. In this study, I evaluated responders' perceptions of their preparedness after responding to a real-world event, post-present-day active-threat training. Strengths, weaknesses, and gaps identified from the study may indicate a need to review active threat course methodologies.

Questions

RQ1. Based on the training received, what perceptions do FRs have of their preparedness during a real-world active threat incident?

RQ2. How effective are contemporary active-threat response plans after the 2007 paradigm shift in FR preplanning and training?

Definitions

1. *Active Shooter/Threat* - An active shooter/threat is an individual(s) actively engaged in killing or attempting to kill people in a populated area. The recent active shooter/threat incidents have underscored the need for a coordinated response by LE and others to save lives. The term 'threat' is advancing into this theme as a potential primary definition for replacing the term 'shooter' since mass killers do not necessarily use firearms to engage in killing, making the term 'threat' more encompassing for this type of event.
2. *After Action Review* - A structured review or debriefing process for analyzing what happened, why it happened, what went well, and how it can be improved upon for future incidents.
3. *Ambulance Exchange Point (AEP)* - This is a position where patients are exchanged from one evacuation platform (e.g., CCP to the ambulance transport area).

4. *Casualty* – Refers to wounded, ill, or incapacitated persons resulting from an active shooter/threat incident.
5. *Casualty Collection Point (CCP)* - Used for the assembly, triage (sorting), medical stabilization, and subsequent evacuation of casualties when demand exceeds transport capacity.
6. *Cold Zone* - The area of an active threat response considered safe with no known threat; all emergency responders may operate in this area.
7. *Contact Team (CT)* – The rapid formation of police officers to immediately move to and address the active threat.
8. *Direct to Threat* – Term directing arriving LE officers to move toward the threat and eliminate it rapidly. This may mean moving to the sound of gunfire or based on casualties and victims' intelligence as to the last known position of the shooter or 'threat,' whatever that threat may be.
9. *Direct Threat Care* - Care rendered under attack or adverse conditions and provided in the hot zone.
10. *Evacuation Care* - Care rendered while the casualty is being evacuated from the incident site and provided in the cold zone.
11. *Fatality* – Refers to a person who has succumbed to injuries resulting from an active shooter/threat incident.
12. *Hot Zone* - The area of an active threat response where intelligence suggests a threat is probably active; access to this area is limited to LE, including solo officers and contact teams.
13. *Indirect Threat Care* – Care rendered while the threat has been suppressed but may resurface at any point and provided in the warm zone.

14. *MARCH* is an acronym used to treat combat-related injuries by priority: Massive hemorrhage, airway, respiratory, circulation, hypothermia.
15. *Rescue Task Force (RTF)* - A team of both LE and fire/EMS responders operating in warm zones of active-threat areas where LE provides security for Fire/EMS responders to provide rapid medical intervention to victims during an active threat.
16. *Safety Cordon or Corridor (SC)* - A secure area or route to a safe place or extraction point monitored by officers serving as sentinel or overwatch; also known as a security cordon or corridor.
17. *TCCC* - Tactical Combat Casualty Care strategies with one overarching goal for dealing with the kinds of wounds acquired in battle (as opposed to household accidents or car collisions)—decrease preventable combat death at the point of wounding, typically referenced in the military terminology.
18. *TECC* – Tactical Emergency Casualty Care medical skills that can be used at the point of injury to increase the survivability of victims in active threat incidents, similar methodology as TCCC, however, referenced in the terminology of civilian first responders.
19. *Triage* – The sorting of casualties by prioritizing their injuries from lethal to minor.
20. *Unified Command (UC)* - An application of the Incident Command System (ICS) used when there is more than one agency with incident jurisdiction or when incidents cross political jurisdictions (e.g., police, fire, and EMS) "sharing" command.
21. *Victim* - Person(s) considered not categorized as a casualty or fatality; however, they were directly affected by the events occurring from an active-threat incident and may have been witnesses to those events.

Summary

Chapter One was an overview of mass killings in the United States that included a foundation for the response. The chapter also introduced the terms active-threat, active-shooter, and mass shooter while identifying the challenges these incidents pose to FRs. Regarding FRs, the chapter also presented the RTF concept and why its implementation has become the standard nationwide. However, identified in this chapter was a perceived problem with the RTF concept—solution to mass killing responses. The public's perception of mass killings and the response to them from a social context was also introduced. This qualitative study was a means to investigate the responder's efficacy, post active-threat response training, when responding to these types of real-world incidents. Although historically used as a social research tool, grounded theory has become increasingly popular in healthcare by medical researchers to justify their methods better. This method has been shown to offer insight when there is no existing theory. Therefore, the grounded theory method was identified to approach this qualitative research project. The implications of this study will convey contributions to active threat preparedness and training while applying theoretical and empirical concepts. The data obtained during this study's process will confirm or contradict various aspects of current theoretical and empirical active-threat preparedness and training. Responders, emergency planners, and emergency management scholars could use this study to understand how the scope of contemporary active-threat training has/is impacting real-world active-threat incidents. These groups may also use the study's findings better to identify the strengths and weaknesses of these training programs to meet the needs of the response and responders.

CHAPTER TWO: LITERATURE REVIEW

Overview

The following review will focus on mass killing incidents involving the use of firearms. This review is centered on after-action reviews (AARs), past and contemporary mass killing response theories, mitigation strategies, and tactics while remaining focused on providing the medical and evacuation needs for casualties and responder safety considerations. As previously stated, the term active shooter evolved into what is presently referred to as active threat, mass shooting, or mass killing. According to the Louisiana State University (LSU) course titled Active Threat Integrated Response Course (ATIRC), "An active threat incident is an ongoing incident in which one or more attackers, regardless of weapon or weapons used, is active and has the potential to harm multiple victims" (L. F. Staff, 2020, Public Law, 2023). The more recent terms, mass shooting and mass killing, commonly used interchangeably by media outlets across the United States, are defined as "the murder of four or more people with no cooling-off period" (Follman, 2012, para. 1–3). Congress redefined the term in 2013 "as being the murder of three or more people" (Public Law, 2013, para. 1). Therefore, understanding the basis, purpose, and importance of AARs cannot be understated.

First developed by the U.S. Army, the term AAR refers to "a structured review or debrief process for analyzing what happened, why it happened, and how it can be done better by the participants and those responsible for a project or event" (Morrison, 1999, p. 3). The subsequent AARs included here are coded geographically, providing a standardized evaluation of each location type where an incident occurred. Examples include educational facilities, outdoor events, indoor events, complex coordinated attacks, government complexes, and commercial airport attacks. I will describe the pertinency of each source throughout the literature review. This study relies heavily on qualitative methodology. Ogawa and Malen developed an eight-step process for developing a

qualitative literature review (Randolph, 2009). Although this method parallels the basic steps of qualitative methodology, I utilized only steps one through six. Steps seven and eight are irrelevant to this section.

The first step of the literature review process was to locate and document evidence supporting each finding, where that evidence was found, and how the evidence was interpreted. The second step in this review was to define the focus and constructs of the literature review. Sources include various AARs resulting from active shooter/threat incidents spanning the United States. This review does not include gang or organized crime violence, nor does it include serial killers or domestic violence incidents, which are not to be confused with the active threat definition. This review only includes incidents where three or more deaths occurred; however, many active-threat incidents occur(ed) without any deaths. The addition of deaths is due to the importance of whether medical care was provided during the incident and the timeframe in which care was available and initiated. The next step included finding relevant literature, such as official AARs, which provide valuable insight into the actions of FRs during various active-threat incidents. Other qualitative documents, such as peer-reviewed journals and federal criminal justice statistics, were evaluated, analyzed, and disseminated. Although not regarded or highly valued by some scholars, newspaper articles and trade journal publications were also analyzed and presented. I also included high-value scholarly sources such as interviews and surveys. In Step 4 of Ogawa and Malen's 1991 methodology, I chose to simplify the sources by coding them. Sources were coded through (a) after-action reviews, then subcategorized by physical incident locations, (b) PBI data sources, and (c) peer-reviewed articles on improving responses. Steps 5 and 6 were combined and are the most complex of the literature review. In Step 5, a coded source summary presents evaluated, analyzed, and developed narrative summaries, considering all the relevant information discovered through the sources. In step Step 6, I identified

essential themes within the literature while creating a hypothesis about the relationships between those themes.

Theoretical Framework

I realized that gathering data on Responder's Critical Decision Making (RCDM) required a unique theoretical framework while employing KSAs in an austere environment. The social theoretical model of street-level bureaucracy (SLB), developed by Michael Lipsky, was most appropriate. According to Lipsky (1980), "SLB is a sociological theory which seeks to explain the working practices and beliefs of frontline workers in public services… examining the workplace in terms of systematic and practical dilemmas, which must be overcome by employees (responders), with a particular focus on public services" (Lipsky, 1980, p. 7). Understanding the actions of trained responders in an active-threat environment required integrating active-threat response theories, such as those developed out of the First Hartford Consensus. The theories “established a framework for minimizing deaths due to mass shootings, specifically eliminating preventable deaths due to limb exsanguination” (Ramly, 2016, pp. 1–3).

Street-Level Bureaucracy Theory

Police officers, FFs, and EMS providers interact directly within the communities they serve daily and represent the frontline of government policy. The concept of street-level bureaucracy was popularized by Michael Lipsky in 1980. Lipsky is well known in the field of public administration and argued that "policy implementation in the end comes down to the people who implement it" (Lipsky, 1980, p. 7). Lipsky (1980) added that dedicated SLBs have high expectations for themselves in their careers but argue that the demands of their work settings challenge these expectations.” Regarding this theory, the setting affects an individual's behavior, affecting their perception of their situation. Lipsky's theory provides "behavior as distinctive for its superb efficacy" (Etal, 2015, pp.

376–377), therefore, applicable to this study. The qualitative method has a history of providing valuable health science research in advancing theories, assessing programs, and improving interventions, making the SLB theory appropriate for analyzing the perceptions of responders training prior to responding during an active-threat incident.

Hartford Consensus

The Columbine High School massacre brought nationwide attention to school mass shootings. Nearly 8 years later, on April 16, 2007, a mass shooting at Virginia Tech University left 32 dead. Virginia's was followed by another one on December 14, 2012, in Newtown, Connecticut, when the Sandy Hook Elementary School shooting happened. A shooter entered the school, killing 20 children and six adults. A realization began gaining ground among responders and government decision-makers alike that "the traditional, sequential response paradigm and scene entry by LE officers, followed by medics only after the scene is secured, produced delays in care and suboptimal victim outcomes" (Jacobs, 2014, pp. 476–480). In an effort to ensure victims receive expeditious treatment for their injuries, the American College of Surgeons (ACS) initiated an effort in 2013 to meet these issues.

The ACS's efforts included forming a group to examine this issue. "This group included individuals from select public safety organizations and included health departments, the Federal Bureau of Investigation, law enforcement, fire, pre-hospital care, trauma care, and the military, meeting in Hartford, Connecticut, on April 2, 2013" (Jacobs, 2014, pp. 476–480). The meeting resulted in a concept document known as the Hartford Consensus I. The Hartford Consensus I group became known as the Joint Committee to Create a National Policy to Enhance Survivability from Mass Casualty Shooting Events. The first meeting led to scheduling a second meeting on July 11, 2013. This second meeting, the Hartford Consensus II, "was expanded to include representatives

from the Federal Emergency Management Agency and the National Security Staff of the Office of the President" (Jacobs, 2014, pp. 476). This meeting resulted in a theoretical response to active shooter and intentional mass casualty events, and the THREAT acronym was born.

> The Hartford Consensus II developed recommendations to improve responding to active shooter events and urged that a continuum of care be implemented that incorporates not only EMS response but also the initiation of care by law enforcement officers and potentially by lay bystanders; THREAT (T—threat suppression, H hemorrhage control, RE—rapid extrication to safety, A—assessment by medical providers, and T—transport to definitive care) became essential to improving casualty survivability. (Jacobs, 2014, pp. 476)

Rescue Task Force Concept

During an active shooter drill in 2007, plans evolved to improve the public safety response to active-shooter incidents in Arlington County, Virginia. Before the Columbine High School massacre in 1999, the LE protocol was to cordon off the area and wait for the arrival of a SWAT team to engage the threat. In most circumstances, this procedure allowed the shooter to remain active inside the perimeter, leading to a significant delay in getting casualties' medical care. Since Columbine, "law enforcement agencies across the nation began to develop proactive plans, to active shooter incidents by establishing an aggressive posture from which police immediately pursue, make contact, and neutralize the shooter; thereby reducing the number of casualties" (Iselin, 2009, para. 4). Arlington County Fire Department's perspective was in contrast to the national standard at the time, which was for LE to make the scene safe before fire/EMS interventions. However, even with the new LE concept of an expedited response directly to neutralize the threat, as recommended by the Harford Consensus, the issue of untreated wounded casualties remained.

Public safety officials from Arlington County performed numerous active shooter school drills to test different theories. Data from their AARs indicated fire/EMS resources remained in staging for an hour before the school was cleared and deemed safe, which was considered unacceptable. Consequently, through the collaborative efforts of both the Arlington County Police Department and Arlington County Fire Department, the agency's staff developed a new medical response concept to active-shooter incidents, which they titled the Rescue Task Force (RTF). The RTF would combine the military medicine of Tactical Combat Casualty Care (TCCC) and apply it to civilian EMS" (Iselin, 2009, para. 9). TCCC is focused on treating the preventable causes of death from combat-related injuries (see Figure 1).

Although the county fire department provided tactical medics for deployment with the county SWAT team, their primary mission was to remain dedicated to SWAT members, not caring for the civilian population. The idea for the RTF was based on a response by on-duty stationed medics, who would be responding within minutes of the first call for help. The medics needed to be trained in TCCC and trained to work with and under the protection of LE officers to care for casualties before the scene was thoroughly cleared. This would require a dynamic, nontraditional approach to providing prehospital treatments in unsecured areas.

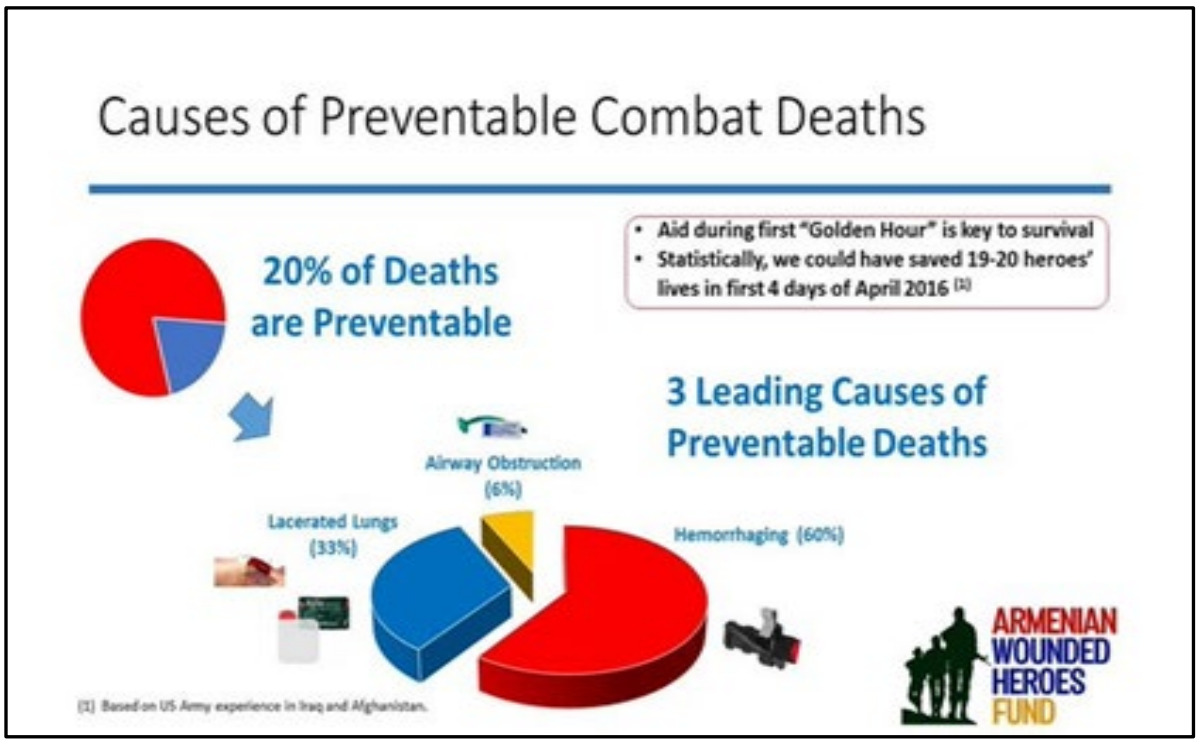
Tactical Emergency Casualty Care

Before 2010, mass shootings and bombings within U.S. borders solidified the recognition that a national capability gap exists in terms of prehospital trauma care at unsecured incident scenes. The Committee for Tactical Emergency Casualty Care (C-TECC) was formed in 2010 and modeled from the Committee on Tactical Combat Casualty Care (CoTCCC) to formally translate military trauma lessons learned into the civilian high-threat prehospital community. "C-TECC brings together SMEs from EMS, fire, LE, and DHS/FEMA, as well as physicians from emergency departments, trauma

centers, and the military to develop evidence-based, best-practice principles of high-threat pre-hospital medicine" (C. Staff, 2022, para. 19). Figure 1 (Staff A. , 2023).

Figure 1

Causes of Preventable Combat Deaths



Tactical TECC derives from TCCC. TECC, like its counterpart TCCC, "is a set of evidence-based and best practice trauma care guidelines with one exception, that being TECC was specifically developed for civilian high-threat prehospital environments" (C. Staff, 2022, para. 1). According to the CTECC, "TECC guidelines are built meet the unique needs of civilian environments... TECC addresses civilian specific language, provider scope of practice, population, civilian liability, civilian mission and operational constraints, logistics, and resource acquisition whereas, TCCC is geared towards military needs" (C. Staff, 2022, para. 1). One clarification necessary here is the difference between the phases of care and the priorities of care as these are two entirely different concepts. The priorities of care for TECC are the actual treatment methodologies. The phases of care for TECC were modified from the TCCC guidelines and are considered "zones of operations" (see Figure 2) image by Danny Jarrell. Although TECC is not an "active-shooter" operations course, TECC does meet the goal of educating responders in treating preventable causes of death during mass shootings/ bombing incidents. The priorities for treating these types of injuries, which are the same guidelines for TCCC, are found in the acronym MARCH: M-massive hemorrhage, A-airway, R-respiratory, C-circulation, and H-hypothermia (see Figure 3) (Staff N. , 2020).

Figure 2

TCCC/TECC Comparison

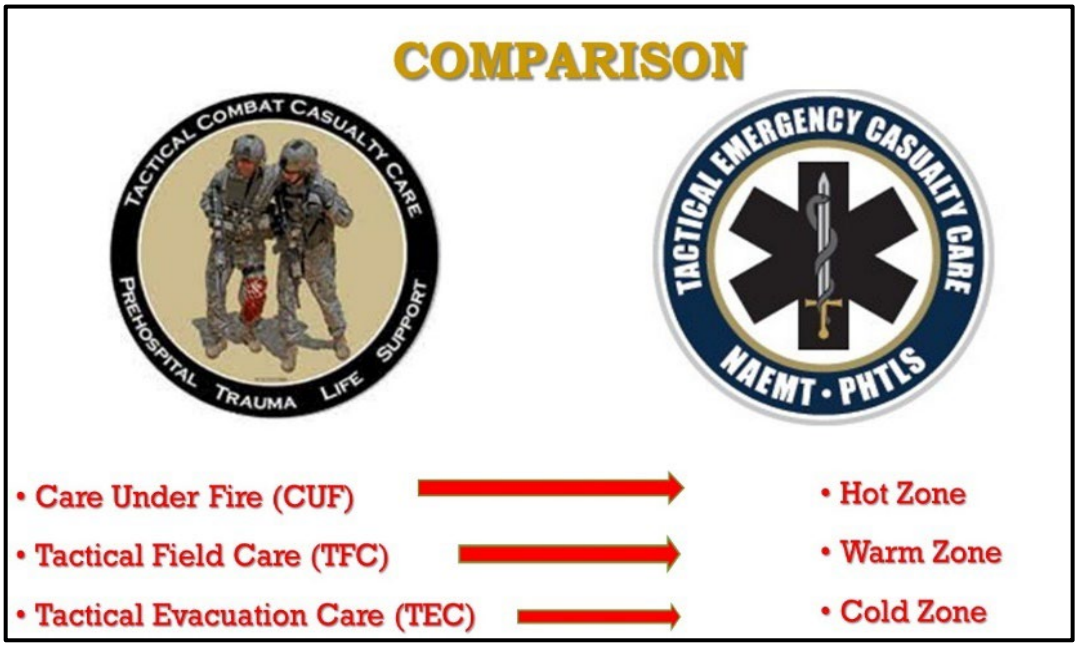
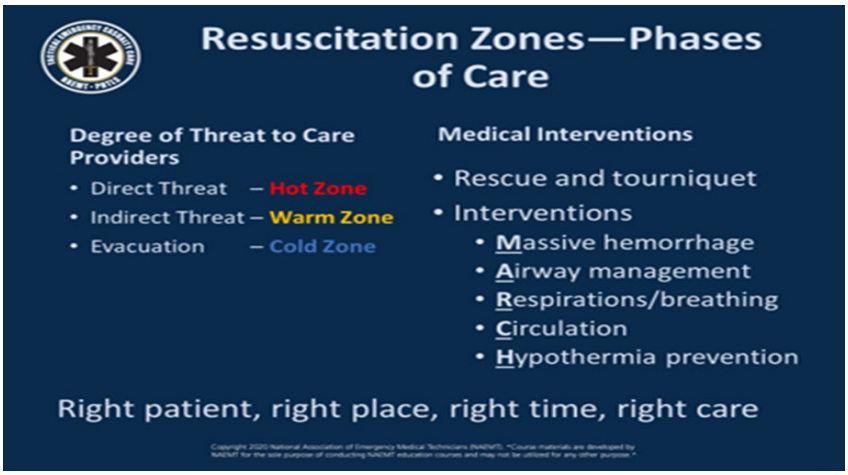


Figure 3

Resuscitation Zones/Phases of Care

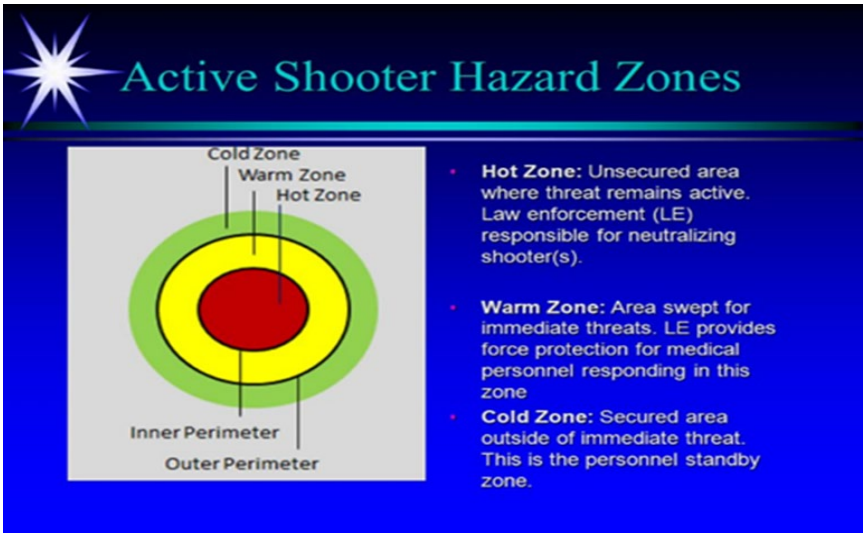


TECC2e_LN01_LessonPresentation

The phases of care are guidelines for responders to initiate specific treatments on casualties within certain zones of an active incident. For example, active shooter incidents are divided into cold, warm, and hot zones. These zones determine which areas are safe to enter and the type of care that will be provided in that particular zone (see Figure 4) (Marshall, 2015).

Figure 4

Active Shooter Hazard Zones



Integrating the Theoretical Framework

By integrating the SLB Theory, the Hartford Consensus I, II, III, and IV (2013–2016), the RTF Concept (2007), and the TECC Concept (2010), a solid foundation for this study is provided. Lipsky's SLB theory is a framework to examine the day-to-day implementation of government policies and procedures by frontline public servants, who are in contact with the public while executing individual critical decisions during their duties. Combined, the four Hartford Consensus have historically established the framework for minimizing deaths from mass shootings while focusing on eliminating preventable deaths due to extremity exsanguination (Ramly, 2016), leading to the RTF Concept.

The RTF Concept, first developed in Arlington County, Virginia, by the county's fire department, is focused on providing life-saving care to casualties wounded during a mass/active shooting. The concept places FRs in an austere environment under the protection of and escorted by police officers. The TECC, developed by the National Association of EMTs (NAEMT) C-TECC, integrated concepts from the standard used by the U.S. military in combat zones worldwide. This standard is the TCCC course. The C-TECC also adopted recommendations from the Hartford Consensus to improve the response to mass shootings while incorporating the RTF concept.

By design, this theoretical framework utilizes the SLB theory to address critical decision-making by FRs operating in civilian high-threat environments, specifically mass/active shootings. The accompanying three concepts demonstrate progressive, theoretical solutions for providing medical care and the evacuation of casualties during these types of incidents while utilizing unconventional tactics and treatments. Current public safety responses to mass shootings/active shooter incidents follow the guidelines set forth using these concepts and theories.

Federal government agencies adopted these standards for courses they sponsor and procedures for their specific agencies when responding to these types of incidents. Specifically, the Department of Homeland Security (DHS) sponsors one program which uses these standards. The program, called ATIRC, is delivered by Louisiana State University. Utilizing these theories, concepts, and standards can help evaluate the efficacy of FRs' skills. The central reason for this study was to prove that these theories are effective because no data exists on the effectiveness of these mass shooting/active shooter concepts.

Related Literature

The following literature review addresses specific incidents through AARs, professional journals, and articles related to the actions of participants enrolled in this study. The participants include full-time, part-time, and volunteer public safety responders who have completed formal training in RTF concepts and responded to a real-world event where they utilized their skills. Beginning with the AARs, each section focuses on a specific demographic location where a mass shooting occurred.

After-Action Reviews

Educational Facilities

Any school shooting news immediately strikes fear in a parent's heart. The media generally picks these incidents up while it remains an active crime scene. One fundamental fact regarding the media is that "if it bleeds, it leads" (Alm, 2019, para. 1). Therefore, news involving death and injuries will likely get higher ratings. This also holds when searching the internet for sources on past active-threat events. For example, if the event was unimportant enough to "lead" in major media news outlets, scholars are less likely to find information on lesser-known incidents. Therefore, the sources utilized for this study are few compared to the number of actual events. Regarding after-action

reviews, if one desires information on lesser-known incidents, the scholar must go directly to the locality and likely fill out a Freedom of Information Act (FOIA) form to release any requested government documents. Four educational facility incidents will be analyzed here, beginning with a comparison of two separate reports on the Parkland, Florida, Marjory Stoneman Douglas High School shooting.

Common to both AARs' "Recovering and Moving Forward: Lessons Learned and Recommendations Following the Shooting at Marjory Stoneman Douglas High School" and the "Marjory Stoneman Douglas High School Public Safety Commission Initial Report," it is evident that this incident took place on February 14, 2018, at 2:21 pm. A male gunman armed with a semiautomatic rifle entered Marjory Stoneman Douglas High School in Parkland, Florida, opening fire on students and staff, killing 17 people and injuring 17 others. The Public Safety Commission's AAR was the first to be completed on January 2, 2019, while the Center for Mass Violence Response Center's AAR was not completed until August 2019. It is worth noting that both AARs stated that the purpose of the review was not to place judgment but to provide clear, objective, evidence-based feedback for improvement (L. Staff, 2019; Straub, 2019).

Through objective investigation, one key finding common to both AARs is the failure of multiple agency's coordination efforts, inefficiencies in preparation, and the actual response itself, which included the Broward County Sherriff's Office, Coral Springs-Parkland Fire Department, Broward County Public Schools and the Marjory Stoneman Douglas High School, which impeded resource coordination (M. P. Staff, 2019; Straub, 2019). Both reports utilized qualitative research methodologies to collect data. Typical of this type of report, SMEs conducted interviews, collected data from each governmental agency involved, and through an exhausting review of the Marjory Stoneman Douglas High School Public Safety Commission’s Initial Report. The relevancy of both

AARs provides different but equally essential perceptions of the same incident, one from the locality, whereas the other is a third-party investigation. The following school event discussed is the mass shooting at Sandy Hook Elementary School in Newtown, Connecticut.

The Connecticut State Police (CSP), in response to the mass shooting on December 14, 2012, at Sandy Hook Elementary School in Newtown, Connecticut, developed an AAR of the events transpiring that day, which includes details from the initial response, rescue, recovery, and investigative activities as seen through the lens of the CSP. According to the review, a male gunman entered the school shooting and killed 26 people. Of the 26, 20 were children between 6 and 7 years old. The remaining six deaths were adult staff members (Police, 2013).

Using a qualitative methodology, the CSP report provided a comprehensive, critical review of actions taken by personnel from various organizational levels within the CSP. Outside agency responders provided various viewpoints simultaneously (Police, 2013). One strength of this report is that legitimate varying perspectives were obtained due to the type of sources utilized. Additional information was compiled from various sources, including personal observations, debriefing sessions, personal and group interviews, consults, and investigative reports (Police, 2013). The data compilation bore various lessons learned and specific recommendations for improvement. Key findings include improvements needed in preincident planning, command and control, equipment, training, and communications (Police, 2013). Many other findings were listed; however, they are irrelevant to this study. The next AAR represents a university mass shooting in Virginia.

At the time, then Virginia Governor Tim Kaine appointed a panel to review the events on April 16, 2007, when a Virginia Tech student began shooting students and staff of the University, killing 32 and wounding 17 before taking his own life (Review Panel, 2007). Even though the event happened 15 years ago, the details from this report remain relevant due to the nature of the incident

and the multitude of agencies responding. Although many critical findings regarding the gunman's mental health and services provided for surviving victims, families, and loved ones of those killed are reported, only the data concerning the response and scene operations are relevant to this study. The methodology for the AAR was qualitative, resulting from over 200 interviews and thousands of pages of records and reports (Review Panel, 2007).

One of this report's greatest strengths is the review's structure. Each chapter addresses distinct aspects of the incident. For example, Chapter 2 addresses the University's setting and security, whereas Chapter 3 addresses the timeline of events. Chapters 7 and 8 address locations where the killings took place. Each one of these aspects of the incident contains critical findings and recommendations. Unlike many similar AARs, where the essential findings and recommendations are compiled at the end, this report includes them in every focused aspect (chapter) of the review, making research very convenient. Subsequent AARs will include incidents occurring at outdoor events.

Outdoor Events

The following two AARs result from a sniper attack in which 58 people were killed and more than 850 attendees injured at the Route 91 Harvest Festival in Las Vegas, Nevada, on October 1, 2017. A lone gunman from across the street, located on the 32nd floor of the Mandalay Hotel, opened fire into a crowd of 22,000 people attending the festival. The AARs result from the Clark County Fire Department, FEMA, and the Las Vegas Metropolitan Police Department (LVMPD). These AARs developed through the collaborative efforts of 24 departments and offices by participating in interviews and surveys or by providing documents such as agency AARs, communication records, crime scene photos, 911 call records, news and social media reports, and even LE officers' body cameras, all of which are related to the 1st October response (L. Staff, 2019; F. Staff, 2018d).

The LVMPD conducted an internal AAR separate from FEMA's. The strength of their report lies in formatting the conclusion and recommendations portion of their report in a table. Each section within the table addressed 93 concise recommendations from no less than 14 key area findings from the incident. These recommendations coincided with departments and bureaus responsible for analyzing their assigned finding (L. Staff, 2019). A strength noted from the FEMA report was the observation and recommendations section. FEMA identified a problem that resulted in recommended changes (F. Staff, 2018d). Both AARs provide data identifying trends in responding to these incidents from four viewpoints: the threat, the responders, the victims, and the casualty's actions. The following final two AARs regarding active outdoor threats were generated from the Boston Marathon bombing.

On April 15, 2013, beginning at 2:49 pm, two IEDs detonated near the finish line of the Boston Marathon, one at 671 Boylston Street; the second, thirteen seconds later, at 755 Boylston Street, less than 200 yards away, resulting in three deaths and 260 injuries. The resultant injuries included the loss of limbs (amputations), burns, and penetrating wounds (Leonard, 2014; C. Staff, 2014). No other active-threat incident of this type had ever occurred on U.S. soil. This incident crossed local, state, and federal law enforcement boundaries, including FEMA and other federal "alphabet" agencies (e.g., FBI, ATF, CIA, etc.). This event captured national and global attention for over 100 hours following the actual bombings, posing enormous challenges for public safety officials. Analyzing selected aspects from this event highlights a whole level of multidimensional preparedness within the region, making this incident worthy of further analysis in this study. The incident's relevance is unique due to the *type* of attack that occurred, defined by the DHS as a Complex Coordinated Attack (CCA). Also known as Complex Coordinated Terrorist Attacks, these types of attacks are a series of assaults by one or more individuals or groups using weapons intending to inflict harm on large numbers of people (C. Staff, 2022).

In "Why Was Boston Strong?" one of the greatest strengths presented focused on the media reports. "Through an extensive focus on the media's reporting, researchers gained exclusive understanding in the state of the media and the public's understanding and reaction to the events, rather than for data about the actual events themselves" (Leonard, 2014, p. 49). This understanding provided a fascinating perspective outside the norms of other AARs. Strengths presented in the AAR for the response to the Boston Marathon bombing are found in the report's formatting. This report addressed the capabilities of the response into five focus areas. Within these focus areas, the best practices and areas needing improvement were detailed in the focus area verses scattered throughout the document, leading to an enhanced understanding of the response's capabilities. The subsequent focus of this study will continue with indoor active-threat AARs.

Public Indoor Events

For this study, public indoor events encompass restaurants, nightclubs, theaters, commercial businesses, and similar venues. Government-controlled facilities will be discussed later in a separate indoor category. On June 12, 2016, a male terrorist entered the Pulse Nightclub in Orlando, Florida, shooting 100 people, leaving 49 dead and 53 wounded. Some sustained injuries other than gunshot wounds. The subsequent review of this incident compares data from three separate AARs. These are the City of Orlando Office of Emergency Management's *Pulse Tragedy: After Action Report,* the Department of Justice's *Response and Resilience: A critical incident review of the Orlando public safety response to the attack on the Pulse nightclub,* and the National Police Foundation's, *After Action Review of the Orlando Fire Department Response to the Attack at Pulse Nightclub.* Utilizing AARs from the same incident, these reports will compound trends, gaps, and oversights lacking in their counterparts.

The strength of the City of Orlando's Office of Emergency Management review lies in the brief details provided for best practices, lessons learned, and recommendations to assist leaders, public safety, and public health personnel in developing successful actions and implementing recommendations for future incidents. The U.S. Department of Justice's (DOJ) report provided critical findings focusing on the challenges faced by public safety agencies responding to this incident. This AAR provided unique insight into active-threat responses where the "threat" has taken their own life prior to law enforcement's arrival; this incident resulted in a nontypical active-threat where the threat engaged LE, resulting in a barricade incident—finally, the National Police Foundation's review. The uniqueness of this review is its focus on the Orlando Fire Department's response. Agency leadership, interagency cooperation, command tactics, and training are concisely presented and contribute significantly to this research. The next AAR resulted from a movie theater shooting occurring in October 2014.

On July 20, 2012, shortly after midnight, a lone gunman entered the Century 16 Theater Cinema complex in Aurora, Colorado, opening fire in the theater, shooting 70 people with a shotgun, an AR-15 semiautomatic rifle, and handgun (T. D. Staff, 2014). Twelve attendees died from gunshot wounds, with an additional 12 known to have suffered injuries while fleeing the theater. A total of 82 people suffered physical injuries, not including any unreported minor injuries (T. D. Staff, 2014). The integral value of this AAR results from critical findings such as the integration of fire, LE, and EMS personnel, which was a significant and fundamental concern presented in this report, providing valuable information for this research. In concluding the AAR documents, the following four resulted from an active threat inside government-administered buildings: an airport, a military installation, a conference center, and one local City government complex.

Government Complexes

As stated earlier, this research section presents data from AARs where an active threat occurred inside a government-administered facility. For example, events at the Fort Lauderdale/Hollywood International Airport in Florida, the Navy Yard in Washington, D.C., the City of Virginia Beach's Municipal Center, and the IRC Conference Center in San Bernardino, California. Although these incidents were located inside a building, the need to categorize them as stand-alone studies lies in where they occurred, beginning with the two separate AARs resulting from the Fort Lauderdale/Hollywood Florida (FL) International Airport attack.

Active threats in airports are rare, making this incident relevant to this study. However, the subsequent two AARs, one from the Broward County Sheriff's Office (BCSO) and the other from the Broward County Aviation Department (BCAD), provided separate but equally essential vantage points from their active-threat response on January 6, 2017. On this day, the shooter arrived at FLL in Broward County, Florida, on a Delta flight from Alaska. Once at the baggage claim area, the subject opened fire, killing five people while injuring six others in the shooting (Diefenbacher, 2017). Additional injuries occurred when 36 airport patrons sustained injuries during the ensuing panic. The first review will be from the BCSO.

One key finding of the BCSO review offers extraordinary strength for this research. The relevance of this strength lies in the section BCSO dedicated strictly to the hysteria and panic resulting from the gunfire. I appreciated the fact that BCSO viewed this incident as two events. One is the actual shooting, and the second is the panic. BCSO also formatted its report in divisions, one inside the airport facility and the other in the perimeter, concisely detailing issues experienced in both areas. BCAD dedicated an entire chapter to observations and analysis.

In the chapter, BCAD detailed the airport-wide response, emergency management, operational coordination, post-event activities, and recovery. The latter will not be discussed in this research. When discussing other factors, BCAD detailed observations and analysis and provided recommendations for each subcategory under the primary topic. This provided essential findings, proving to be a strength in analyzing their review. The following review will be from the San Bernardino terrorist attack on December 2, 2015.

I will discuss two AARs in this section. The first is from San Bernardino County (SBC), and the second is from the DOJ's Community Oriented Policing Services (COPS) office. Conclusions and key findings from the SBC review provide a succinct view of the incident's operational response, emergency protocols established after initial reports of the attack, and a detailed review of the communications materializing from the event. A key strength of this review lies in the report's structure, primarily where the operational response is concerned, where analyzing pre-incident protocols and comparing them to actions initiated post-incident proved valuable in this research. The COPS review also provides valuable key findings that strengthen its report.

The greatest strength of the COPS review is its comparison to the Pulse Nightclub incident. COPS was the third-party reviewer in both incidents. The COPS review provides excellent strength in comparing two similar terrorist attacks. The terrorist attacks were committed by "homegrown jihadis in both incidents." In both events, the terrorists targeted FRs with secondary devices or threats thereof, presenting a challenge to LE in addressing the possibility of suicide vests having been placed on hostages. Both events concluded with a gun battle between LE and the heavily armed suspects, who fought until they were neutralized (F. Straub, 2017). One additional AAR added to this review of San Bernardino is an AAR directly related to tactical medicine treatments and methodology applied to the casualties from the San Bernardino attack.

In this AAR, utilizing the San Bernardino Terrorist attack, Dr. Joshua Bobko presents his case on the importance of civilian responders adapting their responses and medical treatments to those used on the battlefields of Iraq and Afghanistan. Presenting key findings from the lessons learned from the San Bernardino attacks provided a stimulus for discussion among EMS, LE, and EMS medical directors about the appropriate response in these types of events (Bobko et al., 2018). Dr. Bobko's report's strength lies in explaining the difference between SWAT medics and Rescue Task RTF medics responding on ambulances and fire apparatus. The next AAR will focus on the active-threat attack that evolved at the Municipal Complex in Virginia Beach, Virginia.

On May 31, 2019, a City of Virginia Beach employee armed with two .45-caliber handguns entered Building 2 of the Virginia Beach Municipal Center, shooting 12 people and injuring five others. This AAR assesses the initial response by public safety responders, incident communications, the incident command system, lessons learned, and recommendations for improvement. One key finding of this review, although not a designated terrorist attack, the uniqueness of this incident is that upon LE's arrival, the suspect entered into a gun battle with them before taking his own life (Heintze, 2019). Other key findings include that the city's communication capabilities were not robust enough to address the communication requirements, and the city's critical incident response protocols were not thoroughly followed (Heintze, 2019). These findings imply strength in this source by providing information that can be used to develop trends during responses to active threats. The final AAR, generated in 2016, resulted from the active threat incident at the Washington Naval Yard in 2013.

On September 16, 2013, an independent contractor for the Washington Navy Yard entered Building 197, carrying out a deadly workplace mass shooting. Firing indiscriminately over 69 minutes, the subject engaged in multiple shootouts with responding LE officers, killing twelve Navy Yard employees and injuring several others (Metropolitan Police Department, 2014). Conclusions

relevant to utilizing this source in the study lie within the critical finding identifying the Metropolitan Police Department, along with other area LE agencies and emergency responders previously conducting joint active-threat training, in the event of a real-world "active-shooter" incident. These findings are pertinent to the study because the successes encountered during the incident directly related to the responder's training (Metropolitan Police Department, 2014). This AAR concludes this section of the literature review. To maintain consistency in reporting quantitative data, the FBI is the only agency used in this report for quantitative data (FBI, 2019, 2020).

Federal Bureau of Investigation Statistics

The FBI's Criminal Justice Information Services (CJIS) utilizes the Uniform Crime Reporting (UCR) Program, which generates reliable statistics for use in law enforcement, students of criminal justice, researchers, the media, and the public (FBI, 2020). The UCR Program includes more than 18,000 cities, universities and colleges, and county, state, tribal, and federal law enforcement agencies. Participation is voluntary, with agencies submitting relevant crime data to the FBI's UCR Program. The five FBI sources in this study are relevant to active-threat incidents in the United States. The first document, which is relevant to data regarding active shooter incidents, is a compilation of active threat incident data from 2000 to 2017. The next three are independent annual reports from 2018–2020. Each report includes a collection of data, which consists of the number of incidents, the number of casualties, including killed and wounded, and the categories of locations where these incidents took place per year during this time frame. The categories focus on location types (e.g., commerce, houses of worship, education facilities, government locations, and healthcare facilities). Unfortunately, statistics from 2021 have not been published to date. Therefore, the following document presented by the FBI is not statistical per se; however, it is a valuable document providing numerous resources recommended by the FBI for active shooter research.

As a result of the FBI's commitment to working with its partners in protecting schools, workplaces, houses of worship, transportation centers, other public gathering sites, and communities; the FBI's website links to the Office of Partner Engagement, which provides an active shooter resource page (F. Staff, 2022c). This page entails numerous resources such as annual reports, AARs, and training initiatives for FRs nationwide. In addition, this webpage provides pertinent links to various documents necessary to provide valuable resources for this research. The eight articles and reports will be presented and reviewed in the Improving the Response to Active Threats category. The first article reviewed was published in the trade journal EMS World.

Improving the Response to Active Threats

According to one EMT, active shooter incidents are increasingly afflicting the public, forcing FRs to improve their tactical responses to reduce the number of casualties (Amato, 2018, p. 28). Key findings in Amato's research are developing a course titled "Stop the Bleed," which intends to instruct bystanders and FRs on practical measures to prevent fatal blood loss in victims suffering traumatic wounds, which has become a national campaign (Amato, 2018, p. 28). Amato concluded that responders must embrace active shooter incidents as the new norm. Along the same lines, author Don Cox presents his case on active shooter responses.

In *Active-Shooter Response: Tools for Better Preparedness* (Cox, 2018), the author concluded that the number of mass shootings and active-threat incidents has steadily risen since 2000. Adding to this statement, in 2017 alone, the United States experienced approximately one mass shooting per day. Cox's conclusions stress that contemporary times require FRs to understand the critical importance of adequately preparing for active threats (Cox, 2018). Cox also presented information on several alternative training methods evolving within the public safety trade. This information is pertinent to compile within this study as it adds sustenance to provider perceptions of their

preparedness for active threat incidents. In the following article, author Henry Criss provided a view into the future of fire and EMS responses to active shooter events.

Criss began his viewpoint by referencing a quote from the Director of the National Hurricane Center, Max Mayfield, where Mayfield stated, "Preparation through education is less costly than learning through tragedy" (Criss, 2018, para. 1). Using this quote, Criss underscored the importance of FRs and community preparedness for active shooter and hostile events. Criss concluded that responders must focus on increasing the collaboration between LE and fire/EMS agencies while establishing minimum coordination and interoperability practices between these agencies (Criss, 2018). Criss' findings provide valuable insight to this research. The next section focuses on an article by James Dudley.

Coordinating the response to an active threat can be a daunting task. In an article titled "How Police, Fire, and EMS can coordinate active shooter response" (Dudley, 2018, para. 2–3), the author focused on developing national guidelines and procedures governing this type of response. The national guideline Dudley referred to in his article is the National Fire Protection Association (NFPA) 3000 Active Shooter/Hostile Event Response (ASHER) Program, which the NFPA first issued as a Provisional Standard (PS) in 2018 after a string of active shooter events in 2016. Dudley concluded that NFPA 3000 is making headway in coordinating multiagency responses (Dudley, 2018, para. 2-3). This article provides valuable information regarding NFPA 3000, standardizing and outlining responsibilities for police, fire, and EMS responses. The following article, authored by Jennifer Goodwin for the NAEMT, addresses ways to strengthen the role of EMS in our nation's emergency preparedness strategy and response activities.

In the NAEMT's *2017 EMS Preparedness for Disaster and Mass Casualty Incident Response Report*, Goodwin identified national gaps in EMS preparedness protocols and training for responses

during natural and man-made disasters, mass casualty incidents, and medical countermeasures, with recommendations on addressing these gaps (Goodwin, 2017). The relevancy of this article is vital to this research. This information provides ways to improve the integration of EMS in disaster preparedness planning, communications, and interoperability and identify funding sources to support agency preparedness activities. The subsequent article focuses on LE and explores how police officers view their role in active shooter events.

Phillips concluded that police responses to any active shooter/ threat incident receive considerable public attention. The public expects officers to enter active shooter events and engage the suspects immediately. This theory deviates from current suggested procedures, leaving policy implications and directions for the future (Phillips, 2020). This article directly relates to this study in that the vignette provides accurate perceptions from LE officers responding to a simulated active-threat incident. The relevancy of this article is unparalleled and relevant to this research in that it is a fine example of a qualitative research method for officers' perceptions of their roles and responsibilities while responding to an active threat. In the following article, Connie Pignataro authored *EMS Response to the Active Shooter,* published in 2019.

Pignataro's article, published in Fire Engineering, referred to the first contemporary mass shooting at Columbine High School in 1999. This event made LE realize that current policies regarding active shooters no longer served the public (Pignataro, 2019). One conclusion made by Pignataro was that at the time of this tragedy, it was the policy of responding agencies to wait for the SWAT team. While en route and waiting for SWAT, 13 people were killed and 24 injured, most bleeding to death while waiting for SWAT to arrive and confront the shooters (Pignataro, 2019). One key finding in this article was the nationwide development of a new approach and training when responding to active shooters as quickly as possible. Pignataro presented one form of response

training known by the acronym THREAT, meaning **T**hreat Suppression, **H**emorrhage Control, **R**apid **E**xtrication to **S**afety, and **T**ransporting All Patients to Definitive Care. These findings and conclusions are pertinent to this research as they offer insight into an alternative active-threat response system and provide a timeline of the changes in responses implemented post-Columbine. In the following article, there is a need to view these incidents through the eyes of public preparedness.

Understanding public preparedness programs for active threats is imperative during the first few minutes of this incident type. Responders must communicate with victims and witnesses of these events to obtain reliable intelligence for rapidly addressing the threat. Author Jesse Roman published an article for the NFPA Journal in 2019 addressing one of the new concepts in public preparedness. In *The First Twelve Minutes*, Roman discussed this new course directed toward public preparedness in the ever-present threat of intentional violence in schools, places of worship, and other community spaces. What makes this a valuable source is the fact that NFPA Journal interviewed Roman, developer of *The First Twelve Minutes* program curriculum, inquiring as to why there is a need for more emphasis on training citizens for active-shooter response and how it fits into the new NFPA 3000 Standard for an ASHER Program. FRs must understand the integration of a civilian response in the first minutes of an active threat. This article is pertinent for added insight into responders' perceptions, primarily when this new training provides for integration into NFPA 3000.

Summary

Regarding the current standards developed to stop the killing and stop the dying from preventable causes of death during mass shootings, insufficient research exists on the efficacy of FRs' actions throughout response operations during a real-world mass killing/active shooter event, post-formal training specifically intended for this type of incident. An article published by NBC Channel 10 in Philadelphia reported, "There have been close to 400 mass shootings in the United

States this year, according to the Gun Violence Archive" (O'Kruk, 2022, para. 1). Additionally, Channel 10 reported, "While mass shootings make up a small fraction of gun-related deaths, they are becoming more frequent. In 2017, there were around 350 mass shootings; that number jumped to close to 700 in 2021" (O'Kruk, 2022, para. 7). Since the Columbine High School mass killing, the need for faster medical care and increased speed in stopping the shooter was realized as a priority needing attention.

The concept of addressing this need began developing when federal, state, and local agencies consulted to find an answer for improving response outcomes. Beginning in 2013, these agencies met in Hartford, Connecticut, in what became known as the Hartford Consensus meetings, which sought to enhance survivability from mass shooting events. In meeting the goals of this project, I specifically identified the proposed nationwide suggested changes in the response. I also reviewed actual AARs from each recorded demographic mass-killing event across the nation and reviewed whether or not the new standards were initiated and whether they worked.

The gap between the new standard response and trained responder efficacy during these events is unknown, and this was the purpose of this study. Few researchers have looked explicitly at how responders function and operate in austere environments, utilizing these unconventional new standard responses to mass killings. Thus, the purpose of this qualitative, grounded theory study was to address this gap in the literature by investigating the experiences of professional and volunteer public safety workers who have responded to mass shootings/killings after training tailored explicitly for these types of events to measure their efficacy in training post response while evaluating the new standards methodology.

CHAPTER THREE: METHODS

Overview

This qualitative critical decision-making study aimed to evaluate and analyze the perceptions of FRs on their preparedness during an active-threat incident based on training received. In the study, the researcher assessed the efficacy of the participants' KSAs after responding to and operating in a real-world active threat environment. In this chapter, I justify the methodology and the research method. Specht's (2019) study on empirical research skills explains these two terms:

> Methodology explains why you are going to undertake research in a particular way, drawing upon literature and epistemologies, linking your methods to the theories and literature review, while method describes how you will perform the research, e.g., interviews, surveys, etc. (Specht, 2019, p. 135)

The appropriate research methodology for this study was qualitative while maintaining the focus of the study within the grounded theory. Chapter 3 addresses the justification for the study, a reaffirmation of the research and sub-questions, descriptions of the participants, the setting, and the role of the researcher. This chapter also clarifies the steps taken during data collection, data analysis, trustworthiness, and ethical considerations pertaining to this qualitative grounded theory study.

Design

Qualitative methodologies are in various forms. According to Woods (1996), "Many of the principles and techniques found in qualitative research share commonalities with other forms of qualitative work. For example, most forms of qualitative research focus on natural settings; an interest in meanings, perspectives, and understandings" (p. 82). Human situations influence their perspectives; therefore, perspectives can help determine situations. In this study, participants were limited to FRs who completed training in active threat responses. In addition to this specific type of

training, participants were required to respond to a real-world active threat incident, where their skills were transformed into operational experiences.

Because qualitative methodologies focus on situational perspectives in natural settings, this research method seemed applicable in obtaining data for this study. The natural setting is a real-world active threat with trained active threat responders utilizing the KSAs learned for this environment. This allows them to provide a personal perspective on how well they prepared for and reacted during the response. FRs require a unique method for making literal life-or-death decisions in fractions of time. No better example of this type of decision-making is the FR's actions in an active threat environment. The Critical Decision-Making Model is one methodology used to explain the decision-making process necessary for FRs. Although defined and described by an array of means, this model boils down to the methodology presented by the Police Executive Research Forum (PERF).

The information presented here was gathered from the 2016 PERF report on critical issues in policing, compiled during the 30th PERF Summit. The nature of PERF's work is evident in the titles of PERF's reports over the last decade, compiled from the responses of participants attending the summit, of which many are available without charge online at PERF's website. PERF's guiding principles in developing their critical decision-making model were adapted from the UK's National Decision Model. PERF's Critical Decision-Making Model is a five-step process built around the agency's core values. The five steps are: collection of information; assessing the situation, threats, and risks; consideration of police powers and agency policy; identifying options and determining the best course of action then; and act, review, and reassess. Although this critical decision-making model specifically identifies with LE, the same principles can and have been adapted to meet the needs in this study regarding ffS and EMS responders, which encompasses all FRs.

The qualitative case study method aids in analyzing the AARs from previous active-threat incidents, predominately active shooters. The simplest explanation equating an AAR to a case study, as used by Rasmussen University, states, "The AAR is a tool used to provide feedback after an incident and summarizes what took place during an event, analyzes the actions taken by participants, and provides areas needing improvement" (University, 2022, para. 1). In short, AAR is another phrase for a case study and, thereby well suited to this study.

The qualitative case study methodology is also a research approach that facilitates the exploration of a phenomenon within its context, using a variety of data sources, of which two types are presented in this study: one proposed by Robert Stake and the second by Robert Yin (Baxter, 2008). Both approaches to the case study are based upon a constructivist paradigm, which claims truth is relative and depends on one's perspective. "Constructivism is described as building upon the premise in a social construction of reality, thus allowing participants to describe their perceptions of reality, which enable researchers to understand better the participant's actions" (Baxter, 2008, p. 545). For instance, it is impossible to understand a responder's perspective on their preparedness for an active threat without considering the context in which it occurred.

According to Baxter (2008), the study's overall purpose should guide the design. "Yin categorizes case studies as explanatory, exploratory, or descriptive… when differentiating between single, holistic, and multiple-case studies… while Stake simply identifies case studies as intrinsic, instrumental, or collective" (Baxter, 2008, p. 547). Therefore, when considering the different types of case studies, I was required to narrow down the choices between Yin and Stake. Similar studies by separate authors were considered to accomplish this.

Yin's (2003) descriptive case study provided an intervention or phenomenon and the real-life context in which it occurred (Baxter, 2008, pp. 547–548). Yin also recommended using his multiple

case study when studying multiple cases, which is the case in this study. Yin described multiple case studies as:

> Enabling the researcher to explore differences within and between cases… intending to replicate findings across each case; however, when utilizing the multiple case framework, the cases must be chosen carefully to conclude similar events… in this way, the researcher can predict similar results or predict the contrasting results from the actions in similar events. (Baxter, 2008, pp. 547–548)

Multiple case studies in this study strengthened the foundation outlined in the descriptive case study framework.

> Comparatively, Stake's (1995) 'Instrumental Case Study' is,
>
> Used to accomplish something other than understanding a particular situation... it provides insight into an issue, while the case is of secondary interest; it plays a supportive role, facilitating the understanding of something else… often looked at in-depth, its contexts scrutinized, its ordinary activities detailed, and because it helps the researcher pursue the external interest. (Baxter, 2008, pp. 547–548)

Compared to Stake's option, combining Yin's descriptive and multiple case study framework seemed less complicated and better suited for this study. Compared with case study frameworks, AARs could be described as a 'plug-n-play' case study method.

FRs routinely utilize AARs in emergency management to review complex incidents. The AAR is a structured approach for reflecting on responders' actions at an incident while identifying strengths, weaknesses, and areas for improvement (Salem-Schatz, 2010). Four standard questions are addressed in the AARs: (a) What occurred? (b) What actions were taken? (c) What went well; why or why not? (d) What can be improved and how? Frequently published, the results of an AAR are shared

to help others learn to understand, prepare, and mitigate similar incidents when encountered (Salem-Schatz, 2010).

In addition to analyzing AARs, one primary means of data collection is the interview. According to Specht (2019), three types of interviews are used in the qualitative method: (a) semi-structured, (b) structured, and (c) unstructured. "In semi-structured interviews, the researcher has a list of questions for the respondent while asking similar questions to everyone else, allowing them to tell their version of events" (Specht, 2019, p. 142). Specht (2019) stated, "The structured interview follows a strict pattern of questioning, often with much shorter answers" (p. 142). "The unstructured interview allows the respondent to lead the conversation; however, this method takes much planning" (Specht, 2019, p. 142). For this study, the semistructured interview was most appropriate as opposed to the structured and unstructured interviews. No matter which interview method a researcher may use, identifying the population and sampling method is necessary for determining the number and type of respondents most appropriate to interview. Following Specht's framework for developing questions, I intended to use direct, indirect, and specifying questions (Specht, 2019). I utilized the survey method in addition to the interviewing methods.

Surveys provided quantitative data for treatments used by responders on casualties; the intent was to quantify commonly used treatments, including their success or failure rates. Once again, Specht's theory was used in designing the survey framework. The method for sampling and population remained the same for surveying. The survey design included multiple-choice questions, including various possible choices. I used an interval scale of questions to determine the respondent's feelings (Specht, 2019). The survey did not need open questions, as the interview sufficed for this study's data.

The gap in participants' perceptions of preparedness during an active-threat incident was shared by applying the qualitative research methods presented by Specht and Lipsky's (2019) theoretical frameworks. The sheer lack of this data indicates the need to reveal these perceptions, with the expectation that through this study, their responses, coinciding with supporting data, will create a comprehensive analysis of responder preparedness, resulting in a positive impact on future active-threat training and the consequential responses.

Research Questions

Central Questions

RQ1. Based on the training received, what perceptions do FRs have of their preparedness during a real-world active threat incident?

RQ2. How effective are contemporary active-threat response plans, post the 2007 paradigm shift in FR preplanning and training?

Sub Questions

SQ1. Regarding the incident you responded to, in which operational field did you perform your duties as an FR (e.g., fire, LE, or EMS)? Before this incident, how much time had passed since your active threat training?

SQ2. In what role did you perform your duties? (e.g., command position, LE officer, FF, EMS provider, or support, etc.). Please explain your role. Did the role meet your training/experience, and were you over/under-utilized?

SQ3. What type of training did you receive? (e.g., in-house local training, organized accredited certification courses such as ATIRC, or a private vendor. What were your initial course objectives? e.g., addressing threats, treating casualties, command and control, etc.

SQ4. Do you believe the active threat training you received was relevant and corresponded to your incident response?

SQ5. Based on training received, what was your (FR's) personal perceived preparedness for an active threat, having responded to a real-world active threat incident?

SQ6. Do you believe the knowledge, skills, and abilities of the training offered you were effective? If yes, then what areas of your training worked well? If no, then what areas of your training need improvement? Elaborate on the pros and cons of your training received.

SQ7. Was the incident command system utilized during this incident? If yes, please explain the overall organizational chart (e.g., was unified command implemented between various responding agencies).

SQ8. Was the RTF concept utilized? If yes, please elaborate on the process utilized.

SQ9. Were there any issues with communication between different agencies (e.g., varying radio frequencies, strategies, and tactics, command intent differences, or differences in command priorities, etc.)? If yes, what were the issues?

SQ10. Were your casualties triaged? If yes, please elaborate on the system utilized. How did it work? Would you suggest any improvements?

SQ11: Please elaborate on the percentage of knowledge you retained from your initial training. How would you describe your fight-or-flight response to this incident? Did you ever feel unsafe? How often would you recommend refresher or update training for your agency?

SQ12. Regarding the wounding patterns you encountered, did the wounds differ from your training? Was your training effective for these wounds? Please elaborate (Etal, 2015)

SQ13. Regarding the implementation of RTF Standard Operating Procedures, did your leadership encounter any staff members opposed to operating in the warm zone on an RTF while being protected by LE? Was their opposition based on their belief that "this is not what I signed on for?

Setting

The setting for this study was recruiting public safety responders located in multiple geographic localities across the continental United States, where active threat training was conducted before the locality responded to a real-world active threat. The exact settings were determined by obtaining data connecting locations where active threat training occurred. Given LUO IRB policies, I recruited participants nationwide, where LSU, TSU, and other private entities conducted this training. After permission was granted, I cross-referenced data on the locations where their courses were hosted within the vicinity of geographic locations where active threats occurred. By this method, recruiting public safety responders from localities where documented training occurred prior to the locality's response to a real-world event was made available. This was not an easy task—it was a logistical challenge. However, the entire focus of this study was responder efficacy post active threat training; therefore, I had no choice of geographical location and a very specific group of participants.

Participants

The targeted pool of participants for purposive sampling utilized the convenience sampling procedure. The reasoning behind participant selection remains the same as previously stated; therefore, convenience was the best explanation for the sampling procedure. I chose this purposive sampling technique based on this study's requirement for specific information from a specific population. The advantages of this form of sampling include the following:

Purposive sampling depends on the researcher's knowledge to choose the best-fit participants for the systematic investigation; it helps you make the most out of a small population of

> interest and arrive at valuable research outcomes; most importantly, purposive sampling allows the researcher to gather qualitative responses, which leads to better insights and more precise research results; because the researcher collects information from the best-fit participants, the results are relevant to the research context; It allows the researcher to target niche demographics to obtain specific data for your research; and finally, purposive sampling lowers the margin of error in your data because the data sources are a close fit with the research context. (Blog, 2021, para. 5)

Disadvantages of this form of sampling include:

> Purposive sampling leads to several invalid or inferential statistical procedures; often, the researcher excludes several subgroups, leading to lopsided research outcomes. The participants in purposive sampling can manipulate the data, causing invalid research outcomes. Purposive sampling is not an effective method of collecting data from a large population; It is subject to researcher and sampling biases. (Blog, 2021, para. 6)

I found that none of the abovementioned disadvantages apply to this study.

The demographics of participants included the following: participants must be a minimum of 18 years old; participants gender and race are invariant and must facilitate at least one of the following occupational fields via full/part-time employment or volunteering: (a) LE, (b) fire service, (c) EMS, or (d) security service. I obtained permission from the participants' agency, which they represented during the emergency, before contacting any potential subject. There was mandatory adherence to Liberty University's Institutional Review Board (IRB) policies (L. U. Staff, 2022). The number of participants was no less than ten and did not exceed 100. I used pseudonyms if and when necessary to protect the identities of participants. Table 1 is a summary of the participants and their background information.

Table 1

Participant Background Information

Pseudonym	Occupational Setting	Occupational Expertise	Incident Assignment	Setting
Alpha	Career	Fire Marshall (LEO, Fire Service, EMS)	LEO	Government Building
Bravo	Career	Fire Marshall (LEO, Fire Service, EMS)	LEO	Government Building
Charlie	Career	Law Enforcement	LEO	Commercial Building
Delta	Career	Law Enforcement	LEO	Open Area Event
Echo	Career	Firefighter/Medic	EMS	Open Area Event
Foxtrot	Career	Law Enforcement	LEO	Open Area Event
Golf	Career	Law Enforcement	LEO	Open Area Event

Note. Pseudonym refers to the participant's identity; occupational setting refers to the participant's occupational field; occupational expertise refers to the participant's primary day-to-day responsibilities; incident assignment refers to the participant's assignment during the active threat they responded to; and setting refers to the physical location where the active threat they responded took place.

Procedures

The researcher initially coordinated with the committee chair to contact the IRB for conditional approval in soliciting data from educational institutions and private entities that conduct active threat training (see Appendix A). The IRB replied that no approval was necessary for the researcher to elicit formal requests and consent to obtain data from these institutions and entities regarding the locations and contact information where these courses were conducted (see Appendix B). The researcher will secure final IRB approval before collecting participant data (see Appendix C).

The Researcher's Role

I was the sole researcher in this study, which met the requirements for a doctoral degree. I am a full-time Operational Medicine Instructor/SME at the Department of State's Foreign Affairs Security Training Center (FASTC) on Fort Pickett in Blackstone, Virginia. I am also employed as a part-time SME and instructor for Louisiana State University's National Center for Biomedical Research and Training/Academy (NCBRT) for Counter-Terrorist Education. The academy sustains a leadership role in the National Domestic Preparedness Consortium (NDPC), sponsored by the Department of Homeland Security/FEMA National Preparedness Directorate.

I have 39 years of operational field experience in firefighting and EMS. During this time, I have instructed and nationally certified high school students as FFs and EMTs for over 10 years while active in the fire and rescue services. Before retiring from the fire service, I served as a tactical medic on the city's SWAT team before beginning employment at FASTC. This work experience in fire and EMS included career, volunteer, third service, and contracting in the continental United States and abroad. My pursuit for success involves earning a doctoral degree in criminal justice focusing on Homeland Security. However, my associate degree is in emergency medical services, and my Bachelor of Science and Master of Arts degrees are in History.

I have a vested interest in Homeland Security as a result of the Oklahoma City Murrah Federal Building bombing, the Columbine High School shooting massacre, and the Al Qaeda terrorist attack on 9/11. Bearing witness to these events beginning in the mid-90s and continuing to this day, albeit through the media, I began understanding public safety personnel's active shooter challenges. I began self-studied methods of mitigating the harm caused by these incidents. Although I currently teach ATIRC for Louisiana State University, I can assure readers that my personal views of training and response procedures did not factor into the findings. My view of the study was sparked through

teaching active shooter mitigation efforts even before my employment with LSU. Very little data exists on the efficacy of any active shooter response courses. I was intrigued by this lack of data and decided to validate the efficacy of these courses and document what is working and what is not from those who were educated through formal training in this phenomenon. I responded to an incident where their training was made operational to help public safety responders understand the data gathered from this study and build upon the foundations of active shooter mitigation principles, which began after Columbine.

Data Collection

The aim of this qualitative descriptive multiple case study was to evaluate and analyze the perceptions of FRs on their preparedness during an active-threat incident based on training received. This study assessed the efficacy of the participants' KSAs after responding to and operating in a real-world active-threat environment. I used the research methodology outlined in the previous section to gather data. Data collection and interpretation methods were built upon the theories presented in the research methodology. This study focused on situational perspectives in a natural setting. Qualitative methodologies seemed the most applicable for obtaining the data necessary to complete this study when employing a research methodology for this type of setting. The natural setting identified for this study is a real-world active shooter/threat, with responders trained in active shooter/threat KSAs who utilize the KSAs learned while operating in a real-world active-threat environment. This setting allowed this distinct group of responders to both subjectively and objectively provide their perspectives on how well they were prepared for their response. The methods of qualitative research utilized included primary and secondary sources of information. First, the researcher will discuss the methods for study inclusion, data collection, and interpretation of the primary sources utilized.

Primary Sources

The researcher realized that gathering data from primary sources (e.g., FRs) on their critical decision-making model while employing their KSAs in an austere environment required a unique theoretical framework. The primary sources for this data were interviews and surveys. Meeting the criteria was mandatory. I chose incidents based on those reported to the FBI Active-Shooter Database. Once in the database, active-threats meeting, the response criteria were identified. Next, I contacted the local emergency manager where the incident happened for additional information. This additional information included information on the providers who responded to the incident and what active threat training they had documented before their response. This information drove the study's inclusion, training, and response criteria, which took three months to complete.

Incident Response Criteria

The first step to meeting the inclusion criteria was locating active-threat incidents in the FBI active-threat database. Next, a standard was needed to determine which active threat/shooting incidents would be permitted in the study. The FBI's standard in determining inclusion criteria for an active-shooter incident states:

> Shootings in public places; shootings occurring at more than one location; shootings where the shooter's actions were not the result of another criminal act; shootings resulting in the mass killing of at least four individuals; shootings indicating apparent spontaneity by the shooter; shootings where the shooter appeared to search for potential victims methodically; and shootings that appeared focused on injury to people, not buildings or objects. (F. Staff, 2021b, p. 2)

The same FBI standard applied for incident exclusions. Incidents not permitted in the study include "gun-related shootings; self-defense; gang violence; drug violence; contained residential or domestic

disputes; controlled barricade/hostage situations; crossfire as a byproduct of another ongoing criminal act; and an action that appeared not to have put other people in peril" (F. Staff, 2021b, p. 2).

I then analyzed a robust examination of potential inclusion incidents for a particular set of commonalities needed to narrow the criteria within each incident. Further narrowing the inclusion criteria, when analyzing the AARs, I established the standard necessary for the minimum number of killed and/or wounded resulting from these incidents. Only incidents where at least four people succumbed from their injuries and/or where at least four were wounded during an active threat incident. These incidents must have included instances where the threat was considered to remain 'active' upon responders' arrival to the scene, requiring perpetrators to be still on-site and either known or unknown to be still alive. By definition, the threat would remain 'active' until proven otherwise. Excluded were incidents where there were no survivors or no one was wounded.

To accurately assess provider readiness for an active shooter/threat, viable and potentially viable casualties must have been on the scene. The perpetrator must have been known or suspected to still be on scene and an active threat; however, there were instances where extraordinary circumstances allowed for inclusion regarding the shooter's status upon LE officers' arrival. For example, the Route 91 Harvest Festival shooter's position was "approximately 1,100 feet away, on the 32nd floor of the Mandalay Hotel" (Thomas, 2017, para. 2), from where the victims were shot at the concert they were attending. I identified notable circumstance incidents for clarity during the study where necessary. The following section will present the FR's inclusion criteria.

Responder Inclusion Criteria

After meeting the response criterion, I examined the providers' inclusion criteria via their incident responses and their level of training for an active shooter/threat to determine their inclusion status. Local emergency managers/training officers from the localities where an active shooter/threat

occurred guided the verification of responders who responded to the incident and the responder training requirements necessary for inclusion in the study. The inclusion criteria for a responder's eligibility to participate in this study necessitated two requirements: (a) must have attended active-shooter/threat training; (b) must have responded to a real-world active-shooter/threat incident, post their training, which meets the standard set in the preceding "incident response criteria." To be clear, for responder inclusion in this study, they must meet provider inclusion criteria 'plus' the incident response criteria. The following section entails acceptable types of active shooter/threat training courses necessary for meeting the provider's training requirement for inclusion in the study.

Responder Training Criteria

Many active threat/shooter procedures and guidelines have been published to address and mitigate incidents, which begs the question of which method is preferred. With that in mind, I realized the necessity of standardizing the type of training respondents possess for inclusion in this study. For example, was their training a nationally recognized course on mitigating active shooter/threats, where certification was issued upon successful completion? Or was it an "in-house" training developed internally in the responder's agency? For example, was training acquired through researching articles in trade magazines or websites, or was it developed from an actual certified course where the training was not nationally recognized?

Responder training may have been conducted through a nationally recognized course such as the ATIRC sponsored by Louisiana State University or the Advanced Law Enforcement Rapid Response Training (ALERRT) sponsored by Texas State University. The DHS funds both courses, and they are accessible to responders nationwide. If the training was not nationally recognized but followed guidelines outlined in ATIRC or ALERRT, then the criteria for inclusion must have included the following KSA's: (a) incident cold, warm, and hot zones; (b) RTF concept; (c) combat

casualty care skills following the MARCH algorithm (e.g., tourniquets, airway control, chest seals, wound packing, hemostatic dressings, and hypothermia blanket); (d) define and support a Casualty Collection Point (CCP); (e) understanding of the Ambulance Exchange Point (AEP); (f) understanding of triage, treatment, and transport responsibilities; (g) understanding of unified command; (h) understanding of the safety corridor; and (I) understanding of the Contact Team (CT) concept. Verifying which type of course responders attended could be easily verified by their agency's Training Officer (TO) or the responder themselves. I utilized surveys and interviews to elicit usable responses.

Surveys and Interviews

A confidential survey provided a method for gathering data on operations relating to a real-world active threat that met the inclusion criteria. I utilized the survey where interviews could not be completed. Questions in the surveys and interviews were similar. The intent was to quantify various operational aspects during an active shooter/threat commonly utilized by trained responders. Following Specht's framework for developing questions, I used direct questions. The requirements for participant inclusion remained unchanged.

I ensured the protection of responses from participants. There are numerous methods of protecting participant identifiers. One method is confidential research. This method involves the process of deidentifying data, which is the removal of specified individual identifiers, in this case, the participants' names. The names of the participants were not necessary for this study. If, by chance, identifiers became necessary, I implemented a coding method. Semi-structured interviews were utilized in line with Specht's framework. Specht described the semi-structured method: "The researcher has a list of questions for the respondent, while asking similar questions to everyone else,

allowing them to tell their version of events" (Specht, 2019, p. 142). The following was a modest list of potential questions.

Survey/Interview Questions

SQ1. Regarding the incident you responded to, in which operational field did you perform your duties as an FR (e.g., fire, law enforcement, or EMS)? Before this incident, how much time had passed since your active threat training?

SQ2. In what role did you perform your duties? (e.g., command position, LE officer, FF, EMS provider, or support). Please explain your role. Did the role meet your training/experience, and were you over/underutilized?

SQ3. What type of training did you receive? (e.g., in-house local training, organized accredited certification courses such as ATIRC, or a private vendor. What were your initial course objectives (e.g., addressing the threat, treating casualties, command and control, etc.)?

SQ4. Do you believe the active threat training you received was relevant and corresponded to your incident response?

SQ5. Based on training received, what was your (FR's) personal perceived preparedness for an active threat, having responded to a real-world active threat incident?

SQ6. Do you believe the KSAs of the training offered to you were effective? If yes, then what areas of your training worked well? If no, then what areas of your training need improvement? Elaborate on the pros and cons of your training received.

SQ7. Was the incident command system utilized during this incident? If yes, please explain the overall organizational chart (e.g., was unified command implemented between various responding agencies, etc.)

SQ8. Was the RTF concept utilized? If yes, please elaborate on the process utilized.

SQ9. Were there any issues with communication between different agencies (e.g., varying radio frequencies, strategies, and tactics, command intent differences, or differences in command priorities, etc.)? If yes, what were the issues?

SQ10. Were your casualties triaged? If yes, please elaborate on the system utilized. How did it work? Would you suggest any improvements?

SQ11: Please elaborate on the percentage of knowledge you retained from your initial training. How would you describe your fight-or-flight response to this incident? Did you ever feel unsafe? How often would you recommend refresher or update training for your agency?

SQ12. Regarding the wounding patterns you encountered, did the wounds differ from your training? Was your training effective for these wounds? Please elaborate (Etal, 2015)

SQ13. Regarding the implementation of RTF Standard Operating Procedures, did your leadership encounter any staff members opposed to operating in the warm zone on an RTF while being protected by LE? Was their opposition based on their belief that "this is not what I signed on for?"

Document Analysis

I chose to simplify literature sources by coding them. Sources were coded by (a) AARs, then subcategorized by physical incident locations; (b) FBI data sources; (c) peer-reviewed articles on improving responses; (d) surveys and interviews. I analyzed and coded the confidential surveys and interviews according to participant responses to direct questions. For example, what system of triage was used? Was incident command used? What type of initial training was received? Any gaps were identified from the FR's perspective and individual response observations.

Data Analysis

I took various steps in analyzing the data to ensure accuracy and a practical qualitative data analysis using triangulation. Surveys and interviews utilized probing questions, which provided information for a descriptive analysis. This method of questioning allowed me to expand on related responses to a particular question. The data analysis required me to manually create a table of responses for each participant. Next, this individual table was used to manually create a complex table from all participant responses to cross-exam the environmental triangulation method and double-check results obtained from the research. I accomplished greater confidence in the credibility and validity of the findings through these steps. The environmental triangulation method of analysis was appropriate because of the uniqueness of this study, which addressed various mass killing events across the country.

Environmental triangulation findings are influenced by environmental factors such as different settings, locations, and times of day where the incidents occurred, making this method the most acceptable means of collecting data (Guion, 2002). The idea is to determine which factors, such as protocols, staffing, response planning, and training, influence the information received. The identification of factors is followed by a comparison to see if the findings remain the same. Validity can be established if the findings remain unaltered under varying environmental factors.

The general analysis of a grounded theory study embraces three acceptable methods of coding: open, axial, and selective coding (Delve, 2022b). Corbin and Strauss's (1990) paper, "Grounded Theory Research: Procedures, canons, and Evaluative Criteria, " indicated this process in three steps. Step 1 of grounded theory is open coding, which is when you take your textual data and break it up into discrete parts. The next step is axial coding, which is the researcher's process of drawing links between the open data codes. The last step is selective coding, where the researcher

chooses an essential category linking all the codes from the analysis, which captures the substance of the research (Delve, 2022a).

Step 1

The first step, open coding, involved listing qualitative data responses from responder surveys and questionnaires relevant to mass killing incidents to develop an inclusive view of the phenomenon. I then labeled these theoretical possibilities with codes, enabling me to compare and contrast the data. This data included quotes, techniques, protocols, and specific response data, among other data elements, while optimizing the elimination of preconceived ideas and biases.

Step 2

The next step was axial coding. I organized the codes developed in open coding and drew connections between the codes. After identifying the connections, I categorized the codes based on existing code or by developing a more abstract category encompassing several codes. Upon conclusion of step 2, several categories emerged, which coincided with a set of supporting codes I had manually inputted.

Step 3

In the final step, selective coding, I manually connected each category around a fundamental coded category, defining a unified theory around the research. I developed a fundamental core category by elevating or combining categories from the axial coding stage or maybe a new category derived from other categories, ultimately representing the fundamental thesis for this study. This thesis was the height of the grounded theory process, which involved either defining a new theory or modifying an existing theory based on these results. The data analysis encompassed all data collection methods (e.g., the questionnaire, survey, and interviews to triangulate the data, creating structured categories of the responder's experiences, etc.). The environmental triangulation method

followed the data analysis steps of Guion (2002), which aided in identifying consistency among the results. The method also helped provide possibilities for changes in policy, justification, and verification of current operational procedures while providing additional insight and understanding of the mass killing phenomenon response from the responder's personal experiences.

Trustworthiness

Qualitative data relies on researcher and participant trustworthiness. I understood that trustworthiness was paramount to this study. This understanding included knowledge of the association between credibility, dependability, confirmability, transferability, and ethical responsibilities. Participants provide a unique perspective on qualitative studies. This fact rests in the process-based data they provide researchers related to their life experiences (Stahl, 2020). There is much to gain from another's experience; however, the degree of trust one has in the participant sharing their experiences relies on the degree of trust credited to the one sharing their story. Building and maintaining trust in this study was essential to realizing trustworthy findings.

Credibility

Stahl (2020) described credibility by asking the question, "How congruent are the findings with reality?" (Stahl, 2020, pp. 26–28). The method of promoting credibility is triangulation, as defined in the previous data analysis section. For instance, this study involved environmental triangulation, where using multiple cases of mass killings provided context to the study's focus. I understood that credibility is created by the investigator and subsequent reader(s).

Dependability and Confirmability

According to Stahl (2020), "dependability is trust in trustworthiness, while confirmability is getting as close to objective reality as qualitative research can get" (Stahl, 2020, pp. 27–28). Peer scrutiny aided in creating trust, where I utilized an SME to interpret and respond to the researcher's

interpretations. Through this means, confirmation created an implied reality for me, while the professional level of the peer conveyed a sense of self-credibility. Also, because the scrutiny was from a peer, it provided me with an insider's analysis and feedback before the study's submission, thereby creating an act of trust in itself (Stahl, 2020). To subject one's research to auditing, there must be some objective reality present, which were AARs from various mass killing incidents in this study. These reports provided objectivity through reliance on constructs like the accuracy of the reports. I understood that dependability and confirmability are restricted within qualitative research, especially concerning the emergent design of logical positivism.

Transferability

Stahl (2020) stated that the relationship between transferability and qualitative inquiry rests in expanding the understanding of "linking" or transferring the findings from one context to another. Patterns and descriptions from one context may be applicable to another, which was the precipice of implementing environmental triangulation cross-examination during data analysis. For instance, reviewing the responses from study participants on preparation, experience, protocols, and actions during mass killing incidents, which occurred in multiple jurisdictions from across the country, such is the case with this study, is applying their analysis of the data. This analysis was then used to understand better how to manage these incidents. I understood that transferability is only possible through comprehensive data collection and analysis, which delivers a rich portrayal of circumstances, providing relevance in other situations under similar circumstances (Stahl, 2020).

Ethical Considerations

Scholarly researchers must consider the possibility and development of ethical dilemmas affecting each stage of a forthcoming study. The researcher should consider and mitigate ethical challenges, including anonymity, confidentiality, informed consent, and the potential psychological

impact on participants. The security of the data should also be at the forefront of consideration. In this study, I maintained password-protected hardware technologies secured in storage areas. Documents regarding permission and involvement in the study were provided to each participant. I analyzed the interviews and surveys to ensure the confidentiality of the respondents. Codification of respondents was achieved through pseudonyms, and all data were secured electronically and password-secured to protect respondents' identities. I did not identify any undesirable and harmful issues affecting this study, as measures were implemented to prevent and mitigate any identified circumstances that would have arisen. I planned to document any negative ethical issues if they occurred, along with any corrective measures taken to mitigate the circumstances.

Summary

This chapter, 'Methods,' provided a descriptive explanation of the procedures and rationales used for this qualitative grounded theory study, which I utilized to evaluate and analyze the perceptions of FRs on their preparedness when responding to a mass killing incident based on training received. Although the FR community adapted its response to active-threat incidents after the Columbine High School mass shooting, little data exists on whether these adaptive measures, coinciding with contemporary training, are effectively making a difference in casualty survivability. Therefore, the appropriate research methodology for this study was qualitative while maintaining the focus of the study within the grounded theory. Chapter 3 contained a justification for the study, a reaffirmation of the research and sub-questions, descriptions of the participants, the setting, and the role of the researcher. This chapter also clarified the steps taken during data collection, data analysis, trustworthiness, and ethical considerations pertaining to this qualitative grounded theory study.

CHAPTER FOUR: FINDINGS

Overview

This qualitative critical decision-making study aimed to evaluate and analyze the perceptions of FRs on their preparedness during an active-threat incident based on training received. In Chapter 4, I assessed the efficacy of the participants' KSAs after responding to and operating in a real-world active threat environment. Phone interviews were utilized where feasible, and surveys were used where interviews were inconvenient. Both the interview and survey questions had similar questions. Chapter 4 reviews the research questions and the participant's responses. These responses were then analyzed, manually coded, and the themes identified. I organized the identified theme development responses into a table and summarized each question.

The central research questions were: RQ1. Based on the training received, what perceptions do FRs have of their preparedness during a real-world active threat incident? and RQ2. How effective are contemporary active-threat response plans after the 2007 FR preplanning and training paradigm shift? The sub-questions were as follows:

SQ1. Regarding the incident you responded to, in which operational field did you perform your duties as an FR (e.g., fire, law enforcement, or EMS)? Before this incident, how much time had passed since your active threat training?

SQ2. In what role did you perform your duties? (e.g., command position, law enforcement officer, firefighter, EMS provider, or support). Please explain your role. Did the role meet your training/experience, and were you over/underutilized?

SQ3. What type of training did you receive? (e.g., in-house local training, organized accredited certification courses such as ATIRC, or a private vendor. What were your initial course objectives (e.g., addressing the threat, treating casualties, command and control, etc.)

SQ4. Do you believe the active threat training you received was relevant and corresponded to your incident response?

SQ5. Based on training received, what was your (FR's) personal perceived preparedness for an active threat, having responded to a real-world active threat incident?

SQ6. Do you believe the knowledge, skills, and abilities of the training offered to you were effective? If yes, then what areas of your training worked well? If no, then what areas of your training need improvement? Elaborate on the pros and cons of your training received.

SQ7. Was the incident command system utilized during this incident? If yes, please explain the overall organizational chart (e.g., was unified command implemented between various responding agencies).

SQ8. Was the RTF concept utilized? If yes, please elaborate on the process utilized.

SQ9. Were there any issues with communication between different agencies (e.g., varying radio frequencies, strategies, and tactics, command intent differences, or differences in command priorities, etc.) If yes, what were the issues?

SQ10. Were your casualties triaged? If yes, please elaborate on the system utilized. How did it work? Would you suggest any improvements?

SQ11: Please elaborate on the percentage of knowledge you retained from your initial training. How would you describe your fight-or-flight response to this incident? Did you ever feel unsafe? How often would you recommend refresher or update training for your agency?

SQ12. Regarding the wounding patterns you encountered, did the wounds differ from your training? Was your training effective for these wounds? Please elaborate.

SQ13. Regarding the implementation of RTF Standard Operating Procedures, did your leadership encounter any staff members opposed to operating in the warm zone on an RTF while

being protected by law enforcement? Was their opposition based on their belief that "this is not what I signed on for?

Participants

After participants were contacted via purposeful sampling followed by the snowball method for recruiting, ten individuals responded to the screening survey. All ten real-world active threat responders met the criteria for participation in the study, thereby completing all the data collection steps. After returning the consent forms, I contacted the participants to obtain data. Using the contact information for each participant, I liaised with each responder confidentially to secure an interview time. The use of pseudonyms instead of names ensured confidentiality among the participants. The seven participants represented multiple occupational settings and occupational expertise and participated in various operational assignments at the active threat they responded to. Participants of this study collectively encompassed expertise in the following areas: FF, LE Officer, and/or EMS provider. Participants' expertise may overflow into other career fields (e.g., FFs may also be EMS providers, EMS providers may also be LE; in some cases, their background may encompass all three areas of occupational expertise, etc.).

Alpha

Alpha is a career FF who transferred into the Fire Marshal's office. While in this position, they attended "a couple of ALERRT and other active-threat courses focusing on addressing the threat," the last training session was three months before the incident. Alpha's unique expertise lies in their background as a fire marshal. Alpha's expertise encompasses three career fields in this role: FF, LE, and EMS provider. When responding to this incident, Alpha responded as an FF but assumed the role of LE officer after arriving at the scene. Alpha was working on their regularly scheduled shift in a separate workplace nearby when the call for an active shooter was dispatched.

Their response was self-dispatched, only minutes away due to the incident's proximity. At this incident, Alpha commented that their role was that of an LE and, once on scene, organized an RTF with the first responding fire crews operating as their armed protection when proceeding into the threat area, a local government complex. Regarding this response, Alpha recollected that their training was utilized effectively and completely relevant from both the LE officer's and FF's point of view. In their case, they explained that attending both the LE officer and firefighter views of active threat training was an astounding pro vs. con. On a side note, I would like to comment that this could result in potential issues of the phenomena known as mission creep; however, the researcher does not believe this to be the case in this instance. According to Toni Hoy of Board Effect, “Mission creep starts when an individual or an organization asks you to do something slightly outside the activities your mission supports” (Hoy, 2022, para. 6). The key was to recognize that all incidents are dynamic, and the potential for losing focus on the original goals and objectives during an active threat incident could be blurred, especially for responders with multiple skill sets in all three operational areas of these types of incidents.

Regarding the knowledge, skills, and abilities of the training offered them from Sub-question 6, Alpha confirmed their training was effective and described the pros and cons of the training received. Alpha elaborated on incident communication. According to them, one pro discovered from this category was the success of communication, in that while understanding the LE officer side of the threat response (from their point of view as a fire marshal), they fully understood what the LE officer’s purpose, goals, and objectives for an active threat response encompassed. However, this might not hold for other responders who are less educated in LE practices, such as those of a trained fire marshal. In this case, the cons for communication lay in the breakdown of EMS’s refusal to act within the current concept of the national standard for active threat responses. In this instance, the

communication breakdown was not the common radio communication issue experienced, yet in this case, the failure was in communicating and opposing operational procedures. The depth of this particular failure in communication is reserved for deeper study in a category customized for this issue. Another con mentioned by Alpha was the fact that PD's radio channels were encrypted, offering no crossover channel for other public safety officials; however, in this instance, the participant's radio was capable of communicating with PD due to their position as a fire marshal—Alpha's next question regarded establishing the incident command system during this response.

Alpha confirmed ICS was established at this incident; however, this was implemented later in the response due to the chaos created by the incident happening so close to the public safety administration building for this locality, with so many responders arriving on the scene simultaneously in the first minutes from dispatch. Although Alpha admitted to not seeing an organizational chart or being present at the command post, they did report hearing ICS terminology being used over the radio. This terminology included fire, police, and EMS personnel, indicating that a unified command had been established. When asked whether the RTF concept was utilized, Alpha could not verify from their point of view at this incident; however, common knowledge of the RTF concept would verify the complete concept could not have been used at this incident due to EMS not following through with their responsibilities outlined in the modern RTF concept. Alpha reported not seeing any ribbons on casualties coming out of the building. They reported that all casualties were taken to the CCP outside in the parking lot, where EMS took over care. Alpha reported that all deceased casualties were left where they lay post-wounding. Regarding the wounding patterns encountered as compared to those from training, Alpha reported there were more deceased than survivable injuries. When discussing why this was the case, Alpha commented that active shooters are intent on killing. When searching for victims, the shooter is up close and deliberately inflicting

fatal shots to the chest and head, as opposed to a combat situation where, generally speaking, there is a greater distance between combatants; adding that in active shooter situations, the shooter is not being shot at, increasing the time for deliberate effective killing.

When discussing knowledge retention from initial training during the incident, Alpha reported that "muscle memory kicked in." They also added that refresher training had taken place within six months before this incident and was initially stacked back to back from the fire marshal's academy to an ALERRT course followed by a refresher. Regarding the fight or flight response, Alpha reported that the fight response was present and did not think about fleeing the incident.

When asked about coworkers' response to the implementation of the RTF SOP, Alpha could only comment on the incident itself, stating, "They had not seen an actual written SOP prior to this incident." However, during this incident, the two points of opposition were the EMS's refusal to enter the building and comments by FFs entering without body armor. At the time of this shooting, the fire department, although trained to respond to active threats, did not have any body armor; unlike EMS, the FFs followed their training by forming RTFs and entering the warm zone. Alpha recommended that training be completed initially out of the basic academy, followed by a minimum of at least annually.

Bravo

Bravo is a career FF recently reassigned to the Fire Marshal's office. They had last attended active-threat training less than six months before this incident. Their training consisted of an ALERRT course and other state and federal training courses. Bravo attended these training sessions as a participant from the LE officer aspect of FRs and confirmed their training was "for the most part" relevant to this incident, to which they responded. On the day of the incident, Bravo was working their regular shift nearby as a Fire Marshal when the active shooter call was dispatched.

Bravo self-dispatched and arrived on the scene with other responders simultaneously. This incident occurred at a government complex, where administrations for each local public service were located. As such, the response and initial arrival, primarily of LE officers, was near immediate post-dispatch. Upon arrival, Bravo linked up with officers, who arrived simultaneously and formed a small unit. This unit observed victims exiting a rear door to which they proceeded in the direction of. No command had been established yet, and the unit only acted on instincts. They aided victims and casualties outside the complex, not knowing any distinct location from which to direct them. Bravo referred to their view of the scene to their memories of the Columbine High School massacre, where millions saw evacuees of people on TV evacuating the school. I found this to be very relevant during the interview. When I asked the participant their role, there was no definitive answer. The participant did state that their role was "checking evacuees." During Bravo's training, no instruction was given on what to do with evacuees exiting a building.

While posted at the rear door, Bravo's unit of LE officers asked evacuees to aid in treating the casualties exiting. Bravo stated, "I provided bleeding control to a head wound while additionally scanning for the suspect among the evacuees, as a description of the shooter had been broadcast." Bravo then added that one male evacuee met the description of the shooter and was cuffed and detained at gunpoint until LE could confirm he was not the shooter. During this time, officers inside the complex reported contact with more casualties and called for EMS to enter.

Upon making radio contact with EMS, who were stationed outside in the parking lot vicinity, they refused to enter the complex, noting that the area was "hot" and would not enter until it was safe. EMS requested LE officers bring the casualties outside to them, where they had established a CCP. Bravo stated, "This confused LE officers as this was not the standard for how they had trained." When asked if EMS participated during the active-threat training, Bravo stated, "No, only the fire

department participated in their training." It is unknown whether or not EMS had jointly trained on active threats with fire and LE, as in this locality, EMS is a third service provider. It is important to note here that neither fire nor EMS possessed body armor at the time of this particular mass killing; however, the FFs entered the complex as RTFs with only LE officers to protect them, without body armor. The lack of body armor for the FFs and EMS providers coinciding with EMS' refusal to enter the building as part of an RTF symbolized unpreparedness on the locality's part; however, Bravo confirmed their role to primarily side with LE on this incident.

When asked if their training was effective? Bravo replied, "Yes." From the LE officer's point of view, EMS not following the LE officers' training produced a communication breakdown in an already chaotic situation. Bravo was then asked if there were any issues between different responding agencies communicating with each other, and the answer was yes. LE officers were on encrypted channels with no "event" or MCI unified channel where everyone could communicate. Anyone seeking to communicate with LE officers was required to go through dispatch and relay information. Regarding the use of triage, no type of tagging system was observed from Bravo's post, adding, "All casualties were moved outside with no CCPs established inside and the dead were left where they lay and the majority of wounding patterns observed were shot in either the head or chest and deceased." Bravo described their fight or flight response as ready to fight and reverted to training when needed at the incident. This was confirmed by Bravo stating they, "mentally reverted to their training and the use of "muscle memory." Regarding RTF SOPs, Bravo did not recall whether an actual written SOP existed, which aligns with their statement regarding EMS' opposition to entering the complex. EMS said their policy was to stage and not enter a scene until it was deemed safe. The recommendation for training was a minimum of annually and included all responding agencies.

Charlie

Charlie is a career LE officer serving in the patrol officer capacity. Charlie completed active threat training in their basic police academy according to the local standard operating procedure, which is based on the principles of the Advanced LE Rapid Response Training (ALERRT.) As stated, Charlie attended this training as an LE officer and graduated seven months from the academy after three to four months of the Field Training Officer observation phase. Regarding Charlie's role in this incident, Charlie was first on the scene and, per training, assumed command.

No stimulus (audible or visible threat) was noted upon their arrival. Charlie observed one casualty with a gunshot wound moving towards them, along with other victims rapidly exiting the building. During this period, Charlie treated the casualty encountered and gained intelligence regarding the shooter. Charlie believed the active threat training received was relevant and remembered the steps of the response plan compared to muscle memory. With that said Charlie added, "I was very prepared based on training received; however, I should have had a rifle." Charlie's reasoning for the absence of a rifle was that there were no opportunities for rifle qualification during their basic academy. Charlie added that their rifle school was completed after this incident and is now assigned to one. Next, Charlie discussed the effectiveness of the knowledge, skills, and abilities received during initial training.

Charlie recalled that the KSAs of the training offered were effective. Charlie stated, "The addition of role players during training was the most effective tool." Charlie added that lessons on gaining and relaying information were imperative to their response. Additionally, the one-man, two-man, and three-man building clearing formations were highly beneficial. The incident command system was utilized and played a vital role in the success of the response during this incident. The only shortcoming of training would have been the addition of rifle school during the academy.

According to Charlie, there appeared to be little miscommunication between the agencies involved. This became evident when the RTF was implemented.

The RTF concept is included in their city's SOP. Following the incident plan at the scene, casualties were brought to the CCP located in the parking lot via any means available, including shopping carts. LE officers initially triaged casualties, and then secondary triage was completed by medics in the CCP. The wounding patterns Charlie encountered were like those simulated during training. Charlie reports there was no opposition to utilizing the RTF concept and recommends refresher training every 3 to 4 years, which would be sufficient.

Delta

During the incident in which Delta responded to an active shooter event, they served as an LE officer. Delta reported that their agency conducts active assailant training annually. Regarding the incident, as an element of the Incident Command System, Delta was assigned to a Strike Team consisting of LE officers and was assigned various tasks throughout the incident. Examples include searching for survivors, clearing the open area where civilians had come under attack, assisting with evidence preservation, and providing security for victims at the Reunification Site.

Delta's annual active assailant training, developed and taught by department members, has since been adopted by many other agencies in various forms. Delta's training included certification as cadre for the course titled Multi-Assault Counter Terrorism Action Capabilities (MACTAC), which is nearly identical to their department's active assailant training. Initial objectives in Delta's training included locating and neutralizing the threat, then creating safe zones to address the wounded, categorized by order in the seriousness of the injury. Delta stated, "Training was relevant to the incident because it goes against your natural instinct to bypass injured parties to address the active threat."

Regarding their preparedness for the event, Delta recalls feeling very prepared personally. However, as with other incidents reported in this study, there was an issue in the lack of appropriate equipment such as AR15s, level four body armor capable of stopping a rifle round, ballistic helmets, shields, and multifunction breaching tools. After this event, Delta reported that all officers in their department received rifle training and other appropriate equipment. According to Delta, the KSAs of the training offered were effective. When asked to elaborate, Delta stated, "When training occurs, we meet in groups with other agencies, which felt natural when creating a multiagency team of officers to address the complex issues methodically. As previously stated, the Incident Command System was enacted; however, the overall command operation was complicated because nearly every LE agency in their 136 square mile jurisdiction responded.

During this incident, Delta reported having issues communicating with each other over the radio, and cellphone service was problematic, most likely due to the system operating over its normal rated capacity. Additionally, many officers were off duty, responding from home, and had dead or low radio batteries. Delta recalled, "Although radio and telecommunications generated challenges, the mission statement was clear, everyone worked exceptionally well together, no egos, and no attitudes," Delta reported that these challenges have since been addressed. Due to the nature of this incident, the RTF, as defined by this study, was not utilized. Regarding the triage system utilized, triaging casualties was not a responsibility of this participant, stating, "We bypassed or passed off injured persons, as that was not our mission at the time." This participant was confident in their knowledge retention from prior training, which helped them maintain good situational awareness, making them feel somewhat safe during the incident. However, Delta did recall a feeling of insecurity when intelligence suggested explosives may be hidden in the venue. It was apparent by Delta's answer that training for this type of incident prepared them for the response.

In this incident, Delta did not treat any casualties; therefore, no comments were made concerning injury patterns related to training. Delta did suggest that annual training should be sufficient for most agencies with a large number of officers, adding that specialty teams should meet quarterly to sharpen their group tactics. Since Delta did not participate in an RTF, no comments were offered regarding implementing any RTF Standard Operating Procedures. Therefore, no staff members were encountered in opposition to operating in the warm zone.

Echo

Echo's career encompasses serving as a FF/Medic. During this active threat response, their role was to treat casualties. Echo's case was distinct from other cases in that their agency provided a standby unit during routine daily operations for public activities in a large recreational area within their jurisdiction and was essentially "on the scene" while the active threat was occurring. Echo's training consisted of a broad range of ICS structures and unified command during their basic fire academy.

Echo believed their active threat training was relevant and corresponded to their incident response. Echo's perception of preparation for a real-world active threat was adequate based on the training received. Regarding Question 6, as to the KSAs of the training offered, one of the pros offered by Echo was "An understanding of what the other agencies were doing (e.g., LE officers) while they (EMS) were medically treating patients."

Echo's answer to Question 6 was unique and essential to highlight here. I agree with Echo that training with other responders outside their branch's normal scope of duties is beneficial in many ways—for example, anticipation and preparation for what will happen next. Additional benefits include recognizing proactive, standard operational actions versus standard defensive/reactive actions, which coincide with one's ability to know one's limitations while supporting other branches

of FR agencies. This theory should hold firm for each branch of FRs (i.e., fire, EMS, and LE agencies), thereby creating an atmosphere where “we can all play nice in the sandbox together.” When branches train together, the entire response system will function more efficiently, thereby, significantly more effectively. In Echo’s case, this statement holds true when the Incident Command System was implemented during their active threat incident.

Echo confirmed that each branch of responders in their community had trained together on ICS. In this case, a unified command was utilized and functioned seamlessly. Because Echo’s agency was initially on the scene for a stand-by, ICS was already established and operating when the active threat was initiated, allowing the ICS system to expand as the incident expanded. Due to the nature of how this particular case developed, the RTF concept was not utilized. When asked if there were any issues with communication between different agencies, Echo responded, “No comms issues at all between any responders.” Echo added, "Everyone had the same goal in this high-stress environment.” Even though this was a multi-casualty event, resources on scene were adequate, and triage was unnecessary; however, Echo confirmed their jurisdiction had adopted the START system if and when triage is needed.

When elaborating on the percentage of knowledge retained from their initial training, Echo stated, “I felt prepared and remember feeling amped up, but I did never felt unsafe and had faith in PD.” There was a heightened sense of awareness among all responders. Although the RTF was not implemented, their jurisdiction has adopted a SOP for the RTF concept. Echo reported no opposition by their agency’s staff concerning operating in a warm zone as an element of an RTF after adopting the SOP, and they train on it annually, which was their recommendation that other agencies adopt.

Foxtrot

Foxtrot serves in LE, and their last training before this case had been approximately 18 months. Before this incident, they had attended multiple active shooter/assailant training throughout their 17-year career. During this multijurisdictional response, Foxtrot was assigned to a strike team and, according to them, utilized it appropriately. The active threat training Foxtrot attended was primarily in-house, and course objectives centered around LE officer actions. Foxtrot believed the active threat training they received was relevant and corresponded to their incident response. During this active threat, Foxtrot's strike team was deployed four times.

Their first assignment was securing a pedestrian bridge, only to find another team had already covered it. The second assignment was to report where the majority of casualties were injured and to assist with securing the area where the deceased persons were lying. Upon arrival, other LE officers confirmed that the area was secured. They were then deployed to secure the area where the shooter was located. Their final assignment was reporting to the reunification area where victims and witnesses were being staged, and the perimeter was secured until the incident was terminated.

Based on their training, Foxtrot's perception of their preparedness for an active threat, having responded to a real-world active threat, was adequate. The knowledge, skills, and abilities of the training offered were practical for their assignments. During this incident, no other shots were fired after LE officers' arrival on the scene. However, multiple reports came into dispatch stating civilians were arriving with their personal weapons to aid LE, thus forcing the command to believe a continued threat existed outside the primary incident's perimeter and encompassed multiple city blocks with no identified suspect. Their assignment became more of securing a large area of operation rather than seeking out an active shooter. Foxtrot confirmed that ICS was utilized during

the incident, and a unified command was implemented. Due to the nature of this incident, the RTF concept was not utilized.

According to Foxtrot, there were no issues with the actual radio communications amongst the various agencies; however, there were issues with units communicating their status updates to the command post, as stated earlier by the discovery of doubling resources on post assignments. In this incident, the participant did not treat any casualties. However, they did "come across an individual with a non-life-threatening gunshot wound and located a nearby ambulance who secured the victim," according to Foxtrot. The participant was unaware of any type or implementation of a triage system.

When elaborating on the percentage of knowledge retained from training, Foxtrot recalled, "I had just gone through training again recently, and am of the belief that during this incident, I retained at least 90% of the training." The participant also recalled that their agency was not equipped as well as other agencies; however, that has since been fixed. Finally, regarding their agency's implementation of an RTF SOP, Foxtrot did not observe anyone in any position who was reluctant or opposed to operating within an RTF team.

Golf

Golf's career choice is LE. When agreeing to participate in this study, they reported being involved in two separate active threat incidents. The first incident was in a patrol setting, and the second was in a plain clothes detective setting. Concerning both incidents, Golf conveyed receiving some form of active threat training within a year before each incident. In both incidents, Golf's role was that of a LE officer. The first incident was an officer-involved shooting in a patrol uniform setting. Their role in this incident was on a strike team, defined as a heavily armed stack of officers positioned together to stop a threat.

Golf stated, “During this incident, we actively engaged the active shooters in gunfire; I ultimately killed one of the suspects, while the second suspect committed suicide shortly after.” During the second incident, once again, the participant was assigned to a strike team and assigned several locations at the incident where potential active shooters might be; however, they played no part in stopping the threat and eventually secured a perimeter spot. Golf reported feeling that their level of training was sufficient to manage both incidents. The participant confirmed having attended many types of active threat training courses.

All training received was in-house and through their agency instructors. All courses were taught by their department’s MACTAC section, emphasizing stopping the threat early. In the participant’s jurisdiction, priorities within the active threat response transitioned to combat casualty care training and the incorporation of fire service elements into the strike team. All agency officers had to take the Incident Command Courses ICS 100 and ICS 200 offered through the DHS Emergency Management Institute. Regarding whether the active threat training received was relevant and corresponded to their responses, Golf stated, “Absolutely.” Golf also added that:

> Some of the first training I received through the MACTAC section involved an active shooter in a school with multiple elements responding. In both incidents, I was involved in similar instances where I observed most officers moving with a specific task, just like during training.

Regarding the participant's perception of preparedness for an active threat, having responded to a real-world active threat incident, Golf stated,

> Based on how I was trained, not only through official channels but also in the area command, I felt during the first incident that I was prepared not only in training and equipment but also in mindset. After the first incident, I would say I became hyperaware of what was expected of me and my response. When the second incident happened, I was ready.

In sub-question 6, when asked whether the participant's training was practical, Golf believed their training was “extremely effective.” Elaborating on this answer, Golf recalled that before their launch into LE at the age of 18, no prior military or LE experience had been attained. The participant felt their training, which encompassed moving with multiple elements in a kinetic environment, seemed to flow perfectly when applied in real-world scenarios. They felt they could adjust quickly if there were hiccups during the incident. This coincided with the abundance of firearms training, which gave the respondent confidence in their responses.

Regarding both responses, the respondent was asked whether the incident command system was utilized. In the first incident with the officer-involved shooting, Golf replied, “The incident happened so quickly that as soon as we had 5 or 6 officers arrive, we immediately formed a strike team and entered the premises to engage the suspects. Therefore, no solid command system had been established for the incident.” Due to the second incident’s large scope and the high number of known casualties, multiple command posts were initially established. As the incident progressed, within an hour, all converged into one command post controlling the hundreds of officers responding. This leads the conversation to the use of RTFs.

Golf reported that the RTF was utilized in both incidents. In the first incident, Golf elaborated on this, stating, “In 20—the concept was still new to us, and because it was an active gunfight for over 20 minutes, (the RTF) did not immediately enter the store until after both suspects were dead.” Nearly three years later, when the second incident occurred, there were multiple RTFs’ assigned, entering the warm and even hot zones with LE officers clearing the way, treating seriously injured people. The size and scope of both incidents created different issues in communications.

Golf’s agency primarily addressed the first incident, where multiple strike steams entered the store and contained the situation. The radio system utilized at that time was ineffective and failed the

department. During the second incident, all agencies were operating with a new radio system, allowing for mutual aid strike teams comprised of officers from different agencies to communicate effectively. Golf's triage knowledge is limited due to their LE officer background, which is different from a medical one regarding casualty triage.

Golf recalled that the first incident took place in two separate locations. The first was an eatery where two officers were murdered. The second scene was inside a commercial building where a civilian was murdered and where the suspects also died. All casualties were triaged and transported to appropriate medical treatment facilities. In the second incident, it is unclear what type of triage system was utilized; however, due to the size and scope of the second incident, Golf states, "Medical did the best that it could with the resources it had... but there were just too many victims and bodies to deal with at one time." Regarding knowledge retention from initial training to their active threat response, Golf recalls there was no time when they did not have a purpose or needed direction on what action needed to be taken.

The respondent felt 80% of the knowledge was retained at the first incident. Golf also reported that fear affected their actions, but they reverted to their training. Golf recommended departments should train at least annually, refreshing on their active shooter response, adding, "Within their agency, most specialty teams will practice independently during one of their training days at least once annually." Regarding wounding patterns, the respondent did not treat any casualties during both incidents. Regarding both incidents, Golf was unaware of any staff opposed to a rescue task force operating in the warm zone; in fact, fire, EMS, and LEOs' worked effectively together.

Results

I asked participants to complete the university's required Institutional Review Board documents before completing an interview or survey, dependent on whichever method the participant

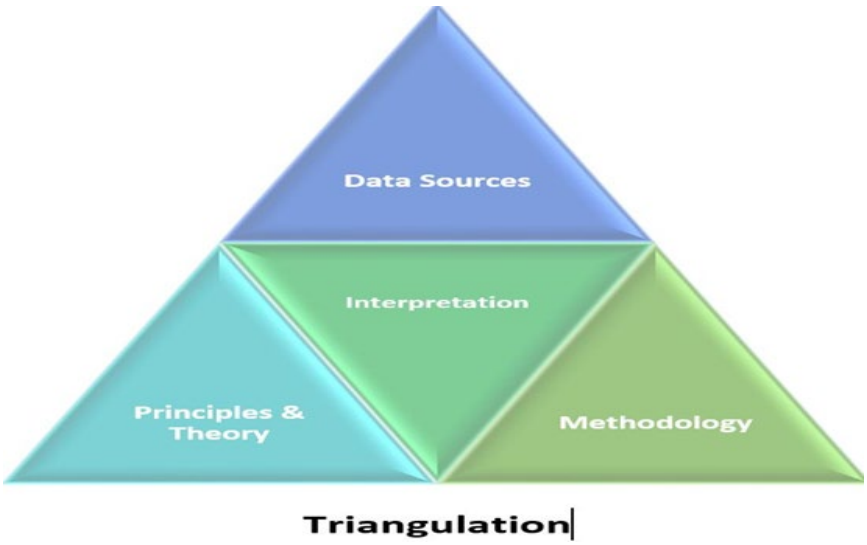
chose to respond. Both the survey and interview questions were identical. All data collection methods focused on two central research questions and 13 sub-questions, which guided the study in identifying the efficacy of responder training for active threat mass killings after responding to a real-world event. I used the environmental triangulation method to analyze the qualitative data collected from the survey or the interview.

Theme Development

I used Guion's method of environmental triangulation to analyze the grounded theory data, whose findings indicated significant themes relating to the central and subquestions (Guion, 2002). Themes emerged that helped answer the central and subquestions. These themes were influenced by environmental factors such as different settings, locations, and the size and scope of the incidents. These themes are shown in Figure 5 (Staff U. , 2022).

Figure 5

Environmental Triangulation Themes



Data Analysis Steps

Environmental triangulation is a critical concept in grounded theory research. These findings are influenced by environmental factors such as different settings, locations, and the scope of incidents, making this method the most acceptable means of collecting data (Guion,2002). The idea is to determine which factors, such as protocols, staffing, response planning, and training, influence the information received; these factors are then changed to see if the findings remain the same. Validity can be established if the findings remain unaltered under varying environmental factors. I maintained critical steps in the qualitative data analysis and triangulation, which resulted in consistency throughout the analysis of all data points. Utilizing open-ended, unstructured interview questions permitted descriptive participant responses, allowing me to expand on those responses related to a participant's particular incident. This method was the ideal research tool as it follows the criteria for environmental triangulation.

The term Triangulation "refers to the use of more than one approach to the investigation of a the research question to enhance confidence in the ensuing findings" (Bryman, n.d., para.1). Utilization of multiple data sources and materials, multiple data perspectives, methods, and approaches, including diverse data analysis including qualitative, quantitative, expert review, logic, patterns, precedent, established principles, and theory triangulation increased validity and reliability. (U. H. Staff, 2022, para 1). The University of Tennessee's Health Science Science Center defines environmental triangulation as:

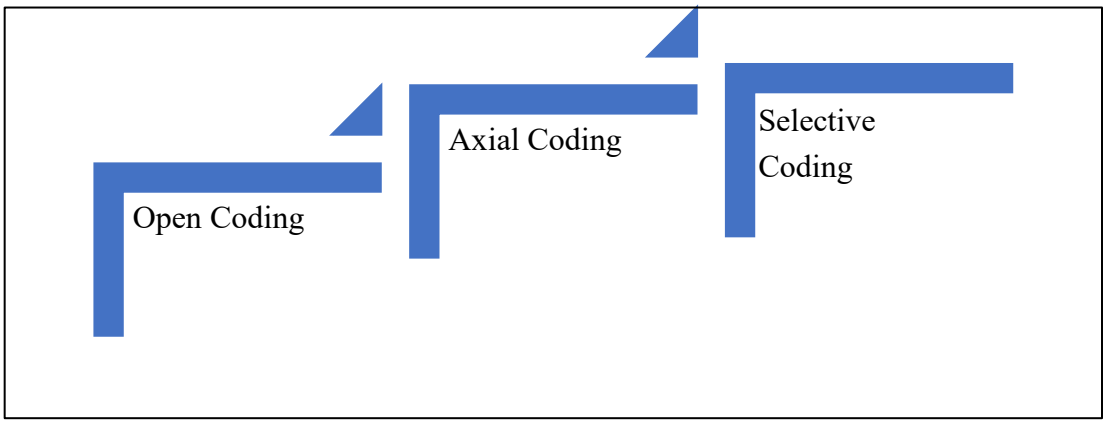
> Environmental triangulation involves using different locations, settings, and other critical factors related to the study's environment, such as the time, day, or season. In this case, the environment is an active threat in multiple settings by various FR locations. The key is identifying which environmental factors might influence the information received during the

study. These environmental factors are changed to see if the findings are similar across settings. Validity has been established if the findings remain the same under varying environmental conditions (U. H. Staff, 2022, p. 2).

See Figure 6 for the coding process using grounded theory. Step image by Danny Jarrell.

Figure 6

Grounded Theory Coding



Note: Figure 6 shows the three stages of grounded theory coding: open coding, axial coding, and selective coding.

There are various steps in collecting and analyzing qualitative grounded theory data. In this study, I followed a combination of grounded theory methods for collection, analysis, and coding based on Corbin and Strauss (1990), Yin (1994), and Delve (2022a). Below is a discussion of the steps I followed.

Step 1: Open Coding

According to Gallicano (2013), researchers must analyze their data numerous times. This should be followed by creating tentative labels for the data that summarize what is happening. This summary should emerge from the data rather than be based on theory (Gallicano, 2013).

Step 2: Axial Coding

The second step in grounded theory coding is Axial coding. This coding involves identifying relationships among the open codes. A researcher then makes inquiries about the connections among the codes (Gallicano, 2013).

Step Three: Selective Coding

The last step is selective coding. It involves determining the core variable, including all the data. This identification is followed by reanalyzing the transcripts and selectively coding any data related to the identified core variable (Gallicano, 2013). See Appendix K for the results of the coding and theme development.

Theme Development Responses

Two central research questions and thirteen sub-questions were asked during the data collection portion of this study. Research question one asked participants about their perception of pre-response training received and whether that training prepared them after responding to a real-world incident. The second research question allowed participants to elaborate on the effectiveness of their agency's contemporary active-threat response plans, post the 2007 paradigm shift in FR

preplanning and training. Through the 13th subquestions, the first focused on allowing participants to describe their perception of their actions during the real-world active threat they responded to, relating to the two central research questions. The following principal themes result from the data analysis method used to describe the experiences of FRs who had undergone active-threat training and responded to a real-world active-threat incident as related to the research questions and the sub-questions asked.

RQ1. Based on the training received, what perceptions do FRs have of their preparedness during a real-world active threat incident?

Subquestions 2 through 6 aided in identifying the principal themes for participants' overall personal perceptions of their preparedness based on training received during a real-world active threat incident to which they responded. Four principal themes emerged for central research question one: incident command system training, active threat training, components of their training, and refresher training.

Incident Command System Training. Sub-question 7 asked if the ICS was utilized. Three respondents recalled that ICS was used during each incident at some point, in some form. Several respondents confirmed that an authority structure in ICS, the unified command, was established. The unified command is when two or more individuals share the role of incident commander, each already having authority in a different responding branch of the FR tree, e.g., fire, EMS, and LE.

Alpha, Charlie, Echo, and Foxtrot each replied that a unified command had been established within ICS. Bravo responded, "Only the fire department utilized ICS." Delta and Golf replied, "The command situation was very difficult 'from the onset'... we had issues communicating with each other over the radio and cellphone service was problematic... many responded from home and had dead or low radio batteries, due to it 'the incident' being so large in scope, with so many casualties

and so many false reports of additional active shooters, multiple command posts were established." Regarding Delta and Golf's responses, one can deduce the possibility that if ICS had been established, there is the possibility of a reduction or lessening of the challenges presented to them.

Active Threat Training. Response to the question on the primary goal of the training was directly related to their area of operation. For example, fire services attendees moved patients, patient care, and command; EMS attendees focused on patient care; and LE addressed the threat. In each branch of this FR tree (fire, EMS, LE), attendees learned their focus was directed around meeting the same incident goal of stopping the bleeding, stopping the dying, and how each one of their focus' is united in meeting this goal and how they must work together in achieving it. Post-training each of their responses regarding active threat training, participants could see the others' focus in action, enabling a better understanding of the active threat response, not just within their specific focus. Additionally, each participant reported being prepared for their incident, which coincided with their training, ultimately creating an atmosphere of trust and understanding between the FR branches.

Alpha's response included attending ALERRT and state, local, and in-house courses addressing the threat, treating casualties, command, and control. Regarding their perception of training retained, Alpha responded, "Muscle memory took over." Bravo's response included ALERRT and a couple of active threat courses, which included addressing the threat. Regarding the perception of training retained, muscle memory took over their response. Charlie's response was unique because their initial training was provided during their basic academy. Charlie's response to preparation was yes, and they reverted to their training, such as muscle memory. Delta's response regarding initial training was, "Their department provides annual training." Regarding preparedness for their incident, the participant felt "very prepared." Echo reported that their initial training included active threat training developed by the department and was presented in the academy. Echo felt prepared, recalling

"that I anticipated actions." Foxtrot stated, "Having attended multiple active shooter/active assailant training over their 17-year career at the time of the incident (now 23 years)... described as in-house training by my department." Golf recalls, "All training received was in-house through their agency... courses were taught by department staff with an early emphasis on stopping the threat." Golf added, "Over the years, their priorities switched to include combat casualty care with incorporated FD elements, also stating officers on my agency are required to take Command and Control via ICS 100 and ICS 200 when they first start on the department."

Components of Training. Subquestion 6 asked respondents to elaborate on the knowledge, skills, and abilities their training offered and whether it was effective. In addition, what were the pros and cons of this training, and would they suggest areas of improvement? Responses varied; however, many similarities evolved, such as training with other branches of the FRs, both locally and with mutual aid, dynamic scenarios requiring critical thinking, effective communications, ICS, and realism input into the training with role players to interact with and moulage injuries to address. The only disadvantage noted during the training for LE officers was that there was no real-world rifle training. In other words, training rifles (blue guns) were utilized in active threat training; however, patrol officers did not have rifles or rifle certifications within the department.

Alpha responded to this question by stating, "Training was effective... communication and an understanding of the LE officer side when addressing the threat and knowledge of what LEOs' were doing and why... training was the reason for the operation's success." Bravo's occupation was a fire marshal with arrest authority to which they carried a weapon. Bravo's response was unique, having gone through training as an LE officer and as a FF stating, "training was effective having the opportunity to operate in each role of the active threat response plan." Charlie responded, "CPR and first aid training with role players in training... wish rifle certification was in initial training, relaying

information was imperative, e.g., one man, two-man, three-man plus building clearing and formations...". Delta's experience was described as, "Yes, the training was beneficial... meeting in groups to train with other agencies helped it feel natural to create a team of officers and methodically address complex issues..." at their incident. Echo responded by stating, "outside of medically treating casualties, understanding what other agencies were doing was very beneficial." Foxtrot's response was limited: "I believe that my and my teams' knowledge, skills, and abilities were effective for the assignments we were given...." Golf reported:

> Yes, I believe the training I received was highly effective. Having no military or LE experience before joining the department, at 18 years old, everything I had been taught was new to me. When applied in real-world scenarios, moving with multiple elements in a kinetic environment seemed to flow perfectly. If there were hiccups during the real-world incident, I felt like I was able to adjust quickly... during both incidents, I felt I was adequately prepared.

Refresher Training. Regarding refresher training, the responses varied from biannually to 3 years. The highest percentage of responses replied annually. Considering the dynamic environments these incidents represent, coinciding with the various methods of executing these vile acts, annual refresher training is the most appropriate means of preparation. On the responder side of this question, changes in equipment, tactics, agency turnover, and overall staffing are a significant concern. With turnover progressing to all-time highs and staffing levels at all-time lows, new responders are entering this career field in considerably high numbers, requiring a high demand for this type of training. "Rookie" responders in all branches must learn to operate with the veterans, and the veterans need to see the limits of their untested staff.

RQ2. How effective are contemporary active-threat response plans, post the 2007 paradigm shift in FR preplanning and training?

The utilization of Sub-questions 7 through 13 identified elements of the participants' department's current active-threat response plan, post the FR preplanning and training paradigm shift of 2007. Four themes emerged under this question. They were communications, triage, RTF policies, procedures, and equipment needs.

Communications. Subquestion 9 asked if any issues with communications evolved. If one were to ask any group of FRs about communications, the response would sound nearly the same: "The key to success at any incident is good communication; when communication fails, there will be operational failures during the incident." Communication does not necessarily mean varying frequencies between departments and the inability to talk to each other; communication does not necessarily mean using cell or satellite phones or other types of encrypted communication devices. Communication failure is also related to interpersonal communication, which is simply speaking with and understanding each other.

One of the common pros developed from the research regarding training components was the ever-evolving, real-world scenarios with role players, which required interaction between responders and the role players. Good communication will take an incident, which most responders will say is chaotic in the first few moments, to an organized incident. In such an incident, command, control, logistics, and extended communications amongst multiple agencies are more manageable.

Triage. Subquestion 10 directed respondents to confirm if triage was used and, if so, identify which method was utilized. Although respondents confirmed that some form of triage was used, limited information was provided on which type of triage system was applied. The most familiar triage system in North America is the method known as S.T.A.R.T. or Simple Triage and Rapid

Treatment. From respondent narratives, where a triage method was utilized, the S.T.A.R.T. system appeared to be the most likely method, according to descriptions from their statements, if not directly confirmed as the triage system utilized. The following are the respondents' replies to question 10.

Alpha recalled, “I did not see any ribbons utilized... all casualties were taken to the CCP outside... deceased left where they lay. Bravo stated, “Yes, however, not sure which system was used... but a CCP was set up.” Charlie answered, “Yes, unknown which system was used.” Delta replied, “We bypassed or passed off injured persons, as that was not our mission then.” Echo recalled, “No triage was necessary here; however, the department’s SOP is the S.T.A.R.T. method.” Foxtrot’s answer: “I did not respond to the area where the injured were being sent, but I do know that many were being triaged at specific areas, and it was being broadcast over the radio.” Golf replied, “A mass casualty triage was established on a major road... I felt like medical did the best it could with its resources... there were just too many victims and bodies to deal with at one time.”

Rescue Task Force Policies and Procedures. Subquestions 8 and 13 were directly related to the implementation of the RFT. Question 8 asked whether the RTF was utilized at the incident. Participants responded that question 13 elaborated on any issues departments may have faced implementing the RTF into policy. Unfortunately, the responses provided very little useful information to these two questions. Below are the responses to the questions.

Alpha replied, “RTF was not utilized from where I was; however, it was utilized in the parking lot and at an exterior door.” Elaborating further, Alpha explained that on the day of the shooting, EMS posed unwavering opposition to operating in the warm zone. According to Alpha and others, all three branches had trained together utilizing the RTF concept, and this opposition at a real-world event caused mass confusion amongst responders on the scene, as this was not how they had trained. Bravo stated, “Yes, RTF was used and based on ALERRT course... concept went well.” It is

important to note here that in Alpha and Bravo's response, no body armor existed for fire or EMS. Although Bravo never witnessed any opposition to the concept, Bravo stated, "If there was opposition, it was only due to no body armor." Charlie replied, "Yes, RTF was utilized, and casualties were carried out in grocery carts and other methods." Charlie noted no opposition to the RTF concept. Delta stated, "I was not part of a rescue task force." Echo replied, "No RTF used." However, Echo confirmed that their department implemented RTF in their active threat response plan; there was no opposition to the concept. Foxtrot stated, "We responded to a command post, placed in teams, and deployed to hot and warm zones as needed... I did not observe anyone in any position reluctant to step up and do their job." Golf recalled:

> Yes, in both incidents, a rescue task force was utilized. In the first incident, this concept was new, and because there was an active gunfight for over 20 minutes, they did not immediately enter the building until after both suspects were dead.

The second incident occurred three years later, with Golf stating, "Multiple RTFs formed and entered the hot zone with police officers clearing the way... treating several seriously injured people." Regarding Question 13, Golf stated, "For both incidents, I was not aware of any staff opposed to a rescue task force operating in the warm zone."

Equipment Needs. Although equipment needs were not a direct inquiry of this study, the lack of specific equipment did affect the outcomes in some incidents. Participants responded to questions involving pros and cons, how one could improve, and what recommendations they would give; surprisingly, equipment developed into the most common theme. Subquestions 5 and 9 primarily fostered responses toward equipment needs, although other questions did as well, just not as prominent as these two.

Subquestion 5 inquired about the responder's perception of preparedness for a real-world active threat event. The responses are as follows: Alpha replied, "EMS would not respond into warm zone due to safety issues." When asked to elaborate, body armor was the answer. Charlie recalled, "should have had a rifle." Delta replied, "The only issue we had was lack of appropriate equipment." When asked to elaborate, Delta stated, "AR15s, Level 4 body armor (capable of stopping a rifle round), ballistic helmets, shields, and multifunction breaching tools."

Subquestion 9 queried about any issues with communications, and the following were participant responses: Alpha stated, "PD operated on encrypted channels for LE officers only," insinuating either everyone operates on an encrypted channel where everyone can communicate or program an unencrypted channel everyone can talk on. Delta recalled, "The only issues were radio and telecommunication." Elaborating on this, common radio channels would have been beneficial. Golf recalled, "The radio system utilized at the time was ineffective and failed not only me but multiple other officers and could not be utilized effectively by outside agencies."

Summary

This chapter provided a thorough discussion of the research results involving the efficacy of FRs, post-responding to a real-world mass killing after having had training in an integrated response to active threats. Participants indicated their perceptions of the effectiveness of the training they received before responding to a real-world event. The results appeared in order of the central research and subquestions to illustrate themes that developed and represented this specific group of FRs. An analysis of the data collected via the questionnaire revealed several themes distinctly connected to this specific group of participants.

The responders in this study presented themselves with the personal strength to recall and discuss an incident they responded to, where many civilians were killed by numerous vial methods in

many different settings and jurisdictions, both large and small, across the United States. The participant career fields included FFs, EMS workers, and LE officers. Their time on the job was from 1 to 20 years, and their roles in the incident they responded to were distinct. They included medics providing casualty care, responders on an RTF, or officers moving towards the active threat. Each presented their incident from an eyewitness perspective and provided input into the pros and cons of their training, coinciding with suggestions to other responders on improving their response to this type of incident. Their diverse backgrounds, experiences, and various types of active threat training received by each participant enhanced this study's results.

CHAPTER FIVE: CONCLUSION

Overview

The purpose of this qualitative study was two-fold. First, I evaluated and analyzed the perceptions of FRs regarding their preparedness during an active-threat incident based on the training received. Secondly, I determined the effectiveness of contemporary active-threat response plans post the 2007 paradigm shift in FR preplanning and training. The grounded theory was the best theoretical explanation for linking the relationship between theory and the focus of this inquiry. The theory was suitable because this study encompassed and relied on the participants' situational perspectives and critical decision-making, where their situational effectiveness was measured through their training efficacy.

No data currently exists from the implementation of the RTF concept during mass killing responses, creating a gap in the concept. The fundamental purpose of this study was to fill that gap through a process known as proof of concept. During this study, my central purpose was to assess the retention of the participants' knowledge, skills, and abilities received during their initial training for active-threat responses, coinciding with identifying the efficacy of this training during real-world operations in active-threat environments while evaluating the effectiveness of contemporary active-threat response plans post-2007. This qualitative research study was justified by empirical and grounded theory.

From an empirical viewpoint, data obtained does not primarily originate from numbers. The empirical means of gathering data utilize direct and indirect observation or experience from the participant(s). The grounded theory, developed for gathering data from the field, involves studying a process, an action, or an interaction involving many individuals (S. Staff, 2023). Therefore, grounded theory was the methodology of choice for this research. This choice was meant to justify and prove

whether the RTF concept is beneficial. By viewing the phenomenon of mass killing incidents from a social context, the grounded theory may help elicit new theories based on the collection and analysis of the real-world data obtained from responders.

In Chapter 5, I will conclude this research by identifying the findings from the study. Chapter 1 was the introduction, which included a historical background of active threat mass killings, social and theoretical contexts, the importance of the study to the researcher, problem and purpose statements, and the significance of the study and the two primary research questions. Chapter 1 also included the definitions of terms used throughout the study. Chapter 2 entailed a review of the literature utilized to provide the theoretical framework for the study. Chapter 3 focused on the methods used to collect the data, the participants, the researcher's role, data collection and analysis methods, and ethical considerations when obtaining the data. Chapter 4 entailed the participants and the analyzed results from the study.

Summary of Findings

There were two central research questions in this study. Research Question 1 was, "Based on training received, what perceptions do FRs have of their preparedness during a real-world active threat incident?" The participants had unique experiences based on their personal and professional training, length of time in their chosen careers, and the type and location of active threat mass killing from which they responded. Research Question 2 was, "How effective are contemporary active-threat response plans, post the 2007 paradigm shift in FR preplanning and training?" The participants identified details of their department's active threat response plan and identified opposition from the staff who were present. Thirteen subquestions were asked during the data collection of this study in support of the central questions.

One imperative question to ask was which branch of service the respondent operated. Each branch of FRs predominately works in its specific area of operation; therefore, Sub-question 1 addressed this need. Sub-question 1 was, “Regarding the incident, you responded, in which operational field did you perform your duties as an FR? (e.g., fire, LE, or EMS). Before this incident, how much time had passed since your active threat training?” Two of the respondents are fire marshals. In each locality, they were also certified as firefighting EMTs, with LE arrest powers and the authority and certification to be armed. One respondent was strictly a certified FF and EMT. Four respondents were LE officers. The average time since their last active threat training was 1 to 3 years.

The response mode requires the implementation of an incident command system when responding to an active threat. During data collection, the respondent's role on the scene was necessary. This is different from their field of expertise, meaning what did they also do on scene. Sub-question 2 addressed this by asking, “In what role did you perform your duties? (e.g., command position, LE officer, FF, EMS provider, or support). Please explain your role. did the role meet your training/experience, and were you over/underutilized?” One participant treated casualties only. One was assigned to an RTF, while the remaining six respondents addressed the threat.

One of the requirements for participating in this study was that participants had to have completed some form of active threat training. Sub-question 3 addressed this by asking, “What type of training did you receive? (e.g., in-house local training, organized accredited certification courses such as ATIRC, or a private vendor. What were your initial course objectives (e.g., addressing the threat, treating casualties, command and control, etc.)?” Two respondents

attended the ALERRT course, while the remaining five attended various in-house developed or regional type noncertification courses.

In evaluating the efficacy of responder training post-real-world event, it was vital that respondents describe the relevancy of the training received. To address this data point, Subquestion 4 asked, “Do you believe the active threat training you received was relevant and corresponded to your incident response?” All seven respondents confirmed that their training was relevant and corresponded to their incidents. The very nature of LE officers' response to an active threat requires them to bypass casualties and move directly to and stop the threat. One LE officer replied, “Training was very effective because it goes against your natural instincts to stop and render aid to casualties.”

The participant’s view of their preparedness for the event to which they responded directly relates to the type of training received, their role on the scene, and the relevancy of the training received. Ssubquestion 5 addressed, “Based on training received, what was your (FR’s) personal perceived preparedness for an active threat, having responded to a real-world active threat incident?” All seven respondents confirmed that their training prepared them for the incident. Elaborating on this, three replied that developing muscle memory, and two stated that the training helped to develop trust in other branches of the FR tree.

The KSAs acquired during training are applied on the scene when responding to an active threat. To identify whether each responder training addressed their response, Subquestion 6 asked, “Do you believe the knowledge, skills, and abilities of the training offered you were effective? If yes, then what areas of your training worked well? If not, then what areas of your training need improvement? Elaborate on the pros and cons of your training received.” All respondents confirmed that the KSAs of the training offered to them were effective. Many

focused on using role players in their training, significantly impacting communication, working in teams with other localities, and increasing their critical thinking skills.

As stated earlier, the incident command system is necessary for any incident, mainly medium to large-scale operations. Identifying whether ICS was initiated at their event was essential. Sub-question 7 determined this by asking, "Was the incident command system utilized at this incident? If yes, please explain the overall organizational chart, e.g., was unified command implemented between various responding agencies?" All respondents answered "yes" to the question regarding utilization of the ICS. Elaborating on this answer, each confirmed that ICS kept the incident organized and made communication easier.

One motive for introducing this study was to define whether the RTF concept works. Respondents trained in active threat response would have received an introduction to the RTF. Sub-question 8 addressed this by asking, "Was the RTF concept utilized? If yes, please elaborate on the process utilized." Answers to this question were diverse. One respondent did not see the RTF concept initiated from their position. One replied that they were not part of an RTF. One respondent confirmed that resources on the scene were sufficient, and the incident did not require an RTF. Two respondents confirmed being assigned to an RTF, and the other two confirmed that the concept was used and worked well.

As stated earlier, good communication is the key to success in any incident. Understanding the level of communication and effectiveness amongst respondents was imperative. The question of this effectiveness was addressed in Sub-question 9, which asked, "Were there any issues with communication between different agencies? e.g., varying radio frequencies, strategies, tactics, command intent differences, or command priorities. If yes, what were the issues?" One participant replied that the LE officers had encrypted channels, which

caused a problem with FFs and EMS, creating the necessity to go through dispatch to relay information. Four participants replied that a mutual aid channel worked very well. Two replied that they had radio and telecommunication issues, causing the system to be ineffective.

Any incident involving many casualties requires some system to sort and prioritize the treatment and transport of the injured. This system is known as triage, and many types exist. The key to operating with a triage system and for the system to be effective is that all responders must be familiar with the type of system being utilized. Therefore, Sub-question 10 asked, "Were your casualties triaged? If yes, please elaborate on the system utilized. How did it work? Would you suggest any improvements?" Three respondents acknowledged utilizing triage but did not know what happened in the CCP. One responded, "No, triage was unnecessary due to sufficient resources on scene." One respondent stated, "No, all casualties were moved by LE officers to the parking lot (because EMS refused to enter the warm zone), where EMS had set up the CCP, unknown what happened in the CCP." Only one respondent identified S.T.A.R.T. as the method of triage; however, from participants who confirmed triage was used, by their description, one could deduce that the S.T.A.R.T. method was used.

Participants were asked to elaborate on what percentage of their training was retained during their real-world event. This question was designed for a fire and EMS response. The idea was to determine how safe they felt operating on an RTF while being protected by LE officers in the warm zone. Subquestion 11 asked, "Please elaborate on what you think was the percentage of knowledge you retained from your initial training. How would you describe your fight or flight response to this incident? Did you ever feel unsafe? How often would you recommend refresher or update training for your agency?" Three participants responded, "Muscle memory from training took over." Another respondent added, "Muscle memory took over, and I was

hyped up." One respondent stated, "I had just gone through training again recently and believe during that incident, I did retain at least 90% of the training." The final participant recalled, "I felt I retained, what feels like looking back at it now, almost 10 years later, close to 80% of my training... There was not a time where I did not have a purpose or needed direction on what action needed to be taken."

Any contemporary active threat training should provide medical training. This training would address any wounding patterns commonly found where penetrating trauma was the mechanism of injury. I believe the components of this training are imperative to saving lives. There was a need to know if the injuries responders were being trained to treat were the injuries encountered and treated in the field. This basis generated Sub-question 12, which asked, "Regarding the wounding patterns you encountered, did the wounds differ from your training? Was your training effective for these wounds? Please elaborate (Etal, 2015)." Participants reported that the wounding patterns were like those found in training, with one exception. One participant responded, "All the casualties I saw were deceased, shot either in the head or chest at close range."

Across the nation, implementation of the RTF has become the standard response. When responders' actions concerning an active threat response are questioned, subject SMEs will refer to components of active threat response and the RTF concept. I wanted to know how many respondents' localities had adopted this response in their jurisdiction's preplanning and SOP. This inquiry yielded Sub-question 13: "Regarding the implementation of RTF Standard Operating Procedures, did your leadership encounter any staff members opposed to operating in the warm zone on an RTF while being protected by LE? Was their opposition based on their belief that "this is not what I signed on for?" Two respondents stated that at their incident, EMS

refused to enter the warm zone; however, all agencies in their jurisdiction had attended active threat training. The remaining participants confirmed no opposition to operating within the RTF concept.

Discussion

In 2009, the RTF model was pioneered by the Arlington County Fire Department in Virginia (Nguyen, 2018). Since then, the RTF model has become the national standard for active threat responses, in some form or fashion, across the United States for FRs. Many jurisdictions have adopted this methodology and inserted it into their standard operating procedures to meet local needs. However, very little information has been published on whether this concept works during a real-world active threat event; therefore, very little information on 'proof of concept' has been published.

In this study, I discovered through participant responses from fire, EMS, and LE officers across the United States that the definition and understanding of the RTF concept vary. The variation lies between branches in the FR tree and amongst jurisdictions. Due to varying agency budgets, understanding of the RTF concept, type of training provided, response terminology and procedures, and the perception of preparation for an active threat program as outlined here, the findings are inconsistent.

Theoretical Confirmations and Corroborations

The results of this study build upon active threat-trained FRs who have responded to a real-world active threat event where mass casualties happened. As stated earlier, minimal research has been published on responders trained to an active threat standard and using those skills in a real-world incident. This study showed that responders felt the KSAs they obtained from active threat training prepared them for the real-world incident in which they responded.

However, this feeling of preparation would have depended on the type of training they received. In most cases, respondents reported that the type of training received was the attendance of the ALERRT delivered by Texas State University or having an in-house course based on the ALERRT methodology. The ALERRT website notes,

> "Since 2002, ALERRT has successfully delivered training nationwide with more than $136 million in federal and state funding. More than 303,928 state, local, and tribal FRs (over 246,129 LE) have received ALERRT training to date, all at no cost to FRs or agencies" (S. Staff, 2023, para. 2).

One respondent reported attending an ATIRC delivered by Louisiana State University and provided through federal and state funding. However, no current data on the amount of funding nor the number of responders trained since the program's inception could be located on their website. By speaking with ATIRC instructors (of which this researcher is one), this course's principles are based on the ALERRT course. Both courses provide nearly identical guidelines for responders to follow or modify for their jurisdiction's needs. The inconsistencies noted earlier are insignificant when looking at the overall question of preparedness. The data from respondents confirms that this training model does prepare responders for active threat incidents. The inconsistencies noted could be related to policymakers' modification of these courses' principles to meet the needs of independent jurisdictions; however, this query remains open for further study. Although the analysis established data saturation on the queries examined, I uncovered many unique perspectives on preparation for an active threat and may shed new light on this topic.

One of the most common challenges noted by respondents was the lack of a common communications network. In one case, the active threat response was in the jurisdiction's

emergency response plan. The police department upgraded their radios from open frequencies to encrypted technology, whereas fire and EMS did not. When the event happened, fire and EMS were required to relay all communications with police through their respective communications officers. A necessity in every locality should require each emergency response agency within the locality to communicate with each other on the purchase of new equipment, which everyone will utilize during a significantly large incident. Agencies outside the locality must also be involved in this phase due to established mutual aid agreements because they would need to share the equipment. The communication problem mentioned above was strictly a local challenge that did not involve mutual aid. Two other notable communication challenges identified through the data included poor signal strength on scene and a lack of mutual aid channels. The respondents note that each one of these challenges has since been rectified. Emergency managers should be responsible for organizing and establishing standards for an All Hazards Emergency Response Plan. In the plan, equipment requirements should be addressed as stated by the DHS:

> DHS/FEMA defines preparedness as "a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action to ensure effective coordination during incident response. This cycle is one element of a broader National Preparedness System to prevent, respond to, and recover from natural disasters, acts of terrorism, and other disasters. (F. Staff, 2022, para. 1)

A different perspective on preparation came from the LE officers. One LE officer respondent said their basic academy did not offer rifle certification. At their incident, they were the first on scene at a large retail store with multiple people down and the shooter still active. The respondent stated that having a rifle would have made them more “comfortable.” Another

respondent stated that their department did not possess rifles, and at their incident, the shooter was utilizing a rifle at long distances. In both instances, all officers now possess the certification and the rifles. Contemporary times require LE officers to carry rifles while on duty. As far back as 1997, recommendations were made for patrolmen to carry carbine rifles. The U.S. DOJ shared an article on its website stating:

> "Handguns and shotguns are no longer adequate for street police officers because they increasingly have to perform the same function as light infantry... The police carbine/rifle may be the solution to the increasingly common situations in which police handguns are inadequate in shootouts." (Huntington, 1997, pp. 38–39)

The final perspective came from the fire/EMS service. Two respondents reported that in their jurisdiction, all branches of FRs had trained and established an active threat response plan. This plan followed the national standard, including establishing RTFs entering the warm zone. At the time of the training, only the police had any ballistic gear issued, and their gear was not rated for rifle rounds, nor did they have helmets. When the actual incident occurred, the FFs and police formed RTFs even without the proper ballistic equipment. When EMS providers were directed to come into the warm zone and treat casualties in the CCP, they refused to enter, stating, "Their policy did not allow them to enter a hostile area." This confused the police, who were inside calling for help, as this was not how they had trained. Postincident, giving them the benefit of the doubt, the FFs attributed EMS's nonaction to the absence of proper equipment. In 2017, the domestic preparedness website published an article on the RTF. In the article regarding active shooters, the following is notable:

> Civilian EMS personnel are not combat medics, so they do not go into the line of fire like their counterparts may in the military... However, when people are bleeding out and

> dying in mass casualty incidents, the urgency of medical care is being pushed to new limits... this is where EMS personnel could have an opportunity to join LE and make entry to locate and treat victims, even as other officers search for and neutralize the suspect... The RTF model presents some challenges. To operate in dangerous environments, members should be equipped with the proper tools –including Kevlar helmets and body armor. This may be an issue for EMS, as EMS organizations often include volunteers. (Mueck, 2017, para. 1–11)

According to the respondents, the cost of equipping all responders was too high before the incident. Post-incident, an order was placed to provide responders with ballistic gear for active threat incidents the next day. One could argue that, in this case, EMS made the correct call. The takeaway is that these issues should have been addressed during training and before implementing an active threat policy, not at the actual incident.

Empirical Extensions and Contributions

The latest report from the FBI, titled Active Shooter Incidents in the United States in 2022, was written in collaboration with the ALERRT Center at Texas State University. The report designated "50 shootings as active shooter incidents. Although incidents decreased by 18% from 2021 (61 incidents), the number of active shooter incidents increased by 66.7% compared to 2018 (30 incidents)" (S. Staff, 2023, p. 6). These incidents occurred in 25 states and the District of Columbia, representing seven location categories, including open spaces, commerce, residences, education, government, houses of worship, and a healthcare facility. There were 313 casualties (100 killed and 213 wounded); one LE officer was killed, and 21 were wounded; the incident with the highest number of casualties, seven were killed and 48

wounded (F. Staff, 2022c). This report conveys the importance of jurisdictions' preparation for active threat incidents resulting in mass casualties.

According to 100% of the respondents in this research, based on training received, each was prepared for the active threat of mass killing to which they responded. Additionally, they reported on all incidents, and the incident command system was established and confirmed that this made the incident operate efficiently. All respondents communicated that their jurisdictions had some form of active threat response plan and had trained before the incident. These incidents occurred across the United States, with casualties ranging from three to more than 300 in their respective responses. Localities ranged in coverage area from ten square miles to over 125 square miles. No matter the department size or the square miles of the area served, every incident had one commonality. The localities had prepared for an active threat and were successful in their execution of the plan. There were problems, but all respondents reported that any faults in the system identified during the incident had been corrected.

Implications

As previously stated, this research specifically focused on responders trained in some form of active threat response, who then responded to an active threat incident, where their newfound skills were employed. No data on training coinciding with responder efficacy during a real-world response is available. The following is an explanation of the implications of this research through theoretical, empirical, and practical lenses.

Theoretical

I used aspects of the grounded theory research method and the environmental triangulation analysis method. Environmental triangulation findings are influenced by environmental factors such as different settings, locations, and times of day. Because this study

included real-world events, this analysis method was the most appropriate means of collecting data (Guion, 2002).

Guion's method of environmental triangulation guided the analysis of the grounded theory data. The findings indicated significant themes relating to the central and subquestions (Guion, 2002). During the analysis, themes began emerging that answered both central and subquestions. Environmental factors such as the incidents' different settings, locations, size, and scope influenced these themes. In this qualitative study, grounded theory methodology provided a framework to discover and construct theory from data systematically obtained and analyzed using comparative analysis. In this case, FRs from various department sizes attended training for active threats and then responded to them after training.

Empirical

No data is available on the efficacy of responders who exit training and respond to an active threat event. According to S. Staff (2023), 96 mass shootings have occurred between 2009, when the Arlington Fire Department first developed the RTF concept, and August 2023 (S. Staff, 2023). Locating participants meeting the requirements to enter this study was quite difficult, especially considering the number of responders trained in this concept, coinciding with the number of mass killings. This was a very small and specific pool of potential subjects to draw from.

Empirically, this study contributed to the foundational understanding of an active threat response plan and whether responders were prepared to respond to these incidents. Responders confirmed they were prepared for their response by employing the training they received. The responders from this study included fire marshals, FFs, LE officers, and EMTs. Responses ranged from government buildings to open-area events and commercial buildings. However, the

data became saturated with many of the same responses, although the wording of their responses varied due to the nature of the respondents' careers. The results were the same, but it is possible to draw parallels to help provide more foundational literature on how they experienced their training and real-world incidents from a first-person perspective. Gaining an enhanced perspective of their perceptions connects to theoretical and practical implications for further research.

Practical

Respondents discussed their training experiences and real-world active threat mass killing responses during the interviews and surveys. These questions allowed participants to reflect on their overall experience and provide first-person analysis for emergency managers, active threat education, and other responders. I hope that the answers provided by these respondents will aid in understanding the implications and applications of their training for and responding to real-world active threat mass killings.

Agencies and departments. Currently, the federal government is the primary foundation and source for information regarding active threat data, solutions, planning, and funding. Emergency responders should guide themselves in locating these sources and requesting help in education and funding for their active threat response plans. Reaching outside the boundaries of one’s department should be considered admirable, especially where the information comes from those who have had similar experiences.

Agency chiefs and managers must convince budgetary supervisors that incorporating policies and additional funding to support an active threat response in their community is a need. There is a need to take lessons from others who initiated these policies without all the equipment needed for an effective rescue. An RTF policy relies on trusting one another.

Agencies trusting other agencies comes from training together. In an emergency, agencies rely upon one another in the activated RTF plan. In the one case outlined in this study, one agency could not be relied upon and refused to operate within established policies: a lack of proper protective equipment, e.g., ballistic helmets and vests. Policies should not be operational until all the policy needs have been provided. The same would stand true for communications equipment and weapons required by LE officers, such as rifles coinciding with level IV protective gear. This same gear should be made available to FFs and EMS personnel. Usually, this is the equipment required for any active threat response, and this is the equipment we train with; therefore, it only makes sense to have this equipment in place and staff trained before an RTF or active threat policy goes operational.

Delimitations and Limitations

This study was delimited to part-time, full-time, or volunteer responders at a minimum of 18 years old who attended active threat training and then responded to a real-world active threat involving mass killings in which their newfound skills were utilized. The inclusion criteria for a responder's eligibility to participate in this study necessitated two requirements: (a) must have attended active-shooter/threat training; (b) must have responded to a real-world active-shooter/threat incident, post their training, which meets the standard set in the preceding "incident response criteria." Responders in this study must have met provider inclusion and incident response criteria.

Responder training may have been conducted through a nationally recognized course such as the ATIRC sponsored by Louisiana State University or the ALERRT sponsored by Texas State University, both funded by the DHS and free to responders nationwide. If the training was not nationally recognized, it must have followed the guidelines outlined in the ATIRC or

ALERRT, then the criteria for inclusion. As with training, the incidents themselves also required delimitations.

Only incidents where at least four people succumbed from their injuries and/or where at least four were wounded during an active threat incident. These incidents must have included instances where the threat was considered to remain 'active' upon responders' arrival to the scene, requiring perpetrators to be still on-site and either known or unknown to be still alive. By definition, the threat would remain 'active' until proven otherwise. Excluded were incidents where there were no survivors or no one was wounded. The following section is a discussion of the limitations.

Although the ability to interview a participant face-to-face could have provided more of a connection and brought forth more significant information about their experiences, phone interviews became necessary. Surveys were also used, including the same questions as the interviews. Surveys could have provided more information because the respondent had more time to think and complete their answers more thoughtfully. Speaking with respondents created a “bonding” sensation and allowed sidebar conversations. The most significant limitation was the participants themselves, a matter of population weakness beyond my control. The lack of participants responding to the research questions after agreeing to participate became a significant challenge; however, I successfully met data saturation.

Recommendations for Future Research

Numerous recommendations for future research emerged based on the findings of this study. The first recommendation is for future scholars to contact more FFs and EMS providers. I found obtaining permission from numerous fire and EMS personnel wishing to participate in this study difficult. Only three departments officially declined participation; the remaining

departments ignored the researcher's request, even though the researcher traveled to their localities across the country to meet officials. To acquire data such as the types of tourniquets used, wounding patterns identified, and triage systems utilized, future scholars must obtain permission from the departments that operate in this environment.

In terms of methodology, both qualitative and quantitative means are necessary. I believe grounded theory remains the systematic qualitative research method to collect empirical data first and then create a theory 'grounded' in the results (Q. Staff, 2023). Quantitative research would provide an excellent statistical analysis of wounding patterns and types of medical procedures, systems, and equipment utilized. Fire and EMS agencies must participate in gaining information using this method. Just as I ensured the participants' confidentiality, agencies must be assured of the same. This researcher went to great lengths to maintain the confidentiality of the respondents and the incidents. This study will guide how to maintain the confidentiality of these departments in the future.

Summary

Qualitative methodologies are found in various forms. Woods (1996) stated, "Many of the principles and techniques found in qualitative research share commonalities with other forms of qualitative work. For example, most forms of qualitative research focus on natural settings, an interest in meanings, perspectives, and understandings" (p. 82). Human situations influence their perspectives; therefore, perspectives can help determine situations. This rounded theory methodologies study gave voice to the experiences of FRs who attended active threat training and then responded to a real-world active threat emergency, utilizing their newfound skills.

This study allowed responders to describe their experiences through factors contributing to their training and response to an active threat incident. In selecting a specific group of participants,

the results of this study indicated that responders were prepared for the incidents in which they responded based on training acquired. Participants also revealed that the RTF is a successful tool for active threat incidents. They also communicated that proper training and equipment are needed when planning for these incidents. To meet these planning needs, budgetary supervisors must provide financial support for planning needs before these plans are made operational. The findings also demonstrate that future researchers must have the tenacity to gain permission to collect data from more fire and EMS agencies to gain support in moving the RTF out of the "concept" category into factuality.

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APPENDICES

APPENDIX A: Institutional Review Board Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

February 16, 2023

Re: IRB Exemption - IRB-FY22-23-583 EFFICACY POST EVENT: MASS KILLING RESPONSE TRAINING

Dear Danny Jarrell, John Bentley,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by § 46.111(a)(7).

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification

Liberty University
IRB-FY22-23-583
Approved on 2-16-2023

of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely, G. Michele Baker, MA, CIP

Administrative Chair of Institutional Research

Research Ethics Office

APPENDIX B: Agency Permission Request

Permission Request (Department or Agency)

June 30, 2022

[Recipient]

[Title]

[Address 1]

Dear [Recipient],

As a graduate student in the Criminal Justice Department of the Helms School of Government at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The title of my research project is Efficacy Post Event: Mass Killing Integrated Response Training and the purpose of my research is to evaluate and analyze perceptions of FRs on their preparedness during an active-threat incident, based on training received. The purpose of this study is to assess the retention and effectiveness of participants' knowledge, skills, and abilities received, from their initial active-threat response training, as observed during real-world operations in an active-threat environment.

I am writing to request your permission to conduct my research through your [DEPT or AGENCY name} by contacting personnel from your staff and invite them to voluntarily participate in my research study.

Participants will be asked to complete the attached survey and/or contact me to schedule an interview to assess the retention and effectiveness of participants' knowledge, skills, and abilities received, from their initial active-threat response training, as observed during real-world operations in an active-threat environment. Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, Liberty University's permission letter document is attached for your convenience. Please complete this attachment then return it to me via email at xxxxxxxxx

Sincerely,

Danny S. Jarrell

Department or Agency Instructions:

Please copy and paste the document below, **Appendix B.1**, on your official letterhead or copy and paste into an email. Please return the **Permission Response** below to me, the researcher, at xxxxxxx and not the IRB. Upon receipt of this documentation, I will attach it to my IRB Cayuse application and return the entire application to the IRB.

APPENDIX B (Cont')

Permission Response (Department or Agency)

June 30, 2022

[Recipient]

[Title]

[Address 1]

Dear Danny S. Jarrell

After careful review of your research proposal entitled Efficacy Post Event: Active Threat Integrated Response Training, [I/we] have decided to grant you permission to access our staff and invite them to participate in your study.

Check the following boxes, as applicable:

☐ [I/We] will provide our staff list to Danny S. Jarrell and Danny S. Jarrell may use the list to contact our staff to invite them to participate in his research study.

☐ [I/We] grant permission for Danny S. Jarrell to contact our department staff to invite them to participate in his research study.

☐ [I/We] will not provide potential participant information to Danny S. Jarrell but we agree to provide his study information to our staff on his behalf.

☐ [I/We] are requesting a copy of the results upon study completion and/or publication.

Sincerely,

[Official's Name]

[Official's Title]

[Official's Company/Organization]

APPENDIX C: Recruitment Template

Recruitment Template: Email, Letter, or Verbal Script

June 30, 2022

[Recipient]

[Title]

[Address 1]

Dear [Recipient]:

As a graduate student in the Helms School of Government's Criminal Justice program at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The purpose of my research is to evaluate and analyze the perceptions of FRs on their preparedness during an active-threat incident based on training received. In this study, an assessment of the efficacy in the participants' knowledge, skills, and abilities (KSAs) post responding to and operating in a real-world active-threat environment and I am writing to invite eligible participants to join my study.

Participants must be a minimum of 18 years old, a career full-time, part-time, or volunteer: firefighter, ems provider, law enforcement or security officer. Additionally, you must have completed some form of active shooter or active threat response course AND responded to an active shooter or active threat call type and if willing, will be asked to answer 13 open-ended questions, taking less than 20 minutes to complete. Names and other identifying information will remain confidential.

A consent document is provided as the first page of the survey and is attached to this [letter/email, The consent document contains additional information about my research. If you choose to participate, you will need to sign the consent document and return it to me prior to your interview.

Sincerely,

Danny S. Jarrell, MA, NRP

Doctoral Candidate

APPENDIX D: Participant Consent

Title of the Project: Efficacy Post Event: Active Threat Integrated Response Training

Principal Investigator: Danny S. Jarrell, Doctoral Candidate, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be a minimum of 18 years old, a career full-time, part-time, or volunteer: firefighter, EMS provider, law enforcement or security officer. Additionally, you must have completed some form of active shooter or active threat response course AND responded to an active shooter or active threat call type. Taking part in this research project is voluntary.

Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of this study is to evaluate and analyze perceptions of first responders on their preparedness during an active-threat incident, based on training received. The purpose of this study is to assess the retention and effectiveness of participants' knowledge, skills, and abilities received, from their initial active-threat response training, as observed during real-world operations in an active-threat environment.

What will happen if you take part in this study?

If you agree to be in this study, you will be asked to do one of the following:

1. Answer open-ended questions via online survey link that will take approximately 20 minutes to complete.
2. Participate in an audio- and video-recorded interview that will take approximately 30-45 minutes to complete. The interview can be either in-person or virtual, depending on the participants' preferences.

Both procedures contain the same questions, and participants may choose either method to answer the questions.

How could you or others benefit from this study?

Participants should not expect to receive any direct benefits from taking part in this study. Benefits to society include increased public knowledge on the topic, improved learning outcomes, and policy and procedure changes in the first responder community regarding mass killing incident responses.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life. The risks involved in this study include questions which may trigger post-traumatic stress related symptoms. To reduce this risk, I will monitor participants for signs of psychological stress and immediately discontinue the interview, while additionally providing referral information for counseling services where necessary. As a Paramedic, I am a mandatory reporter. During this study, if I receive information about child abuse, child neglect, elder abuse, or intent to harm self or others, participation from the respondent in this study will be terminated and reported to the proper authorities under the federal mandatory reporting requirements.

How will personal information be protected?

The records of this study will be kept private. Published reports will not include any information that will make it possible to identify a subject. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be kept confidential by replacing names with pseudonyms.
- All interviews, whether in person or virtual, will be conducted in a location where others will not easily overhear the conversation.
- Data will be stored on a password-locked computer and may be used in future presentations. Hardcopy data will be stored in a locked filing cabinet. After three years, all electronic records will be deleted. Upon the end of three years storage, all hardcopy data will be disposed of by means of secure destruction e.g., shredding. Any published

data which has become open-source information may be used in the future, e.g., studies, presentations, etc.

- Interviews will be recorded and transcribed. Recordings will be stored on a password locked computer for three years and then erased. Only the researcher will have access to these recordings.

How will you be compensated for being part of the study?

Participants will not be compensated for participating in this study.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please contact the researcher at the email address or phone number included in the next paragraph. Should you choose to withdraw, data collected from you will be destroyed immediately and will not be included in this study.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Danny S. Jarrell. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at xxxxxxxx and/or xxxxxxxxxx. You may also contact the researcher's faculty sponsor, John Bentley at xxxxxxxxxx.

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Institutional Review Board (IRB). Our physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA 24515 or email at irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

By signing this document, you are agreeing to be in this study. Make sure you understand what the study is about before you sign. You will be given a copy of this document for your records.

The researcher will keep a copy with the study records. If you have any questions about the study after you sign this document, you can contact the study team using the information provided above.

I have read and understood the above information. I have asked questions and have received answers. I consent to participate in the study.

☐ The researcher has my permission to audio- and video-record me as part of my participation in this study.

_____

Printed Subject Name

_____

Signed Subject Name

APPENDIX E: Participant Prescreening Survey

In order to help identify and eliminate participants who are at high risk for emotional distress, or those in opposition to the study, participants are required to be pre-screened. If the subject decides to participate in this study's survey, questionnaire, or interview, please note that this research *will* include questions about the critical stress incident you responded; identified as a mass killing incident. In the case subjects decide to participate, let it be known that they are free to withdraw from the study at anytime, for any reason. This pre-screening survey will involve collecting data to identify and eliminate participants at risk for mental health barriers, which place them at a higher risk. The following script may not be followed verbatim, as subjects may ask additional questions or stray from the topic. If this becomes the case, it is expected that the principle investigator (PI) will keep as closely as possible to the spirit and letter of the script. The screening script language is such that a professional in the first responder community can understand what is being asked.

Subjects will be recruited only after their affiliated agency provides written consent for them to do so. All subjects will be present or former first responders who have the potential to meet the inclusion criteria. This could be in the form of a recruitment email sent by their agency, or an email, phone call, or interview established by the PI.

****The following will be attached to the Participant Consent Form for pre-screening..***

APPENDIX E (Cont')

Pre-Screening Survey

Title of the Project: Efficacy Post Event: Active Threat Integrated Response Training

Principal Investigator: Danny S. Jarrell, Doctoral Candidate, Liberty University

There are no co-investigators.

Dear Colleague:

Thank you for your consideration to participate in this research study titled, *Efficacy Post-Event: Mass Killing Integrated Response Training*. The purpose of this study is to examine procedures developed through collaborative efforts between first responders, e.g., Fire, Emergency Medical Services (EMS), and Law Enforcement (LE), which address a common unified response goal identified in the Harford Consensus, that goal being to increase the number of lives saved during an active mass killing event. The answer to this phenomena was to train all first responders in a concept known as the Rescue Task Force (RTF), which is performed expeditiously and at greater risk to all responders.

However, where this unified response goal has been applied in agencies and departments nationwide, data is lacking on responder efficacy post-training, during a real-world mass killing event. By utilizing qualitative research methodologies, the researcher will identify localities where mass killing incidents occurred post-delivery of mass killing response training. Actions including knowledge, skills, and abilities (KSAs) acquired from the traininig will be measured through interviews, surveys, and questionnaires. This study will last approximately three months.

In order to insure the inclusion criteria is met for participants to qualify for this study, the principle investigator (PI) will need to ask potential subjects some questions about their present health condition. Some of these questions may be sensitive, such as questions about PTSD,

mental health, and any opposition to the study. Participants are not required to answer any questions and you may stop this interview at any time. If you do not qualify for this study, the information you give me will be destroyed immediately. If you do decide to continue, the information will stay securely filed both physically an electronically with access only allowed by the PI. Do I have your permission to proceed?

Confirmation to proceed: YES or NO

Survey Questions

1. This study will require your recollection of the mass killing incident you responded. **YES, NO, DECLINED** Do you wish to continue? **YES or NO**

2. Are you now or have been previously diagnosed with Post Truamatic Stress Disorder (PTSD) as a result from this incident? **YES, NO, DECLINED** Do you wish to continue? **YES or NO**
3. Are you now or have been previously diagnosed with depression as a result from this incident? **YES, NO, DECLINED** Do you wish to continue? **YES or NO**
4. Do you now or have previously had thoughts of harming yourself or others as a result from this incident? **YES, NO, DECLINED** Do you wish to continue? **YES or NO**

Did the subject meet pre-screening criteria? YES or NO If no, explain:

Proceed to closing statement on next page……

Closing Statement

Thank you for your time to participate in this pre-screening. I should now inform you that

you **have or have not** met the preliminary screening requirements. If you have not met the

(circle one)

requirements, your information will be destroyed immediately by shredding or deletion.

If you have met the sreening requirements to participate, you will be contacted in the near future to answer some questions related to the incident you responded and the data you provide will be kept on file for three years at the PI's secured office, electronically password protected and physically secured by lock and key. Once again, the question of do you wish to continue participation must be asked. Does participant consent to continue with the study? **YES or NO**

Thank you for your consideration and time!

Date Pre-Screening Survey completed? _____

APPENDIX F: Risks, Benefits, and Mitigation Analysis

No study is without risks. As a researcher, the very first thing that must understood is knowing and accepting their ethical responsibilities. This study requires interaction with first responders, who have responded to real-world incidents where mass killings occurred. There is a potential for participants to become upset by discussing the incident and answering questions about the incident. Mitigating these risks provides a mechanism for reducing any identified risks and will be identified in this section. This section will discuss risks vs. benefits and methods offered to mitigate any identified risks. Direct benefits to participants as well as benefits to society as a whole, will be identified. Finally, the justification to proceed with the study, even with minimal risks, will be based on facts, guidance, and input from a variety of people, including more experienced researchers, and those who might be better able to take the perspective of a participant, such as consulting with a Critical Incident Stress Debriefing (CISD) specialist.

Risks

Identified risks for this study are the psychological or emotional triggering from past emotional experiences, secondary to a critical stress incident they responded and considered minimal at best. Additionally, implications for mandatory reporting requirements may arise for the principal investigator (PI), if the interview subject is identified by the investigator as a harm to themselves or others; although, the incidence of this risk is highly unlikely and therefore minimal, it cannot be disregarded.

Benefits

Regarding benefits, the researcher is expecting direct benefits to participants and benefits to society. Direct benefits are those benefits that the participants may receive from taking part in

the study, while benefits to society are those benefits from which individuals who share characteristics with the participants, but were not part of the study may receive, coinciding with wide-ranging benefits to science and humanity. Direct benefits associated with this study are identified as the provision for access to mental health resources, new insight, feelings of well-being, and ultimately, improvements in health. The benefits to society are identified as increased public knowledge on the topic, improved learning outcomes, policy and procedure changes in the first responder community regarding mass killing incident responses.

Mitigating Risks

Even though the identified risks are minimal, the researcher has identified strategies to minimize these risks during research. Creating an informed consent and debriefing process will be required as a way to minimize risks during the pre-screening procedure. This will help to identify and eliminate participants who are at high risk. Participants will be pre-screened with a warning that the survey, questionnaire, or interview *will* include questions about the critical stress incident they responded and remind them that they are free to withdraw from the study at any time, if, they feel these circumstances may trouble or upset them. Prescreening will involve collecting data to identify and eliminate participants at risk for physical or psychological problems placing them at a higher risk. Another method to minimize risk will be to take active steps to maintain confidentiality. One method of mitigating this risk is to ensure signed consent forms will be stored separately from any data collected, in a manner in which no individual's name, can be linked to the data.

All responses are considered confidential; therefore, the administration of a questionnaire, survey, or interview is required to be completed individually, and in private. When recruiting participants, no matter the recruitment method, it will be necessary to provide

them with as much information about the study as possible. This will allow those who might find objection to the study an opportunity to avoid it. The researcher is also placing consideration into using a form of debriefing. This debriefing allows time to provide additional benefits to research participants by providing them with information, from other sources, for psychological or emotional assistance if needed. Additionally, the debriefing will provide participants with information from the data gathered, as well as a means for them to validate that the data they provided, is correct.

Evaluation of Risks and Benefits Ratio

Ultimately, the benefits of completing this study far outweigh any of the risks, as the identified risk are minimal at best, encompassing no more than one would find during any of the subject's daily lives or psychological evaluations. The benefits, however, include the likelihood of direct positive effects for some research participants. According to Newman (1997), "some researchers have reported benefits to participants in survey research that had not been previously considered, such as the opportunity to discuss the event, access to resources, new insight, feelings of well-being, improvements in health, and the potential to help others" (Labott, 2013, p. 2). Additionally, the benefits of this study will positively affect society as a whole. One of these benefits is the anticipated knowledge gained about mitigating mass killing scenes aimed at scene management and the treatment of casualties. In any case, studies have shown that, "if the research poses minimal risk; Even a small benefit to participants, science, or society is generally considered enough to justify the study" (Price, 2017, para. 10).

_____

Printed Subject Name

_____

Signed Subject Name

APPENDIX G: Data Collection Instruments and Procedures

Participants

The targeted pool of participants for purposive sampling utilized the convenience sampling procedure. The reasoning behind participant selection remains the same as previously stated; therefore, the best explanation for the sampling procedure is simply convenience. The purposive sampling technique was chosen based on this study's requirement for specific information from a specific population. The demographics of participants include the following: participants must be a minimum of 18 years old; participants gender and race are invariant and must facilitate at least one of the following occupational fields via full/part-time employment or volunteering: (a) law enforcement, (b) fire service, (c) emergency medical service, or (d) security service. Permission from the participants' agency from, which they represented during the emergency, will be obtained prior to contacting any potential subject. Mandatory adherence to Liberty University's IRB policies is required (Staff L. U., 2022). The number of participants shall be no less than ten and not exceed 50. Pseudonyms will be provided if and when necessary to protect the confidentiality of each participant.

Table 2

Participant Background Information

Participant Name	Pseudonym	Background
Rob Doran	Alpha	Fire Marshal, FBI Joint Terrorism Task Force
Steve Huey	Bravo	Fire Marshal
	Charlie	
	Delta	

APPENDIX H: Data Collection Procedures

The purpose of this qualitative descriptive multiple case study is to evaluate and analyze the perceptions of first responders on their preparedness during an active-threat incident based on training received. In this study, an assessment of the efficacy in the participants' knowledge, skills, and abilities (KSAs) post responding to and operating in a real-world active-threat environment. The research methodology outlined in the previous section will be used to gather data. Data collection and interpretation methods build upon the theories presented in the research methodology. Recapping, this study will focus on situational perspectives in a natural setting. Qualitative methodologies seemed the most applicable for obtaining the data necessary to complete this study when employing a research methodology for this type of setting. The natural setting identified for this study is a real-world active-shooter/threat, with responders trained in active-shooter/threat KSAs, who utilize the KSAs learned while operating in a real-world active-threat environment; allowing this distinct group of responders the ability to both subjectively *and* objectively provide their perspectives, on how well they were prepared for their response. The methods of qualitative research utilized included primary and secondary sources of information. First, the researcher will discuss the methods for study inclusion, data collection, and interpretation of the primary sources utilized.

Surveys and Interviews

A confidential survey will provide a method for gathering data on operations relating to a real-world active threat that meets the inclusion criteria. This method will be utilized where interviews cannot be completed; however, the same questions used for the interviews will be

utilized here. The intent is to quantify various operational aspects present during an active shooter/threat commonly utilized by trained responders. Following Specht's framework for developing questions, the researcher intends to use direct questions (Specht, 2019, p. 143).

Responses from participants must be protected. There are numerous methods of protecting participant identifiers. One method is confidential research. This method involves the process of de-identifying data, which is the removal of specified individual identifiers, in this case, the participants' names. For this study purpose, the names of participants will be confidential. Following Specht's framework, the type of interview to be conducted will be semi-structured. Specht describes the semi-structured method as "the researcher has a list of questions for the respondent, while asking similar questions to everyone else, allowing them to tell their version of events" (Specht, 2019, p. 142). The following is a modest list of potential questions to be asked by the following methods, chosen by the participant: telephone, video teleconference, email, online survey tools, or in-person interviews.

Survey/Interview Questions

SQ1. Regarding the incident you responded to, in which operational field did you perform your duties as a first responder? (e.g., fire, law enforcement, or EMS). Prior to this incident, how much time had passed since your active threat training?

SQ2. In what role did you perform your duties? (e.g., command position, law enforcement officer, firefighter, EMS provider, or support). Please explain your role and did the role meet your training/experience, and whether you were over/underutilized.

SQ3. What type of training did you receive? (e.g., in-house local training, organized accredited certification course such as ATIRC [active threat integrated response course]), or a

private vendor. What were your initial course objectives? e.g., addressing the threat, treating casualties, command and control, etc.

SQ4. Do you believe the active threat training you received was relevant and corresponded to your incident response?

SQ5. Based on training received, what was your (first responder's) personal perceived preparedness for an active threat, having responded to a real-world active threat incident?

SQ6. Do you believe the knowledge, skills, and abilities of the training offered you were effective? If yes, then what areas of your training worked well? If no, then what areas of your training need improvement? Elaborate on the pros and cons of your training received.

SQ7. Was the incident command system utilized during this incident? If yes, please explain the overall organizational chart (e.g., was unified command implemented between various responding agencies).

SQ8. Was the Rescue Task Force concept utilized? If yes, please elaborate on the process utilized.

SQ9. Were there any issues with communication between different agencies (e.g., varying radio frequencies, strategies, and tactics, command intent differences, or differences in command priorities, etc.)? If yes, what were the issues?

SQ10. Were your casualties triaged? If yes, please elaborate on the system utilized. How did it work? Would you suggest any improvements?

SQ11. Please elaborate on what you think was the percentage of knowledge you retained from your initial training. How would you describe your fight or flight response to this incident? Did you ever feel unsafe? How often would you recommend refresher or update training for your agency?

SQ12. Regarding the wounding patterns you encountered, did the wounds differ from your training? Was your training effective for these wounds? Please elaborate (Etal, 2015)

SQ13. Regarding the implementation of RTF Standard Operating Procedures, did your leadership encounter any staff members opposed to operating in the warm zone on an RTF while being protected by law enforcement? Was their opposition based on their belief that “this is not what I signed on for?S

APPENDIX I: Agency permission for Data Acess

[Insert Date]

[Recipient]

[Title]

[Address 1]

Dear [Recipient],

As a graduate student in the Criminal Justice Department of the Helms School of Government at Liberty University, I am conducting research as part of the requirements for a doctoral degree. The title of my research project is Efficacy Post Event: Mass Killing Response Training and the purpose of my research is to evaluate and analyze perceptions of first responders on their preparedness during an active-threat incident, based on training received. The purpose of this study is to assess the retention and effectiveness of participants' knowledge, skills, and abilities received, from their initial active-threat response training, as observed during real-world operations in an active-threat environment.

I am writing to request permission for access to data found in your patient care reports from a mass killing incident in your jurisdiction. The purpose of this requests is to utilize data such as the number and type of tourniquets applied, wound patterns, timelines, and other procedures performed or followed at the incident. No information linked to the Health Insurance Portability and Accountability Act (HIPPA) is needed. I should not receive any data identifying patients, only the queried data regarding procedures and treatments casualties received as a result of the incident.

Thank you for considering my request. If you choose to grant permission, please provide a signed statement on official letterhead indicating your approval or respond by email to xxxxxxxx. A permission letter from Liberty University's Institutional Review Board is attached for your convenience, which verifies the validity of this study.

Sincerely,

Danny S. Jarrell, MA, NRP

Doctoral Candidate

APPENDIX J: Agency Follow Up Reminder

[Insert Date]

[Recipient]

[Title]

[Address 1]

Dear [Recipient]:

As a graduate student in the Helms School of Government at Liberty University, I am conducting research as part of the requirements for a Criminal Justice Homeland Security degree. [Last week/two weeks ago/etc.] a[n] [email/letter] was sent to you inviting you to participate in a research study. This follow-up [email/letter] is being sent to remind you to complete the questionnaire. if you would like to participate and have not already done so. The deadline for participation is [Date].

Participants, if willing, will be asked to answer a survey containing 13 open-ended questions, which should take approximately 20 minutes to answer. Participation will be completely confidential, and no personal, identifying information will be collected.

[Provide instructions on how to participate by editing the following sentence. Include additional sentences/information as needed:] To participate, please complete the attached survey and return it as an email attachment to me at xxxxxxxxxxx.

Sincerely,

Danny S. Jarrell, MA, NRP

Doctoral Candidate

APPENDIX K: Coding

RQ1. Based on the training received, what perceptions do FRs have of their preparedness during a real-world active threat incident?		
Open Code	Properties	Participants' Remarks
ALEERT, local, other various courses	National certification, in-house certification, attendance only	Stay in one's own lane, organization versus chaos, various courses are beneficial
Prepared	Full-scale exercises, tabletop exercises	Muscle memory, automatically reverted back to training, training with other agencies
Initial training, refresher training	Initial, annually, semi-annually, basic academies	Require initial training Follow-up/refresher required Don't overtrain on subject Focus on locality needs
RQ2. How effective are contemporary active-threat response plans, post the 2007 paradigm shift in FR preplanning and training?		
Open Code	Properties	Participants' Remarks
Equipment needs, lack of specialized training	Unprepared, outgunned	Lacking ballistic rifle protection, lacking rifles, lacking mutual aid communications, since rectified post-incident
Communication problems	Distance and depth inside structures Frequency overload Wrong frequencies Dead batteries LEOs' channels encrypted	Radios would not work Responded from home, dead batteries, No mutual aid channel Radios wouldn't transmit or receive inside building, Cell towers overloaded
Rescue Task Force	Implemented Not implemented	Never saw it used, EMS would not participate, wanted casualties brought out to them
Response procedure changes	Transitioned from the old "standing-by" to "direct-to-threat"	Stop the killing Initial triage by LEOs'
SQ1. Regarding the incident, you responded, in which operational field did you perform your duties as a FR? (e.g., fire, LE, or EMS). Prior to this incident, how much time had passed since your active threat training?		
Open Code	Properties	Participants' Remarks

LEO, EMS	Six months to three years	n/a
SQ2. In what role did you perform your duties? (e.g., command position, LE officer, FF, EMS provider, or support). Please explain your role did the role meet your training/experience, and were you over/underutilized?		
Open Code	Properties	Participants' Remarks
LEO, EMS	Secure scene, treated casualties, direct-to-threat, triage, command	Utilized appropriately, checking evacuees; provided bleeding control, first on scene then assumed command
SQ3. What type of training did you receive? (e.g., in-house local training, organized accredited certification course such as ATIRC [active threat integrated response course]), or a private vendor. What were your initial course objectives? e.g., addressing the threat, treating casualties, command and control, etc.		
Open Code	Properties	Participants' Remarks
In-house, ALERRT, ATIRC, MACTAC	Addressing threat, treating casualties	Training with outside agencies beneficial, everyone learns their role, improves command and control
SQ4. Do you believe the active threat training you received was relevant and corresponded to your incident response?		
Open Code	Properties	Participants' Remarks
Yes	Yes	Training was very effective because it goes against your natural instincts to bypass the injured to address the threat, training aided in understanding what other agencies were doing, every FR branch in jurisdiction trained together in ICS
SQ5. Based on training received, what was your (FR's) personal perceived preparedness for an active threat, having responded to a real-world active threat incident?		
Open Code	Properties	Participants' Remarks
Prepared	Prepared	Muscle memory kicked in, the "fight" response kicked in, acted on instincts, trusted LEOs
SQ6. Do you believe the knowledge, skills, and abilities of the training offered you was effective? If yes, then what areas of your training worked well? If no, then what areas of your training need improvement. Elaborate on the pros and cons of your training received		
Open Code	Properties	Participants' Remarks

Yes	ICS, working as a team, learned communication aspects of all branches and terminology,	role players were really effective tools in training, the mission was clear, and everyone worked well together

SQ7. Was the incident command system utilized at this incident? If yes, please explain the overall organizational chart (e.g., was unified command implemented between various responding agencies?)

Open Code	Properties	Participants' Remarks
Yes	n/a	Command worked well, aided with communication between partners

SQ8. Was the Rescue Task Force concept utilized? If yes, please elaborate on the process utilized.

Open Code	Properties	Participants' Remarks
Yes	LEO organized,	Linked up with arriving fire crews and formed an RTF as their protection,
No	EMS refused to enter warm zone, type of incident did not allow for RTF, adequate on-scene resources did not require RTF	EMS confused LEOs' by not entering warm zone, forcing them to bring out all casualties to EMS in parking lot where makeshift CCP was established

SQ9. Were there any issues with communication between different agencies? e.g., varying radio frequencies, strategies, and tactics, command intent differences, or differences in command priorities. If yes, what were the issues?

Open Code	Properties	Participants' Remarks
Encrypted channels, not following procedure, cell phones, dead batteries, no MCI or event channel,	Miscommunication on operational policy,	We (LEOs') had to relay all communication with fire and ems through dispatch due to encryption,

SQ10. Were your casualties triaged? If yes, please elaborate on the system utilized. How did it work? Would you suggest any improvements?

Open Code	Properties	Participants' Remarks
Yes, uncertain, did not see it used	START is in SOP	I did not treat any casualties, I did not see any tags or ribbons, I did not hear triage terminology on radio

SQ11. Please elaborate on what you think was the percentage of knowledge you retained from your initial training. How would you describe your fight or flight response to this incident? Did you ever feel unsafe? How often would you recommend refresher or update training for your agency?

Open Code	Properties	Participants' Remarks
Yes	n/a	I recalled 90%, recalled most of it, unknown really, did my job

SQ12. Regarding the wounding patterns you encountered, did the wounds differ from your training? Was your training effective for these wounds? Please elaborate (Etal, 2016)

Open Code	Properties	Participants' Remarks
No difference, effective training	n/a	Didn't treat or see any casualties

SQ13. Regarding the implementation of RTF Standard Operating Procedures, did your leadership encounter any staff members opposed to operating in the warm zone on an RTF, while being protected by LE? Was their opposition based on their belief that “this is not what I signed on for?

Open Code	Properties	Participants' Remarks
Conforming to policy,	n/a	Never saw anyone not participating
Nonconformance to policy	caused confusion	EMS stated working outside cold zone was not in their policy

Open codes	Axial Codes	Selective Codes
Training, components of training, ICS training	Certification courses, in-house courses, and non-certification courses, include role players, treating casualties, triage, direct-threat exercises utilizing RTFs	Training based on locality needs with all potential responding agencies, training must provide realism to make an effective "trigger" for memorization and understanding

RQ 2.

Open codes	Axial Codes	Selective Codes
Communications, triage, RTF policies and procedures, equipment needs	Including all forms (e.g., electronic, interpersonal, and SOPs) identifying geographic comms problem areas, simple triage system, identify equipment requirements	Each principle theme here must be universally understood and utilized by all participating agencies; triage must be simple and understood by all, including those without medical backgrounds

APPENDIX L: Rescue Taskforce Plan

RESCUE TASK FORCE RESPONSE PLAN

STANDARD OPERATING GUIDANCE DOCUMENT

Presented by the
Walworth County Law Enforcement Chief's Association
&
MABAS Division 103

❖ The material contained within this document is the result of a collaborate effort between many law enforcement and fire/EMS agencies throughout Walworth County. It is intended to serve as a template or foundation to assist an individual municipality or collaborating municipalities in determining the irrespective needs in response to incidents involving active shooters or aggressors. It is in no way meant to serve as the defining document for any one agency or recommended practice. Agencies must carefully evaluate their own specific needs and develop operational guidelines, practices and procedures that best serve their situation considering, above all else, the safety and welfare of both civilians and emergency responders. It is imperative that law enforcement and fire/EMS agencies engage in this dialogue and develop and train their response procedures proactively.

RESCUE TASK FORCE
Standard Operating Guidance Document

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RESCUE TASK FORCE
Standard Operating Guidance Document

PURPOSE

Mass casualties and other life-threatening injuries during a violent event, such as an active shooter event, presents a difficult situation for law enforcement and EMS/Fire to both address the threat and quickly respond to the victim(s) in order to render aid and save lives.

The purpose of this policy is to identify guidelines, procedures, and tactics that will assist law enforcement and EMS/Fire in working as a team in order to respond to these situations and optimally provide *victim contact* within ten (10) minutes and *victim transport* within sixty (60) minutes in order to maximize victim survival.

GUIDELINE

This guideline recognizes the need for the integration of law enforcement and EMS/Fire resources in order to provide life-saving measures during an ongoing active shooter incident or similar type of violent event; whereby law enforcement provides a

protection element for EMS/Fire personnel in order to get them directly to the injured person(s) for treatment and/or evacuation. This integration of law enforcement and EMS/Fire resources is recognized as a Rescue Task Force.

DEFINITIONS

A. **Active Shooter / Mass Casualty Incident:** A crime scene that has injured people in need of treatment, rescue, and expedient evacuation.

B. **Ambulance Exchange Point:** A specific location where an ambulance is sent to pick up evacuated casualties from a team operating in the Warm Zone. The ambulance may or may not transport directly to a hospital after picking up casualties.

C. **Ballistic Protection Equipment (BPE):** A Level IIIA (minimum) ballistic vest with a
"Police" or "RESCUE" patch on the front and back, and a Level III ballistic helmet.

D. **Casualty Collection Point:** A location designated for the holding, further assessment and treatment of casualties. A **secure** area within the warm zone. An ideal CCP has **cover** and **concealment**.

E. **Clear, but not secure (primary):** Clear means an area is clear of the suspect ***only***. Clear does ***not*** mean an area is clear of victims. It is an area currently absent of a known threat. Law enforcement has passed through; however, a deliberate search has not been conducted to guarantee life safety.

F. **Cold Zone:** A ***secure*** area.

G. **Concealment:** Protection from observation.

H. **Contact Team:** Law enforcement strike team responsible for stopping the suspect. Shall locate and mark secondary devices. Shall callout the number of victims.

I. **Cover:** Protection from direct fire or an explosion.

J. **Distant Staging**: Staging that will keep the bulk personnel and equipment at a safe distance from the theater of operations, thus minimizing the potential dangers that exist in the hot and warm zones. Members will exit Distant Staging and progress to Link-Up Location in anticipation of becoming a member of a Rescue Task Force (RTF) where they then can be moved to Forward Staging.

K. **Duress Signal:** Using common English, to advise of an injury, and how it occurred.

L. **Entry Corridor:** Path from the ***Cold Zone*** to the ***Warm Zone***. An established path to a location that has security measures in place. An Entry Corridor is generally utilized to move to an affected site or to leave a site and/or evacuate injured from the site.

M. **Forward Staging:** An aggressive staging position for Rescue Task Force operations (once the Rescue Element and Protection Element have been linked up).

N. **Hot Zone:** An area that contains an immediate threat to life safety. A ***Warm Zone*** could quickly become a ***Hot Zone*** and vice versa.

O. **IFAK** (Individual First Aid Kit) ***Minimum***:
- 2 Combat Application Tourniquets(CAT or Soft T wide)
- 2, 28-Fr/9.3 mm Nasopharyngeal Airways(NPA)
- 2 Israeli bandages or Olaese bandages
- 2 – Chest Seals
- 2 – Combat gauze
- Sharpie marker
- Tape
- Multiple gloves

P. **Leapfrog:** To move ahead of each other in turn; to advance by keeping one ***RTF*** in action while moving the other ***RTF*** past it to a position farther in front. Also referred to as bounding over watch.

Q. **Level 1 Staging:** A ***clear*** staging position for EMS operations usually out of the line-of-sight of the threat.

R. **Level 2 Staging:** A ***secure*** staging position for Fire/EMS operations. Normally some distance from the event and large enough to accommodate a significant number of apparatus.

S. **Link Up Location:** A location where the Rescue Element and the Protection Element meet up and form a Rescue Task Force.

T. **Protective Element:** Minimum of two law enforcement officers. One of which may be the ***RTF Team Leader***.

U. **Rescue Element:** A minimum of two EMS personnel with ***BPE/IFAK***. Takes direction from and provides information to the ***Team Leader***.

V. **Rescue Task Force (RTF):** A team with three elements (***Team Leader*** –Law Enforcement, ***Protective Element*** – Law Enforcement, and ***Rescue Element*** – EMS). The ***RTF*** enters the ***Warm Zone*** to execute ***TECC*** techniques and to rapidly extricate the wounded. Although operating as one unit, the RTF may simultaneously communicate on two radio channels.

W. **Tactical/Triage Group:** officers assigned by the Incident Commander who is tasked with assembling the RTF and the components of the RTF process, such as identifying and implementing the entry corridor and coordinating with police and fire for deployment.

X. **Secure (secondary):** A detailed and deliberate search of an entire area is concluded and it is safe from the suspect and from secondary devices. Law enforcement remains in the area.

Y. **Security Measures** – Any means utilized to reduce the amount of dangers or hazards to 1st responders and victims in a specific area or location. This can include, but is not limited to, cover, concealment, ballistic shields, law enforcement officers with lethal weapons, vehicles, armored vehicles, positioning, teams utilizing Protection Element, movement, etc.

Z. **Team Leader:** Directs the ***RTF*** maneuvers. Law enforcement individual. Team Leader receives direction from the Rescue Element with regards to medical actions necessary.

AA. **TECC:** Tactical Emergency Casualty Care.

AA. **Treatment Bags/Drop Bags:** Contain additional equipment and supplies capable of treating additional victims and can either be used in conjunction with or in replace of IFAK kits.

BB. **Triage:** Standard victim sort in the ***Cold Zone***. Under the direction from the Medical Group Supervisor.

CC. **Warm Zone:** An area that is ***clear, but not secure***. A ***Warm Zone*** could quickly become a ***Hot Zone*** and vice versa.

PROCEDURES

Rescue Task Force Thresholds

Prior to the deployment of a Rescue Task Force, specific thresholds must be met. These thresholds include:

A. Injuries are being reported.

B. An entry corridor or perimeter has been established.

C. A warm zone has been identified.

D. The RTF Team Leader, Protection Element and Rescue Element personnel have been identified and equipped, and have been assigned by Unified Command. All elements must be in contact with their respective command structure via radio.

Hierarchy of Response Responsibilities and Responsible Party

Follow C3 Pathways Active Shooter Incident Management Checklist

A. **Stop the Shooter or Threat (Contact Teams):** Law Enforcement

B. **Establish a RTF:** Law Enforcement/Fire Service

C. **Establish a Perimeter / Protection Corridor:** Law Enforcement

D. **Protection Element:** Law Enforcement

E. **Rescue Injured:** Based upon the circumstances and numbers of injured persons this could be either a Law Enforcement response Fire Personnel assigned to a Rescue Task Force

F. **Staging:** Fire Personnel (Primary); Law Enforcement (Secondary)

Command and Control

Although quick response to stop the shooter coupled with a quick response to the injured needs are the two primary goals of first responders during an active shooter, command and control needs to be set up early in the incident to allow resource and personnel to be as effective as possible. Active shooter incidents command and control (ICS) should be established and driven from the bottom up, meaning your command element will be established with one initial incident commander (the 5th arriving officer) and then built up and expanded out as supervisors and other command elements arrive on scene. The following are best practices regarding command and control that agencies should look to practice and implement to achieve superior results.

First Arriving Law Enforcement Officer:

- ✓ Size up and report situation.
- ✓ Identify danger zone and communicate.
- ✓ Establish initial command – "I have command" ✓ Engage – enter or wait for others depending on agency training/policy/procedure.

Second – 4th Arriving Law Enforcement Officers:

- ✓ Communicate with command
- ✓ Form – up contact team
- ✓ Move – to – contact shooter

5th Arriving Law Enforcement Officer (5th Officer Concept)

- ✓ Get briefed on situation (verbal over radio)
- ✓ Assume Command
- ✓ Set Staging location (For incoming resources)
- ✓ Get situation awareness
- ✓ Assign more contact teams if needed
- ✓ Begin plan for introduction of rescue task force

First Arriving Law Enforcement Supervisor (Or Designee)

- ✓ Get briefed on situation (verbal over radio)
- ✓ Assume Command
- ✓ Designate **"5th Officer**" as Tactical Group Supervisor
- ✓ Assign STAGING Manager
- ✓ Assign Perimeter Group Supervisor

- ✓ Assign medical branch to EMS

Second Law Enforcement Supervisor

- ✓ Get briefed on situation (verbal over radio)
- ✓ Assume Command
- ✓ Designate First Law Enforcement Supervisor as Law Enforcement Branch

Intelligence Section – It is recommended that an officer or Detective be assigned as soon as possible to start vetting intelligence that will be pouring into an already overwhelmed dispatch center and coordinate feeding that information (shooter location description, location of injured, etc.) to the incident commander.

Staging Location – Staging should be co-located with police and fire in the same general area. Fire police should have their own designated locations within the identified staging area so police vehicles do not park in fire apparatus that will need to be moved.

This concept and breakdown of incident management for an active shooter is derived from C3 Pathways

Contact Teams

The first responding officers shall form a contact team whose duty is to go in immediate pursuit to stop the active killing incident by arrest, containment or use of force. Priority is to make contact with the suspect(s) and stop their deadly behavior. This is, solely, the responsibility of law enforcement.

Key Elements of Contact Team:

1. **Locate, suppress, and neutralize an active threat**
2. Locate, identify, and **communicate** secondary devices
3. Locate, identify, and **communicate** injured persons

 It is **NOT** the duty of the Contact Team to investigate secondary devices. It is **NOT** the duty of the Contact Team to assess and treat injured persons.

Contact Team(s) will utilize ***Rapid Deployment*** in order to eliminate an active threat.

The swift and immediate deployment of law enforcement resources to an active shooter where failure to take immediate action could result in death or great bodily harm to innocent persons.

Contact Team Procedure:

A. RESPONSE

1. The Supervisor or officer assuming command should coordinate officers' response as they arrive so a team can immediately be assembled and entry can be made, if appropriate. A location shall be identified where squads should initially attempt to assemble and linkup.

2. Don't wait 2-3 minutes for backup. Statistically, the duration of an active shooter is very short, and numerous people can and will die in a very short time if action is not taken. Single officer to multiple officer response as necessary.

3. There are two tasks/clocks in an active shooter incident that are extremely time sensitive.

   a. First–the "shooter's clock." Contact teams to stop the shooter. The more time a shooter goes unstopped, the more casualties that result.

   b. Second–the "victims' clock." Those who are injured need to be treated in an advanced life support facility within 60 minutes of injury. Therefore, our goal is to have a warm zone/Casualty Collection Point established in the affected location or structure within 10 minutes of notification of shooting.

B. **INITIAL ARRIVAL**

1. Cautiously proceed toward reported location looking for signs of ambush, booby traps or I.E.D.'s.

2. Attempt to identify the cause of the violent event/mass casualty.

3. Officers should utilize appropriate tactical principles such as bounding over watch (leap frog), expanded diamond and column formations to move, with some degree of security measures in place while moving from rally points/squads to location of violent event.

4. Initially, take up a position of cover (observation point) with a rifle and cover the building/location for assault directed from the target location or nearby vehicles. Officers should observe the situation, orientate, and decide on best course of action, then proceed to act.

5. Direct individuals exiting the building to keep their hands up above their head and follow officers' directions away from affected areas, to a safe victim/witness rally point/location.

6. Identify link-up point and the safest route in for responding squads. Broadcast location to others.

7. Identify safest route in and staging location for EMS ambulances (which will provide cover but quick access to site—cold zone). Broadcast location. Dispatch shall notify EMS of staging location.

8. Visually identify location of possible entry point. Officers should attempt to stay away from main entrances, if possible, as these are places where the suspect(s) may setup barricades, explosives or an ambush.

9. Upon approach, officer(s) should be constantly aware of explosive devices in vehicles, as well as any booby traps on and within site.

10. Once initial officer(s) believe they have enough or specific officers needed, entry should be made. However, time equals lives — single officer or two officer response maybe necessary depending on the circumstances.

11. Initial officers should not change their active shooter response (form up and go in) just because they do not currently hear active gunfire or there is a time delay of when shots were last reportedly heard. This time delay by itself does not negate the need for an immediate response. If you have numerous reports of an active shooter a response is still required, but should be done so with caution.

12. The perpetrator may be using other weapons or his or her shots may not be audible because of size and/or location of shooter. If officers have made entry and the driving force (gunfire) has stopped or you can not locate it, officers should utilize the SIM Concept (ALERRT).

SIM – **Security** – Maintain and secure ground gained.
Immediate Action Plan – Plan if shots are fired or threat identified what will the team do.
Medical – Treat and remove victims to a possible location for future casualty collection.

The concept of SIM versus contact teams that keep searching the entire building and then treat victims when studied side by side found that SIM got to victims 14 minutes faster and can save lives.

Sight, Sound or Intelligence - If you have information from any of these three, contact teams should continue to move to contact the shooter. Without sight, sound or intelligence of an active shooter contact teams should utilize SIM Concept.

13. If subject barricades or takes a hostage, officers should transition to a hostage/barricade situation and request additional resources as necessary.

C. CONTACT TEAM DEPLOYMENT

1. Contact Teams should equip themselves according to agency protocol and equipment available. ***CONSIDERATION:*** *Agencies should consider inserting equipment based upon what is available, emphasizing storage of such equipment so that it is ready for rapid deployment. Additionally, agencies should consider access to school keys, maps/floor plans and other tools that may assist and listing such in this section.*

2. Designate a Team Leader for the Contact Team.

3. Initial Entry Teams/Contact Teams should broadcast their entry point location and who is entering with Team. **Incident Command and Dispatch** should be tracking entry point so additional squads can join up for traditional active shooter response.

4. If more Contact Teams make entry at different times and points of entry, the Teams' location and direction of movement should be communicated between all Contact Teams to avoid friendly fire situations.

5. Move with 360 degrees of coverage.

6. Continue past victim(s), but **relate their locations to Incident Command and Dispatch for Rescue Task Force deployment.**

7. Safely continue past explosives, if possible, but relay the locations to Incident Command – Reminder: RF frequencies from some handheld radios can set off explosives.

8. Communicate progress to Incident Command.

9. If the shots and screaming stop and the location of the active shooter is unknown, begin slow, transition to SIM Concept.
   - Security
   - Immediate Action Drill Plan
   - Medical – Treat and remove injured

a. If the incident transitions to a static situation where the location of the suspect(s) is known and gunfire has stopped, establish an inner perimeter around the suspect location and advise the IC.

PROTECTION ELEMENT – The RTF police officers, at a minimum of 2, will, at all times, provide direct protection for the EMS participants in the RTF. At NO time, for any reason, will officers leave EMS. Priority of the Protection Element is to provide security for EMS as they treat and/or evacuate injured persons. Protection element tasks include:

 Establish a protection corridor and Warm Zone.

Key Responsibilities for the Protection Element:

1. Establish and guard the entry corridor and casualty collection points.
2. Escort RTF EMS, through the entry corridor, into warm zones.
3. Provide security for RTF EMS, while EMS treats injured subjects.
4. Provide security for RTF EMS, while evacuating subjects.
5. It is NOT the duty of the Protection Element to seek out and engage the active threat.
6. It IS the duty of the Protection Element to provide security for EMS and defend against any sudden threats to the RTF.

Protection Element Procedure:

1. Rescue Task Force Teams shall have, at a minimum, 2 law enforcement officers with lethal cover making up its Protection Element when escorting fire personnel to give adequate security.

2. General formation is one Protection Element officer up front covering 180 degrees of front and one Protection Element officer in rear covering 180 degrees to rear. When possible, assigning more Protection Element personnel to Rescue Task Force Teams is preferred (4-person protection element is the optimal staffing).

3. During injury retrieval, the Protection Element shall be tasked with EMS covering/security as first priority. However, the Protection Element officers must also prepare for new, active threats, at all times.

4. Rescuers may be tasked with treating and assisting, carrying, dragging injured back to Casualty Collection Point with security from the Protection Element officers.

5. To maintain the highest level of effectiveness, safety, and efficiency, law enforcement and EMS personnel are tasked with the responsibilities and objectives that they are trained and skilled in (operate in your lane/expertise while working side-by-side and in conjunction with other disciplines). EMS treat and conduct injury care, Law Enforcement provide security and deal with threats.

6. Injury retrieval security, when possible, should be enhanced by placing static Protection Element personnel along hallways (long cover) and at strategic locations (hallway junctions, overview locations, etc.) throughout the structure to reduce threats and improve security measures.

Evacuation of External Injured

1. Rescue Task Force Teams (Consisting of Fire/EMS and Law Enforcement)

   a. The goal is to get all injured to a medical facility for advanced medical treatment **within 60 minutes of notification of an active shooter.**

   b. All Rescue Task Forces should generally consist of the following positions (Figures 1-4 illustrate the possible staffing configurations for RTF):

      1) Protection Element (L.E.) - Provide security measures for Injury Rescue Task Force.

      2) Rescuer/EMS/F.F. (EMS or L.E.) – Tasked with rendering aid and removing injured.

3) Rescue Task Force Team Leader (L.E.) – Coordinate and direct Rescue Task Force in its tasks.

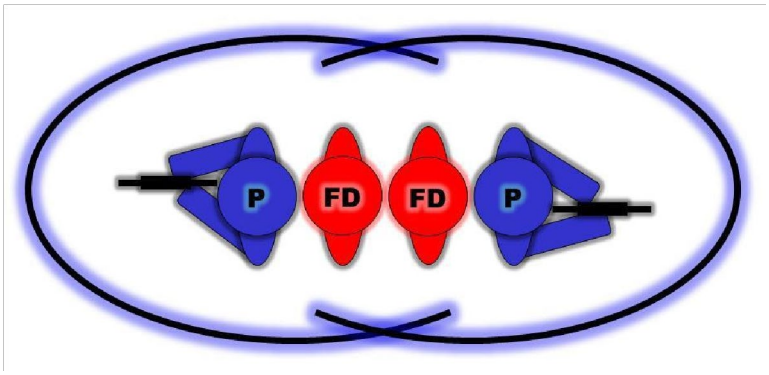

Figure 1: Two-person Protection Element and two-person Rescue Element configuration.

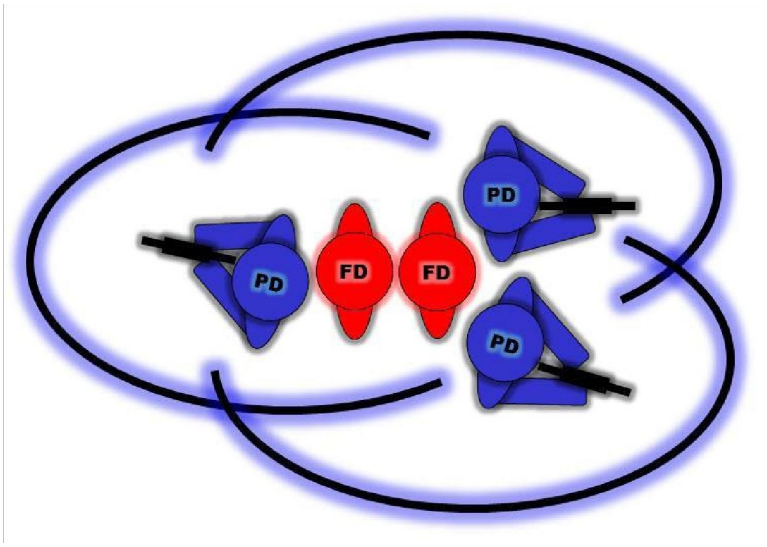

Figure 2: Three-person Protection Element and two-person Rescue Element configuration.

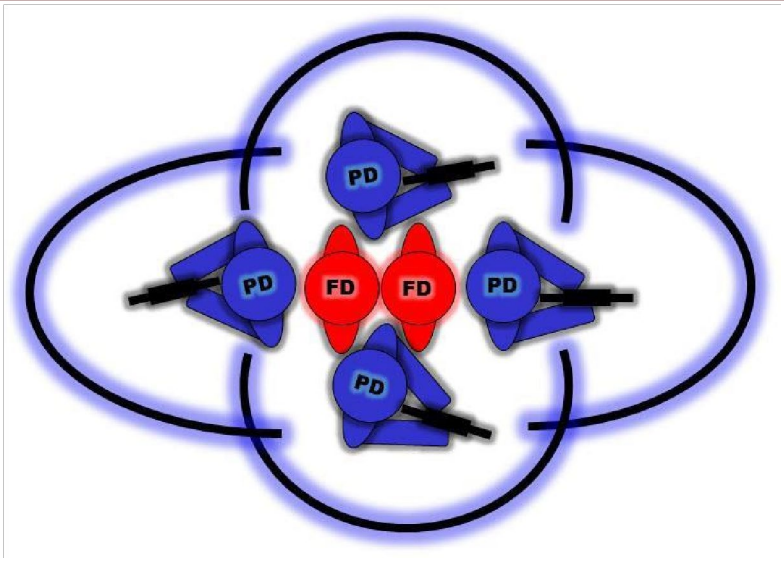

Figure 3: Four-person Protection Element and two-person Rescue Element configuration.

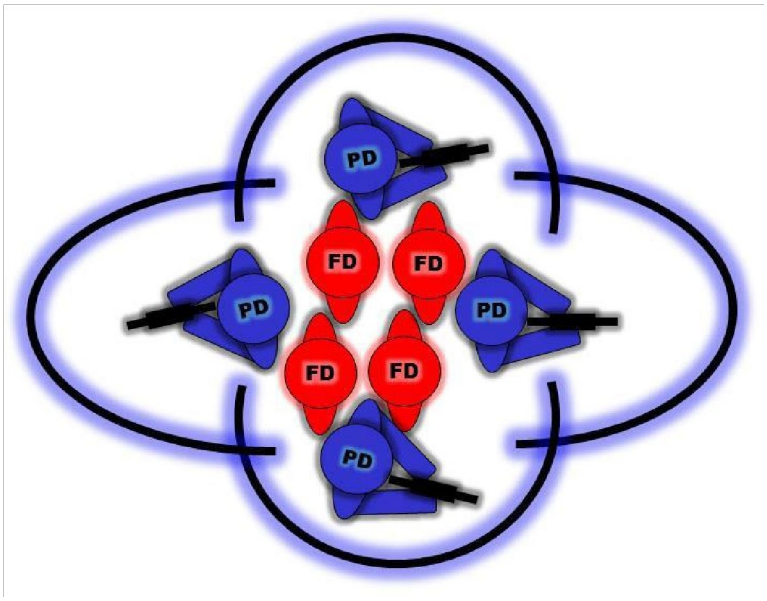

Figure 4: Four-person Protection Element and four-person Rescue Element configuration.

c. All Rescue Task Forces should have a designated Team Leader (law enforcement) to reduce confusion and minimize needless communication. The Team Leader should generally handle all communication with the Tactical Group (co-located with Triage group) unless communication responsibilities are reassigned within the Team. The Rescue Task Force Team Leader is tasked with coordination and direction of Rescue Task Force and its assignment/s.

d. All Rescue Task Forces shall have law enforcement officers assigned to be the Team's Protection Element. The Protection Element will provide security measures for the Rescue Task Force.

e. A Rescue Task Force has Emergency Medical Services (EMS) or Firefighters (F.F.) assigned to the Team as "Rescuers" - **ALL UNARMED RESCUERS (EMS/F.F.)MUST HAVE MEMBERS OF THE PROTECTION ELEMENT (L.E.) PHYSICALLY WITH THEM**

PROVIDING SECURITY MEASURES AT ALL TIMES WHILE IN THE WARM AND HOT ZONES OF AN INCIDENT. The only time EMS and F.F. can be without an assigned Protection Element physically with them is when they are in the cold zones (i.e., staging areas). If you are assigned to a Protection Element for F.F. or E.M.S., you shall not physically leave them at any time while they are in the warm or hot zone.

f. The preferred vehicle and method for movement of EMS personnel/Rescue Task Force, victims and injured in "hot" and "warm zones" is an armored vehicle.

g. If the Rescue Task Force Team is utilizing multiple squads/vehicles for a vehicular injury evacuation, a team can assign Squad (Team) Leaders to each vehicle to coordinate that vehicle's response and actions. All Squad Leaders report directly to the Tactical Group (colocated with Triage Group)

h. When a Rescue Task Force is set up for vehicular injury evacuations in diagrams A, B, C and D as seen below, the Protection Element will utilize their firearms to cover their respective arcs of coverage. During this time, it may become necessary for them to use lethal force by firing their weapons at the threat from either a stationary or moving vehicle.

2. Victims that are injured but ambulatory should be directed—verbally or with hand motions—to move to a perimeter position or in a safe direction away from the building

structure. Those victims evacuated from the site need to be gathered and interviewed at a later time.

3. The location of where injured are being initially evacuated to must be communicated to Incident Command so Fire/EMS/Ambulance personnel can be made aware.

4. See below list for tactics that can be utilized for evacuating external injured.

a. Remove injured with use of armored vehicle, vehicles and Rescue Task Force— See Diagrams A, B, C & D below.

Entry Corridor

A. The first step in recovering internal or external injured victims is identifying and ***establishing and maintaining*** an Entry Corridor.

B. Protection Element shall communicate the establishment of the entry corridor with Contact Teams so as to not create a friendly fire situation.

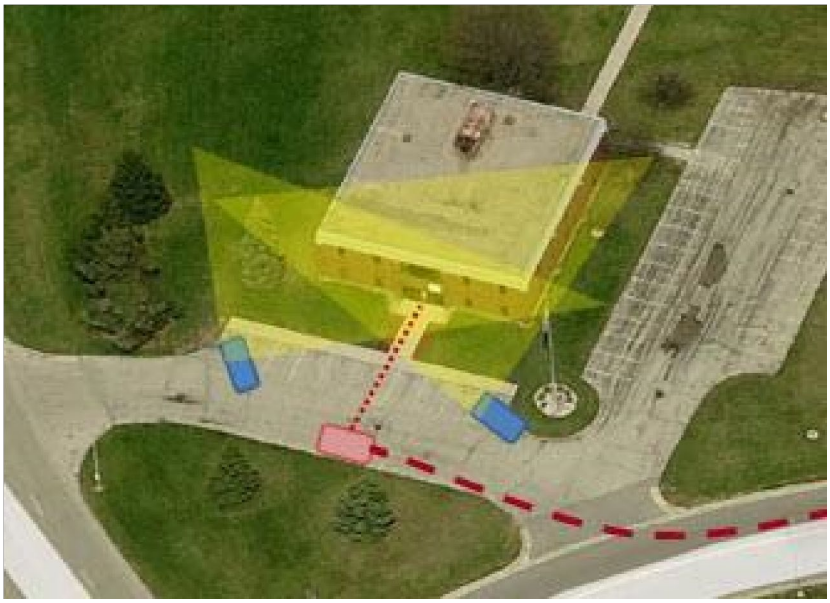

Figure 5: Entry Corridor Illustration

Casualty Collection Point

A. Depending on the size, structure layout and location of victims the incident commander can decide to use more than one casualty collection point.

B. The Casualty Collection Point can be located externally (Not indoors)(examples would be parking lot, an intersection that has been blocked off, etc.) considerations

should be given to length of operation, weather conditions, media access to photographing injured, etc.

C. The Casualty Collection Point can also be located directly inside a structure that has experienced an active shooter or in a nearby structure close to a building that was involved in an active shooter.

D. Security of Casualty Collection Point

1. All Casualty Collection Points (CCP) shall have security measures in place while the location is occupied and being utilized.

2. Whenever possible, Protection Teams should attempt to have, at a minimum, two turns/corners with assigned Protection Teams covering those turns/corners between Casualty Collection Point and possible threat/s.

3. The degree and level of security measures should be appropriate to the location, logistics and possible threats to those working in and around the Casualty Collection Point.

4. The Incident Commander and or assigned Casualty Collection Point Coordinator are responsible for ensuring security measures and protective elements are in place in and around the CCP.

E. Responsibility for Establishment of Casualty Collection Point.

1. The Incident Commander and or the Contact Teams are responsible for the establishment of the Casualty Collection Point.

2. The Casualty Collection Point goal establishment time frame is within 10 minutes of officers arriving on scene.

F. Internal Casualty Collection Point

1. Identify the side of the building with an access door that has the least amount of windows (to minimize taking fire upon approach).

2. Identify the side of the building that has geographic barriers that can be used as cover and concealment for best approach.

3. Identify the side of the building that minimizes the time and distance Rescue Task Force will have to transverse to get to the site.

4. Many times a casualty collection point will be a location where the largest numbers of injured are found and its location may be dictated to you.

G. Utilize Entry Corridor to access Casualty Collection Point Location.

1. Prior to any Rescue Task Force approaching or entering the building, a designated Rescue Protection Element (law enforcement only strike team) will make their way to the structure and make entry securing the designated Rescue Task Force entry location and securing a designated Casualty Collection Point.

2. The Rescue Protection Element, if possible, should take complete control of the designated side of the building or all windows and doors facing the approach of Rescue Task Force to increase the security of the Protection Corridor.

H. Establishment of Casualty Collection Point inside a Structure

1. Upon making entry into structure, place law enforcement in cover/protection positions and begin establishing a stronghold within structure. This stronghold will be known as the Casualty Collection Point.

2. General Casualty Collection Point security measure guideline is to have, at a minimum, two corners/turns with assigned Protection Element at each corner/turn between the location where emergency medical services can conduct tactical emergency casualty care (TECC) and remainder of hot zone. This creates a layered protection approach that enhances the level of protection provided for those in the Casualty Collection Point.

3. Once security measures are put in place, advise the Tactical Group (co-located with Triage group) that the Casualty Collection Point is secure and ready to accept the remainder of the Rescue Task Force Team which is EMS / F.F. and their Protection Element.

4. The remainder of the Rescue Task Force Team (EMS/F.F. with its Protection Element) can then move through the Protection Corridor to the Casualty Collection Point to begin treating and evacuating the injured.

Rescue Task Force Team Movements (Internal –inside a structure)

Core Concepts of Rescue Task Force

1. Golden Rule of RTF – Protection Element shall not at any time leave Fire and EMS personnel unguarded while in the warm and hot zones. The only place Fire and EMS may be without protection element is in the cold zone.

2. Protective Elements positions assigned to an RTF need to constantly monitor for threats and place protective elements where most needed. Protection of an RTF is fluid and can be constantly changing therefore Protection Elements need to be able to flex and flow around RTF filling those gaps. For example approaching a building you may not need a rear guard as much as you need front cover from multiple angels, therefore in this example the rear guard may rotate forward and assist on front cover until needed at rear guard. It is critical that Protection Elements do not forget their original assigned location because when that area needs cover it is the assigned Protection Element responsibility.

3. Verbal commands within RTF should be loudly and twice due to noise, confusion, possible fire alarms sounding and chaos of situation.

4. Team communication is critical to keep the team working as a cohesive unit and maximize its abilities.

Consideration: *In order to keep the team movement integrity, it is suggested that agencies adopt a plain speak communication that addresses this. Numbers 5-7 are the recommended action messages.*

5. Point or Lead Protective L.E. will **request act** – “READY TO MOVE”

6. Rear Protective L.E. will **initiate act** -“MOVE”

7. Point or Lead Protection L.E. **will confirm** –“MOVING”

8. RTF Team Leader should be identified prior to entry and can be located in different positions depending on team makeup.

9. **Two main action commands on RTF for interior team movements**:
    a. **Fire remaining with the team; or**
    b. **Fire posting (with protection) while Protection Element perform task (e.g., clear room).**
    c. **Use plain speak communication.**

Law Enforcement Responsibilities

Prior to the deployment of a Rescue Task Force, specific thresholds must be met. These thresholds include:

A. There are confirmed injuries and number of injured

B. **Unified Command must be established prior to deploying the RTF**. U/C maybe established initially via radio but ultimately face-to-face. A shared command post should be established as soon as possible.

C. Establish and deploy ***Contact Teams*** to stop the threat.

D. Establish a ***Protective Element***.

E. Identify and establish ***Entry Corridor***, ***Warm Zone*** and ***Casualty Collection Point***.

Fire / EMS Responsibilities

A. **Unified Command must be established prior to deploying the RTF**. U/C maybe established initially via radio but ultimately face-to-face. A shared command post should be established as soon as possible.

B. Establish tactical communications channel.

C. Establish ***Staging and Linkup Location***, as necessary.

D. Verify that ***Entry Corridor***, ***Warm Zone*** and ***Casualty Collection Point*** have been identified and established.

E. Establish a ***Rescue Element***.

F. Establish an **Ambulance Exchange Point**

Rescue Task Force (RTF) Responsibilities

A. Conduct RTF tactical brief with the Unified Commander.

B. Approach the ***Warm Zone*** through the ***Entry Corridor***.

C. Continually call out number of victims – Fire reports to triage and police RTF reports to Tactical Group

D. Treat the wounded with TECC techniques and move to next victim. Repeat as necessary and evacuate when appropriate.

E. Additional RTF's may leapfrog with RTF's already treating victim(s).

F. Consider using the Casualty Collection Point as IFAK re-supply and as staging for evacuation equipment.

G. Evacuate victims to the **Ambulance Exchange Point** (this can be accomplished by the RTF or a separate EVAC Team depending on individual department procedure).

H. The Rescue Element maintains contact with the Medical Group Supervisor or Fire Department Command/Ops.

Tactical Group & Triage Group Responsibility

A. Brief incoming ***Rescue Elements*** with ***Linkup Location***, ***Entry Corridor*** and ***Warm Zone*** locations.

B. Track the ***Casualty Collection Point***, if established.

C. Receive updates from the ***RTF's*** in the ***Warm Zone*** and those waiting in the ***Cold Zone***.

D. Update the Communications Center.

E. Prepare for re-supply of ***RTF's*** that may return to the Cold Zone.

F. Prepare to send an additional ***Rescue Elements*** to the Linkup Location to form additional ***RTF's*** into the ***Warm Zone*** for re-supply or for ***evacuation***.

G. Establish triage, treatment and transport branches.

H. Coordinate victim(s) removal and transport to ***Cold Zone***.

Accountability/Emergency Actions

In the event of a L.E./F.D. injury, plain English will be used to advise of the injury and how it occurred.

CHECKLISTS

RESCUE TASK FORCE
LE Standard Operating Guidance Document

Active Shooter

Initial Officer / Contact Team Checklist

- ❑ Establish command
- ❑ **Immediately** arm yourself with your (insert squad rifle, “Combat Go Bag”, Level IV body armor and personal helmet.)
- ❑ Take – breaching tools, school keys (if applicable), ballistic shield, slung shotgun, building maps or floor plans.
- ❑ Size Up Report - **Observe, Orientate, Decide and Act**.
- ❑ Identify danger Zones - **safest route in** and **SAFE staging location for EMS** ambulances.
- ❑ Visually **identify location of possible entry point.**
- ❑ Beware of I.E.D.’s and ambush assaults on 1st responders.
- ❑ Form Contact Team.
- ❑ Designate the Team Leader for the Contact Team.
- ❑ Move with 360 degrees of coverage.
- ❑ **Stop the Shooter.**

Active Shooter

Incident Commander Checklist

- ❑ Establish Incident Command.
- ❑ Establish a safe perimeter position which is your initial Mobile Command Post location (This should be moved to a Cold Zone as soon as possible.)
- ❑ Identify safe routes into Cold Zone staging areas that should be utilized by EMS, Fire, Mutual

Aid, etc.

- ❑ Address both clocks—shooter and victim.
- ❑ **1st Priority** - **Assemble more entry team/s to search out and stop shooter (shooter's clock)**, IF NEEDED. If not, proceed to Priority 2.
- ❑ **2nd Priority**–Create entry coordinator to provide a level of security for victims, 1st responders, Injury Recovery Teams and bystanders.
- ❑ **3rd Priority** – Evacuate uninjured that are immediately accessible.

- ❑ **4th Priority - <u>Assemble Rescue Task Force for injured recovery and to provide aide to injured (victim/s' clock).</u>**
- ❑ **Liaison with Fire Command** to coordinate Injury Rescue Evacuation Teams.
- ❑ Initiate a **SMART** callout.
- ❑ Begin assigning Incident Command System positional assignments – request EOC activation.
- ❑ Track locations of victims and I.E.D.'s.
- ❑ Throughout incident, ensure the following occur:
- ❑ **Contact Team/s** (Police) stops the shooter.
- ❑ **Perimeter** (Police) established to begin ambulatory injury evacuation.
- ❑ **Protection element/s** (Police) established for injury evacuations.
- ❑ **Protection Corridor** (Police Strike Team) established to create a passage with security measures to external non-ambulatory injured or structure.
- ❑ **Evacuation of non-ambulatory external injured** (Police Strike Team or Police and Fire Task Force).
- ❑ **Casualty Collection Point / Warm Zone** (Police Strike Team) established within structure or location (10 min establish goal).
- ❑ **Interior Rescue Teams retrieve injured** back to casualty collection point or ambulance exchange point (Police Strike Team or Police and Fire Task Force).

Active Shooter

Tactical Group/Triage group

- ❑ Command and control over Rescue Task Force Team's movement and actions.
- ❑ Communication (unless assigned within Team) with Incident Command or designee— one person talks.
- ❑ Identify most advantageous location to approach structure or location.
- ❑ Assemble Rescue Protection Element and assign cover positions or assignments to team members.
- ❑ Insert "Protection Corridor" up to and into structure prior to any EMS personnel and/or Rescue Task Force approaching established warm zone. Utilize SMART squads for static cover/protection positions.
- ❑ Establish "Interior Warm Zone/Casualty Collection Point" with Protection Element prior to any EMS personnel and/or Rescue Task Force entering interior or exterior warm zone.
- ❑ Assign Rescue Protection Element to any and all Rescue Task Forces entering created Warm Zone.
- ❑ Position Protection Element at strategic locations throughout structure to provide security measures to Injury Rescue Task Force Teams retrieving injured back to Casualty Collection Point and ambulance exchange point.
- ❑ Monitor and adjust Protection Element to constantly provide security measures to EMS personnel assigned to Rescue Task Force while in warm zones. FF/EMS personnel in warm zone shall always have Protection Element physically with them at all times.

Active Shooter

Tactical/Triage Group checklist

- ❑ Command and control over Casualty Collection and Ambulance Exchange Points.
- ❑ Communication (unless assigned within Team) with Rescue Task Force Team

Leader and Incident Commander and perimeter supervisor.

- ❑ Communicate needs and protection gaps and see that security measures in the

Casualty Collection Point are addressed and met.

- ❑ Coordinate removal of injured.
- ❑ Ensure Protection Team members are in place to adequately protect Casualty Collection

Point.

- ❑ If not enough Protection Team members are present, request and assign additional members to Casualty Collection Point.
- ❑ Place Protection Team members at identified locations to cover threats.
- ❑ Whenever possible, Protection Teams should attempt to have, at a minimum, two turns/corners with assigned Protection Teams covering those turns/corners between

Casualty Collection Point and possible threat/s.

- ❑ Coordinate successful securing of Casualty Collection and Ambulance Exchange Points with

I.C.

- ❑ Coordinate approach and entrance of EMS Protection Elements.
- ❑ **Ensure that all EMS/FF personnel, while in warm zones, have protection Element personnel physically with them**.
- ❑ Coordinate needs and protection concerns with EMS personnel in Casualty Collection Point.
- ❑ Coordinate interior injury retrieval by Rescue Task Force/s.

- Coordinate with EMS Personnel and I.C. the evacuation of injured from Casualty Collection point, on foot, by squad, armored vehicle, etc. The Protection Corridor shall be maintained while evacuating injured out of location/casualty collection point.
- If the Casualty Collection Point needs to be relocated due to access to injured or other reasons, the Casualty Collection Point Coordinator, along with EMS Team Leader, will identify best location. Relocation will be secured by Protection Element prior to any introduction of EMS Personnel.
- Makes decision to initiate a controlled disengagement from a specific area/location or the entire structure if the danger or threats in that area become too great or unknown threat is discovered that threatens the Casualty Collection Point.

Active Shooter

Telecommunications Checklist

Glean information from caller utilizing ***Active Shooter/Mass Casualty Call Card***.

- ❑ Keep your voice calm and relay information to responding units.
- ❑ Keep air time clear—only essential transmissions.
- ❑ Within the first 5 minutes, activate SWAT and Supervisor All-Call, and request armored vehicles.
- ❑ Request Mutual Aid or SMART per Incident Commander or Team Leader. Clarify location of staging with Incident Commander.
- ❑ Advise Fire personnel of Cold Zones, safe staging areas, **Hot Zones**, and **safe routes in to location**.
- ❑ Track and identify locations and entry points of Contact Teams.
- ❑ Track the location of victims reported by Contact Teams. Relay to Incident Command

RESCUE TASK FORCE

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