IS THE MID AMERICA REGIONAL COUNCIL PREPARED: AN EVALUATION OF THE KANSAS CITY METROPOLITAN EMERGENCY RESPONSE SYSTEM

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Since 2000, over 220 active shooter events and numerous natural disasters have occurred in the United States (US) resulting in mass casualty incidents. These incidents have the potential to overwhelm available emergency response personnel and equipment depending on the cause and number of casualties. The integration of civil and military operations must continue due to unconventional threats and attacks on the American people. Effective utilization of all taxpayer dollars will require collaborative training and emergency management effort with the maximum use of all available resources. This research will analyze a regional emergency response system, the Mid America Regional Council (MARC), and its compliance with the National Response Framework (NRF). The use of the case study method will evaluate two regional emergency response systems; a much smaller metropolitan's capability to a much larger metropolitan's actual mass casualty incident response. The purpose of identifying the requirements is to enhance regional response systems regardless of population size. The overall goal is to identify best practices to attain maximum operational reach and promote whole community effort in support of homeland security.

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statement.)

ABSTRACT

IS THE MID AMERICA REGIONAL COUNCIL PREPARED: AN EVALUATION OF THE KANSAS CITY METROPOLITAN EMERGENCY RESPONSE SYSTEM by MAJ Brandon Singleton, 79 pages.

Since 2000, over 220 active shooter events and numerous natural disasters have occurred in the United States (US) resulting in mass casualty incidents. These incidents have the potential to overwhelm available emergency response personnel and equipment depending on the cause and number of casualties. The integration of civil and military operations must continue due to unconventional threats and attacks on the American people. Effective utilization of all taxpayer dollars will require collaborative training and emergency management effort with the maximum use of all available resources. This research will analyze a regional emergency response system, the Mid America Regional Council (MARC), and its compliance with the National Response Framework (NRF). The use of the case study method will evaluate two regional emergency response systems; a much smaller metropolitan's capability to a much larger metropolitan's actual mass casualty incident response. The purpose of identifying the requirements is to enhance regional response systems regardless of population size. The overall goal is to identify best practices to attain maximum operational reach and promote whole community effort in support of homeland security.

iv

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TABLE OF CONTENTS

ACRONYMS

AAR	After Action Review
ADRP	Army Doctrine Reference Publication
DHS	Department of Homeland Security
DOD	Department of Defense
DOTMLPF	Doctrine, Organization, Training, Material, Learning, Policy, Facilities
DSCA	Defense Support of Civil Authorities
EMS	Emergency Medical Services
ICS	Incident Command System
JP	Joint Publication
MARC	Mid America Regional Council
MARCER	Mid America Regional Council Emergency Rescue
MCIP	(Kansas City) Metropolitan Mass Casualty Incident Plan
MEIS	Metropolitan Emergency Information System
NG	National Guard
NRF	National Response Framework
RHSCC	Regional Homeland Security Coordinating Committee
US	United States
USC	United States Code

TABLES

CHAPTER 1

INTRODUCTION

Since 2000, several incidents ranging from active shooter to domestic bombings have occurred in the United States (US) resulting in mass casualty incidents. Mass casualty incidents are events that have a real potential to overwhelm available emergency response personnel and equipment due to its destruction of property and the number of casualties in need of treatment or transport.[1] The integration of civil and military operations must continue due to unconventional threats and attacks on the American people. Effective utilization of all taxpayer dollars will require collaborative training and emergency management effort with the maximum use of all available resources.

This research will analyze a regional emergency response system and its compliance with the National Response Framework (NRF). The goal is to identify the requirements necessary to modify regional response systems into holistic modular systems that encourage collaborative effort and unified command between multiple jurisdictions, both large and small, that comply with the NRF. The NRF is the national guidance to standardize emergency planning but the lessons learned from events requiring response following the NRF's creation is key to planning enhancement.

The emergency response lessons learned from two domestic tragedies included in this study are domestic terrorism, and a man-made catastrophe due to human negligence

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[1] United States Fire Administration, *Incident Command System for Emergency Medical Services* (Emmitsburg, MD: Federal Emergency Management Agency, January 1999), 1-5, accessed April 11, 2018, fire.nv.gov/uploadedFiles/firenvgov/content/bureaus/FST/ICSfor EMS_SM.pdf.

both resulting in incidents of mass casualty. This study will also propose the idea of exploring the active shooter scenario and what challenges confront first responders when dealing with them. The active shooter scenario is also a violent attack on the public and updates to training and responding to active shooters scenarios benefit the citizens of the homeland. The review of the events and the lessons learned hope to identify requirements needed to enhance emergency response frameworks further. The objective is to determine deficiencies within each case study and compare those deficiencies to the selected regional response's resources and training. To save lives and improve casualty chance of survival, US citizens must assist with providing recommendations to develop the systems within the Homeland Security community. The purpose is to evaluate if a regional emergency response system can serve as a national model. The results of the study will help determine the Mid America Regional Council (MARC)'s compliance with the NRF and its ability to expand its framework to serve as a national model.

Primary Research Question

How does the MARC compare to the emergency response capabilities of larger metropolitan areas?

Secondary Research Question

What assistance can Title 32 provide in the case that a mass casualty incident overwhelms the Kansas City Metropolitan's ability to protect its citizens?

Background

The tragedy that occurred April 15, 2013, during the Boston Marathon resulted in two improvised explosive devices detonating; killing three and injuring over 250 people.

This mass casualty incident resulted in a horrific number of casualties, but agreement amongst the medical community is that the incident response was successful. Researchers of this event have concluded that the key lessons from this success are joint public safety service training exercises and a well-organized and executed disaster plan.[2]

The city of Boston is a large metropolitan area, and by expert's analysis, the resources and training provided to its first responders delivered swift triage and evacuation which limited casualties. The possibility of another large-scale mass casualty incident is a reality and if that tragedy occurs, is Boston prepared? What about smaller urban areas with less equipment and fewer trained personnel? The events from the Boston Marathon bombing has established lessons learned and best practices from such events. This research will explore tips and successes from a larger metropolitan area and analyze a smaller area to help identify lacking capability within its system.

The threat of active shooters is worthy of concern to the American people, and governments at the local, state and federal level must implement the necessary training and response plans to limit casualties and restore order. An active shooter is defined by the Department of Homeland Security (DHS) as "an individual actively engaged in

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[2] Paul D. Biddinger, Aaron Baggish, Lori Harrington, Pierre d'Hemecourt, James Hooley, Jerrilyn Jones, Ricky Kue, Chris Troyanos, and K. Sophia Dyer, "Be Prepared—The Boston Marathon and Mass-Casualty Events," *The New England Journal of Medicine* 368, no. 23 (May 2013): 1958-1960, accessed April 1, 2018, https://www.nejm.org/doi/full/10.1056/NEJMp1305480.

killing or attempting to kill people in a confined and populated area; in most cases, active shooters use firearms, and there is no pattern or method to their selection of victims."[3]

Since September 11, 2001, the US has realized its vulnerability to unconventional attacks that can result in catastrophic incidents. Active shooter incidents are an example of these incidents that are occurring more frequently. A federal study has indicated from 2000-2013, 160 active shooter incidents have taken place inside the US. The known trend is these events happen in public commercial locations such as schools and businesses.[4] The latest data from the Federal Bureau of Investigation, shows that the three years following 2013, twenty incidents occurred each year totaling 220 during the 16-year period.[5]

The Pulse nightclub shooting of June 12, 2016, is an example of the devastation that active shooters can inflict on a community. This active shooter incident was the most substantial casualty producing of any attack that year, with over 100 people murdered or wounded with little to no warning or apparent signs of danger. Exploration of Orlando's emergency response report will give insight into challenges and give an opportunity to customize active shooter training. The unpredictability and speed of active shooter events

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[3] Department of Homeland Security, "Active Shooter: How to Respond," last modified October 2008, accessed November 30, 2017, https://www.dhs.gov/xlibrary/assets/active_shooter_booklet.pdf.

[4] Federal Bureau of Investigation, "Active Shooter Incidents in the United States from 2000-2016," Department of Justice, 1-30, accessed October 3, 2017, https://www.fbi.gov/file-repository/activeshooter_incidents_2001-2016.pdf/view.

[5] Ibid.

pose a significant threat to law enforcement and emergency medical personnel as well as innocent bystanders caught in the middle of the attack.

The President of the United States signed into law the creation of the DHS in 2002. This department has "five core missions which are: prevent terrorism, border security, enforce immigration laws, prevent and combat cyber-attacks, and to ensure effective response to national disasters."[6] The response to terrorism and man-made mass casualty incidents is the focus of this research paper; the researcher will analyze capabilities needed to mitigate lag in patient care and transport from first responders. Many emergency response plans exist within the US, but these plans differ. The reality of domestic and international terrorist attacks presents an opportunity for all levels of government to collaborate on a unified response effort to minimize casualties and maximize the efficient use of all available resources.

The communities within the Kansas City Metropolitan area focused on collaborative whole community involvement before the former President created DHS in 2002. The formation of the MARC remains one of the most comprehensive examples of a large urban area and small-town neighbors uniting for local emergency protection. The MARC is a community welfare-based organization that promotes the government-community partnership. The headquarters of MARC is located in Kansas City, Missouri, and incorporates 119 cities, nine counties, two states which are Kansas and Missouri that form one region with the purpose of "promoting regional cooperation through leadership,

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[6] Department of Homeland Security, "Creation of the Department of Homeland Security," September 24, 2015, accessed November 13, 2018, www.dhs.gov/creation-department-homeland-security; Public Law 107-296, *Homeland Security Act of 2002*, 107th Congress, H.R. 5005, November 25, 2002.

planning, and action."[7] The MARC is the answer for maximum effort regional response with the focus on local interoperability between first responders and interagency command and control personnel.[8] The researcher will review the case study of the Hyatt Skywalk Collapse, which killed 114 and over 200 injured on July 17, 1981, in Kansas City, Missouri and this event with jumpstart the MARC to expand and grow into the organization that it is today.[9] What were the lessons learned from this event?

An overview of this case study will set the tone for the exploration into a regional emergency response system and its compliance with NRF. The primary research question is, how does MARC compare to the emergency response capabilities of larger metropolitan areas? The secondary research question is, what assistance can Title 32 provide in the case that a disaster overwhelms the Kansas City Metropolitan's ability to protect its citizens? MARC focuses on collaborating resources to eliminate threats and give the communities rapid emergency response to mitigate chaos and restore order during and after catastrophic events. The answers to these questions do not intend to solve every issue associated with incident management, but the public has the right to access as much information as possible that will make them aware of vulnerabilities within the existing emergency plans.

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[7] Mid-America Regional Council, "About MARC," accessed March 23, 2018, http://www.marc.org/About-MARC.

[8] Mid-America Regional Council, "Overview," accessed April 1, 2018, http://www.marc.org/Emergency-Services-9-1-1/Interoperability/Systems/Overview.

[9] World History Project, "Hyatt Regency Walkway Collapse," July 17, 1981, accessed April 11, 2018, https://worldhistoryproject.org/1981/7/17/hyatt-regency-walkway-collapse.

<u>Definitions</u>

<u>Active Shooter</u>: An individual actively engaged in killing or attempting to kill people in a confined and populated area; in most cases, active shooters use firearms, and there is no pattern or method to their selection of victims.[10]

<u>Catastrophic Incident</u>: An event involving nature or humankind that results in mass casualties or severe property destruction that provokes fear amongst the populous.[11]

<u>Crisis Management</u>: The effective planning and execution of available resources to prevent and respond to a natural disaster or act of terrorism.[12]

<u>DOTMLPF</u>: The concept of analyzing and enhancing the elements of Doctrine, Organization, Training, Materiel, Learning, Education, Personnel, and Facilities to fill capability gaps.[13]

<u>Emergency Response</u>: systems and procedures used to preserve life, limb, property, and order following a catastrophic incident.[14]

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[10] Department of Homeland Security, "Active Shooter: How to Respond."

[11] Joint Chiefs of Staff, Joint Publication 3-28, *Defense Support of Civil Authorities* (Washington, DC: Government Printing Office, July 2013), GL-5.

[12] Ibid.

[13] Joint Chiefs of Staff, Joint Publication 1-02, *Department of Defense Dictionary of Military Associated Terms* (Washington, DC: Government Printing Office, November 8, 2010, as amended through February 15, 2016), 285.

[14] DEM Rhode Island, "Definition of Emergency Response," Department of Environmental Management, accessed March 3, 2018, http://www.dem.ri.gov/topics/erp/1_2.pdf.

Incident Command System (ICS): "The incident command system is used to organize on-scene (in the field) and supporting operations for incidents of any size."[15]

Incident Commander (IC): The individual responsible for all incident activities, including the development of strategies and tactics and the ordering and the release of resources.[16]

Improvised Explosive Device: "is the use of a 'homemade' bomb and/or destructive device to destroy, incapacitate, harass, or distract."[17]

Mass Casualty Incidents: are events that have a real potential to overwhelm available emergency response personnel and equipment due to its destruction of property and number of casualties in need of treatment or transport.[18]

Mid America Regional Council (MARC): A collaboration of 119 cities, nine counties, two states within the states of Kansas/Missouri that promotes leadership, planning, and action.[19]

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[15] Headquarters, Department of the Army, Army Doctrine Reference Publication (ADRP) 3-28, *Defense Support of Civilian Authorities* (Washington, DC: Government Printing Office, June 2013), 1-3.

[16] Department of Homeland Security, "Incident Commander Responsibilities," accessed March 28, 2018, https://emilms.fema.gov/is700anew/NIMS0105110text.htm.

[17] U.S. Department of Homeland Security, "IED ATTACK Improvised Explosive Devices," accessed April 15, 2018, https://www.dhs.gov/xlibrary/assets/prep_ied_fact_sheet.pdf.

[18] United States Fire Administration, *Incident Command System for Emergency Medical Services*, 1-5.

[19] Mid-America Regional Council, "What is MARC?" accessed November 27, 2017, http://www.marc.org/About-MARC/General-Information/What-is-MARC.

National Response Framework (NRF): The national emergency response framework created by the DHS that describes authority and best practices of execution in the event of small scale or large scale catastrophic events.[20]

Posse Comitatus Act: Section 1385, Title 18, United States Code (USC) punishes individuals that use federal military troops to execute law enforcement domestically except in cases of dire need authorized by either Congress or the President of the United States.[21]

Whole Community Approach: "Preparedness is a shared responsibility; it calls for the involvement of everyone—not just the government—in preparedness efforts. By working together, everyone can help keep the nation safe from harm and help keep it resilient when struck by hazards, such as natural disasters, acts of terrorism, and pandemics."[22]

Assumptions

This research assumes that the neighboring towns and villages outside of metropolitan areas such as Kansas City, Missouri, have a finite amount of emergency equipment and personnel. Funding is key to resource procurement, and without proper funding, these smaller communities are likely to need local assistance from larger cities.

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[20] Department of Homeland Security, *National Response Framework* (Washington, DC: Government Printing Office, June 2016), accessed April 3, 2018, https://www.fema.gov/media-library/assets/documents/32230.

[21] Headquarters, Department of the Army, ADRP 3-28, *Defense Support of Civilian Authorities*, 2-12.

[22] Federal Emergency Management Agency, "Whole Community," Department of Homeland Security, accessed April 3, 2018, https://www.fema.gov/whole-community.

Also, this research assumes that while first responders were available and many even present on the scenes, prior to disaster response, they did not have any warning.

The final assumption is that most communities within the 50 states have National Guard (NG) armories within a 100-mile radius and that the opportunity is available amongst most regions to receive the benefits of collaborating personnel and material resources to best support the DHS's mission to protect and serve the citizens of the US. The assumption is that most NG response units collaboratively train with the municipalities surrounding them. The emergency equipment and the NG's trained personnel provides much needed assistance and resources to less wealthy communities that cannot afford state of the art equipment and have limited emergency service capability.

Research Scope

The researcher will attempt to answer the primary research question by comparing mass casualty case studies and finding the common suggestions from participants of these events as to how to best manage the situation, and what training is needed to protect the public better. This thesis used a comparative model and qualitative analysis to determine capabilities within MARC and best practices from first responders regarding mass casualty incidents. A comparison of case studies will identify the lessons learned from each event and analyze whether MARC has implemented those best practices into its planning. The MARC organization collaborates resources regionally to maximize effectiveness and minimize response time. This organization's analysis is a starting point towards developing a national standardized model for emergency preparedness to ensure that communities large or small receive proper response capability in the event of a

national disaster. The secondary research question is answered by using detailed doctrinal analysis of Joint Publication (JP) 3-28, *Defense Support of Civil Authorities* and Army Doctrine Reference Publication (ADRP) 3-28, *Defense Support of Civil Authorities*, which will explore assistance capabilities available to bridge gaps and vulnerabilities of regional systems.

Research Limitations

This project limits analysis to the planning, response training and capabilities of MARC. First responder training and life preservation of the casualties is the primary focus when analyzing the mass casualty case studies. This study will focus only on the assistance capabilities under Title 32. This paper is an emergency response capability focused study only. The use of open source materials and references primarily drive the research to ensure public availability. Potential bias is present due to researcher's background in emergency response but only on the subject selection, not the data collected or the findings of the research. This research paper has time constraints of 10 months due to CGSC course conclusion. However, the analysis is relevant to the US homeland security due to potential devastation of mass casualty incidents and the effects on its communities.

Research Delimitations

This research project will utilize case studies of resulting in mass casualty from 1981 to 2016, with the 1981 cases study being the foundation for modern collaborative regional emergency planning. The second case study is more recent and occurred within the last ten years. The purpose is to examine if the MARC is relevant today and what if

any, new training is identified that will help the MARC's preparation. This study will focus on lessons learned from different mass casualty incidents to determine the versatility in the response of the MARC. The researcher will not analyze law enforcement apprehension techniques or active shooter motives and affiliations. The military's inclusion in this project will only focus on available assistance as defined by the latest doctrine which are JP 3-28 *Defense Support of Civil Authorities*, and ADRP 3-28 *Defense Support of Civil Authorities* published in 2013. This study does not evaluate any other regional framework's capabilities other than the MARC.

<u>Research Significance</u>

The benefits of this collaboration can serve as the model for other regional frameworks with the desired end state eventually being one national model. The personal stress and time limitations of mass casualty events call for maximum utilization of all available resources. The purpose of this study is to identify the resources of a region and identify capability requirements to improve first responder effectiveness. Domestic security is the mission of the DHS and enhancing existing plans and processes supports this mission. The analysis of the MARC's capabilities in addition to resource availability offers a guide to enable farther operational reach in the event of a large-scale catastrophic attack in other areas throughout the nation. The commitment to maximizing efficiency concerning taxpayer dollars obligates civilian and military leaders to enhance the already existing partnership further.

Summary

The requirements needed for a national emergency response framework and the utilization of the military creates the opportunity to enhance disaster response. The scope of the research focuses on lessons learned from the studies of mass casualty events. The review of a regional emergency response framework of a metropolitan area is used to discover if the organizational planning is current or needs updating with the more recent mass casualty events. The secondary questions will attempt to investigate the capabilities of the Title 32 resources and incorporate its resources to aid in closing the gaps of the civilian emergency response departments that have much fewer resources than large cities.

The next chapter will review the literature involved in this study. The method used to answer the research questions is to review the previous research conducted on the case studies and find the best practices and lessons learned stated by first responders and research officials.

CHAPTER 2

LITERATURE REVIEW

Introduction

The potential for attacks within the United States (US) is significant. Mass

casualty incidents produce anxiety amongst citizens and often causes the populace to

doubt their government officials' ability to implement the response plans and train the

necessary personnel needed to protect them. The formation of the MARC in 1972 was the

foundation of one of the most aligned regional cooperative emergency medical service

(EMS) systems between a large city and its small-town neighbors. The MARC is a

comprehensive emergency preparedness organization that promotes the government-

community partnership. The MARC's website has actual emergency plans posted and

illustrations of the command structure. The MARC's website has a wide range of links

connecting citizens from topics spanning from community assistance agencies to

metropolitan transportation plans.[23] These links provide updated information and point of

contacts for correspondence. The council supports the NRF's "whole community"

approach and is actively refining its plans to meet its residents' needs better.

This chapter first examines the case of the Hyatt Regency Skywalk collapse and

the lessons learned from the emergency response. The training, actions, and

recommendations from this case aim to find the correlation between this case, in 1981,

and a more recent catastrophe in 2013. Next, the bombing of "the Boston Marathon on

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[23] Mid-America Regional Council, "Homepage," accessed March 28, 2018, http://www.marc.org.

April 15, 2013, was a terrorist attack that wounded or killed over 260 people."[24] Critics

of Boston's emergency response to this incident gave positive reviews and identified

sustains and improvements that will help compare best practices from other events. The

Boston Bombing scenario is unique because of the magnitude of the event and the

number of attendees; whether participant or spectator. Many emergency personnel

attended the marathon, but people from all over the world were present also, not solely

Bostonians. This fact is vital, due to attendance forecasting and the amount of emergency

medical supplies available. There are several articles of literature that mention the

unpredictability of forecasting and readiness of emergency personnel. Officials ranging

from the Boston Chief of Police to the Federal Emergency Management Agency's

investigative teams gives the whole community effort praise.

In 2014, the Federal Bureau of Investigation began a study of active shooter

incidents to explore the trends, characteristics, and lessons learned from each event. The

design of the study was to help law enforcement throughout the country get a better

understanding of ways to prevent, identify and respond to these attacks.[25] However, not

pertinent to only law enforcement, first responders of all types can benefit from the key

characteristics and best practices discovered to incorporate into their training plans. The

overall purpose of training plans is to organize realistic training that resembles practical

scenarios. From 2000 to 2013, the number of active shooter incidents has totaled 160,

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[24] History.com Staff, "Boston Marathon Bombing," History, accessed March 29, 2018, http://www.history.com/topics/boston-marathon-bombings.

[25] J. Pete Blair and Katherine W. Schweit, *A Study of Active Shooter Incidents, 2000-2013* (Washington, DC: U.S. Department of Justice, 2014), 4.

with the report identifying that the last seven years of this period concluded that the average number of events have nearly doubled.[26] A review of the literature concerning active shooters is necessary to identify the lessons learned and to discover any common characteristics between two different types of incidents. The list of common traits will give a baseline of capabilities required by MARC's emergency response teams to evaluate a variety of incidents and can serve as a training guide across the board. This literature review will use the Pulse nightclub event to assess and analyze lessons learned from an active shooter perspective and find areas of further study in the final chapter since it was the deadliest mass shooting in US history at the time.[27]

The Boston Marathon case study and the Pulse nightclub case study are modern events that have taken place within the last five years, however; the Hyatt Regency Skywalk incident occurred more than 35 years ago and is the crucial event that led the Kansas City Metropolitan area to focus on regional response. The review of the Skywalk case will identify the characteristics of the rescue effort and the lessons learned. The literature from this case study will build the foundation of the obstacles of that event and evaluate whether the MARC's training and planning development best prepare its first responder community for the challenges identified. In addition to similarities of past and present, does the MARC apply to both types of incidents, violent and nonviolent? The

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[26] Federal Bureau of Investigation, "Active Shooter Incidents in the United States from 2000-2016," 1-30.

[27] Hasani Gittens and Helen Kwong, "Florida Nightclub Massacre Is Deadliest Mass Shooting in U.S. History," *NBC News*, June 12, 2016, accessed February 23, 2018, https://www.nbcnews.com/storyline/orlando-nightclub-massacre/florida-nightclub-massacre-deadliest-mass-shooting-u-s-history-n5990476.

reason for evaluating these two case studies is to analyze whether the MARC is still relevant today and to identify ways to improve or augment the framework to work on a larger scale.

The NRF's main focal points and overall mission gives guidance and sets a foundation for understanding the fundamental principles of response. The mission principles focus on tiered response and community involvement. The literature reviewed for military involvement is from JP 3-28, *Defense Support of Civil Authorities* (July 2013) and ADRP 3-28, *Defense Support of Civil Authorities* (June 2013). A range of topics and subtopics are available, but the ones chosen will focus on the types of assistance authorized and available under Title 32 concerning Department of Defense (DOD) support.

<u>Hyatt Regency Skywalk Collapse Lessons Learned</u>

There is an extensive collection of literature concerning the Skywalk collapse of 1981. With over 25 articles and presentations, the results range from the party that took place that evening to the cause of the structural collapse. A recent presentation by Dr. Jeffrey Franc, Associate Clinical Professor of Emergency Medicine–University of Alberta writes in his presentation "Lessons Learned from a Structural Collapse," a timeline of events, lessons learned from planning assumptions and behaviors.[28] Franc presents a timeline of events that highlight complexity and confusion.

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[28] Jeffrey Franc, "The Hyatt Regency Skywalk, Lessons Learned from a Structural Collapse," last updated May 23, 2015, accessed April 1, 2018, http://www.caep.ca/sites/caep.ca/files/caep/CAEP2015/Presentations/franc_hyatt-regency-jef-2015-05-23_rev6.pdf.

1. The time of collapse was 19:05 and the first call received to EMS dispatch was at 19:08. Upon EMS activation, 16 on duty ambulances and 15 Mutual aid responders were available.[29]

2. The first ambulance arrives at 19:12 and the ambulance crew discovers a physician has set up triage outside on the street. Establishment of the incident command post is occurred at 19:17 in an ambulance on the street.[30]

3. At 19:36 the first transport takes place with taxis serving as ambulatory vehicles to transport patients to hospitals farther away. Incident command post conducts patient transport in two phases: scene to the street, street to the hospital.[31]

4. At 04:30, the extraction of the last survivor occurs seven hours after the collapse, and the IC leaves one rescue worker at the Hyatt to oversee and care for wounded rescuers.[32]

The timeline allows for measurement of response requirements and identifies shortfalls. Operationally, upon establishment of the incident command post, an observer stated that "A smoothly functioning, high-performance organization was developed on

[29] Franc, "The Hyatt Regency Skywalk, Lessons Learned from a Structural Collapse," 5.

[30] Ibid., 6.

[31] Ibid., 7.

[32] Ibid., 8.

the spot. Leaders emerged and were recognized and allowed to lead because they were capable, willing and because it was necessary."[33]

The formation of tiered response and the use of incident command allowed an orderly operation with a focus on utilizing subject matter experts to their best ability. The teamwork and familiarity of duties and tasks highlighted in Franc's presentation by noting that Kansas City's emergency personnel all reside within city fire quarters, this daily proximity to each other provided ease of verbal communication and efficient task execution.[34]

One of the operational drawbacks noted from the presentation is that the initial organization of volunteer medical personnel such as physicians and nurses was chaotic. Uniformed personnel on-scene could not initially verify volunteers' credentials which delayed triage and patient care. Suggested solutions are sectional rehearsals and training simulations to gain familiarity with the emergency response community. This suggestion concludes that organizations that have a working relationship and knowledge of each other's policies and procedures enable ease of communication.[35]

Another drawback noted from Franc's research is the importance of triage tags. Patient care and transport priority depend upon triage identification. Kansas City's response planning included triage tagging at the time, but for whatever reasons were not

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[33] Franc, "The Hyatt Regency Skywalk, Lessons Learned from a Structural Collapse," 8.

[34] Ibid., 29.

[35] Ibid., 33.

available during the Hyatt incident.[36] However, these tags give a visual to responders and volunteers of the ambulatory vs. non-ambulatory patients.

Additional reviews indicate that within eight minutes after the initial call to EMS dispatch, one of the four ambulances had a medical doctor riding along as an observer. While serving as a crew member, the city's emergency plan designated the physician as the medical director and one of the emergency medical technicians as the communications officer.[37] The establishment of the incident command post enabled central EMS communication to flow from the triage post to the command post to hospital personnel. The transfer of vital information such as injury type and the number of transported patients allowed the hospitals to prepare equipment and to customize medical staff to care for specific injuries.[38] Critical elements of operations included activating the Hospital Emergency Alert Radio and an ambulance access lane supervised by local law enforcement. The Hospital Emergency Alert Radio network is a central system that connects all area hospitals for emergency information in case of a major disaster. The network allows for hospitals to focus on personnel readiness and medical system preparedness.[39] Personnel capability identifiers such as Red Cross insignia and bright colored vests offered easy visibility and rapid identification during the incident. The

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[36] Franc, "The Hyatt Regency Skywalk, Lessons Learned from a Structural Collapse," 33.

[37] Steven M. Orr and William A. Robinson, "The Hyatt Regency Skywalk Collapse: An EMS-Based Disaster Response," *Annals of Emergency Medicine* 12, no. 10 (October 1982): 602.

[38] Ibid.

[39] Ibid.

aftermath of the Skywalk collapse, motivated Kansas City officials to incorporate these items into emergency vehicles to increase visibility for otherwise unidentified medical personnel.[40] The emphasis on communication, both verbal and visual is the primary focus of the literature regarding the Hyatt Regency Collapse of 1981.

<div align="center">Boston Marathon Bombing and Lessons Learned</div>

The Boston Marathon bombing is one of the worst acts of terrorism in the US since 9/11.[41] The relatively recent attack has produced multiple studies by various universities and law enforcement agencies. Articles and journals are the primary sources for information collection, and the majority are available online. The literature exposed several key findings and suggestions. Many of the articles and journals mentioned in this thesis, analyzed the use of social media and networking before, during, and after the event. Principal authors of the literature found were public safety officials, medical officials, and prior public affairs specialists.

The first discovery within the literature is the relevance and widespread use of social media before, during and after the incident. Social communication forums were on full display during this event and are relevant regarding information flow between responders and witnesses. The whole community approach was apparent to all in the Boston metropolitan area with the Boston Police Department's "Twitter account

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[40] Orr and Robinson, "The Hyatt Regency Skywalk Collapse: An EMS-Based Disaster Response," 602.

[41] RT Question More, "Worst Since 9/11: Boston Bombing Revives Terrorism Ghosts," April 16, 2013, accessed April 12, 2018, https://www.rt.com/usa/us-soil-terrorism-overview-926/.

increasing followership from 53,000 to a high of 304,000."[42] The period ranging from before detonation to the capture of the suspect, networks such as Twitter and Facebook gained much exposure due to the mass amounts of information between incident officials and the public.[43]

The presence of high-quality cameras captured the detonation as well as the emergency response plan in action. Live broadcasting of the Marathon allowed authorities to immediately push the images to the public to aid in apprehending the suspects and provided situational awareness for responders wishing to volunteer. This overloading of correspondence did have downfalls. The public circulated many pieces of erroneous information, which created chaos for first responders until a dedicated social network account "Twitter" became the recognized social media forum for updates and alerts.[44]

The second common theme discovered in the literature review was the focus on emergency personnel training and readiness. The city of Boston received high praise for its highly trained personnel and government officials emphasizing safety at the event.

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[42] Leishen Stelter, "Boston Commish: 3 Lessons Learned from Marathon Bombing," Education Issues in Public Safety, October 25, 2013, accessed April 14, 2018, https://www.policeone.com/chiefs-sheriffs/articles/6547563-Boston-Commish-3-lessons-learned-from-marathon-bombing/.

[43] Association for Media Literacy, "Boston Marathon Bombing Case Study," April 23, 2013, accessed March 12, 2018, http://www.aml.ca/boston-marathon-bombing-as-case-study/.

[44] Tod Newcombe, "Social Media: Big Lessons from the Boston Marathon Bombing," Justice and Safety Government Technology, September 24, 2014, accessed April 1, 2018, http://www.govtech.com/public-safety/Social-Media-Big-Lessons-from-the-Boston-Marathon-Bombing.html.

The use of the ICS was apparent, and federal agencies praised local government officials

for their cooperation and willingness to assist in any way possible. Reports show that

since 9/11, Boston departments have prepared for disastrous events via training exercises

and updating training plans. Boston invested in coordinated communication via radio

with secondary lines for backup.[45]

Massachusetts Emergency Management Agency has published an after-action

review (AAR) available on the Massachusetts state website, detailing best practices and

lessons learned. Massachusetts Emergency Management Agency teamed up with TriData

to conduct the independent investigation. A wide-ranging review of all aspects of the

bombing ranging from public safety, health, to medical support plans. This thorough

review produced a 130-page document in 2013, but release to the public did not occur

until nearly two years after the attack.[46]

The AAR has the timeline of events and response best practices and needs

improvements from every echelon of response to the event. This report emphasizes

among other things the need for an integrated public safety plan specific to the event. The

AAR praises pre-existing interagency relationships and joint training as keys to

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[45] Neil Osterweil, "World Class Emergency Response in Boston Marathon Bombing," Medscape, October 28, 2015, accessed March 30, 2018, https://www.medscape.com/viewarticle/853394.

[46] Massachusetts Emergency Management Agency, "After Action Report for 2013, Boston Marathon Bombings Released," Executive Office of Public Safety and Security, April 3, 2015, accessed April 4, 2018, www.mass.gov/eopss/agencies/mema/news/press-releases/after-action-report-for-the-2013-boston-marathon-html.

operational effectiveness. Mutual Aid Agreements and Hospital staff participation complimented the effort with proper coordination and execution.[47]

Massachusetts' emergency alert network provided situational awareness and communication between public safety and medical officials. The final noteworthy observation from the AAR is the establishment of a separate family assistance center for survivors and their families and the families of the victims. The AAR notes that the availability of services for financial assistance, mental health assistance, and spiritual care better supports the response effort as the event transitions into recovery.[48]

The main areas for improvement are as follows:

1. Lack of Single Integrated Public Safety Plan for Marathon Day – Marathon organizers did a great job of creating individualized, integrated safety plans, but the absence of a single operational plan led to a lack of responder synchronization during the response.[49]

2. Limited Use of Triage Ribbons and Tags—Study reports that most of the EMS personnel did not have triage tags. The emergency treatment response received praise, but hospitals report difficulty in patient tracking due to lack of identification and knowledge of the seriousness of their injuries.[50]

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[47] Massachusetts Emergency Management Agency, "After Action Report for 2013, Boston Marathon Bombings Released."

[48] Ibid., 123-128.

[49] Ibid., 77.

[50] Ibid., 92.

3. Lack of Clearly Identified In-Field Command—As the response relocated from

   the triage site of the Boston marathon to the site of apprehension,

   communication broke down between the ICS, which led to disorder amongst

   law enforcement personnel.[51]

The MARC

The MARC consists of 119 counties and two metropolitan areas totaling over 2,000,000 people as of 2010.[52] That is, 119 separate city governments and the resources within them cooperated to act as a regional community. MARC is not a government; it is a council of governments consisting of a 33-member board of local elected officials that share suggestions and emphasize training and interoperability.

The MARC website contains links to the plans and the points of contact names and numbers of different department heads ranging from aging adult services to transportation plans. The website gives one-stop access to the over 50 programs and initiatives that enable public access currently or will have availability soon. Subcommittees of MARC serve as managers that give the oversight of the program; subcommittees also serve as points of contact to give personal interaction between the organization and the community it serves.

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[51] Massachusetts Emergency Management Agency, "After Action Report for 2013, Boston Marathon Bombings Released," 113.

[52] Mid-America Regional Council, "Member Cities and Counties," accessed April 12, 2018, http://www.marc.org/About-MARC/General-Information/Member-Cities-and-Counties.

MARC receives most of its funding from federal, state, and private grants along with local contributions. The budget is available for public view as well as the current year's estimated revenues and expenses.[53] The transparency of MARC serves as a clear example to the community that the MARC promotes the ideology of community government and encourages building relationships with all levels of governments as well as nongovernmental agencies. The information on the website displays MARC's example of transparency and emphasis on problem-solving. The website has seven main categories, Community, Data and Economy, Emergency Services, Environment, Government, Regional Planning, and Transportation.[54]

The population of the Kansas City Metropolitan is modest by large city standards, but the 119 counties that comprise the council is what the focus of the MARC is all about. The use of the Regional Coordination Guide provides "an all-hazard, capabilities-based guide designed to address any of the hazards potentially affecting the metro area."[55] The plan describes how multiple jurisdictions will work together to coordinate the response. The focus on emergency response directs the review to the emergency services tab that contains plans, Homeland Security, training and exercise, interoperability and many others. These tabs include web links to topics such as funding from DHS to the Mid-America Regional Council's clean energy initiative.

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[53] Mid-America Regional Council, "About MARC."

[54] Ibid.

[55] Mid-America Regional Council, "Regional Coordination Guide," accessed April 18, 2018, http://marc.org/Emergency-Services-9-1-1/MEMC/Other-Resources/Regional-Coordination-Guide.

The coordinating body for most of MARC's security and response plans is the Regional Homeland Security Coordinating Committee (RHSCC). The Mid America Regional Council Emergency Rescue Committee (MARCER), Heart of America Fire Chiefs, and Metropolitan Emergency Managers Committee are a fraction of the 12 committee partners that comprise the MARC's response team.[56] The Regional Coordination Guide, Regional Evacuation Plan and the Kansas City Metropolitan Community Plan for Ambulance Diversion are a few of the regional plans and illustrations available. The focus regarding this study will involve reviewing its response planning framework to evaluate the capability it gives first responders within the communities represented.

<u>National Response Framework</u>

The NRF is part of the National Preparedness System, which attempts to plan a whole community approach to participate in the development of local preparedness activities.[57] The NRF is on its third edition as of 2016 and is always in effect nationally. The core principles of the NRF are:

1. Engaged partnership: The focus on all elements of the community, primarily people and resources that promotes teamwork and communication.[58]

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[56] Mid-America Regional Council, "Training and Exercise Subcommittee," accessed April 10, 2018, http://marc.org/Emergency-Services-9-1-1/HomelandSecurity-(RHSCC)./Subcommittees/Training-and-Exercise.aspx.

[57] Department of Homeland Security, *National Response Framework*, 1.

[58] Ibid., 5.

2. Tiered Response: Incidents commanded at the lowest level and elevating

   depending on the level of support. Typically, incidents begin and end at the

   local level.[59]

3. Scalable, Flexible, and Adaptable Operational Capabilities: The ability to

   increase, transition and modify resources and processes to fit the need or

   situation.[60]

4. Unity of Effort: The clear understanding by incident managers and responders

   of their roles and responsibilities under the ICS to ensure interoperability

   across multiple jurisdictions and agencies to maintain organizational command

   and control or unified command.[61]

5. Readiness to Act: This is the "whole community approach." The support from

   all individuals and communities to aid and assist responders to save lives,

   property, and the environment.[62]

<p style="text-align:center"><u>Defense Support of Civil Authorities</u></p>

JP 3-28 *Defense Support of Civil Authorities* explores the DOD's authorization to

support municipalities. JP 3-28 provides the guidelines and overview for military

assistance during domestic emergencies. Since the NG is usually the primary domestic

military first responder, employment will often be in either a state active duty status or

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[59] Department of Homeland Security, *National Response Framework*, 5.

[60] Ibid.

[61] Ibid.

[62] Ibid.

Title 32. The use of ADRP 3-28 *Defense Support of Civil Authorities* is the Army specific

publication and has more detailed information regarding Army guidance. However, JP 3-

28, speaks of Defense Support of Civil Authorities (DSCA) across all branches of the

military and communicates to the sister services that domestic response is generally under

Title 32. Because the NG may act in a law enforcement role since the Posse Comitatus

Act does not apply, it may be advantageous to use NG employment under Title 32.[63]

Within the publication, JP 3-28, addresses the response and planning factors of domestic

emergency response. The focus of the health services guidance is that in the events of

mass casualty and disaster assistance, the military forces will operate under the direction

of the state's government. JP 3-28 states:

> As a supporting agency to the Department of Health and Human Services,
> DOD will coordinate mission assignments involving health services through the
> DCO. DOD employs and integrates medical response through the following joint
> medical capabilities: first responder care; forward resuscitative care; en route
> care; and theater hospitalization. The focus of DOD medical support is to restore
> essential health services in collaboration with the state and local health
> authorities.[64]

The DOD focuses on restoration of local health services and will provide DOD

resources to allow the civil authorities to restore their original capability and support ICS.

The NG has a history of interacting with emergency situations both domestic and abroad.

The NG operating under Title 32 authority is unique to Title 10 status concerning law

enforcement authority. As a general rule, Title 10 forces cannot operate as a law

enforcement force due to the Posse Comitatus Act. JP -3-28 also mentions the NRF as the

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[63] Joint Chiefs of Staff, JP 3-28, *Defense Support of Civil Authorities*, I-6.

[64] Ibid., V-11.

national guidance for emergency response and the DOD will comply with the ICS outlined in the National Incident Management System.

Summary

The lessons learned presented by researchers of the Hyatt Skywalk incident focus on teamwork and organization. The event concluded with experts giving praise to an excellent effort by a highly trained medical response team along with a solid response plan, but the unpredictability and magnitude of the triage during the incident caused by impromptu incident command left room for improvement. The tiered response and training competence outlined by Franc's presentation are significant because they focus on teamwork and organization. The principles within the NRF embodies teamwork and organization, and since the Hyatt incident occurred before the development of NRF, the assumption may arise that implementation of adjustments learned from this incident guided the officiating body within MARC to offset the shortfalls by enhancing its doctrine.

The requirements for effective response during the Hyatt Regency event are very similar to the Boston Marathon bombing that occurred more than 30 years later, so the review of literature confirms evidence of trends, and documents the resources needed to respond to them. The assistance from Title 32 NG forces augment temporary capability gaps of a regional response system. DSCA operations under Title 32 can serve as a last resort enabler for local authorities. The overall responsibility of emergency management is always the town, city, or county of origin. The whole community approach involves the NG because they are citizen Soldiers and it is possible that they reside in the same locality as the tragedy that the emergency incident is occurring.

CHAPTER 3

RESEARCH METHODOLOGY

Introduction

The previous chapters introduced the research topic and the literature currently available to the public regarding its background and lessons learned. The primary research question is seeking to discover, how does the MARC maintain its relevance as a comprehensive regional response framework compared to recent mass casualty incidents? The MARC has grown tremendously since one of the deadliest structural collapses in the U.S. occurred more than 35 years ago.

The selection of recent mass casualty case studies aims to analyze the lessons learned from these recent events and compare the MARC's current abilities. The secondary research question's purpose is to discover what assistance is available from Title 32 USC that will augment any deficiencies discovered in the MARC. This chapter aims to identify the plan for conducting further research on improving regional emergency frameworks to create more significant operational reach for citizens in large cities and small towns. The secondary research question attempts to identify the capabilities available from DOD forces activated under Title 32 status. A detailed doctrinal analysis is the method used to answer the secondary research question with the use of both, Joint and Army doctrinal references.

Three sections, which organize this chapter is the research methodology, strengths and weaknesses of the selected primary case studies, and the chapter summary. The first section will explain why the author chose this research methodology. The second section will seek to justify the selection of the case studies used and its relevance to the field of

study. Finally, the last section will state the criteria used to evaluate the regional emergency response framework.

Methodology

The purpose of this research paper is to evaluate a venerable emergency response framework based on recent incidents and the lessons learned from them. The goal is to find evidence that supports or defends its relevance in today's emergency response community. The U.S. invests millions of dollars every year to Homeland Security and Defense and the paradigm assumed when selecting this research methodology is that U.S. citizens value Homeland Security and Defense. The selection of qualitative research with a multiple case study design enables observation of patterns or trends from a general perspective proven by data that will answer the question of 'what the requirements of emergency response plans during mass casualty incidents are?' The results of analyzing the case studies will then set criteria for evaluating the MARC's relevance regarding response effectiveness during these incidents.

John Creswell's book, *Qualitative Inquiry and Research and Design* defines qualitative research. He writes, "Qualitative research begins with assumptions, a worldview, the possible use of a theoretical lens, and the study of research problems inquiring into the meaning individuals or groups ascribe to a social or human problem. To study this problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under

study, and the data analysis that is inductive and establishes patterns and themes."[65]

Pragmatism is the basis of the research. The study is not concerned with the outcome but the "how" and "why" of the results to improve a system.[66] The decision to review lessons learned from other metropolitan areas and comparing the capabilities available and the capabilities needed promotes improvement within the system. The system of providing Homeland Security to U.S. citizens will always welcome development due to a vast amount of capital invested. The importance of the research begins and ends with the relationship and capability of the evaluated framework and whether it is relevant regarding the threats of today.

The case study method intends to relate incidents and the response to them as an issue for the whole, not large cities or small towns.[67] The emergency response system studied in each case presents, through multiple sources of information, whether manuscripts, journal articles, or observations, which will answer the primary research question. The observations intend to develop common themes and offer different approaches to either solve a problem or improve a process.[68] The ability to better understand the opportunities for improvement identified within the first responder community allows government officials as well as citizens to gain a sense of responsibility and personal sacrifice needed to aid in the security of the Homeland.

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[65] John Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 2nd ed. (Thousand Oaks, CA: Sage Publications, 2007), 37.

[66] Ibid., 23.

[67] Ibid., 42.

[68] Ibid., 73.

The use of purposeful sampling shows different perspectives on the problem, which in this research are two different geographical areas with different causes of one phenomenon; the mass casualty incident.[69] The reasoning for selecting a case study analysis is that it allows a baseline of identified core capabilities to begin the evolution of emergency response as a national issue and a need for national officials and planners to improve the frameworks used. Table 1 provides the description of the factors receiving evaluation. The factors are taken out to of the AAR from the Boston independent study.

<u>Inclusion Criteria</u>

The criteria for case selection was deliberate and shared amongst all cases.

1. The case studies must involve population centers of 250,000 or more that has operating paid emergency service departments.

2. The incident must have taken place without apparent warning, enabling the element of surprise for first responders and emergency response systems.

3. All cases had more than 100 casualties (dead or wounded) that required triage and transport.

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[69] Creswell, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 75.

Table 1.   Description of Methodology Factors

Mutual Aid Relationships	Existing partnerships and agreements with surrounding municipalities to aid when requested.[70]
Rehearsals/Training Exercise	Pre-existing relationships and familiarity with operating procedures due to collaborative training.[71]
Multiple forms of Communication	Different nodes of communication via social media, email, aside from primary and backup radio communication that enables situational awareness[72]
Mutual Aid Communication	Ability to communicate with mutual aid partners to ensure shared understanding.[73]
Triage Tagging	The use of triage identification to visually communicate patient identity and injury[74].
Infield-Command	The defined use of ICS and the execution of an Incident Commander.[75]

Source: Created by author.

The importance of this criteria is to eliminate false positives and observe real-time response to capture unbiased results. The case studies share the commonality of resulting in circumstances of mass casualty, but are different versions of the subject studied.

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[70] Massachusetts Emergency Management Agency, "After Action Report for 2013, Boston Marathon Bombings Released," 75.

[71] Ibid., 71.

[72] Ibid., 86.

[73] Ibid., 119.

[74] Ibid., 92.

[75] Ibid., 113.

The criteria will evaluate the MARC against the common themes in each case study. The common issues determined by the literature review allows for comparison of each emergency system. For example, the Hyatt Regency case study sets the foundation for the need to improve regional emergency collaboration when responding to an incident. The MARC continued to improve readiness after acknowledging and correcting the observed deficiencies noted by responders. The threat of resource exhaustion is real, and the probability of fatalities increases amongst wounded when there is a delay in transport or when medical facilities do not have the triage specific staff available. The common themes of the Hyatt Regency case were the importance of regional emergency communication systems, combined training exercises and policy, and a unified command structure.

The Hyatt Regency will serve as the baseline credited with steer heading a strong government council's focus on whole community assistance within a region known as MARC. The other case study will attempt to identify a relationship between requirements, best practices, and areas that welcome improvement. The capabilities observed from the research of each case study and investigation of resources available within MARC attempts to prove or disprove the MARC's ability to operate as a national model as guided by the NRF.

<u>Primary Research Question</u>

How does the MARC compare to the emergency response capabilities of larger metropolitan areas?

Table 2.   Research Methodology Table

Best Practices (Boston)	Hyatt Skywalk Collapse	Boston Marathon Bombing	Current MARC
Mutual Aid Relationships	(_)	(_)	(_)
Rehearsals/Training Exercise	(_)	(_)	(_)
Multiple forms of Communication	(_)	(_)	(_)
Lessons Learned (Boston)	Hyatt Skywalk Collapse	Boston Marathon Bombing	Current MARC
Mutual Aid Commo	(_)	(_)	(_)
Triage Tagging	(_)	(_)	(_)
Infield-Commander	(_)	(_)	(_)

Source: Created by author. Table 2 when filled in during Chapter 4, Analysis: (+) designates positive effects on the outcome of each case study. (-) designates an adverse outcome. (_) indicates that the capability evaluated was not available.

Secondary Research Question

The secondary research question's purpose is an attempt to discover what assistance is available from Title 32 USC that will augment any deficiencies discovered in the MARC. Detailed analysis and research of both Joint, and Army doctrinal references will answer this question. The findings will answer the secondary research and provide recommendations for further study in chapter 5.

MARC against Lessons from Boston

The areas identified from the Boston bombing consists of six total observations, three categorized as successful, and three categorized as lessons learned that presents the opportunity for improvement. Comparing these two departments does not provide a definite answer for needs of first responders in all cities because every situation is not the

same. However, documenting the identified trends and patterns allows other regional

plans across the nation to gain insight of the challenges encountered regarding the

response requirements if a similar event occurs. The aim is to develop solutions and

contingency plans that will mitigate the devastation of the incident. How well the MARC

matches up to these requirements, offers awareness to MARC officials of the

improvements and sustains needed to effectively respond to an unpredictable, large-scale

violent attack such as the Boston Marathon bombing.

Summary

This chapter covered the purpose of the research and justified the selection of the

chosen method. Pragmatism is the basis of the study. The "how" and "why" of the results

of the analysis is the focus to answer the primary research question. The analysis of the

case study comparison and the DSCA publications will answer the secondary questions

concerning Title 32 involvement and the assistance the military can provide. The table

displays the critical lessons from the Boston Bombings and compares Boston's response

to MARC of 1981 and MARC's current capability. This chapter also describes the factors

evaluated in each case study and the meaning of the evaluation criteria for each. The

study aims to examine MARC's potential effectiveness via its emergency plans and

guidance, and if it compares with the capabilities of a much larger metropolitan area. The

methodology table provides the factors used to the evaluate the emergency response

systems. The results of the literature will produce a completed methodology table found

in chapter 4. The table represents the evaluation of each case study and provides details

from the literature review supporting the evaluation.

CHAPTER 4

ANALYSIS

Introduction

The previous chapters introduced the backgrounds, the literature reviewed, and the methodology used to direct this study. The primary research question is how does MARC compare to the emergency response capabilities of larger metropolitan areas? This case study comparison of the MARC and Boston provides recommendations and awareness to the importance of denying complacency regarding emergency response and realizing the security of the homeland is everyone's responsibility. The whole community approach involves governments, non-government agencies, first responders and most importantly individuals of the community.

The intention of chapter 4 is to assess the MARC and the resources it possesses against the lessons learned and best practices documented from the Boston bombing. The capability identified by the Boston's reports and the MARC's response plans will determine whether the MARC can provide that resource. The focus is to bridge any gaps regarding the regional framework and plans of the MARC with the goal of improving and creating more versatility amongst regional emergency frameworks. The introduction of the findings of the Hyatt Skywalk collapse sets the foundation for the MARC and the deficiencies noted during the event. Evaluating the MARC from the lessons learned at Boston seeks to measure the MARC's ability to serve as the model for regional systems across the nation.

The evaluation of the MARC uses qualitative methodology to focus on achieving the desired outcome of maximizing resources to improve emergency response

effectiveness. Finding the relationship of the intended effect of Boston's response elements and MARC's resources provides benchmarks of sustained practices. The lessons learned are the key improvements noted; these improvements allow MARC to gain an understanding of Boston's shortfalls during its response. The identification of gaps enables review of MARC's plans and actions to identify similar shortcomings or if it has the capability that Boston required. MARC's resource capability will determine its versatility to respond to an event that a much more extensive urban area had to manage.

The research methodology table found in chapter 4, explains the evaluation of six best practices and lessons learned from the Boston incident and assesses the required capability across the three mass casualty incidents reviewed. The (+) plus symbol, indicates that the review of the literature concluded that respective capability was available and its use during the incident benefited the response outcome. The (-) minus symbol, indicates that the respective capability is an area of opportunity to improve. The (_) blank symbol, indicates that the respective capability was not available at the time for research.

The reasoning behind analyzing the case study of Boston is to highlight an emergency response plan's training and best practices. In the case of the MARC, in 1981, the Kansas City region has previously dealt with the deadliest structural collapse prior to the 9/11 attacks.[76] Revisiting MARC's capability identifies growth within the system

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[76] Christopher McFadden, "Understanding the Tragic Hyatt Regency Walkway Collapse," Interesting Engineering, July 4, 2017, accessed April 2, 2018, https://interestingengineering.com/understanding-hyatt-regency-walkway-collapse.

after a 32-year period and intended to evaluate relevance regarding the response of current threats.

<u>Primary Research Question</u>

How does the MARC compare to the emergency response capabilities of larger metropolitan areas?

Table 3.   Research Methodology Table--Evaluated

Best Practices (Boston)	Hyatt Skywalk Collapse	Boston Marathon Bombing	Current MARC
Mutual Aid Relationships	(+)	(+)	(+)
Rehearsals/Training Exercise	(_)	(+)	(+)
Multiple forms of Communication	(+)	(+)	(+)
Lessons Learned (Boston)	Hyatt Skywalk Collapse	Boston Marathon Bombing	Current MARC
Mutual Aid Commo	(+)	(-)	(+)
Triage Tagging	(-)	(-)	(+)
Infield-Commander	(_)	(-)	(+)

Source: Created by author. Table 3: (+) designates positive effects on the outcome of each case study. (-) designates an adverse outcome. (_) indicates that the capability evaluated was not available.

The structural collapse of the Hyatt was a nonviolent occurrence, and law enforcement's primary utilization was for traffic control and emergency route clearance.

This comparison does not evaluate law enforcement's detailed response regarding apprehending the suspects during the Boston event. The primary focus regarding law enforcement for this study is to identify the best practices observed and communicate the lessons learned for more efficient emergency and cohesive response for the first responder community.

The first portion of chapter 4 examines the similarities of the Hyatt and Boston events to recognize the likely needs of incident response. The second portion of the chapter identifies the differences between the two events and explore the present state of MARC and its ability to perform necessary tasks in response to a violent attack. The last portion of the chapter gives an overview of the assistance that Title 32 provides to offset deficiencies, concluding the chapter summary.

The inclusive criteria selected intends to reveal the need to examine major U.S. population areas and the ability to expand its operational reach to smaller surrounding communities. The themes of communication, collaborative training, and unified effort are fundamentals found within the NRF and identified to the MARC during the response to the Skywalk collapse. The analysis of this chapter focuses on proving or disproving whether the MARC is capable and equipped to better handle this situation due to improvements in its system and constant enhancement of its framework.

Exploration of the MARC different response plans and policies found in this chapter seeks to determine its ability to respond to the Boston bombing. The evaluation of the plans and resources of the MARC against the lessons learned and best practices aim to confirm its capability. The purpose is to determine whether the size of the metropolitan area is insignificant, but the overall preparation, planning and "whole

community" approach solidifies the relationship between the emergency planning of the two regions.

<u>Present Day MARC vs. Hyatt Challenges</u>

The literature reviewed indicated several factors that would have improved the Hyatt response. The formation of tiered response and the use of incident command allowed an orderly operation with a focus on utilizing subject matter experts to their best ability. A full analysis of this element of the response poses the question, does the MARC have a published incident command structure that is open to the public for viewing? Providing public access of information on an easy to use website is not only good for transparency, but it also serves as a reference for volunteer first responders in the event the need for them arises, for availability to help. Overall, the Hyatt received praise from medical and law enforcement to organize its incident command operation, but it was impromptu. The assumption is that the more familiar executors are with the plan, the faster the triage and transport will take place.[77]

The MARCER is responsible for developing MARC's mass casualty planning doctrine titled *Regional Mass Casualty Incident Plan for Metropolitan Kansas City* (MCIP) and utilizes the ICS mentioned in the NRF. While the plan does not explicitly direct local departments' operations, it serves as the guide to the regional EMS

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[77] Franc, "The Hyatt Regency Skywalk, Lessons Learned from a Structural Collapse."

community for consistency in execution.[78] The ease of use of the website directs

interested viewers to access an appendix that gives example checklists for the duties of

each position. The thoroughness of this MCIP may not tackle all the challenges of an

emergency scene, but the foundation and products available that serve as potential guides

are noteworthy.

The Hyatt response noted the need for triage identification. The reports show the

Kansas City emergency plans included triage tagging within its plans at the time of the

incident, but its use did not take place. Triage tagging was not the only deficiency noted,

but also, the inability to adequately identify volunteer first responders as well. The need

for visual and verbal understanding provided to appropriate personnel on the ground of

the incident saves time. Observations from the scene note that time was crucial for

transport and the inability for on- scene personnel to work with unidentified medical first

responders slowed treatment.[79]

MARC easily addresses this issue by describing its process regarding the

identification of emergency response personnel. The medical providers wear colored

vests, and their area of operations have flags posted.[80] Most importantly, simple vests and

flags give responding units clear indication of who the initial responders to the scene are.

The reason for this importance is that members new to the scene do not know if ICS is in

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[78] Mid-America Regional Council, "Regional Mass Casualty Incident Plan for Metropolitan Kansas City," Accessed May 2, 2018, http://www.marc.org/Emergency-Services-9-1-1/pdf/MCIPLAN_Final_April2015.aspx.

[79] Orr and Robinson, "The Hyatt Regency Skywalk Collapse," 602-603.

[80] Mid-America Regional Council, "Regional Mass Casualty Incident Plan for Metropolitan Kansas City," 10.

effect and having properly identified incoming responders creates much needed situational awareness to all.

MARC vs. Boston

The Boston bombing has different variables involved than the Hyatt regarding challenges, requirements, and advancement of emergency planning. The Hyatt occurred more than 30 years before Boston, but the key to this analysis is the similarity of resource needs. Boston was indeed a crime scene, and naturally, law enforcement will always take the lead role at crime scenes. The exploration of the Massachusetts Emergency Management Agency AAR published a detailed report concerning best practices and key lessons. It is necessary to keep in mind that this analysis is more pertinent to the current plan of MARC because the Boston event is much more recent. MARC had 32 years to right its wrongs stemming from the Hyatt response which was not a hostile act, and the Boston event was the act of a violent terrorist attack that the MARC system has not experienced.

Since violence did not play a role in the first case study and a terrorist attack has not taken place in the Kansas City Metropolitan area, this case study seeks to identify weaknesses in capability that the MARC may have. In fairness, the Hyatt incident was not as large in scale as the Boston bombing, but Boston is a much larger metropolitan area concerning population. The potential for both EMS departments to exhaust available resources were still possible.

The first sustain regarding the Boston incident is the evaluated level of competency EMS personnel displayed and performed during the event. The praise of the AAR notes that the city of Boston was very proactive in collaborative training after the

9/11 attacks. Medical personnel were ready to respond and took quick action. Participation in several training events along with regional communication provided familiarity with procedures and processes.[81] This is not surprising since rehearsals are necessary before any exercise in training. Drilling is key to proficiency, and the perception of Boston EMS was that as a proficient team and received praise for doing an excellent job.

Emergency personnel hold an obligation to the public it serves to execute efficiently to save as many lives and preserve as much property as permits. MARC does not have terrorist attack experience, therefore, the obvious question is, is it prepared for one? The MARC's website has a massive amount of information and numerous appendices and supporting documentation. The training information pointed to the same concept as Boston.

The regional training uses biannual collaborative training events along with documented training calendars that MARC shares across all subcommittees; the website posts this information for the public's situational awareness as well.[82] The benefit to an operation like Boston's bombing is the likelihood that off-duty EMS reporting to the scene have familiarity with the policies and procedures of the system. The individuals have trained together and know organic methods. Active participants in the community that attend MARC's training and meetings can communicate to their neighbors the proper ways to assist without becoming a distraction during a response. Once again MARC

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[81] Osterweil, "World Class Emergency Response in Boston Marathon Bombing."

[82] Mid-America Regional Council, "Training and Exercise Subcommittee."

emphasizes the need for community involvement, thus supporting the principles of the NRF's whole community approach.

The different forms of communication used is the second sustain from the report, social media along with a mass communication system provided the link between 911 personnel and the public. Boston's communication effort grew massive before, during and after the detonation; granted the Boston Marathon is a huge event and a Boston holiday, but social media played a huge role. The fact is, the use of social media not only expanded awareness to those not watching television that day, but the public's ability to access real-time information enabled the public to take immediate action due to situational awareness.

The use of high-quality cameras also played a role by pushing out images of the suspects and alerting residents to shelter in place to avoid interfering with law enforcement's response. MARC's website alone illustrates the importance placed on different forms of media to communicate. MARC also utilizes social media to inform and alert the public to real-time events and potential hazards. MARC has active Twitter and Facebook accounts available for the public's view which enables government-community communication. Similarities between the MARC and Boston is evident regarding radio systems, MARC has the MARCER radio system, and Boston has Boston Area Medical Alert radio. Boston Area Medical Alert radio enabled Boston personnel to communicate to all EMS units regarding the location of staging areas and request additional resources to the scene. [83] The MARCER radio system received updates in 2012, which allows

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[83] Massachusetts Emergency Management Agency, "After Action Report for 2013, Boston Marathon Bombings Released," 39.

communication between area hospitals and over 30 EMS agencies.[84] MARC also has the

Regional Area Multi-Band Integrated System, which is a regional interoperable radio

system that allows multi-agency communication during a regional or multi-jurisdiction

event.[85]

The final note from Boston's report is to continue emphasizing and building

mutual aid relationships. The report found that Boston's network of responders and

partners was impressive, and the availability of resources was instrumental to the

response's success.[86] The amount of personnel from all levels of government supports the

observation that Boston has made significant progress in developing mutual aid

partnerships and state and federal government relationships. Before the response, the

identification of key tasks through mutual aid meetings and discussions led to the need

for minimal paperwork and coordination once the response began.[87]

The lessons learned from the Boston bombing is significant because assuming

that the economic and resource allocation capability is of greater scale compared to

smaller cities is not unreasonable. The challenge for MARC is to demonstrate the

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[84] Mid-America Regional Council, "MARCER Radio System," accessed April 13, 2018, http://marc.org/Emergency-Services-9-1-1/MARCER/Activities/MedChannel-Radio-System.

[85] Mid-America Regional Council, "RAMBIS," accessed April 12, 2018, http://marc.org/Emergency-Services-9-1-1/Interoperability/Systems/RAMBIS.

[86] Massachusetts Emergency Management Agency, "After Action Report for 2013, Boston Marathon Bombings Released," 124.

[87] Ibid.

relevancy and ability to function as an interoperable and fully capable emergency

response framework regardless of its size.

The first lesson from Boston is the lack of mutual aid communication, especially

regarding the Watertown response. This period of the response reveals the potential

danger and the risks associated with a lack of command and control at a catastrophic

incident. The scene was inherently chaotic, and tension-filled since the beginning of the

incident, and only elevated with the arrival of more police officers from surrounding

areas. The danger of fratricide and negligent discharge added to the environment due to

self-deployment of some police officers.[88] Research of MARC reveals that the

Metropolitan Emergency Information System's (MEIS) creation was to cross-

communicate between first responder systems. The system is a secure web-based system

that allows major role players such as government and nongovernment agencies and

private sector partners as well as nonprofit organizations to communicate daily and

during times of emergency.[89] The significance of this system is that the likelihood of

responders not having synchronization decreases due to proper information sharing and

relationship building. The system allows for electronic tracking of responding personnel

as they enter and exit an emergency scene. The system also links over 100 agencies to

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[88] Massachusetts Emergency Management Agency, "After Action Report for 2013, Boston Marathon Bombings Released," 117.

[89] Kavan Peterson, "Kansas City Develops Internet-Based Security System," PEW Stateline, August 21, 2003, accessed May 2, 2018, http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2003/08/21/kansas-city-develops-internetbased-security-system.

connect via the internet to locate and resource the appropriate equipment and personnel from neighboring communities.[90]

The second lesson is the use of triage tags. The AAR states that the first responders on the scene arrived without proper triage identification; this led to hospitals receiving patients without knowledge of the seriousness of their injuries. The Hyatt case also notes the need for triage tags, and like the Hyatt, Boston's emergency response plan calls for the use of triage tags also. The speed of patient contact and quick initial triage at the scene is vital to survival, but proper identification and communication to emergency facilities are just as important. The hospitals must prepare equipment and other resources such as surgical teams and bed space; proper notification and warning can undoubtedly speed up the process.[91]

The final lesson from Boston is that every effort to train together as a group is mandatory; the regional teams performed well individually, but issues with unified command were evident. The AAR reported the lack of an infield commander confused thousands of out of town police officers waiting for deployment to assist. Therefore, without the proper ICS staff members present, this caused much of the incoming personnel not to receive proper guidance regarding roles and responsibilities.[92]

The focus of this study is the first responder aspect, however; law enforcement is key to maintaining law and order; not to disrupt it. The literature highlights the need for

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[90] Peterson, "Kansas City Develops Internet-Based Security System."

[91] Massachusetts Emergency Management Agency, "After Action Report for 2013, Boston Marathon Bombings Released," 92.

[92] Ibid., 113.

all first responders to train together, to prevent mishaps such as fratricide and self-deployment when conducting operations. The fact that officers self-deployed could have escalated EMS response due to a significant number of gunshot wound victims and miscommunication between regional partners unfamiliar with the area.[93]

Defense Support of Civil Authorities Assistance

JP 3-28 is the military's guidance regarding state or federal assistance to civil authorities in the event of a national disaster. This study only explores Title 32 entitlements and assistance as this orders NG members to service under the command of the respective state governor and Title 10 assistance is the employment of federal forces under the command of the President of the United States. ADRP 3-28 supports the general guidance of the NRF, and in a tiered response, activity always begins at the local level and elevates to the state and finally the federal level. The tiered response almost always designates the NG as the military's first responders in support of their respective state's first responders, keeping the federal forces as a real reserve.[94]

DSCA is a tool that a state's Governor can utilize when all available state resources are exhausted. The Governor in question must ensure that he/she is employing state military personnel under Title 32 orders as a last resort to maintain good stewardship of the taxpayer's resources. The capabilities within the NG are the subject matter experts in fields such as EMS; communication; search and rescue; and civil

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[93] Massachusetts Emergency Management Agency, "After Action Report for 2013, Boston Marathon Bombings Released," 117.

[94] Headquarters, Department of the Army, ADRP 3-28, *Defense Support of Civilian Authorities*, 1-7.

engineering.[95] One of the most critical aspects of NG assistance is the awareness of its interstate agreements. In an emergency, a state's governor can request from another state assistance with the proper documentation. This ability enables speed of action which decreases the response time to receive goods and services.[96]

The Boston bombing involved many law enforcement officials; Title 32 allows the NG to act in a law enforcement capacity. This assistance provides local and regional law enforcement departments greater operational reach due to additional vehicles, personnel, and weaponry. Indeed, the goal is to utilize the NG in the event of a disaster to act primarily as an enabler, but the option becomes available to utilize them in a larger operational role.

The most important aspect of DSCA assistance is that Title 32 is a temporary solution, which is beneficial to all taxpayers because utilizing the U.S. military is not cheap. The DSCA focus of assisting civilian authorities to regain lost capability exudes responsible stewardship of taxpayer money and state resources. The ability for Title 32 forces to bridge a local government's capability gap also minimizes response delay for the excavation, triage, and transport of victims.

<u>Summary</u>

This chapter gives an analysis of the literature reviewed and provides the answers to the research questions. MARC addresses the best practices assessed from the Boston

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[95] Headquarters, Department of the Army, ADRP 3-28, *Defense Support of Civilian Authorities*, 1-13.

[96] Ibid., 1-12.

study of mutual aid communication, collaborative rehearsals, and utilization of multiple forms of communication, not only with emergency medical services and law enforcement but with the citizens directly.

The RHSCC is the regional coordination committee that interacts with agency officials and is the central coordinating body for the mutual aid meeting, coordination and training. Every year thousands of EMS personnel train together under the coordination of RHSCC to build trustworthy relationships needed to respond collaboratively.[97] The RHSCC serves as the strategic-operational committee that organizes the training plans and engages agencies across multiple jurisdictions.

MARCER is responsible for the mass casualty MCIP, which is the tactical guidance concerning the response. The MARCER is responsible for the emergency rescue operations during an incident. The MARCER radio provides the cross-communication needed during the Boston event and at the very least, if this only enables communication via EMS departments, each EMS department certainly has communication with its law enforcement and dispatch elements.

The literature review identified that social media played a huge role in maintaining the public's situational awareness as well as communicating with response officials.[98] Instantaneous interaction and visual depictions of the suspects proved vital during the law enforcement phase of the response. MARC also supports community interaction with social media nodes like their website, Twitter, and Facebook. MARC

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[97] Mid-America Regional Council, "Training and Exercise Subcommittee."

[98] Stelter, "Boston Commish."

also has the MEIS, which is a web-based system that allows authorized users to connect

and share contact information and request mission-specific equipment and personnel to

regional EMS departments, government, and nongovernment agencies.[99] The MEIS and

Regional Area Multi-Band Integrated System provide the nodes to ensure proper incident

command.

Title 32 provides EMS assistance, communication, search and rescue, and civil

engineering. If activated under Title 32, the NG can also provide urban search and rescue,

health services, and law enforcement, which provide additional resources if local

governments exhaust response capability. The literature emphasized that authorization of

its use is enforced by the governor, but the governor must only utilize this resource as a

last resort.

The final chapter will show the correlation between the data researched and the

results that will provide recommendations. Areas of further study will provide additional

field related topics to research and expand the knowledge base of not only the homeland

security, but to the public also.

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[99] Peterson, "Kansas City Develops Internet-Based Security System."

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter is the culmination of the study. The focus of research review centered on mass casualty incident characteristics and potential remedies for noted deficiencies concerning response. The primary research question was, how does MARC compare to the emergency response capabilities of larger metropolitan areas? The secondary question was, what assistance is available under Title 32 that can bridge unknown capability gaps of the MARC in the event of a disaster? The first section will identify the results from the analysis and describe the relevance of MARC's capabilities and provide the basis for recommendations and areas for further study found later in the chapter. The recommendations section will take the results from the study and provide suggestions for improving the response system according to the guidance directed within the NRF. The next section details areas for further study that will provide situational awareness to threats and vulnerabilities that exists domestically. These areas provide the DHS the opportunity to research and analyze different events and scenarios that will encourage proactive incident planning and response training. The final section is the chapter summary and concludes the study.

Findings

1. How does the MARC compare to the emergency response capabilities of larger metropolitan areas?

The findings from the research revealed that the current MARC holds much relevance regarding the capability and modernization of its emergency response plans. The effects of the Boston Marathon bombing created an opportunity for response framework improvement, and MARC has the right training plans and organizational structure to lead the movement. MARC addresses the best practices assessed from the Boston study of mutual aid communication, collaborative rehearsals, and utilization of multiple forms of communication, not only with emergency medical services and law enforcement but with the citizens directly.

The best practices observed from Boston leads to the MARC's website to discover matching or similar capability. Mutual aid communication is a very significant element of response to a large-scale incident due to the influx of responders and resources. The MARC enables this coordination with the communication enabled by MARCER radio system, which provides communication capability to area hospitals and over 30 EMS agencies.[100]

The next capability observed as a best practice during the Boston incident was collaborative training and rehearsals. Boston received much praise for the technical competency of its response staff and hospital personnel. Boston officials praised the numerous training exercises planned and conducted in the aftermath of 9/11. The MARC presents training calendars and points of contact names and numbers to inquire and coordinate. The government and non-governmental agencies working during the Boston

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[100] Mid-America Regional Council, "MARCER Radio System."

disaster actively participated in coordinating the response and worked well together. The MARC encourages and facilitates the same engagement via its RHSCC.[101]

MARC shows compliance with the NRF guidance regarding teambuilding and engaged partnership. The whole community approach is noteworthy also due to MARC's continuous open invitation to the public to participate in training events and meetings.

Boston found great success with operating different mediums of communication. The case studies prove that communication is crucial to timely and efficient response and MARC has invested in building its communication capability. This system promotes the NRF's principles of tiered response and readiness to act; involving the whole community.

Boston's AAR noted some deficiencies that did not cause the response to become a failure but could use improvement. The key lessons learned are mutual aid communication, triage tagging and lack of unified command due to the absent field commander. Researching MARC's website has the details of whether it possesses the capability that Boston needs to modify or improve.

The MARCER radio system links mutual aid partners on one network, increasing situational awareness with multiple channels. The Hospital Emergency Alert Radio system serves as the backup to the MARCER'S primary network so MARC has a mutual aid communication contingency plan and it stays in effect. The collaboration of area hospitals, emergency responders, and the incident commander provides the communication links necessary for shared understanding.[102]

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[101] Mid-America Regional Council, "Training and Exercise Subcommittee."

[102] Mid-America Regional Council, "Regional Mass Casualty Incident Plan for Metropolitan Kansas City," 15.

Like the Hyatt Skywalk event, the absence of triage tags created an issue for medical personnel in Boston to quickly identify the identity and seriousness of injury for transported patients. The MARC's mass casualty plan emphasizes the use of different patient identification techniques and directs the use of triage instruments and patient tracking sheets.[103] MARC's modernization shows that the system has learned from the Hyatt event and has made modifications to correct its deficiency.

The final deficiency noted with Boston's response was the lack of an identified in-field commander. The NRF calls for a unified command to enable unified effort, the assembly of thousands of emergency personnel that did not have extensive training as a cohesive unit created chaos.[104] The Regional Coordination Guide details the series of actions needed during a multi-agency event. The coordination guidance's development began with Metropolitan Emergency Management Committee and other local government officials and response personnel. The Kansas City Area Metropolitan Regional Coordination Guide is endorsed by the Regional Homeland Security Coordination Committee, and focuses on interoperability between the different agencies of the region to create unity of effort during a response.[105]

2. What assistance is available under Title 32 that can bridge an identified capability gap within the MARC in the event of a disaster?

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[103] Mid-America Regional Council, "Regional Mass Casualty Incident Plan for Metropolitan Kansas City," 29.

[104] Massachusetts Emergency Management Agency, "After Action Report for 2013, Boston Marathon Bombings Released," 113.

[105] Mid-America Regional Council, "Regional Coordination Guide."

The NG activated under Title 32 enables a state to utilize an identified capability to supplement a civilian government or entity's deficiency. The forces operate under the orders of the state's governor, and they stop operations at the order of the state's governor. The extreme cost of the military obligates the commanding official to use the NG as a last resort. The focus of the NG in DSCA emergency response is to bridge capabilities within the civilian sector temporarily until the civilian sector can regain or mitigate their deficiencies. The use of interstate agreements allows multiple governors to assist if additional capability becomes necessary.[106] Title 32 authorization does not limit assistance to just resources and material but also provides personnel operating in a law enforcement capacity.

According to ADRP 3-28, Title 32 status authorizes the use of personnel for law enforcement, homeland defense, security of strategic facilities and support for chemical, biological, radiological or nuclear incidents.[107] Title 32 does provide the bridge for any major capability gaps that would assist the MARC, if requested. Most importantly, regarding Title 32 assistance, is that officials should utilize its capabilities as a last resort.

As the state's commander in chief of NG forces, governors' Title 32 authority enables a broad range of capability if needed.[108] Civilian and military authorities must continue to evaluate its planning and training cohesively to strengthen civilian-military interoperability.

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[106] Headquarters, Department of the Army, ADRP 3-28, *Defense Support of Civilian Authorities*, 1-12.

[107] Ibid., 1-23.

[108] Ibid., V.

The findings of this study led to the conclusion that to obtain the whole community approach guided by the NRF, emergency response systems are dependent upon adhering to the NRF's principles, and that compliance will lead to nationwide standard operating procedures. The operational planning doctrine accompanied by the MARC's transparent website, provides a starting point for other regions to enhance their systems. Further review of the website provides a template for communities to develop a whole community approach-based environment. The MARC's website is not only emergency services focused, but community welfare and economic development are key areas of focus.

The framework of MARC is in direct compliance with the NRF and more resources from the DHS can expand and promote its framework as a national model.

Recommendations

The analysis of literature reveals that the MARC has the capabilities needed for the response of the Hyatt Skywalk collapse and the Boston Marathon bombing, areas of opportunity are still available to improve the MARC's system. Boston is a major metropolitan of the U.S., modifications to not only their planning and training, but emergency frameworks nationwide can benefit from the MARC's training plans and organization.

MARC has the doctrine to build cohesiveness within the community, but it is a volunteer-based organization and cannot mandate members to adhere. The opportunity is available to further the whole community approach and increase the public's awareness to trust MARC's principles, to encourage full cooperation from the community. The MARC also has a great opportunity to disseminate its response plans and structure to

larger cities. The possibility for cities with a grander resource and personnel inventory matched with MARC's superior organizational structure can have a significant impact on the enhancement of regional response systems nationwide.

Organizational expansion is key to the MARC reaching its full potential. A recommendation is for MARC to encourage expansion throughout the Midwestern states and eventually communicating and training with bi-coastal partners to continue the necessary networking and relationship building that makes it effective within the Kansas City metropolitan area. The MEIS database provides the capability to further the networking ability of the homeland security community nationwide.

The current membership is respectable, but MARC holds an obligation to grow membership and its national lines of communication. If the MARC conducts an active recruiting campaign and expresses the value of joining its organization to municipalities outside of the current area of operation, the assumption is that government officials will welcome the partnership and the US will obtain cohesive operational understanding in the event of a disaster.

A recommendation obtained from the research is to conduct a Doctrine, Organization, Training, Materiel, Learning, Policy, and, Facility (DOTMLPF) analysis and further review a more detailed approach to improving regional emergency response systems. The analysis will detail the capabilities needed within each subset that provides the best value regarding civilian and military interoperability.

Finally, the government leaders that head the MARC's subcommittees must mandate compliance through municipal policy. Currently, the MARC is non-governmental, but the organization's committee leaders hold positions as municipal

leadership and can implement policy. Government officials must solicit funds for additional resources and training opportunities from the DHS, the results from the training will identify best practices, lessons learned, and continue to expand the capability of the council.

<u>Areas for Further Study</u>

Chapter 1 referenced the active shooter scenario and the unpredictability that it presents to not only law enforcement agencies but all emergency response personnel. The Federal Bureau of Investigation data revealed that the active shooter scenario is becoming more frequent and that emergency response systems can benefit from collaborative training. One area for further study is to identify the required training that best mitigates the effects of the active shooter scenario? The Pulse nightclub shooting in 2016, was the deadliest mass shooting at the time, evaluation of this case may lead to innovations in emergency responder training and update doctrine to execute response better in the event of an active shooter scenario. The Orlando emergency effort received praise from investigators and hospital personnel. The whole community effort by civilians and the care provided by the emergency medical staff contributed to every patient admitted to emergency departments surviving the attack.[109]

The Department of Justice has not published the AAR as of the conclusion of this research, and the details of the collaboration of emergency medical personnel along with

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[109] A. J. Heightman, "Lessons Learned from EMS Response to the Orlando Pulse Nightclub Shooting," *Journal of Emergency Medical Services* (January 24, 2017), accessed April 10, 2018, http:///www.jems.com/articles/2017/01/lessons-learned-from-ems-response-to-the-orlando-pulse-nightclub-shooting.html.

law enforcement's simultaneous apprehension of the suspect(s) are important to improve the active shooter scenario. The publication of the AAR will give law enforcement's findings on the successes and areas of improvement learned from the incident. The Pulse scenario is very similar to the case studies reviewed regarding the potential to exhaust area resources. The need to find advancements in procedure begins with research and ends with training exercises with different scenarios. The results of the training will lead to the discovery of common themes and assess the vulnerabilities and risk associated with each scenario.

Recent natural disasters such as hurricanes and tornadoes have involved the use of NG units from various states as well as nongovernment agencies. Cases are available to further study on DOD involvement and cooperation during these events. Hurricanes such as Katrina, and tornadoes that devastated Kansas and Missouri provide opportunity to bolster the effectiveness of DOD resources and personnel during disasters. The opportunity is also available to improve systems and upgrade military-civilian training exercises.

The case study of Hurricane Harvey is worthy of analysis. The devastation of Harvey is comparable to Hurricane Katrina regarding costliness and governmental and non-governmental agency involvement. More than 30,000 federal partners have assisted or are currently assisting with the response and recovery effort of the incident.[110] The DHS noted an aggressive unified effort of response involving local residents, state and

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[110] Department of Homeland Security, "Hurricane Harvey Snapshot," September 4, 2017, accessed June 7, 2018, https://www.dhs.gov/news/2017/09/04/hurricane-harvey-snapshot.

federal agencies was key to producing an overall positive response upon the storm's initial landfall. This effort led to the rescue of "more than 16,000 individuals and 1,500 pets."[111] It is notable that DOD's involvement was significant, over 15,000 NG personnel from over 40 states have supported the operation, as well as, more than 2,000 federal law enforcement personnel.[112] What coordination plan was in effect, and how was the plan executed? The opportunity exists to explore planning and execution of this mission and release the results to the public to encourage the whole community effort. The logistical and communication resources needed to respond in this manner needs reviewing also. Responding to this event incorporated preparedness and planning structures that regional emergency systems can surely use in the future.

The final area for further study, is to research the characteristics of domestic terrorists and analyze what opportunities exist for domestic terrorism. The case study of the Boston Marathon Bombing leads to the exploration of the background, motives, and desired outcome of domestic terrorists. Understanding key information regarding domestic terrorists enables the DHS to review domestic vulnerabilities. For example, the possibility of a bacterial or viral outbreak involving the nation's agricultural industry can lead to a catastrophic outcome to the US population. Referencing an article published in 2013, it explains that California is credited with producing 90 percent of the broccoli

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[111] Department of Homeland Security, "Hurricane Harvey Snapshot."

[112] Ibid.

produced in the US.[113] The ramifications of rogue personnel tainting the broccoli crop will not only cause social, and political devastation; but economic devastation as well.[114] The effort to mitigate agricultural sabotage is vital not only for the US population, but can have a negative global effect for every nation that imports its livestock and produce. Identifying the potential for attacks on the nation's food source and actively researching causes and effects, provides the foundation to obtain funding and materials to mitigate the risks.

Summary

Chapter 5 referenced the findings from the literature analyzed in chapter 4 to answer the primary and secondary research questions. The MARC has refined its operational footprint by adhering to the NRF's principles of engaged partnership, tiered response, maintaining flexible, scalable, and adaptable operational capability, unified effort, and rapid approach. The Kansas City metropolitan's comprehensive system enables the framework the flexibility to modify, and innovate its planning, training, and organizational structure to respond to current threats.

MARC's focus on interoperability and whole community interaction makes it a model for other regions to follow. The MARC follows the NRF's principles and emphasizes the importance of the ICS. The information available from the MARC's

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[113] Brian Palmer, "The C-Free Diet," Slate.com, July 10, 2013, accessed June 7, 2018, http:www.slate.com/articles/health_and_science/explainer/2013/07/ California_grows_all_of_our_fruits_and_vegetables_what_would_we_eat_without.html.

[114] Peter Chalk, *The Bio-Terrorist Threat to Agricultural Livestock and Produce* (Santa Monica, CA: RAND Corporation, November 2003), accessed June 7, 2018, https://www.rand.org/content/dam/rand/pubs/testimonies/2005/CT213.pdf.

website showcases transparency to the public and openly invites participation from communities throughout the region. Research needs to continue regarding the direction of modernizing and enhancing emergency response capability through all levels of government.

Title 32 authority further enhances a regional response system by bridging capability gaps once resources are or near exhaustion. The Title 32 forces can perform engineering, law enforcement, and health services. Being the state stewards, governors have a responsibility to properly manage Title 32 forces and should only utilize them as a last resort.

Further areas of study are active shooter incidents, natural disaster recovery, and agro-terrorism. These topics contribute to public awareness and invites suggestions and encourages research to mitigate the risks associated with each. Properly identifying threats and proactive planning is the way to lessen the devastation of a disaster. Communities must team with DHS to ensure the resources are available to maintain relevancy in emergency response practices.

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