

2020

## First Responders' Perceptions of Diversity Training Practices to Assist At-Risk Populations

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# Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Sara Parry

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Walden University  
2020

Abstract

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Populations

by

Sara Parry

MA, Walden University, 2016

BS, State University College at Cortland, 2001

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

Walden University

February 2020

## Abstract

New York State first responders, including police, fire, and emergency medical personnel, often lack consistent awareness and diversity training to assist at-risk populations, which can pose challenges to preparedness and response strategies during disasters and emergencies. The purpose of this study was to assess the awareness and diversity training practices among first responders across New York State in assisting people with at-risk characteristics during disasters. Punctuated equilibrium theory provided the framework for the study. Data from interviews with 15 participants and from historical and legal documents were coded and analyzed to identify themes. Findings indicated that there had been a lack of consistent awareness and diversity training provided to first responders in New York State, and that awareness and diversity training would help first responders assist at-risk populations during disasters. Findings indicated a need for systemic changes across New York State to provide consistent awareness and diversity training to first responders. Findings may be used to establish diversity training curricula for first responders assisting at-risk populations during disasters.

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## Dedication

Draken, I thought I had it all figured out. Then you came along. Being a full-time single mom, a full-time emergency manager, and a full-time student was proof that I was wrong. I wouldn't trade all our laughs, smiles, and adventures for anything. If I can leave you with anything, I leave you with this: Reach for the stars. You can be anything you want to be as long as you keep putting one foot in front of the other. I believe in you. I love you.

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## Chapter 1: Introduction to the Study

### **Introduction**

The State of New York experiences a variety of disasters and emergencies that may result in the loss of life or damage and destruction of property, and may negatively affect community members, especially those considered to be at-risk populations and the people who respond to the disasters and emergencies as first responders. At-risk populations are

individuals or groups whose needs are not fully addressed by traditional service providers or who feel they cannot comfortably or safely use the standard resources offered during preparedness, response, and recovery efforts. These groups include people who are physically or mentally disabled (e.g., blind, deaf, hard-of-hearing, have learning disabilities, mental illness and/or mobility limitations), people with limited English language skills, geographically and/or culturally isolated people, homeless people, senior citizens, and/or children.

(Emergency Management Accreditation Program [EMAP], 2016, p. 1)

Community disasters can result from natural or human-caused emergencies that pose challenges to first responders in their response to at-risk individuals based on individual and collective preparedness plans, establishment of a relationship between at-risk populations and responders, and the availability and attendance of awareness and diversity training to first responders. First responders, who include police, fire, and emergency medical personnel, often lack training, as training was overlooked or staff were not aware of agency policies for training to assist people with disabilities (National

Council on Disability, 2014). Providing first responders with awareness and diversity training may lead to better preparedness and response. This study was conducted to provide information, guidance, and a process for awareness and diversity training to support local first responder operations. To understand the current perceptions of first responders, I explored the background of incidents involving at-risk populations, applicable laws, and previous research. I assessed the awareness and diversity training of first responders from September 11, 2001 to the present day in New York State to establish better training curricula for first responders assisting at-risk populations during disasters.

### **Background**

To understand the current perceptions of persons at-risk, I looked to the history of care, abuse, and neglect of persons in New York State and nationwide. The background started before the September 11, 2001 attacks on the World Trade Center, so I investigated the full background so that current educational practices would be understood regarding how people with at-risk characteristics, especially people with disabilities, have been seen as a subpar population. Their needs have been disregarded and overlooked, as noted in Geraldo Rivera's TV exposé *Willowbrook: The Last Disgrace* in 1972 (Skinner, 1972) and *The New York Times* "Used and Abused" exposé series in 2011 (Hakim, 2011). A more detailed history and background regarding at-risk populations can be found in Chapter 2.

## **Legal Policies and Authorities**

From the implementation of the Civil Rights Act of 1964 to present-day lawsuits involving the Americans with Disabilities Act, legal policies and practices in New York State and the United States have provided legal guidance and practices to agencies, organizations, and individuals who provide services and/or emergency response to people considered at-risk. These legal policies and authorities have also allowed individuals with at-risk characteristics and their supporters to advocate for equal treatment under the law (US Department of Justice, n.d.; Good, 2011; Jones, 2010). Adoption of legal policies and practices based on action reports or lawsuits against state or federal governments following large-scale disasters, such as the Post-Katrina Emergency Management Reform Act of 2006 and the Robert T. Stafford Disaster Relief and Emergency Assistance Act, ensure the needs of people with at-risk characteristics are addressed before, during, and after the disaster (National Association of County and City Health Officials [NACCHO], 2014; Riscoe, Schlegelmilch, & Paturas, 2013; Jones, 2010). A more detailed description of legal policies and authorities can be found in Chapter 2.

## **Previous Research**

Limited research regarding at-risk populations has been conducted within the past 5 years. Research tends to be conducted immediately following an emergency or disaster affecting a specific population, as seen immediately following 9/11, Hurricane Katrina, and Superstorm Sandy. A full review of research studies can be found in Chapter 2. A brief description can be found below.

Keiser University (2004) concluded that every individual, regardless of abilities or disabilities, is entitled to services provided by emergency and response organizations. Additionally, Keiser University recommended that emergency responders must incorporate appropriate access and response into their planning and operations. Keiser University noted that first responders should not receive awareness and disability training during a disaster but prior to a disaster.

Research following Hurricane Katrina was conducted to determine the awareness of emergency managers regarding people with disabilities and whether their needs were considered. Rooney and White (2007) explored effective preparation practices and relief efforts from the perspective of participants with mobility issues who had experienced disaster. Rooney and White noted that although there were ADA requirements for accessibility, accessibility was an issue in evacuation planning and disaster training. Rowland, White, Fox, and Rooney (2007) explored the types of policies and practices in existence to ensure first responders and emergency personnel are trained to assist people with mobility impairments. Rowland et al. noted that people with mobility impairments were not supported by agency emergency plans and that emergency management planners had limited knowledge regarding the number of people with mobility impairments within the jurisdiction. White (2007) expounded on how there is a contemporary issue of emergency management and disaster preparation and response assisting people with disabilities. White noted that future studies were needed to bridge gaps in current disability programs, practices, and policies in order to avoid another response similar to Hurricane Katrina. Fox, White, Rooney, and Cahill (2010) conducted

a qualitative analysis regarding the psychosocial impacts of Hurricane Katrina on persons with disabilities and staff living on the American Gulf Coast. The research revealed a gap in critical supports within the community, inclusive of “police and fire, department services, postal delivery, road maintenance, electrical power, and access to food and clean water” (Fox et al., 2010, p. 237).

Reilly (2015) completed a case study comparing business continuity practices following Hurricane Katrina in New Orleans and the Fire at Rosepark Care Home in Uddingston, Scotland. Findings indicated the need for better training, inclusion in emergency management plans, and evacuation planning (Reilly, 2015). Clements (2010) discussed the use of functional need support services by comparing lawsuits following the Hurricane Katrina response and a 2007 lawsuit filed against the City of Oakland, CA. Clements concluded that advanced planning needs to occur, which includes collaboration with relevant stakeholders, and that accommodations are essential to planning and response activities.

Following Superstorm Sandy, Weibgen (2015) conducted a study about the legal rights and responsibilities that local governments have toward populations that are considered marginalized or at-risk. The study included Tropical Storm Irene and Superstorm Sandy, and how New Yorkers and responders had become “lulled into a false sense of security” (Weibgen, 2015, p. 2436). Weibgen described limitations of at-risk populations and first responders, such as social inequalities, the tendency to underplan for the needs of at-risk populations, the general misunderstanding regarding the needs of people with disabilities, and the prioritization of lives during an emergency.

Due to multiple types of physical and social barriers, emergency management plans do not include people with special needs; therefore emergency personnel are not trained to understand or assist those with special needs (Stough, Sharp, Resch, Decker, & Wilker, 2016). Research showed that because emergency managers are not trained in the unique needs of people with disabilities or other at-risk characteristics, local emergency management efforts rarely include community-level preparedness (Rooney & White, 2007; Fox et al., 2005; Kendall-Tackett & Mona, 2005).

Additionally, a 2014 report from the National Council on Disabilities and Department of Justice recommended comprehensive and continual staff training to ensure first responders are communicating effectively with people with disabilities. The report noted that staff training was critical and necessary; however, the report indicated that first responders lacked the training, training was overlooked, or staff were not aware of agency policies for training to assist people with disabilities (National Council on Disability, 2014). By assessing the awareness and diversity training of first responders from September 11, 2001 to the present day in New York State, I endeavored to establish better training curricula for first responders assisting at-risk populations during disasters. I also sought to determine the preferred training methods of first responders and to determine the awareness and diversity training policies across New York State.

### **Problem Statement**

Across first responder agencies in New York State, awareness and diversity training are not consistent, which can negatively impact the response and care of at-risk populations during disasters. David Whalen of Niagara University offered a voluntary

training program to educate anyone involved in emergency management with elements inclusive of people with disabilities and functional needs (Niagara University, 2018). The Federal Emergency Management Agency (FEMA, 2018) offered two voluntary trainings, IS-20.18 Diversity Awareness Course 2018 and IS-368 Including People with Disabilities and Others with Access and Functional Needs in Disaster Operations. Minimum standards for firefighting personnel, as noted in New York Codes, Rules, and Regulations Parts 426, 427, and 438, did not address training or educational protocols for awareness and diversity training to assist people with at-risk characteristics (New York State Division of Homeland Security and Emergency Services, n.d.). Training modules for EMT certification briefly addressed mental and physical illness that are prevalent in special needs populations (Aehlert, 2011) but did not include an awareness or diversity component and did not provide the responder with basic training in how to assist people with at-risk characteristics. However, agency-specific training curricula included an aspect of awareness and diversity, such as state agencies having annual mandatory trainings that consist of online modules touching on the basics of rights and responsibilities, workplace safety, sexual harassment in the workplace, and working together in a diverse workforce (Statewide Learning Management System, 2018).

Disasters affect people regardless of race, religious beliefs, ethnicity, age, gender, physical abilities, political beliefs, or socioeconomic status. Disasters affect people with access and functional needs, also known as at-risk populations. Disasters also affect the first responders assisting others. From the towers collapse on 9/11 to present-day natural disasters, events in New York State and nationwide have become lessons in how to

improve training and response efforts for future incidents. In this qualitative case study, I investigated the types of voluntary and mandatory trainings offered and received by first responders and explored how their lived experiences assisting people with at-risk characteristics during disasters could foster coordination for future education and training to ensure community engagement and preparedness at the first response level.

### **Purpose of the Study**

The purpose of this study was to assess the awareness and diversity training practices among first responders across New York State in assisting people with at-risk characteristics during disasters. The objective was to address the gap between the knowledge of first responders and their preparedness and response capabilities based on their level or type of training. I also assessed the practices of awareness and diversity training in first responder agencies. Further, I explored the attitudes of first responders regarding awareness and diversity training as well as their lived experiences assisting people with at-risk characteristics during disasters.

### **Research Question**

How has awareness and diversity training among first responders in New York State led to changes in preparedness and response strategies to at-risk populations during disasters after September 11, 2001?

### **Theoretical and Conceptual Framework for the Study**

#### **Theoretical Foundation**

Punctuated equilibrium theory is the theory that public policy changes rapidly over a short period of time (Baumgartner & Jones, 2009). The punctuated equilibrium



model of policy change states that policy generally changes incrementally, characterized by long periods of policy stability followed by large changes in society or government (Baumgartner & Jones, 2009). This is often found when a governmental party changes or there is a change in public opinion (Baumgartner & Jones, 2009).

Typically, progress occurs in steps. Patience and moderation are touted as political terms until bursts of social change seek to move policies in new directions (Ishimatsu, 2015). This trigger event, or basis of change, may include persuasion following a disaster. For example, public outrage in New York State after 9/11, Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy, and the most recent flooding in Western New York in August 2018 led to quickly written or revised policies, either internal or external, of first responder agencies, the State, or the federal government. Often, the changes are not an easy transition for those involved and may include significant controversies and debates (Ishimatsu, 2015).

The current study indicated that policy changes occurred in the aftermath of major disasters or lawsuits, specifically regarding training practices of first responders assisting people with at-risk characteristics. However, policy feedback and organizational performance caused friction in the policy process and structure, resulting in changes in environmental demands (Flink, 2017). This caused the structure of the policymaking to become steady over time, which led to stagnation or collapse of a policy (Baumgartner & Jones, 2009). In terms of first responder training, this meant that training requirements lost sight of the core idea or became lax or nonexistent until the next disaster perpetuated

a policy change. Detailed explanations regarding this study and the use of the punctuated equilibrium theory can be found in Chapter 2.

### **Conceptual Framework**

I considered the location of first responder activity because most coastal storms occur in areas closer to the Atlantic Ocean and winter storms occur near areas where there are increased lake-effect snow falls. Tilcsik and Marquis (2013) suggested that location plays a significant role in the punctuated equilibrium theory. With 62 counties across New York State including New York City, the state experiences a wide variety of natural or human-caused disasters and emergencies that may affect a variety of populations, the results of which often negatively impact community members through loss of life, damage, or destruction of property. Further, this study showed that the locations of disasters determined the policy change affecting types of training for first responders and the role it played in future preparedness.

### **Nature of the Study**

I conducted a qualitative case study to assess the effects of first responder training in addressing the needs of at-risk populations during disasters. Qualitative researchers should develop and express “understanding the ways people see, view, approach, and experience the world and make meaning of their experiences” (Ravitch & Carl, 2016, p. 7). By using a qualitative design, I was able to gain insight into the lived experiences of first responders who have assisted people with at-risk characteristics during disasters. Findings offered insight into training practices and social and physical barriers that affect the quality of services provided to at-risk populations during disasters.

I used a collective or the multiple-case study design (see Yin, 2018). Yin (2018) suggested that a case study researcher attempts to explain how or why a contemporary social phenomenon works. Further, Yin suggested that the researcher should be able to focus in-depth on the study and allow the research to retain a real-world perspective.

I used the case study approach of the problem-oriented method. I identified an existing problem and suggested solutions to the problem (see Yin, 2018). Using the problem-oriented case study method allowed me to offer first responder agencies and trainers a tool. to apply the concepts learned to analyzing the issues. Further, I produced recommendations that may help first responders better assist at-risk populations during disasters.

This study took place in New York State. The New York State Division of Homeland Security and Emergency Services (DHSES) divides New York State into five emergency management regions with 10 emergency response zones within those regions. I used the region emergency response zones defined by the DHSES-OEM GIS map as of 8/28/2017 (DHSES, 2017). Data sources included interviews with people who fell within the category of first responders, including EMTs, firefighters, and police officers..

### **Definitions**

The EMAP is a voluntary accreditation program for emergency management programs. The language and standards developed by the EMAP program include a credible peer review of state and local emergency management programs. The following definitions are from EMAP standards because this is the accrediting agency for New

York State. New York State passed EMAP accreditation in 2014, and reaccreditation in 2019.

*Disability:* “According to the Americans with Disabilities Act of 1990, a person with a disability is defined as a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person perceived by others as having such as impairment. Disability includes impairments, activity limitations, and participation restrictions. Types of disabilities include physical disability like paralysis and amputation, cognitive disability like intellectual disability or Autism, and sensory disability like blindness or deafness” (NACCHO, 2014, p. 1).

*Disaster:* “A severe or prolonged emergency that threatens life, property, environment, and/or critical systems” (EMAP, 2016, p. 1). According to NYS Executive Law Article 2B, a “disaster means occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property resulting from any natural or man-made causes, including, but not limited to, fire, flood, earthquake, hurricane, tornado, high water, landslide, mudslide, wind, storm, wave action, volcanic activity, epidemic, air contamination, terrorism, cyber event, blight, drought, infestation, explosion, radiological accident, nuclear, chemical, biological, or bacteriological release, water contamination, bridge failure, or bridge collapse” (New York State, 2018, p. 1).

*Emergency:* “An incident or set of incidents, natural or human-caused, that requires responsive actions to protect life, property, environment, and/or critical systems” (EMAP, 2016, p. 1).

*First responders:* “This term has come to be used popularly or colloquially to refer to law enforcement, fire, and emergency medical personnel, especially after the events of September 11, 2001” (Bricker, Petermann, Hines, & Sands, 2013, p.1).

*Human-caused:* “Incidents caused by human activity, which include but are not limited to those of a chemical, biological, radiological, nuclear, explosive, or technological (including cyber) nature, whether accidental or intentional” (EMAP, 2016, p. 2).

*Mitigation:* “The activities designed to reduce or eliminate risks to persons or property to lessen the actual or potential effects or consequences of a disaster” (EMAP, 2016, p. 2).

*Preparedness:* “The range of deliberate, critical tasks and activities necessary to build, sustain, and improve the operational capacity to prevent, protect against, mitigate against, respond to, and recover from disasters” (EMAP, 2016, p. 2).

*Response:* “Efforts to minimize the short-term direct effects of an incident threatening life, property, environment, or critical systems” (EMAP, 2016, p. 3).

### **Situation**

EMAP has identified standards that address plan writing and procedures. The process included “situation and assumptions” (EMAP, 2016, p. 7). After the broad statement of purpose, the situation and assumptions sections are used to narrow down the scope of what a document addressed, including the characteristics of the jurisdiction, the hazards addressed by the document, and the worst-case scenario (see New York State, 2018; EMAP, 2016; FEMA, 1996).

New York State is the third largest state in population and has a diverse demographic profile of residents. In 2017, an estimated 19.8 million people resided across New York State, with 8.5 million of those living in New York City (U.S. Census Bureau, 2017). According to New York State demographics as cited in the U.S. Census Bureau (2017), 30% of residents speak a language other than English at home, 7.5% identify as having a disability and are under the age 65, and 14.7% live in poverty. Additionally, according to the U.S. Census Bureau (2012), 56.7 million people in the United States reported having a disability. In 2018, nearly 140,000 New Yorkers with developmental disabilities received services from the New York State Office for People with Developmental Disabilities (Office for People with Developmental Disabilities, n.d.).

Disasters affect people regardless of race, religious beliefs, ethnicity, age, gender, physical abilities, political beliefs, or socioeconomic status. Additional social or physical barriers may exist for people who are considered at-risk. This group includes individuals whose needs are not fully addressed by traditional service providers or who feel they cannot comfortably or safely use the standard resources offered during preparedness, response, and recovery efforts (National Weather Service, 2014). This group also includes people who are physically or mentally disabled (e.g., blind, deaf, hard of hearing, have learning disabilities, have mental illness, and/or mobility limitations), people with limited English language skills, geographically and/or culturally isolated people, homeless people, senior citizens, and/or children (EMAP, 2016).

Communities of residents have become displaced from their homes, either through self-evacuation or with the assistance of first responders, as seen in the aftermath of natural disasters in New York such as Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy, and terrorist attacks such as September 11, 2001. People with at-risk characteristics evacuating their homes or work sites may not have a personal preparedness plan in place, or they may rely on other supports such as defend in place, elevators, aides, mobility equipment, medical equipment, closed captioning, or any additional supports used by at-risk populations (New York State Department of Health, 2019). Reliance on external supports may result in a disruption of services necessitating additional support, assistance, or services, as seen in 9/11, Hurricane Katrina, and Superstorm Sandy.

First responders may not have the skills or resources available to quickly and efficiently assist with the disaster response of at-risk populations. A person with autism spectrum disorder typically has difficulty in changes to routine (Spinner, 2018). Additionally, people with autism spectrum disorder may have increased sensitivities to auditory, tactile, or visual stimuli (Good, 2011). These sensitivities may cause a person with autism spectrum disorder to hide from first responders or become combative if they do not understand the situation (Good, 2011). A person with emotional disturbances may not understand serious incidents and disasters, which may lead them to disobey or resist directions from a first responder (Spinner, 2018).

At-risk populations may also include the elderly population, people who are deaf, or people with a primary language other than English. In these instances, first responders

may not understand hearing or processing delays and may repeatedly question the person, showing general impatience with a lack of an answer (Good, 2011). Furthermore, first responders may attribute inappropriate behaviors, underdeveloped communication skills, high pain thresholds, failure to recognize dangerous situations, and avoidance of physical contact to drug use or poor parenting (Good, 2011). These biases are created through lack of knowledge or education about at-risk populations (Good, 2011) or through automatic or implicit stereotyping (Paul, 2016). Events in New York State have required first responders to assist people with at-risk characteristics. These events have become lessons in how to improve training, mitigation, preparedness, and recovery efforts for future incidents.

### **Assumptions**

Assumptions are principles or statements that are accepted as true (FEMA, 1996). The following assumptions were needed in this study to provide meaning to the qualitative data and research findings.

1. An incident may affect the people of the State of New York at any time, possibly with no warning, and may result in injury, death, or substantial personal or property damage. “Any disaster will, by definition, disrupt lives” (Keiser University, 2004, p. 2).
2. At-risk populations may be without necessary care in the event of a disaster.
3. Disasters create new physical and social barriers by eliminating services, which reduces the ability of at-risk populations to perform tasks independently or those that can be completed with assistance (Keiser University, 2004).



4. First responders in New York State, including police, fire, and emergency medical personnel, will have the opportunity to participate in awareness and diversity training that includes assisting at-risk populations during times of disaster.
5. Awareness and diversity training educators will team up with local resources, including subject matter experts and individuals with at-risk characteristics, to ensure the training message is relevant, consistent, appropriate, and complementary in an effort to eliminate bias and stereotyping.

### **Scope**

This research was intended to help first responders and trainers understand preparedness efforts in assisting at-risk populations during disasters. Through this research, first responders across New York State may see how increased, improved, and consistent awareness and diversity training can support a positive response to and care of people with at-risk characteristics during disasters. In addition to serving as a guiding document, this study included information that may serve as a valuable resource and reference tool for New York State first responders, trainers, administrators, and at-risk populations.

This research complemented other research efforts, such as the *Nobody Left Behind* research project conducted by the University of Kansas (White, 2007). Additionally, this research complemented training programs such as Niagara University's First Responders Disabilities Awareness Training (Niagara University, 2018). However,

unlike the *Nobody Left Behind* study, this study was based on the experiences of the first responders assisting at-risk populations, not just individuals with disabilities.

### **Delimitations**

The boundaries of the study were the use of the first responder population, which included fire, police, and emergency medical services personnel across New York State. First responders often have dual roles; for example, several fire departments in Central New York require members to have both EMT certification and fire certification. Due to the increasing number of disasters in New York State, experience levels and seniority of the first responders were taken into consideration. Mutual aid agreements allow first responders to traverse local, county, and regional lines to assist others during times of disasters; therefore, a first responder originating from Central New York may have assisted with response during 9/11 in New York City or Snowvember in Western NY in 2014.

The boundaries of this study, according to the variables of geographic areas (DHSES regions), time span from 9/11/2001 to present day, and events/incidents (disasters include natural and human-caused), were similar to other locations and incidents in the United States and abroad. Such details of the study lend to transferability and provide a foundation for discussion and further research opportunities in the fields of emergency response, at-risk populations, and public policy.

Due to limited research in the fields of people with at-risk characteristics, intellectual disabilities, the disabled, and multiple facets of emergency planning, theoretical frameworks may or may not be used or identified. Some theoretical

frameworks that were identified in emergency planning for people with at-risk characteristics are the whole community concept, grounded theory, sense of community, and change theory. Grant and Osanloo (2014) identified several theoretical frameworks that could help provide structure for this study. Grounded theory would have complemented previous studies because this was a new dynamic being explored. Additionally, the phenomenological theory, using the lived experiences of first responders, could have had a potential impact by using the words of the first responders to encourage change to previous and existing policies. I chose the punctuated equilibrium theory because this had not been used in conjunction with at-risk populations, first responder training, and disasters.

### **Whole Community Concept**

FEMA (2017) used the whole community concept in their development of emergency management plans by using the whole community as its guiding principle. The whole community concept is defined as involving people in the development of programs and ensuring their roles and responsibilities are reflected in the content of the programs (FEMA, 2017). This concept promoted shared responsibilities. Flowers (2016) defined responsibility in the legal context rather than responsibility to community through relationships, membership, and a sense of community. Flowers used the whole community concept through the review of court cases, civil rights, and select legal issues to provide recommendations and overview in the areas of participation in an inclusive emergency planning process, communication, special needs registries, community evacuation and transportation, service animals, and emergency shelter programs.

## **Grounded Theory**

Glaser and Strauss developed the grounded theory in the 1960s. Grounded theory is different from other theories because it is based on analysis of data versus using a theoretical framework (Allan, 2003). Grounded theory research begins with a question or a collection of qualitative data, and researchers code the data into groups or concepts and then into categories (Allan, 2003). When applying the grounded theory method, the researcher does not formulate the hypotheses in advance (Allan, 2003). The grounded theory method is not used to aim for the truth but to conceptualize what is going on by using empirical research to develop a theory that is grounded in the data (Allan, 2003). Stough et al. (2016) used grounded theory to examine the barriers to the recovery process experienced by people with preexisting disabilities. Stough et al. stated that the use of the grounded theory was based on a lack of previous research with people with disabilities and the recovery processes.

## **Sense of Community Theory**

Sarason (1974) developed the sense of community framework to describe the notion that people are part of a readily available, mutually supportive network of relationships upon which they can depend to avoid sustained feelings of loneliness. Nowell and Boyd (2010) used this theory to address a sense of community through membership, influence, integration, the fulfillment of needs, and shared emotional connections. However, Nowell and Boyd observed that the sense of community framework does not identify responsibility within the identified concepts.

People with intellectual disabilities want a sense of community. In the New York State Office of People with Developmental Disabilities (OPWDD, n.d.), sense of community was characterized as normalization or the process of making something more normal. Within the OPWDD, sense of community was supported by making the conditions of everyday living the same for people with intellectual disabilities as those without. The closest theoretical framework to normalization appeared to be the sense of community theoretical framework. Using the sense of community framework would require focusing on membership within the community and the relationships. However, the framework's lack of inclusion of responsibility led to the exploration of other theoretical frameworks.

### **Change Theory / Logical Framework**

Change theory addresses how the program will lead to results by using critical thinking (Center for the Theory of Change, 2016). One description of change theory is taking a real-world picture and showing all the possible ways for change and the researcher's identification of why they lead to change either through viable evidence or assumption. Change theory also focuses on long-term results beyond program goals and outputs (Center for the Theory of Change, 2016). On the other hand, logical framework focuses on one specific way by creating a neat and orderly structure.

### **Limitations**

According to Yin (2018), the goal of a case study is to understand the boundaries of the study by keeping the boundaries in focus. The boundaries for this study included the participants being employed at or a volunteer for a first responder agency during the

time frame of September 11, 2001 to the present. Participants had responded to a disaster involving a person with at-risk characteristics, and had been offered or had attended awareness and diversity training at some point during their lifetime or had been exposed to persons with at-risk characteristics, such as a family member, friend, or community member. The goal was to study first responder agencies and their training practices regarding awareness and diversity. Agencies were studied jointly to understand the offered and attended awareness and diversity trainings and how the training may have prepared the first responders in assisting at-risk populations during disasters that occurred from September 11, 2001 to the present.

Additional limitations of this study included the following: (a) interviewees may have answered the questions based on a personal or organizational agenda; (b) respondents may have operated with a personal bias for or against the agency or organization in which they worked or volunteered (c) awareness and diversity training may have been offered with participation, offered with no participation, or not offered; and (d) the selected areas of New York State may not have been representative of how other parts of the state or country are trained and how they would respond to a disaster. These limitations may have weakened the findings, which may affected transferability.

Bias and stereotyping people who are at-risk populations could have positive or negative implications. Emotional response may affect first responders' behavior decisions. To mitigate these limitations, I developed interview questions to address bias, stereotyping, and relevancy.

## **Significance**

Awareness and diversity training are aspects of learning and development that assist in the modification of behavior, skills, and knowledge that result in better practices and positive experiences of a first responder. This study contributed to the knowledge and understanding of first responder training. Results may be significant to the following groups.

### **First Responders**

First responders are the primary responders to a disaster, including fire, medical, or law enforcement personnel. First responders were considered the secondary concern relative to individuals with at-risk characteristics. Findings of this study may inspire, enlighten, and benefit first responders in New York State.

According to the New York State Department of Health (2018), there were 59,755 certified emergency medical services providers in New York State in March of 2010. The Fireman's Association of the State of New York had registered over 100,000 volunteer firefighters in New York as of April 23, 2018 (Pienkowski, 2018), and the United States Fire Administration (2018) had 1,665 registered fire departments on the National Fire Department Registry for New York State. Additionally, records from 2008 indicated that there were 514 state and local law enforcement agencies in New York State with 1,133,000 full-time employees, of which 765,000 were sworn police and peace officers (Reaves, 2011). The significance of these statistics were that over 60,000 emergency medical personnel, over 100,000 volunteer firefighters, and over 765,000 sworn police and peace officers could benefit from awareness and diversity training in New York

State; which is a significant number of people to educate in modifications of behaviors, skills, and knowledge to assist at-risk populations.

### **Educators or Trainers**

Educators or trainers include professional staff trainers. On January 29, 2018, NYS Assemblyman Angelo Santabarbara sponsored a proposal, Bill A09634, in the state assembly for the establishment of a statewide training program for first responders for handling emergency situations involving individuals with autism and related disorders (New York State Assembly, n.d.). Through the implementation of a mandatory training course for first responders in New York State, agencies will be hiring more educators to cater to the educational needs of first responders.

### **People With At-Risk Characteristics**

People with at-risk characteristics were considered the primary concern in the current study because their lives, safety, and personal or medical property are intertwined with the first responders responding to the disaster. According to New York State demographics in the U.S. Census Bureau (2017), 30% of people speak a language other than English at home, 7.5% identify as having a disability and are under the age 65, and 14.7% live in poverty. However, demographics vary based on the location within the state; urban areas typically have larger numbers of these individuals than rural areas. According to the U.S. Census Bureau (2012), 56.7 million people in the U.S. reported having a disability. According to the statistics from the First Niagara Disability Awareness Training, 130,285 people received services from the New York State Office for People with Developmental Disabilities, with 5,086 people receiving services in a



certified setting and 86,477 people receiving services in a noncertified setting (Niagara University, 2018).

### **Administrators**

Administrators gained insights as to what training measures were appropriate and effective to help first responders respond to a disaster and assist at-risk populations. First responders assisting at-risk populations has become a significant issue in recent years due to an increase in natural or human-caused disasters. In 2005, the National Oceanic and Atmospheric Administration stated that the United States experienced approximately 1,348,500 fire-related accidents, 3,000 earthquakes, 10,000 severe thunderstorms, 1,700 flash flood injuries, 1,000 tornadoes, and 10 hurricanes each year (Kettaneh & Slevin, 2014). In New York State, the State Emergency Operations Center has a spreadsheet on activations from 1995 to present with a variety of disasters that caused an activation (DHSES Operations, 2018). In 1995, there were eight activations, while in the first quarter of 2018 there were nine activations (DHSES Operations, 2018). Given the severe winter storms, flooding, ice jams, events such as 9/11, hurricanes, radiological activations, and counties overcome with medical issues such as West Nile Virus or countywide food poisoning, the probability that a person will experience one or more disasters during their lifetime is high; as the numbers for activations have increased for an average of three events, incidents, or disasters per month (DHSES Operations, 2018).

The significance of the study is for first responders to apply the principles and concepts that have been learned in awareness and diversity training when assisting at-risk populations during disasters. The findings may help trainers create model education and

training curricula that provide training, services, and resources for first responders assisting people with at-risk characteristics.

### **Summary**

This study of awareness and diversity training for first responders assisting at-risk populations was conducted to expand the existing knowledge of personnel preparedness and current training practices in New York State as they related to emergency preparedness, response, and mitigation. This study offered insight and recommendations to first responders, trainers, supervisors, and people with at-risk characteristics in New York State.

Chapter 2 is a literature review related to the problem of New York State first responder agencies' awareness and diversity training not being consistent, which can negatively impact the response and care of at-risk populations during disasters. Chapter 2 provides support for the study and for the use of the punctuated equilibrium theory and the case study methodology.

## Chapter 2: Literature Review

### **Introduction**

Events in New York and across the United States, such as 9/11, Hurricane Katrina, and Superstorm Sandy, have forced many to analyze emergency preparedness and training for first responders assisting people with at-risk characteristics. Lessons learned from events have created significant literature related to emergency management, disaster preparedness, and training. Among the products of 9/11 was the review of disaster planning and contingency planning, the conduction of vulnerability assessments, and the need for increased training of first responders. The response to Hurricane Katrina was the Post Katrina Emergency Management Reform Act and the Robert T. Stafford Act. The recommendation from the aftermath of Superstorm Sandy was that the consequences of a lack of preparedness and planning led to social inequality. With the proposal of recent legislation in New York and the governor's address in 2018, focus changed to a need for training first responders to assist at-risk populations during emergencies. However, little research has been done on the lived experiences of first responders assisting people with access and functional needs and the training practices in New York State. This literature review addresses existing theories and concepts regarding first responder training, the government's approach to preparedness training through legislation, the emergency manager's response to needed training, and the gap between the lived experiences of the first responders and the training they have received to address the needs of individuals with at-risk characteristics during emergencies. This study was conducted to fill the gap in understanding characteristics of at-risk populations and the

lack of emergency preparedness and response education and training of first responders and other emergency personnel who will encounter physical and social barriers in the field.

As documented in the firsthand accounts of first responders, Congressional Committee reports of people with at-risk characteristics or people who speak in their absence, and scholarly journals, the analysis of disaster impact based on preparedness revealed an interesting cycle of events. In the moments immediately following a disaster or emergency, analysis tended to be conducted based on proper and improper processes or procedures related to that event (Frieden, 2006; Keiser University, 2004). As time went by and both the short- and long-term recovery efforts subsided, the information gleaned from data analysis became recommendations on how to mitigate future events (Frieden, 2006; Keiser University, 2004). From 9/11 to Hurricane Katrina and Superstorm Sandy, recommendations were either implemented, neglected, or excused by emergency managers (Taylor, 2018; Weibgen 2015; Good, 2011). As a result, first responders were either adequately prepared for the next emergency or they continued to find social and physical barriers to assisting individuals with at-risk characteristics (Taylor, 2018; Good, 2011).

### **Problem Statement**

Across New York State first responder agencies, awareness and diversity trainings are not consistent, which can negatively impact the response and care of at-risk populations during disasters. For example, David Whalen of Niagara University offered a voluntary training, Disability Awareness Training, to educate anyone involved in

emergency management with elements inclusive of people with disabilities and functional needs (Niagara University, 2018). FEMA offered two voluntary trainings, IS-20.18 Diversity Awareness Course 2018 and IS-368 Including People with Disabilities and Others with Access and Functional Needs in Disaster Operations (FEMA, 2018). Minimum standards for firefighting personnel, as noted in NYCRR Parts 426, 427, and 438, did not address training or educational protocols for awareness and diversity training to assist people with at-risk characteristics (New York State Homeland Security and Emergency Services, n.d.). Training modules for EMT certification briefly touched on mental and physical illness that were prevalent in special needs populations (Aehlert, 2011) but did not include an awareness or diversity component, and did not provide the responder with basic training in how to assist people with at-risk characteristics. However, agency-specific training curricula included an aspect of awareness and diversity, such as state agencies having annual mandatory trainings that consisted of online modules touching on the basics of rights and responsibilities, workplace safety, sexual harassment in the workplace, and working together in a diverse workforce (Statewide Learning Management System, 2018).

Disasters affect people regardless of race, religious beliefs, ethnicity, age, gender, physical abilities, political beliefs, or socioeconomic status. Disasters affect people with access and functional needs, also known as at-risk populations. Disasters also affect the first responders assisting others. From the towers collapse on 9/11 to present-day natural disasters, events in New York State and across the United States have become lessons in how to improve training and response efforts for future incidents. In this qualitative case

study, I investigated the types of voluntary and mandatory trainings offered and received by first responders and identified their lived experiences assisting people with at-risk characteristics during disasters and how they could foster coordination for future education and training to ensure community engagement and preparedness at the first response level.

### **Purpose of the Study**

The purpose of this study was to assess the awareness and diversity training practices among first responders across New York State in assisting people with at-risk characteristics during disasters. The objective was to address the gap between the knowledge of first responders and their preparedness and response capabilities based on their level or type of training. I also assessed the practices of awareness and diversity training in first responder agencies. Further, I explored the attitudes of first responders toward awareness and diversity training as well as their lived experiences assisting people with at-risk characteristics during disasters.

### **Literature Search Strategy**

The following literature review offered an exhaustive review of literature with selective citations directly related to the problem statement and research question: : How has awareness and diversity training among first responders in New York State led to changes in preparedness and response strategies to at-risk populations during disasters after September 11, 2001?

The literature review was focused on individuals with at-risk characteristics and the training of first responders in New York State. Legislation based on major disasters

affecting at-risk populations across the United States was relevant because it affected all states and their preparedness efforts. Research databases in the Walden Library included EBSCO, Google Scholar, ProQuest, SAGE, and Thoreau. I also reviewed government publications, including NYS Executive Law Article 2B and federal legislation such as the Americans with Disabilities Act and its amendments.

The combination of databases and other resources provided a broad perspective on the many facets of the problem. Key words and combinations included *access* and *functional needs*, *at-risk populations*, *disabilities*, *disaster preparedness*, *emergency management*, *emergency preparedness*, *first responders*, *Hurricane Katrina*, *response*, *recovery*, *special needs*, *Superstorm Sandy*, *training*, *vulnerable populations*, and *9/11*. The concepts of grounded theory and phenomenology were also explored resulting in articles addressing emerging research fields based on the lived experiences of the first responders. Additionally, the concepts of whole community concept, sense of community, and change theory were explored to provide structure for the study. Further, the punctuated equilibrium theory was explored because this concept had not been used in conjunction with at-risk populations, training for first responders, and disasters.

### **Theoretical Foundation**

Due to limited research on people with at-risk characteristics, intellectual disabilities, the disabled, and aspects of emergency planning, theoretical frameworks were not readily apparent. Some theoretical frameworks that had been identified in emergency planning for people with at-risk characteristics were the whole community concept, grounded theory, sense of community, and change theory. Grant and Osanloo

(2014) identified several theoretical frameworks that could provide structure for the study. Grounded theory would have complemented previous studies because this was a new dynamic being explored. Additionally, the phenomenological theory focusing on the lived experiences of first responders could have had a potential impact by addressing the words of the first responders to encourage change to previous and existing policies. I chose the punctuated equilibrium theory because this theory had not been used in conjunction with at-risk populations, first responder training, and disasters.

### **Whole Community Concept**

FEMA (2017) used the whole community concept in their development of emergency management plans by using the whole community as its guiding principle. The whole community concept was defined as involving people in the development of programs and ensuring their roles and responsibilities were reflected in the content of the programs (FEMA, 2017). Cripps, Cooper, and Austin (2015) expanded the whole community concept by publishing a set of guidelines and recommendations for the inclusion of people with hearing impairments or deafness in communication during natural disasters and emergencies. The concept of the whole community promotes shared responsibilities between professionals in emergency management, the community impacted, and at-risk individuals (FEMA, 2017).

Flowers (2016) defined responsibility in the legal context versus responsibility to community by relationships, membership, and a sense of community. Flowers used the whole community concept through the review of court cases, civil rights, and select legal issues. Flowers provided recommendations and an overview of participation in inclusive



emergency planning processes, communication, special needs registries, community evacuation and transportation, service animals, and emergency shelter programs.

### **Grounded Theory**

In the 1960s, Glaser and Strauss developed the grounded theory (Allan, 2003).. Grounded theory is different from other theories because it is based on analysis of data versus using a theoretical framework initially (Allan, 2003). Grounded theory begins with a question or a collection of qualitative data, codes the data into groups or concepts, and then codes the data into categories (Allan, 2003). The researcher does not formulate the hypothesis in advance when applying the grounded theory, but is used to conceptualize what is going on using empirical research and preconceived hypotheses resulting in a theory that is grounded in the data (Allan, 2003). Stough, Sharp, Resch, Decker, and Wilker (2016) used grounded theory to examine the barriers to the recovery processes experienced by people with preexisting disabilities. Stough et al. stated that the use of grounded theory was based on a lack of previous research with people with disabilities and the recovery processes.

### **Sense of Community Theory**

Sarason (1974) summarized the sense of community framework as the sense that one was part of a readily available, mutually supportive network of relationships upon which one could depend and as a result of which one did not experience sustained feelings of loneliness. Nowell and Boyd (2010) described the sense of community theory as the bridging of membership, influence, integration and the fulfillment of needs, and

shared emotional connections. Nowell and Boyd noted that the sense of community framework does not identify responsibility within the identified concepts.

People with intellectual disabilities want a sense of community, or normalization (OPWDD, n.d.). Within the OPWDD, sense of community was supported by making the conditions of everyday living the same for people with intellectual disabilities as those without. The sense of community theoretical framework is the closest theoretical framework to OPWDD use of normalization, as noted by the focus on membership within the community and the relationships (Nowell & Boyd, 2010; Sarason, 1974). However, the sense of community framework's lack of inclusion of responsibility led to the exploration of other theoretical frameworks.

### **Change Theory / Logical Framework**

The Center for the Theory of Change (2016) summarized change theory as the framework that uses critical thinking to determine program results. The Center for the Theory of Change described change theory as taking a real-world pictures and identifying all the possible ways for change, including the researcher's identification of what leads to change through viable evidence or assumption. Theory of change also focuses on long-term results beyond program goals and outputs (Center for the Theory of Change, 2016). On the other hand, logical framework focused on one specific way by creating a neat and orderly structure.

### **Punctuated Equilibrium Theory**

In 1993, Baumgartner and Jones (2009) founded the punctuated equilibrium theory of policy change. Baumgartner and Jones summarized the punctuated equilibrium

theory as changes to public policy that occurs rapidly over a short period of time or the evolution of policy change. Baumgartner and Jones described the punctuated equilibrium model of policy change as policy changes that generally change incrementally, characterized by long periods of policy stability, followed by large changes in society or government. Baumgartner and Jones noted that these changes in society or government occur when there is a governmental party change or a change in public opinion, such as after a disaster.

Ishimatsu (2015) described how patience and moderation were steps in progress of policy changes until a trigger event moves policies in new directions. Trigger event, or basis of change, included persuasions following a disaster, such as public outrage surrounding the events in New York State after 9/11, Hurricane Irene, Tropical Storm Lee, Super Storm Sandy, or most recently the flooding in Western New York in 2018 or the Halloween wind storms and flooding in 2019. Following the core idea of the original biological theory of punctuated equilibrium theory, geographical location played a major role in determining which populations are subject to the abrupt changes in policy (Tilcsik & Marquis, 2013). Ishimatsu noted that change is not an easy transition for those involved and could lead to significant controversy and debate. Trigger events could lead to quickly written or revised policies, either internal or external of first responder agencies, the State, or the federal government, such as community and disaster planning as a result of 9/11 (Eisinger, 2004) to having a citywide disabilities coordinator after the Brooklyn Center for Independence of the Disabled versus the City of New York 2013 lawsuit following Irene and Lee (NACCHO, 2014)

Kuhlmann and van der Heijden (2018) reviewed how the punctuated equilibrium theory applied to studies that analyzed policy change and offered insight into the punctuated equilibrium theory in the development of policy change. Through the construction, validation, and replication of knowledge offered by reflections on the logistics of social science, Kuhlmann and van der Heijden analyzed the dynamics of policy stability and change, including the mechanisms of positive and negative feedback. Jones and Baumgartner (2012) referred to this as the thermostatic-type process; a process where positive feedback promoted policy change due to transitions whereas negative feedback promoted change due to disturbances.

Baumgartner and Jones (2009) defined core concepts related to policy change, including policy image or “how a policy is understood and discussed” (p. 25). Baumgartner and Jones defined the core concept of institutional venues of policy issues, or the “institutions or groups in society [that] have the authority to make decisions” (p. 31). Baumgartner and Jones described how policy image and institutional venues were the core concepts manipulated by decision-makers to institute policies based on the understanding of an issue, influence the institution, and exert jurisdiction over others. Further, Baumgartner and Jones defined the core concept of attention allocation, or how limited cognitive and temporal resources result in a short attention span for policymakers. Lastly, Baumgartner and Jones defined the core concept of forces of resistance, which is how political systems or institutional structures impede or obstruct policy change.

I explored how policy changes occur in the aftermath of major disasters or lawsuits, specifically designed toward training practices of first responders assisting

people with at-risk characteristics. Flink (2017) noted that changes in environmental demands could lead to positive or negative policy feedback and organizational performance causing friction in the policy process and structure. Therefore, I explored if there were forces of resistance present, such as institutional resistance to the policy changes made by the state or by political systems forcing change on institutions.

Baumgartner and Jones (2009) noted that the structure of the policymaking becomes steady over time, which can lead to stagnation or worse, collapse of a policy. In terms of first responder training, this means that training requirements may have lost sight of the core idea or become lax or non-existent over time, until the next disaster perpetuated a policy change. This was observed in New York City prior to Superstorm Sandy, which was the force behind the *Brooklyn Center for Independence of the Disabled v. The City of New York* decision in 2013.

### **Conceptual Framework**

Tilcsik and Marquis (2013) suggested that location played a significant role in the punctuated equilibrium theory. Therefore, I considered the location of first responder activity within New York State because most coastal storms occur in areas closer to the Atlantic Ocean and winter storms occur near areas where there are increased lake-effect snow falls. With 62 counties across New York State including New York City, the state experiences a wide variety of natural or human-caused disasters and emergencies that may affect a variety of populations, the results often negatively impact community members; whether it is through loss of life, damage, or destruction of property.

Geographically, New York State is in the northeastern United States. Netstate (2016) ranked New York State 27<sup>th</sup> largest state by size, spanning 54,556 square miles. New York State borders six US states; Pennsylvania, New Jersey, Connecticut, Rhode Island, Massachusetts, and Vermont. Additionally, New York State shares a border with Canada. Further, New York State touches the Atlantic Ocean, Lake Erie, and Lake Ontario.

The United States Census Bureau (2018) noted that New York State is the third largest state in population, with 19.8 million people residing statewide in 2017 from a diverse ethnic background. Of those, over 8.5 million people reside in New York City, the most populous city in the United States (US Census Bureau, 2018). Additionally, New York State welcomes many visitors, emphasizing tourism as an industry. According to a 2017 press release, 62.8 million visitors toured the Big Apple (NYC & Company Global Communications Staff, 2018) and an estimated 8 million people visit Niagara Falls each year (New York State, n.d.). New York City is host to Wall Street, the United Nations, Statue of Liberty, the Empire State Building, and various museums, historical sites, and tourist destinations. New York State is also home to 180 State parks and historic sites, 24 National Park affiliated sites, the Adirondacks, the Catskills, a former Olympic site, and many adventures and attractions that draw local and out-of-state travelers. The prevalence of terrorist activities occurs in largely populated areas, as noted with the 9/11 attacks in New York City. This research study showed that the various locations and disasters determined the policy change affecting types of training for first responders and the role it plays in future preparedness.

### **Literature Review Related to Key Variables and/or Concepts**

Planning and preparation are the foundation of effective emergency management response and recovery. Awareness and diversity training for first responders to assist at-risk populations assumed that despite the diversity of individuals, emergencies and disasters effect all populations. Using key variables and concepts, the following literature review showed that some populations are more adversely affected than others and that awareness and diversity training for first responders can lessen the effects of the disaster on populations with at-risk characteristics.

### **Background**

The perceptions towards individuals with at-risk characteristics, including disabilities, has varied significantly from one community to another and from one state to another. Fleischer and Zames (2001) noted that historically, in the United States, children who were born with disabilities were often killed or excluded and/or isolated from society. Fleischer and Zames suggested that people with disabilities were blamed as sins within the family, a personal tragedy to a family, or included feelings of shame and guilt. Fleischer and Zames suggested that historically parents with children who were diagnosed as disabled were hidden from society and forgotten in institutions. Skinner (1972) noted that not only were these schools or institutions used for children with mental retardation, they were also homes for unwed mothers, people with mental illness, or people who were socially stigmatized or encountered physical or social barriers in general public arenas.

## **New York State and the Willowbrook State School**

Through the years, New York State has offered services to individuals, whether it was placement in an institution in the mid 1900's to the current family and employment support networks (OPWDD, n.d.). The quality of these services has not always been considered humane and ethical, especially when people with developmental disabilities were living in institutions (Castellani, 2012; Hakim, 2011; Skinner, 1972).

In 1965, Senator Robert Kennedy made an unannounced visit to Willowbrook State School. After his visit, in September 1965, he spoke before a hearing of the Joint Legislative Committee on Mental Retardation and Physical Handicap to describe the horrid conditions he encountered there; by likening it to a snake pit (Castellani, 2012). According to Castellani, the New York State operated complex of building on Staten Island that housed both children and adults with developmental disabilities, mobility impairments, and unwed mothers was thrust into the national spotlight for the inhumane and unethical conditions and treatments for people with developmental disabilities. Castelli noted that New York State responded with a five-year improvement plan, however, after making minor adjustments, conditions at Willowbrook quickly deteriorated because there was no oversight and there was no designee to ensure continual improvements.

In 1972, millions of people watched *Willowbrook: The Last Disgrace*, an ABC network television exposé by investigative reporter Geraldo Rivera, exposing New York State and Willowbrook State School for the deplorable conditions, abuse, and neglect of the residents of Willowbrook who were living in squalor (Skinner, 1972). Skinner noted



that at the time of Rivera's exposé, 5,230 residents were living in buildings meant for 4,000, staffing ratios exceeded 30-40 residents to one staff, and, because of overcrowding with inadequate health care, hepatitis was so rampant that several unethical and controversial medical research studies were being conducted with the residents as unknowing participants. Krugman (1986) noted that many residents, without their knowledge or consent, were exposed to hepatitis to test the effectiveness of various vaccines, which was in direct violation of medical ethics laws and ethically unjustified. Unfortunately, these conditions were similar to other facilities across New York State and nationwide; including the abuse and neglect of a population that was considered substandard. Castellani described that the Geraldo Rivera Willowbrook exposé and ensuing investigation as responsible for finding civil rights abuses, abuse allegations, neglect, internal investigation issues, lack of training, lack of staffing, lack of funding and resources, unethical medical research, and lack of oversight.

In 1978, Governor Hugh Carey hired Clarence Sundram to begin the overhaul of New York State's system for caring for individuals with disabilities and to provide oversight on how people with developmental disabilities were treated (Hakim, 2011). Sundram implemented the concept for the Commission on Quality of Care and the investigation into issues pertaining to individuals with developmental disabilities served by New York State. He ran the commission until he retired in 1998. Hakim noted that despite opposition from the state's Office of Mental Health and the Office for People with Developmental Disabilities during his 20-year reign, Sundram was diligent about reporting any serious problems, including incidents of abuse or allegations of abuse to

law enforcement, the use of physical restraints, the use of seclusion, and kept news media aware of issues within the disabilities population.

### **September 11, 2001 (9/11)**

On the morning of September 11, 2001, two terrorist hijacked planes crashed into the World Trade Center, which led to the collapse of the North and South Towers. According to Keiser University (2004), the evacuation plan for people with disabilities within the towers consisted of going to pre-determined meeting sites and waiting for evacuation assistance from first responders; which many times first responder agencies were unaware of these plans. Keiser University recounted survivor's stories of breaking the rules in order to survive by being carried down flights of stairs by inexperienced coworkers and helpers while others noted that there was a room full of people who used wheelchairs and walkers waiting for firefighters on the 80<sup>th</sup> floor, none of whom survived.

Keiser University (2004) described an agency that comprised of people with visual impairments met with the New York City Fire Department after the 1993 bombing at the World Trade Center, and devised an evacuation plan for their employees, which allowed for a successive evacuation of all the employees. Additionally, Keiser University noted that after the 1993 bombing, a company had purchased a special wheelchair for an employee on the 68<sup>th</sup> floor, which allowed his coworkers to carry him down the stairs and safely evacuate on 9/11. Further, Keiser University noted that after increased and frequent drills since the 1993 bombing, a man on the 70<sup>th</sup> floor with a prosthetic leg was

able to keep up with his non-disabled coworkers, allowing him to safely evacuate on 9/11.

Keiser University (2004) suggested that people who relied on familiar sites and routines that helped orient them, such as people with cognitive, visual, or hearing impairments, met with barriers when they were rerouted by first responders, such as risking arrest because they did not understand where to go when they got to the subway. Additionally, Keiser University suggested that people trapped in their homes who were hearing impaired or mobility impaired were unable to answer first responders, because they could not hear the; thus, they could not access emergency services.

Keiser University (2004) noted that because of training conducted for people with developmental disabilities prior to the 9/11 attacks which began as preparation for Y2K, none of the more than 2,800 people who died in the World Trade Center attacks had a developmental disability. Additionally, Keiser University suggested that measures taken through the development of a tracking system made it possible to track people with disabilities immediately following the attacks and in the ensuing days.

September 11, 2001 got the attention of the at-risk and disability community. In the aftermath of the towers collapse and the ensuing recovery of the devastated city, O'Brien (2003) noted that local, State, and national emergency managers revealed four significant shortcomings; there was no appropriate emergency management for older and disabled populations, the city lacked any type of citywide coordinated community services, there was no system in place to identify and locate older or disabled populations, and there was no sharing of pertinent information before or after the

emergency. However, O'Brien suggested that the agencies that did have emergency action plans with regular training and drills, were better equipped to handle 9/11 than those that did not.

Eisinger (2004) noted that responses to September 11 was that cities and communities reviewed disaster planning and contingency plans, conducted vulnerability assessments, and increased training to first responders. However, Eisinger noted that complaints arose from local communities when the increased cost of security, training, and overtime arose but there was no or limited compensation from the government. Additionally, Eisinger suggested that there were a lack of guidelines about the terror alert system, a lack of intergovernmental coordination and relationships, and increased frustrations, burdens, and resentments. Although tragic, the terrorist attacks on September 11, 2001 forced local and federal governments to face new responsibilities, including emergency planning and risk assessments for all populations within a community (Eisinger, 2004; O'Brien, 2003).

### **Hurricane Katrina**

In 2005, during the aftermath of Hurricanes Katrina and Rita, policymakers realized the true disadvantage people with disabilities faced during emergencies and natural disasters. In 2006, The National Council of Disability published a report for Congressional review of what went wrong during Hurricanes Katrina and Rita. The report started "people with disabilities were disproportionately affected by the Hurricanes because their needs were often overlooked or completely disregarded" (Frieden, 2006, p. 2). Frieden noted that some areas of concern were lack of evacuation buses that did not

have wheelchair lifts, people with special needs were refused shelter, there was a lack of plans in place to evacuate people with mobility concerns or people who were unable to care for themselves (i.e. nursing home residents, elderly family members), and there was an inadequacy of needed supplies. Additionally, Frieden suggested that a major concern was that despite FCC regulations, public warnings were not fully accessible to anyone with hearing or visual impairments.

### **Wells Fire (2009)**

In New York State, one area of concern was fire safety in state-run group homes for individuals with developmental or intellectual disabilities. Eisner (2013) suggested that economic downturn across New York and the United States has led to closures of fire departments due to lack of financial resources, lack of personnel, and lack of volunteers. During a 2017 OPWDD mandatory staff Fire Safety training class, Fire Safety Officer Butierri discussed that due to severe lack of volunteer firefighters in the outlying areas where there are houses that serve individuals with developmental disabilities in Broome and Chenango Counties, NY, it could take upwards of 20-30 minutes for a fire department to respond. According to a simulated video shown during the class, it takes approximately three minutes for a fire to engulf an entire room.

Therefore, Butierri (2017) suggested that due to lack of fire personnel and resources, it falls on the in-home staff to attempt to safely evacuate individuals from the residence. Karlin (2014) noted that in the case of the Wells state-run group home fire in 2009, four individuals died when two staff were unable to evacuate them, despite saving five others. Karlin reported that the state and staff were found 100% liable for the deaths

of the individuals and the delays in contacting the fire department because they called the alarm company first and only could evacuate one of the individuals as far as a mud room..

The ultimate goal is the preservation of life during emergencies and natural disasters, however, there continues to be equality issues regarding emergency management services offered to individuals with disabilities typically due to lack of knowledge, lack of services, lack of equipment, and lack of personnel. Despite neglect and liability rulings such as the results of the Wells group home fire, as of January 10, 2018, when I ceased employment with OPWDD and reviewed my last fire safety plan and staffing roster for OPWDD group homes, state-run facilities continued to have awake overnight staff with a staffing ratio of two staff to 12 individuals.

### **Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy**

Weibgen (2015) noted that when Hurricane Irene struck New York City, access barriers prevented people with disabilities from evacuating and denied crucial benefits of emergency preparedness to at-risk populations. Weibgen suggested that that although there were emergency plans for the general public, those plans failed to address the needs of over 900,000 disabled persons who were impacted and/or vulnerable during natural disasters. Weibgen noted that this was the basis for the BCID lawsuit filed in September 2011. Additionally, Weibgen noted that a CIDNY report urging the training of first responders to meet the needs of people with disabilities was ignored by the City in the aftermath of 9/11, therefore the same access mistakes were made in emergency

preparedness for people with disabilities during Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy.

Weibgen (2015) suggested that because of the minor effects of Tropical Storm Irene, New Yorkers and responders had become “lulled into a false sense of security” (p. 2436) when Superstorm Sandy hit New York City. Additionally, Weibgen suggested that those living in the boroughs of New York City and having an at-risk characteristic were not prepared for Superstorm Sandy; given time constraints on evacuating, the lack of power restoration to the outer boroughs, and the Mayor’s promises that no one would be left behind; that first responders would come in to save people. Weibgen also suggested that the underlying problem was the ongoing failure to prepare for the needs of at-risk populations during disasters by emergency preparedness plans and first responders. Weibgen described how untrained volunteers and neighbors had to fill the gaps that official response teams had left until the National Guard and health care professionals began a coordinated response effort two weeks after Superstorm Sandy struck.

### ***New York Times Articles (2011)***

In 2011, Hakim ran a series of articles exposing abuse in New York State-run homes for individuals with developmental disabilities in the New York Times. Hakim noted that according to FOIL requests, in 2009, there were approximately 13,000 allegations of abuse in state-operated facilities, however less than 5% were referred to law enforcement. Hakim also noted that of those cases, 399 were considered serious offenses of which 25% of those involved physical, sexual, or psychological abuse of a resident. Hakim reported that termination was successful in 30 of those cases while the

remainder of the employees were suspended, fined, had vacation time reduced, or were moved to a new work location.

In response to continued allegations of abuse by state employees toward individuals with developmental disabilities, Governor Cuomo (2013) initiated the formation of the Justice Center for the Protection of People with Special Needs, which began operations on June 30, 2013. The mission of the Justice Center was to “provide tough oversight and transparency for facilities across the state responsible for the care of special needs individuals, prevent neglect and abuse, and ensure that anyone committing crimes will be swiftly caught and penalized for their actions” (Cuomo, 2013, para. 2).

Abuse and neglect have been common for decades; from Geraldo’s investigative report on Willowbrook State School and the unethical and deplorable conditions to the inception of Cuomo’s Justice Center because of continued allegations of abuse and neglect (Cuomo, 2013; Hakim, 2011; Skinner, 1972). I felt it was important to acknowledge the historical instances of abuse and neglect in order to understand the perception of how at-risk populations have been treated and how they could be treated differently in the future, which would necessitate awareness and diversity training to improve relations between first responders and at-risk populations.

### **FEMA’s Whole Community Approach (2011)**

In 2011, FEMA introduced the concept of the whole community approach, which was described as a shared responsibility concept that calls for preparedness efforts and involvement from all layers in a community, not just the government. Using whole community as a guidance principle in preparedness, FEMA encouraged the use of



involvement by individuals, families, businesses, faith-based organizations, community organizations, non-profit groups, schools, media, and all levels of government in the development of preparedness documents to ensure their roles and responsibilities within the content of the material.

FEMA (2011) suggested that changes in demographic trends and technology would affect disaster management activities that would change the relationships with first responders and at-risk populations. FEMA recognized growing senior populations, changes in transportation systems, and immigrant trends often a more diverse community in which influence how people prepare for and respond to emergencies and disasters. Through involvement in the whole community approach, FEMA suggested that the ideal preparedness plan for a community would be able to understand and meet the needs of all members of the community, as well as engage and empower members of the community.. FEMA also suggested that this would help identify any partnerships or relationships that would need to be built or maintained, such as first responders and at-risk populations.

Cripps, Cooper, and Austin (2015) expanded upon the whole community approach by publishing a set of guidelines and recommendations for working with people who were hearing impaired or deaf. Cripps et al. suggested that expansion came with the idea that some tools and resources offer limited success when communication with the deaf community, but it does not allow for expansion of conversation or only offers limited response choices. In response to recommendations, Cripps et al. developed the EPPS Model, which teaches first responders basic American Sign Language with the help of people in the deaf community. Cripps et al. noted that the model provided awareness

training to first responders by using a concurrent training model with the deaf community representatives which promoted community members to take active roles in public safety training. Cripps et al. suggested that the EPPS Model attempted to reduce communication barriers between first responders and the deaf community, thus promoting a whole community approach to disasters and emergencies. However, Cripps et al. identified research gaps that showed a need to further explore emergency preparedness and the whole community approach, application and evaluation with emergency preparedness curricula, and suggestions and accommodations for people with dual special needs such as deaf and blind or deaf and developmentally disabled.

### **Legal Policies and Authorities**

Legal policies and practices in New York State and the US have provided legal guidance and practices to agencies, organizations, and individuals that provide services and/or emergency response to people with at-risk characteristics. These legal policies and authorities have also allowed at-risk populations and their supporters to advocate for equal treatment under the law. This has been seen in the adoption of legal policies and practices based on after action reports or lawsuits against state or federal governments following large-scale disasters, inclusive of the Civil Rights Act of 1964, the Willowbrook Consent Judgement of 1975, New York State Executive Article 2B, the Americans with Disabilities Act, the Post-Katrina Emergency Management Reform Act of 2006, the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the Brooklyn Center for Independence of the Disabled v. the City of New York, and the Division of Homeland Security and Emergency Services Strategic Plan 2018-2020.

**Civil Rights Act of 1964**

The Civil Rights Act of 1964 provides a basis of providing services to people regardless of race, color, or national origin (SLMS Language Access, 2018).

Additionally, SLMS Language Access noted that the Civil Rights Act of 1964 makes it unlawful to discriminate or deny services under any program that receives Federal financial assistance. Additionally, SLMS Language Access suggested that any first responder program that receives Federal financial assistance, whether it is grants or FEMA assistance, cannot exclude or discriminate against the participation of persons within the program or those who receive the benefits of the program.

**United Nations International Disability Rights Movements**

The World Health Organization estimates that there are between 600 and 650 million people worldwide diagnosed with some type of disability or impairment (International Federation of Social Workers [IFSW], 2017). IFSW suggested that the history of how people with at-risk characteristics were treated worldwide was based on the country of residence; whether it was discrimination, exclusion and segregation, extermination, or marginalization. Additionally, the IFSW suggested that there has always been some sort of social exclusion and stigma in most industrialized nations; as noted with the Willowbrook expose or the Tuskegee Syphilis experiment in the United States. Further, the IFSW suggested that religious beliefs and cultural values have played a role in the treatment of people with at-risk characteristics in some nations, such as in Nazi Germany where people were used for medical experimentation or put to death.

Since 1971, the United Nations has implemented international disability rights movements to advocate for the human rights of people with disabilities (IFSW, 2017). IFSW noted that efforts have been made to reduce or eliminate institutionalized living and promote community living. IFSW noted that in culmination of all the United Nations initiatives, more than 144 nations have now signed this into law.

### **Willowbrook Consent Judgment**

In response to Geraldo Rivera's investigative report, in March 1972, a lawsuit was filed against New York State by parental advocacy groups. Disability Justice (2016) reported that allegations included that the conditions at Willowbrook State School violated the constitutional rights of the residents, specifically multiple violations of the 8<sup>th</sup> and 14<sup>th</sup> Amendments. Disability Justice suggested that this was inclusive of violations for the confinement of residents for indefinite periods of time, failure to release residents if or when they were eligible for release, failure to conduct periodic evaluations of residents to assess progress and refine goals and programming, failure to provide habilitation for residents, failure to provide adequate educational programs or services such as speech, occupational, or physical therapy, overcrowding, lack of privacy, failure to provide protection from theft of personal property, assault, or injury, inadequate clothing, meals, and facilities, including toilet facilities, confinement of residents to beds, chairs, or to solitude, lack of compensation for work performed, inadequate medical facilities, and understaffing and incompetence in professional staff. Judge Judd, decreed that the residents of Willowbrook State School were "entitled to at least the same living conditions as prisoners" (Linnell & Wieck, 2012, p.51) based on the Constitutional rights

of the Eighth Amendment, the due process clause of the 14<sup>th</sup> Amendment or the equal protection clause of the 14<sup>th</sup> Amendment and that individuals with developmental disabilities should be able to live in an environment that is free from “cruel and unusual punishment” (Linnell & Wieck, 2012, p. 51).

In April 1975, Judge Judd signed the Willowbrook Consent Judgment: *New York State Association for Retarded Children, Inc., et. v. Hugh L. Carey*, 393 F. Supp. 715 (1975). The Consent Judgment established guidelines and a standard of care for individuals with disabilities. Disability Justice (2016) suggested that these guidelines that started with Willowbrook State School residents and led to legislation that has included all individuals in the care of New York State. Linnell and Wieck (2012) noted that the Consent Judgment also led to the closure of Willowbrook State School and the eventual closure of all New York State institutionalization of individuals with developmental disabilities.

### **New York State Executive Law Article 2B and Its Amendments**

New York State (2018) Executive Law Article 2B and its amendments are the backbone of emergency management in New York State. New York State Executive Law Article 2B is the guidance document for emergency management within New York State, which provided information to emergency managers about the all-hazards approach, the use of a county registry, and local measures for disaster preparedness and response. Enacted in 1978, with amendments and revisions to present day, Executive Law Article 2B emphasized an all-hazards approach to preparedness activities and response of Disaster Preparedness Commission agencies By using the all-hazards approach to

emergency management, New York State recognized the potential that any type of emergency or disaster can occur at any time. In doing so, New York State also recognized that at a local level, local emergency managers must take into consideration the risks associated within their jurisdiction and plan ahead for hazard scenarios. New York State suggested that part of planning ahead for a risk hazard scenario includes training and exercise of personnel and resources; which although not specifically stated, should include awareness and diversity training for first responders assisting at-risk populations.

New York State (2018) Executive Law Article 2B established the use of a county registry for persons with special needs who would require assistance during disasters due to physical or mental disabilities. New York State described that the voluntary registry is designed at a county level and should be used to identify persons within the county who need assistance, identify the types of assistance needed, and plan resource allocation to assist the identified person and needs. Amended in 2018 to include the elderly, New York State Executive Law Article 2B directed community-based service providers to establish an awareness program to educate clients about their safety during disasters.

New York State (2018) Executive Law Article 2B recommended the establishment of a command structure, however it does not specify training requirements of first responders, emergency managers, or local emergency response organizations. However, New York State Executive Law Article 2B did state that specialists or subject matter experts should be assigned to assist, when practicable, in the related emergency actions in order to avoid adverse effects. New York State Executive Law Article 2B

Section 23, recommends that the local comprehensive emergency management plans should coordinate appropriate local measures to prevent disasters and provide local services and resources to aid in the delivery of services during and after disasters. Based on interpretation of what other measures mean, New York State Executive Law Article 2B could recommend awareness and diversity training of first responders could be appropriate measures to assist in protecting lives and reducing the disaster impact on vulnerable populations.

### **Americans With Disabilities Act of 1990 and Its Amendments**

NACCHO (2014) defined the Americans with Disabilities Act and disability as a physical or mental impairment, activity limitations, and participation restriction based on physical disability, cognitive disability, or sensory disability. Additionally, NACCHO noted that the disability must substantially limit one or more major life activities. The United State Department of Justice (n.d.) suggested that the Americans with Disabilities Act (ADA) of 1990 and its amendments guarantees that people with disabilities have the same opportunities as other Americans regardless of a person's physical or mental impairment. This includes access to assistance and resources during times of emergencies, which is often ignored when addressing the needs and rights of people with access and functional needs in the emergency management plan process for state and local governments (Taylor, 2018; Good, 2011). Litigation in cases since September 11, 2001 have referenced the ADA and pertains to emergency management, first responders, and emergency planning in New York State.

Jones (2010) prepared a Congressional Research Service report regarding the Americans with Disabilities Act (ADA) and emergency preparedness and response. Jones defined the statutory and regulatory language of the Americans with Disabilities Act and although the ADA does not include provisions specifically to disasters, the broad nondiscriminatory provisions can and should be included in emergency preparedness and response. Additionally, Jones noted that the Department of Justice has interpreted the ADA to prohibit against discrimination by emergency services, with the exception of an imminent threat where the safety and welfare of an individual or public cannot wait for the availability of an interpreter.

Jones described how the Department of Justice issued a planning guide to offer local governments action steps regarding emergency preparedness and response programs. Jones noted that the guidance included incorporating people with different types of disabilities in all phases of the planning process, process of notifying people with hearing impairments or other disabilities about emergencies and disasters, evacuation planning either through self-evacuation or with first responder assistance, removing barriers from sheltering, arrange for accessible housing and the issues involved with returning people with disabilities to their homes, and ensuring that emergency services and first responder agencies follow the action steps delineated in the guide.). Jones recommended that making these programs accessible was a requirement of the ADA.

It should be noted, however, that there are no specific guidelines to provide first responders with awareness or diversity training to be able to assist at-risk populations during disasters. Jones (2010) noted that the guide discussed inclusion of people with



disabilities in the planning process but it was referenced to the plan writing procedures not training. Jones did note how the National Council on Disability recommended that “disaster preparedness policies protect and maintain the independence of individuals with disabilities” (p.7) but did not recommend how this actually works during a real-world event.

Taylor (2018) suggested that although the ADA does not specifically address emergency preparedness, first responder awareness and diversity training, or emergency management standards, the courts have found that the ADA does apply and that the needs of people with access and functional needs can and will be incorporated into emergency preparedness plans. Good (2011) suggested that basic principles of the ADA encouraged educating first responders because the ADA requires that people with disabilities must be provided with equal opportunities to participate in or be a recipient of services provided by a public entity, in which emergency and disasters services from first responders applies. NACCHO (2014) recognized that during an emergency, people with disabilities have needs that must be addressed to assist those individuals in maintaining independence, health, and safety during an emergency or disaster. Therefore, NACCHO recommended that every police officer, firefighter, and emergency medical services personnel should be trained in awareness and diversity training to adequately assist people with access and functional needs during disasters.

### **Post-Katrina Emergency Management Reform Act of 2006**

Riscoe, Schlegelmilch, and Paturas (2013) suggested that the general principles of the Post-Katrina Emergency Management Reform Act of 2006 were that children and

adults with access and functional needs must have access to the same programs and services that people without access and functional needs have. Riscoe et al. suggested that the Post-Katrina Emergency Management Reform Act mandated that emergency plans “must develop and incorporate strategies for locating, communicating with, transporting, and sheltering those with needs beyond the general population when disaster strikes” (para. 1).

Jones (2010) summarized that the Post-Katrina Emergency Management Reform Act of 2006 was responsible for the formation of a disability coordinator position in the Federal Emergency Management Agency. Jones recommended that the disability coordinator position be used “to ensure the needs of individuals with disabilities are being properly addressed in emergency preparedness and disaster relief” (p.6).

### **Robert T. Stafford Disaster Relief and Emergency Assistance Act**

FEMA (2018) summarized that Title VI of the Robert T. Stafford Disaster Relief and Emergency Assistance Act explained the measures that must be undertaken to prepare for an emergency or disaster, inclusive of recruiting and training personnel, emergency officials, and any service organization that assists in a disaster. Additionally, FEMA summarized that Title VI also discussed that after a disaster, local governments must provide services to at-risk populations, such as fire, police, and emergency medical services.

### **Brooklyn Center for Independence of the Disabled v. The City of New York (2013)**

NACCHO (2014) reported that in November 2013, the United States District Court, Southern Division of New York, ruled that the New York City Emergency

Preparedness Program failed to meet the needs of people with disabilities who resided within New York City. NACCHO summarized that the ruling stated that people with disabilities were not provided reasonable access to the emergency preparedness program. NACCHO concluded that the six key areas of noted deficiency included the city's evacuation plans, the city's shelter plans, a lack of a city canvassing plan, accessible communication for resources after a disaster, a lack of the city's outreach and education programs, and the city's lack of plans for providing people with disabilities information about any accessible services and their locations. I concluded that the deficient area of outreach and educational programs showed a lack of awareness and diversity training to first responders in New York City.

#### **Division of Homeland Security and Emergency Services (DHSES) Strategic Plan 2018-2020**

In the Commissioner's Message in the Division of Homeland Security and Emergency Services (DHSES) Strategic Plan 2018-2020, Roger Parrino Sr. discussed how New York has come together during natural disasters, terrorism, and other hazards that threaten New York to be better prepared for the future. DHSES noted in the Strategic Plan that New York currently has 19.8 million residents, with 73 major disaster declarations since 1954, have responded to 29 terrorist plots since 9/11, and train over 60,000 first responders annually. DHSES suggested that the stakeholders included in this plan were New York State DHSES employees, the public, first responders, State agency partners, and any others with vested interest in DHSES activities.

DHSES (2018) stated five goals in the Strategic Plan. DHSES stated that the first goal was to prevent, protect, and/or mitigate man-made threats and natural hazards. DHSES suggested that this goal would be accomplished through a continual assessment of threats, vulnerabilities, and consequences faced by New York State and its stakeholders and an understanding of those threats, vulnerabilities, and consequences. Additionally, DHSES suggested that information and intelligence sharing would allow New York State and its stakeholders to take proactive measures to lessen the likelihood and impact of emergencies, disasters, and hazards that threaten New York State. DHSES recommended several possibilities for attaining this goal, which includes the use of supporting and strengthening education, inspection, and/or investigations through proactive programming, such as fire education, counterterrorism training, active-shooter training, and Red Team exercises.

DHSES (2018) stated that the second stated goal was to prepare first responders with the capabilities needed to address threats and hazards associated with New York State. DHSES suggested that this would be accomplished through several preparedness opportunities, including planning, training, exercises, and equipment. DHSES recommended several possibilities for attaining this goal, which included conducting training and exercises for emergency response personnel, expand and diversify training offered at the State Preparedness Training Center, and conduct planning workshops and provide planning assistance to stakeholders.

DHSES (2018) stated that the third goal was to respond to and recover from disasters, emergencies, and incidents that occur in New York State. DHSES suggested

that this would be accomplished through the deployment of personnel and other resources to assist local communities with coordinated efforts and the support necessary to respond to and recover from disasters, emergencies, and incidents in New York State. DHSES recommended several possibilities for attaining this goal, which included the management and maintenance of situational awareness, develop and deploy specialty resource teams, enhance the delivery of 911 services using Next Generation technologies, and develop internal capabilities and trainings to support full-scale activations.

DHSES (2018) stated that the fourth goal was to enhance outreach, education, and partnerships by actively engaging with the public and stakeholders. DHSES suggested that this would be accomplished by building relationships through active engagement, sharing of information, and education. DHSES recommended several possibilities for attaining this goal, which included expanding the Citizens Preparedness Training to include children and other vulnerable populations, increase the use of social media and media platforms, increase public outreach for education programs, and develop and maintain partnerships with stakeholders through information sharing, exercises and trainings, and presentations.

DHSES stated that the fifth goal was to ensure an integrated and effective DHSES. DHSES suggested that this would be accomplished by ensuring compliance with any statutory or other requirements, by effectively communicating and collaboration of services across DHSES, and by providing professional development opportunities for staff, including ways to improve agency operations. DHSES recommended several possibilities for attaining this goal, which included ensuring that mandated staff complete

trainings and provide staff with new training opportunities, develop professional development programs, and identify and promote new policy potentials and legislative initiatives for emergency management.

### **Previous Research**

Limited research regarding at-risk populations has been conducted within the past five years. Research tends to be conducted immediately following an emergency or disaster affecting a specific population, as seen immediately following 9/11, Hurricane Katrina, and Superstorm Sandy.

### **Lessons Learned From the World Trade Center Disaster**

Keiser University (2004) explored emergency preparedness for people with disabilities following the World Trade Center disaster. Keiser University suggested that appropriately training staff prior to a disaster on disability awareness and incorporating strategies to assist people with disabilities in planning and operations would allow first responders to account for the specific needs of people with disabilities during a disaster.

Keiser University (2004) suggested that first responders were not trained to understand why people would not leave their apartments in the event of a disaster or seek assistance. Keiser University offered many example, such as a man with quadriplegia was unable to leave his home and went unnoticed by outreach personnel, was unaware on how to seek help when the power went out. Additionally, Keiser University suggested that new barriers were created and/or eliminated services to people with disabilities. For example, Keiser University suggested that people with mobility issues could not leave apartment complexes when elevator services stopped working or when debris, cracks,

and flooding of street surfaces changed, resulting in the impossibility for people with visual impairments or people who relied on wheelchairs to evacuate. Keiser University suggested that because first responders did not understand these barriers and were not prepared for them, they did not adequately assist people with disabilities during and in the aftermath of 9/11.

Keiser University (2004) suggested that one major areas of concern was that there were no emergency plans in place to assist vulnerable populations. Keiser University suggested that this clearly showed that persons with disabilities or impairments were not identified by the community or first responders, therefore rescues could not be facilitated. Keiser University recommended that lessons learned from 9/11 include integrating people with disabilities into community and neighborhood networks responsible for emergency preparedness.

Keiser University (2004) explored various resources that became available after 9/11. Keiser University noted that one resource that first responders started using were tip cards. Keiser University noted that NYPD community relations personnel and first responders, such as fire departments, emergency medical services, and police officers, introduced tip cards with information available in English, Spanish, and Mandarin, which provided directions on how to get help for people with disabilities or language access issues.

Keiser University (2004) recommended that awareness and diversity training needed to occur prior to a disaster, not in the middle of a disaster. Keiser University noted that FEMA developed a course for emergency response staff called “Emergency Planning

for Special Needs” as a response to 9/11. Additionally, Keiser University recommended that community outreach to people with disabilities should be part of the preparedness efforts of a first response agency and should include training employers, landlords, and organizations in the use of emergency equipment for people with disabilities.

Keiser University (2004) concluded that every individual, regardless of abilities or disabilities, is entitled to services provided by emergency and response organizations. Additionally, Keiser University recommended that emergency responders must incorporate appropriate access and response into their planning and operations. It was noted that as part of preparedness efforts, Keiser University recommended that first responders should be trained on how to work effectively with people with disabilities during a disaster.

### **Voices of 9/11 First Responders: Patterns of Collective Resilience**

Freedman (2004) explored the resiliency of first responders after the 9/11 terrorist attacks and the common mission of serving the community. Freedman used ethnographic research to describe how firefighters and police officers recounted how their professional training and experience allowed them to handle the horror-filled emergency situation of 9/11. Freedman suggested that the shared values, beliefs, and common social background provided first responders with a strong sense of group cohesion, which allowed them to numb themselves to the mission of helping others during and after the attacks.

### **Community Tracking Study (September 2002 - May 2003)**

McHugh, Staiti, and Felland (2004) conducted research to gauge the public health preparedness of U.S. communities following the September 11 terrorist attacks. McHugh



et al. collected data regarding the changes in funding, leadership and involvement, emergency preparedness using six focus points, factors that facilitate preparedness, and preparedness challenges. McHugh et al. noted that federal funds were used for capital investments, but funding was also used for planning, personnel, training, and drills. McHugh et al. suggested that in communities where leadership in public safety organizations was lacking or collaboration between agencies was challenging, local planners evolved to leadership positions to help foster relationships and collaboration between neighboring jurisdictions.

McHugh et al. (2004) explored six focus areas of emergency preparedness. McHugh et al. researched emergency planning and readiness assessment, disease surveillance and epidemiology, lab capacity, communicating health risks and disseminating information, communication and information technology, and education and workforce training. Additionally, McHugh et al. suggested that communities were better prepared for a disaster if other factors were present, such as the existence of a nearby nuclear powerplant or if there were previous emergencies and disasters that communities had dealt with. Further, McHugh et al. suggested that challenges to preparedness were noted as a lack of funding, budget deficits, and staffing. Lastly, McHugh et al. recommended that policymakers should examine the perceived deficiencies to support progress and that communities could benefit from leaders who have experience and the ability to motivate others.

### **Post-September 11 and Post-Katrina Policy Reform Efforts**

Brattberg (2012) explored the public administrator's perspective to the policy reform of the US Homeland Security systems efforts in the aftermath of September 11 and Hurricane Katrina. Brattberg suggested that after the September 11 terrorist attacks, that there was a lack of coordination between federal agencies and the response capacity at local levels. Brattberg noted that the Department of Homeland Security was formed as a result of the homeland security issues in 2001.

Brattberg (2012) suggested that after Hurricane Katrina, there were competing decision-making structures, issues with information sharing between local, state, and federal levels, and a lack of preparedness at all levels. Brattberg suggested that as a result of these efforts to clarify organizational relationships, the use of the National Incident Management System (NIMS) and National Response Framework (NRF) were adopted.

Brattberg (2012) suggested that both 9/11 and Hurricane Katrina led to governmental reshuffling and the emergence of new policies using both a structured and network approach. However, Brattberg noted gaps are in training and evaluation programs, regional emergency management collaboration and mutual aid agreements, leadership reform and organizational culture, and the need for collaboration and coordination in the preparedness phase.

### **Disaster Preparedness and the Chronic Disease Needs of Vulnerable Older Adults**

Aldrich and Benson (2008) explored how chronic conditions resulted in older populations being vulnerable during disasters. Aldrich and Benson researched the effects on vulnerable older adults in both the September 11 attacks and Hurricanes Katrina and

Rita. Aldrich and Benson suggested that one of the lessons learned following those disasters was greater awareness needed to be focused on people with chronic conditions and vulnerable populations.

Aldrich and Benson (2008) recommended having tools and strategies in place to assist vulnerable populations in place during disasters. Aldrich and Benson recommended that by helping professionals, including first responders, plan for emergencies through assistance guides and training materials would enhance assistance to aging populations. Aldrich and Benson noted that by 2030, over 72 million people will be aged 65 or older and people over 85 was the fastest growing population in the United States. Aldrich and Benson noted that aging populations may have declining hearing or vision, which may make it difficult to communicate with first responders, or they may have cognitive impairments, which could lead to confusion or agitation during an emergency, especially if there are crowds, noise, or lack of privacy.

Aldrich and Benson (2008) recommended that relationships needed to be formed between public health agencies, services for the aging, first responders, and other entities working with aging populations before disasters to ensure coordination, communication, and response during a disaster. Additionally, Aldrich and Benson recommended that a system in place for continuity of operations with backup communication systems in order to maintain vital records and essential information. Aldrich and Benson suggested that the system include mapping programs, plans, and tracking methods to best assist elderly populations.

## **Nobody Left Behind**

Rooney and White (2007) explored how effective preparation practices and relief efforts was viewed from the perspective of participants with mobility issues who had experienced the Hurricane Katrina disaster. Rooney and White suggested that although there was ADA requirements for accessibility, a noted issue that appeared repeatedly was both the follow through with requirements and mitigation efforts, even when failure to comply was reported. Rooney and White suggested that deficiencies included evacuation planning, registries for special needs, and disaster training. Rooney and White indicated a gap in disability-related disaster preparedness training and education, inclusive of the training on personnel in the field or first responders.

Rowland, White, Fox, and Rooney (2007) explored the types of policies and practices in existence to ensure first responders and emergency personnel were trained to assist people with mobility impairments. Rowland et al. concluded that many agencies interviewed did not have emergency plans to assist people with mobility impairments. Additionally, Rowland et al. concluded that emergency management planners were unaware of the number of people with mobility impairments within their jurisdictions. Rowland et al. suggested that the primary barriers to developing, adopting, and implementing emergency management plans assisting people with mobility impairments was a lack personnel and financial resources, and a lack of knowledge of the planners to develop guidelines. Rowland et al. recommended that future training programs for responders should include specialized equipment training with a standardized training program, a standardized training on people with disabilities, and training on rehabilitation

equipment and the proper use of the equipment. Rowland et al. suggested that the research, planning, and a standardized training framework was needed in the development of training programs to assist people with mobility impairments.

White (2007) explored the concept that emergency management, disaster preparation, and response assisting people with disabilities was a contemporary issue. White was instrumental in laying the foundation into the series of the *Nobody Left Behind* study, the ensuing articles, and future contributions to disability policy. White suggested that future studies regarding gaps in current programs, practices, and policies regarding disability disaster preparation and response at local, state, and federal levels of government would assist in avoiding another Hurricane Katrina response to people with disabilities.

Fox, White, Rooney, and Rowland (2007) researched the relationship between a person with mobility issues and the impact of a disaster at the county-level of preparedness. Fox et al. suggested that preparation at the county-level was inadequate during Hurricane Katrina because buses were not equipped to handle people in wheelchairs, staff were not trained in adequate evacuation procedures for nursing homes that resulted in patient deaths at exits, and many places did not have backup power sources, which resulted in the death of ventilator dependent individuals. Fox et al. suggested that emergency management guidelines were not in place to assist people with mobility issues, with local county jurisdictions offering excuses relating to cost or lack of personnel, even after research associated with 9/11 indicated a need for disability preparedness. Fox et al. suggested that a gap in leadership and at local, state, and federal

levels cause universal disaster plans that do not accommodate people with mobility impairments.

Fox, White, Rooney, and Cahill (2010) conducted a qualitative analysis regarding the psychosocial impacts of Hurricane Katrina on persons with disabilities and staff living on the American Gulf Coast. Fox et al. suggested that first responders were often ill-prepared to assist people with physical disabilities, despite technology and guidelines available, due to a lack of understanding how psychosocial supports and emergency services align. Fox et al. suggested a gap in critical supports within the community, inclusive of “police and fire, department services, postal delivery, road maintenance, electrical power, and access to food and clean water” (p. 237). Fox et al. suggested that these gaps were in the areas of pre-disaster planning, pre-and post-disaster communication, and pre- and post-disaster coordination of services.

### **Hurricane Katrina**

Reilly (2015) completed a case study comparing business continuity practices following Hurricane Katrina in New Orleans and the Fire at Rosepark Care Home in Uddingston, Scotland. Reilly examined how special needs or individuals with impairments or impediments were left behind or forgotten during Hurricane Katrina. Reilly concluded that that in 2005, the population of New Orleans was approximately 450,000 people, with almost 24% of the population disabled. Reilly suggested that after the levee failed, the approximate deaths attributed to Hurricane Katrina in New Orleans was approximately 986, with approximately 50% over the age of 74 and many having mobility and transportation issues. Reilly suggested that over 100 of these persons were

nursing home residents who died from dehydration and heat-related issues. And, when the situation became desperate at one hospital, a “surgeon and several nurses made the decision to euthanize patients who were deemed unlikely to survive the ordeal or evacuation” (Reilly, 2015, p.43). While this is an extreme example, Reilly suggested that emergency managers and first responders were improperly prepared to assist at-risk populations in severe disaster conditions. Reilly recommended that there is a need for better training, inclusion in emergency management plans, and evacuation planning. Additionally, Reilly suggested that a gap in regular emergency planning with special needs populations that included realistic trainings and exercises.

Clements (2010) discussed the use of functional need support services by comparing lawsuits following the Hurricane Katrina response and a 2007 lawsuit filed against the City of Oakland, CA. Clements described functional needs to include senior citizens, newborns, pregnant women, people with autism, people with cognitive disabilities or mental health issues, people who are deaf or have hearing impairments, people who are blind or have visual impairments, people with mobility impairments, and people suffering from severe and chronic health conditions. Clements suggested that each group of people requiring support encountered multiple challenges, especially if they had characteristics spanning more than one functional need category. Clements recommended that advanced planning needed to occur, which would include collaboration with relevant stakeholders and that accommodations were essential to planning and response activities. Although Clements mentioned recent success stories, he summarized that overall the

response to people with functional needs during disasters had been burdened with errors and lack of oversight.

### **Barriers to Recovery Following Disaster**

Stough, Sharp, Resch, Decker, and Wilker (2016) researched the barriers to the long-term recovery of individuals with disabilities following Hurricane Katrina. By using focus groups and the grounded theory, Stough et al. suggested five themes as significant barriers to recovery, including housing, transportation, employment, physical and mental health, and accessing recovery services. Stough et al. suggested that early studies found that emergency managers did not often complete trainings focused on the needs of individuals with disabilities and often did not include them in emergency management plans. Additionally, Stough et al. suggested that first responders frequently did not understand the supports needed by people with disabilities, therefore they were unprepared to assist post-disaster. Further, Stough et al. suggested that in emergency disaster drills, first responders often overlooked, ignored, or inappropriately assisted volunteers pretending to have disabilities, such as mobility impairments or blindness. Stough et al. suggested that in order to have adequate and accessible services for people with disabilities, there needed to be appropriate coordination of services, adequate staffing, and solid staff capabilities.

### **Right to be Rescued: Disability Justice in the Age of Disaster**

Following Superstorm Sandy, Weibgen (2015) conducted a study about the legal rights and responsibilities that local governments had toward populations that are considered marginalized or at-risk. Weibgen suggested that after Tropical Storm Irene



and Superstorm Sandy, New Yorkers and responders had become “lulled into a false sense of security” (p. 2436). Weibgen suggested that limitations of at-risk populations and first responders, such as social inequalities, the tendency to under-plan for the needs of at-risk populations, led to the general misunderstanding regarding the needs of people with disabilities, and the prioritization of lives during an emergency. Additionally, Weibgen concluded that “OEM has never done a study to determine if the fire department will have the capacity, or the ability, to actually evacuate people with disabilities from their apartments in the event of a mass emergency” (p. 2450). Further, Weibgen suggested that with the settlement of the BCIL case, the practice of delegating responsibilities without direction or oversight would end and that staff and task force members would be required to receive training on disabilities.

#### **National Council on Disabilities Report (2014)**

A 2014 report from the National Council on Disabilities and Department of Justice recommended comprehensive and continual staff training to ensure first responders are communicating effectively with people with disabilities. The National Council on Disability recommended that that staff training was critical and necessary however first responders either lack the training, training was overlooked, or staff were not aware of agencies policies for training to assist people with disabilities.

#### **Rescue-D (2014)**

Wolf-Fordham, Twyman, and Hamad (2014) evaluated the skills first response personnel gained through pre- and post- test responses when dealing with people with disabilities using the *Rescue D* program. Wolf-Fordham et al. suggested that the *Rescue*

*D* training module was a prototype online course simulated as an ongoing storyline, with real-life scenarios embedded within each exercise, increased the knowledge of an emergency responder in emergency planning and response for individuals with disabilities.

Wolf-Fordham et al. (2014) suggested that *Rescue-D* offered scenarios where a person may avert their gaze or refuse to look at the responder. Wolf-Fordham indicated that to a law enforcement officer that someone may be lying, guilty, or suspicious, however this was typical behavior for someone who has Autism. Wolf-Fordham et al. suggested that *Rescue-D* offered additional scenarios which included someone with an unsteady gait and slurred speech. Wolf-Fordham indicated that law enforcement would perceive the individual may be drunk, an emergency medical responder may perceive the individual as hypoglycemic, but these characteristics could also indicate a person had cerebral palsy. Wolf-Fordham et al. recommended that by offering disability characteristics as alternatives to specific behaviors, scenario-based learning offered law enforcement, fire, emergency medical providers, public health personnel, emergency managers, emergency planners, Community Emergency Response Teams (CERT), and voluntary responders the opportunity to promote equal access to emergency services. Wolf-Fordham et al. recommended that scenario-based learning assisted in the removal of barriers, such as preconceived notions regarding behaviors, in order to enhance the safety and well-being of disability populations during emergencies.

Wolf-Fordham et al. (2014) suggested that the limitations within their study included retention evaluation, if skills gained translated into actual practice, and

understanding the knowledge acquisition process and best training practices. Wolf-Fordham et al. suggested that prior training of emergency responders did influence readiness, however responders with past experience, better training, and practiced response techniques were more likely prepared to assist people with disabilities than those who do not.

### **Inclusive Disaster Preparedness Planning in Upstate New York (2014)**

Burke (2015) conducted a case study to explore the inclusive disaster preparedness planning efforts of Albany, Fulton, Columbia, Montgomery, Saratoga, Schenectady, Ulster, Greene, and Rensselaer counties for people with disabilities. Burke explored the physical accessibility of shelters and accessibility plans, the accessibility of communication, accessibility of evacuation and transportation, the representation of organizations serving people with disabilities or people with disabilities on committees, disability awareness of first responders, and the involvement of individuals with disabilities as volunteers and first responder. Burke suggested that people with disabilities were rarely involved in the emergency planning processes, first responders were rarely trained to assist people with disabilities or had disability awareness training, available resources were not be viable to people with disabilities, and that counties delegated responsibilities to other entities without regard of that entity's ability to meet those responsibilities.

### **Disparate Impact (2015)**

Barash (2015) suggested a resolution to the House of Delegates that included funding for departments and entities who were responsible for responding to and assisting

survivors of disasters; specifically, at-risk and vulnerable populations such as individuals with disabilities, children, elderly, medically and physically frail, homeless populations, undocumented persons and illegal aliens, domestic violence victims, low economic or impoverished persons, and persons with language barriers. Barash recommended that the funding be used to assist with the unique needs of at-risk and vulnerable populations in planning for, responding to, and recovery from a disaster.

Additionally, Barash (2015) advocated for increased awareness levels of first responders and emergency managers assisting at-risk populations. Barash cited issues with Hurricane Katrina and Superstorm Sandy where persons with limited hearing, vision, and speech, as well as those with limited English proficiency, had restricted abilities to receive and respond to first responders. Additionally, Barash cited how individuals with mental illness were often pushed aside due to challenging medical or supervision needs or because first responders do not understand those behaviors.

Barash (2015) advocated for legal representation in the planning process to assist with community-wide planning and the whole community approach to planning and response efforts. Barash recommended that attorney involvement was necessary to improve training, education, and guidance through the inclusion of at-risk and vulnerable populations in the planning process. Barash concluded that this would improve consumer aids and resources for at-risk and vulnerable populations, promote relationships and collaboration among individuals, agencies, and entities that serve at-risk and vulnerable populations, and provide guidelines and testing of these aids, resources, and relationships that address the short-comings and anticipated barriers during a disaster.

Additionally, Barash (2015) recommended attorney involvement in the planning process, so lawyers can advocate for planning and following applicable laws and regulations, while offering practical solutions to those shortcomings and barriers. Barash suggested that legal representation in the planning process could be advantageous in understanding and mitigating disaster responsibilities regarding the Americans with Disabilities Act. Barash suggested promoting ADA compliance in first responder directions, emergency evacuation transportation, or training of staff on the needs of at-risk populations. Although much of Barash's resolution and report came from the aftermath of Hurricane Katrina and Superstorm Sandy, Barash advocated for community preparation for disasters to lessen the impact and after-effects on vulnerable populations.

### **Advanced Technology Trends**

Bennett, Phillips, and Davis (2017) explored a flash-forward approach to emergency management, which identified how wireless technologies could assist emergency managers and first responders assisting people with disabilities and other conditions that compound the disaster impact through preparedness, response, recovery, and mitigation measures. Bennett et al. explored the use of drones, wearable technology, holograms, and social media in emergency management.

Bennett et al. (2017) suggested the concept of geo-fencing or having a virtual barrier around an area where alerts, warnings, and public education can be sent to wireless devices. Bennett et al. suggested the use of mobile apps to assist people in gaining skills in their own preparedness versus a reliance on first responders and emergency managers. Bennett et al. also suggested that wearable technology that would

be able to assist first responders with accessible information, such as braille for someone who is visually impaired or blind, or text, voice, or ASL interpretation for someone who hearing impaired or English is not a primary language. Further, Bennett et al. explored hologram technology to assist with ASL interpretation and communication while further exploring how social media and its popularity with the public are used as a means to communicate with others on a daily basis. Bennett et al. also suggested that drone usage could be used as a service to deliver necessary medical supplies, such as medications or an AED, or food and supplies to disaster areas.

Bennett et al. (2017) explored pairing technology such as social media platforms with holographic technology, would be able to provide face-to-face communication with first responders, medical providers, social service programs, or advocates. Bennett et al. suggested that by pairing social media crowd sourcing with drone technology, there may be the ability to use satellite imagery to map resources, which would then assist first responders in mapping direct routes to survivors.

Bennett et al. recommended increased interconnectedness of future technology by recognizing that many people communicate with mobile devices, have mobile devices handy, check mobile devices frequently, and use mobile devices for information gathering purposes regardless of socioeconomic status or ethnicity. Bennett et al. suggested that income levels have a significant impact on the ability to obtain technology.

Bennett et al. (2017) recognized that emergency managers and first responders were hesitant to fully incorporate technology into preparedness, response, recovery, and mitigation phases due to a lack of rules and regulations regarding the technology. Bennett

et al. suggested that a shift on current technology use needed to be shifted in order to properly design and use technology with emergency managers, first responders, and vulnerable populations. Bennett et al. suggested that the gaps in research included how disasters influence awareness and funding for accessibility initiatives and motivations behind current laws, rules, and policies.

### **Professional Engagement in EMS (2017)**

In 2017, Grayson surveyed EMS providers about what was worse, ignorance or apathy in EMS providers, because of EMS provider and educator complaints. Grayson concluded that the top two answers from EMS providers were “I don’t know” and “I don’t care.” Grayson summarized that often EMS providers complain about a lack of education, yet through personal experience, Grayson concluded that EMS providers did not even take the time to answer the survey, do not participate in offered classes, do not seek out instructors for assistance, but most often complain. Grayson suggested that when providers were forced to partake in a class or exercise, they were often sullen and childlike. Grayson suggested that providers who were motivated to seek out professional advancement and truly wanted to learn more, were better providers because they cared. Grayson concluded that those who need the education the most, will seek it out the least.

### **Current Training Practices**

#### **New York State Employees**

If the first responder is employed by New York State, the first responder is required to take online trainings through the Statewide Learning Management System (SLMS). One such training was the Language Access training, which was mandated by

New York State Executive Order 26 and Title VI of the Civil Rights Act of 1964.

According to the SLMS Language Access (2018), over 2.5 million New Yorkers are limited English proficient , which means that English was not their primary language, they may not speak English, or they may have limited ability to read, speak, write, or understand English. Additionally, SLMS Language Access suggested that the six most common languages outside of English in New York State are Chinese, Haitian Creole, Italian, Korean, Russian, and Spanish. SLMS Language Access recommended that agencies create a language access plan, so all agencies are able to assist all individuals who come to them seeking assistance.

Additionally, the Statewide Learning Management System had an online training called Reasonable Accommodations for the Public. SLMS Reasonable Accommodations to the Public (2018) emphasized that New York State prohibits unlawful discrimination by any state entity that provides aid, benefits, or services based on disability. Mandated by New York, SLMS Reasonable Accommodation to the Public was based on Title II of the Americans with Disabilities Act and the New York State Human Rights Act. SLMS Reasonable Accommodations to the Public suggested that it was the policy of New York to provide equal opportunity for persons with disabilities by providing reasonable accommodations in all accommodations, programs, and services provided by any New York State entity or anyone contracted or licensed to work with said entity.

### **At-Risk Populations and Emergency Management**

Stough et al. suggested that due to multiple types of physical and social barriers, emergency management plans are not inclusive of people with special needs therefore



emergency personnel are not trained to understand or assist those with special needs.

Research showed that because emergency managers are not trained in the unique needs of people with disabilities or other at-risk characteristics, then local emergency management efforts rarely included community-level preparedness (Rooney & White, 2007; Fox, et al., 2005; Kendall-Tackett & Mona, 2005).

McDermott, Martin, and Gardner (2016) explored the impact of disasters on people with disabilities and the disability response to the disaster. McDermott et al. concluded that in order to have an effective disaster response and that no one organization can provide all the resources or services necessary to respond to people with disabilities during a disaster, there needed to be a strong collaborative network of stakeholders. McDermott et al. suggested that there was a gap in the government's knowledge and the knowledge involved in effective community practices regarding the needs of people with disabilities in all types of disasters. Additionally, McDermott et al. suggested that the tedious work to develop disability partnerships prior to a disaster can result in improved and strengthened responses that are logical and wide-ranging.

Emerson (2018) detailed three low or no-cost suggestions that Vance Taylor, chief of the California Governor's Office of Emergency Services, shared with local emergency managers; to establish a relationship with local organizations that assist people with disabilities to live as independently as possible, to reassess emergency shelter accessibility, and to include American Sign Language interpreters during emergency and disaster press conferences. Emerson suggested that Taylor recommended the low and no-

cost suggestions because he understood budget cuts and the need to integrate access and functional needs into emergency management.

### **Summary and Conclusions**

Disasters and emergencies are becoming more and more frequent, both in New York State and nationwide. These disasters and emergencies will test the limits of first responder capabilities, and tough decisions will have to be made. First responders need to have the knowledge of awareness and diversity training in order to make well-informed and practiced decisions that will help save the lives of people with at-risk characteristics. This chapter explored published materials on at-risk and vulnerable populations, including the background and history at Willowbrook, significant events since 9/11 in New York and nationwide, key legal policies and authorities, previous research studies, current training practices, and the relationship between at-risk populations and emergency management. The gap in the literature indicated that there was a lack of awareness and diversity training to first responders, the costs of the training were often one of the first cuts in the budget, relationships and a lack a knowledge regarding at-risk populations produced inaccurate perceptions of at-risk people, and that policy revolved around disasters.

Chapter 2 will address the research methodology for this qualitative case study regarding the awareness and diversity training practices of first responders across New York State. The applicability of the punctuated equilibrium theory and the case study methodology will be discussed in Chapter 3. The methodology, including the

participants, data collection procedures, data analysis methods, and ethical concerns are will also be addressed in Chapter 3.

## Chapter 3: Research Methods

### **Introduction**

This chapter addresses the research methodology for this qualitative case study regarding the awareness and diversity training practices of first responders across New York State. This approach allowed for a deeper understanding of awareness and diversity training practices of first responders assisting at-risk populations during disasters. The applicability of the punctuated equilibrium theory and the case study methodology is discussed in this chapter. The methodology, including the participants, data collection procedures, data analysis methods, and ethical concerns are also addressed in this chapter.

### **Purpose of the Study**

The purpose of this study was to assess the awareness and diversity training practices among first responders across New York State in assisting people with at-risk characteristics during disasters. The objective was to address the gap between the knowledge of first responders and their preparedness and response capabilities based on their level or type of training. Additionally, I assessed the awareness and diversity training practices in first responder agencies. Further, I explored the attitudes of first responders toward awareness and diversity training as well as their lived experiences assisting people with at-risk characteristics during disasters.

## **Research Design and Rationale**

### **Research Question**

How has awareness and diversity training among first responders in New York State led to changes in preparedness and response strategies to at-risk populations during disasters after September 11, 2001?

### **Central Concepts / Phenomenon of the Study**

The central concept addressed in this study was that changes have been made in the preparedness and response strategies of first responders assisting at-risk populations during disasters because preparedness or response strategies were inadequate on September 11, 2001 and in proceeding disasters. There was a demonstrated need for awareness and diversity training for first responders regarding at-risk populations. Lack of training had resulted in inadequacies in preparedness and response strategies of first responders.

### **Research Tradition and Rationale**

For this study, the research design was a qualitative case study. When explaining a central concept or phenomenon based on personal perception and experience of a situation, a qualitative approach is appropriate (Creswell, 2006). The qualitative case study approach was used to assess the effects of first responder training in addressing the needs of at-risk populations during disasters. By using a qualitative approach, I was able to gain insight into the lived experiences of first responders who had assisted people with at-risk characteristics during disasters. Further, the results offered insight into first responder training practices and social and physical barriers that affect the quality of

services provided to at-risk populations during disasters. Because the purpose of this study was to explore the experiences and perceptions of first responders assisting at-risk populations during disasters, a qualitative approach was the most appropriate choice.

### **Punctuated Equilibrium Theory**

This qualitative study was performed using the punctuated equilibrium theory as the foundation. Punctuated equilibrium theory was developed for the study of evolution of policy change (Baumgartner & Jones, 2009). Introduced to the research community in the 1990s as a social theory, punctuated equilibrium theory had its roots as a biological theory. Baumgartner and Jones (2009) explained that the punctuated equilibrium model of policy change stated that policy generally changed incrementally, characterized by long periods of policy stability followed by large changes in society or government. This change was often found when a governmental party changed or when there was a change in public opinion (Baumgartner & Jones, 2009), which can occur after disasters. For example, public outrage in New York State after 9/11, Hurricane Irene, Tropical Storm Lee, Superstorm Sandy, and the flooding in Western New York in 2018 led to quickly written or revised policies, either internal or external, of first responder agencies, the state, or the federal government.

Tilcsik and Marquis (2014) noted that geography plays a major role in determining which populations are subject to abrupt changes in policy. This was part of the core idea of the original biological theory of punctuated equilibrium theory (Tilcsik & Marquis, 2013). Baumgartner and Jones (2009) defined five core concepts related to policy change:

- “how a policy is understood and discussed” (p. 25);
- “institutions or groups in society [that] have the authority to make decisions” (p. 31);
- policy image and institutional venues are the core concepts manipulated by decision-makers to institute policies based on the understanding of an issue, influence the institution, and exert jurisdiction over others;
- attention allocation is the core concept where there is limited cognitive and temporal resources which result in a short attention span of policymakers; and
- forces of resistance is the core concept where political systems or institutional structures that impede or obstruct policy change.

In the current study, I used punctuated equilibrium theory to show that policy changes occur in the aftermath of major disasters or lawsuits, specifically designed toward training practices of first responders assisting people with at-risk characteristics. For example, the Brooklyn Center for Independence of the Disabled v. The City of New York decision in 2013 followed Superstorm Sandy. According to punctuated equilibrium theory, emphasis was placed on geographical location in New York State. Tilcsik and Marquis (2013) suggested that location plays a significant role in the punctuated equilibrium theory. Therefore, I focused on geographic locations within New York State. With 62 counties across New York State, including New York City, the state experiences a wide variety of natural or human-caused disasters and emergencies that may affect a variety of populations. The results often negatively impact community members through loss of life, damage, or destruction of property. This study showed that the locations and

disasters determined the policy change affecting types of training for first responders and the role it played in future preparedness.

I used the collective case study or multiple-case study approach (see Yin, 2018). Yin (2018) suggested that a case study researcher attempts to explain how or why a contemporary social phenomenon works. Further, Yin suggested that the researcher should be able to focus in-depth on the study and allow the research to retain real-world perspective.

I used the case study approach of the problem-oriented method. I identified an existing problem and recommended solutions to the problem (see Yin, 2018). Using the problem-oriented case study method enabled me to offer first responder agencies and trainers a tool to apply the concepts learned to analyzing the issues. Further, I produced recommendations that would help first responders better assist at-risk populations during disasters.

### **Role of the Researcher**

Since January 2018, I have been employed with the New York State Division of Homeland Security and Emergency Services Office of Emergency Management (DHSES-OEM) as a disaster preparedness program representative. Prior to employment with DHSES-OEM, I was employed with the New York State Office for People with Developmental Disabilities (OPWDD) for more than 10 years. I have also been employed with the Arc working with adults with developmental disabilities, with Three Springs working with at-risk teenagers, and for the New York State Park Police. Further, I have volunteered as a first responder and EMT with Central Oneida County Volunteer



Ambulance Corp since 2014 and as helper/provider at local food banks and veteran associations. All these roles revealed aspects of an observer-participant relationship regarding first responders and at-risk populations.

At the time of the interviews, I was not a supervisor at DHSES-OEM. Therefore, there was no supervisory or instructor relationship with the participants. Personally, I was able to garner respect from the participants because of shared professional and personal experiences.

### **Researcher Bias**

The human elements involved in the research process pose nine types of bias based on the participant, researcher, or a combination of participant and researcher (Sarniak, 2015). Responder bias includes four biases: acquiescence bias, social desirability bias, habituation bias, and sponsor bias (Sarniak, 2015). Acquiescence bias occurs when the participant tends to agree with the researcher (Sarniak, 2015). Social desirability bias occurs when the participant will answer questions in a way they think they will be liked and accepted by the researcher (Sarniak, 2015). Habituation bias occurs when the participant responds to all the questions asked by the researcher in a same or similar manner (Sarniak, 2015). And, sponsor bias occurs when the participant's feelings or views of a suspected sponsor of the research may influence the participant's answers (Sarniak, 2015). Ways to combat responder bias is focusing on the research participant's true point of view by asking questions that do not have a right or wrong answer, by allowing the participant to project their own feelings by asking questions using socially

sensitive phrases, by engaging in conversation that avoids repetitive answers, and by reinforcing a neutral or independent status as a researcher (Sarniak, 2015).

Sarniak (2015) suggested that researcher bias and researcher-respondent bias included five biases; confirmation bias, culture bias, question-order bias, leading questions and wording bias, and the halo effect. Confirmation bias occurs when a researcher forms a hypothesis and then confirms it by weighing and judging participant responses and dismissing responses that do not support the hypothesis (Sarniak, 2015). Culture bias occurs when the researcher makes assumptions or judges another culture based on one's own cultural beliefs (Sarniak, 2015). Question-order bias occurs when the researcher asks one question that can lead or influence the answer to those questions (Sarniak, 2015). Leading questions and wording bias occur when the researcher elaborates on the participant's answers, which may cause the researcher to influence responses from the participant (Sarniak, 2015). Ways to reduce researcher bias and respondent-researcher bias is to for the researcher to continually reevaluate impressions by challenging assumptions and hypotheses, to be cognizant of their own cultural assumptions, avoid summarizing the participants response, try not to assume any relationships between feelings and behaviors, and address all questions about one topic or brand before moving on to another one (Sarniak, 2015).

## **Methodology**

### **Participant Selection Logic and Sampling Plan**

This study took place in New York State. The New York State Division of Homeland Security and Emergency Services (DHSES) divides New York State into five

emergency management regions with 10 emergency response zones within those regions. I used the region emergency response zones defined by the DHSES-OEM GIS map as of 8/28/2017 (DHSES, 2017)

Cresswell (2006) recommended that use of purposeful sampling in case study research. The use of multiple cases, or for this research, the use of multiple participants was used to increase representation from the population (see Cresswell, 2006). According to Mason (2010), different researchers recommended a variation of sample sizes based on expertise of the chosen topic, the type of theoretical method or methods used, and the technique used by the researcher; focus group versus in-depth interview. Data sources for this study included people who fell within the category of first responders, including EMTs, firefighters, and police officers. Many times, first responders may have multiple roles; whether duties are performed in a paid or voluntary position or they may be part of a department where a fire department may also require members to be EMTs. Multiple cases were preferable to a single case, which will offer a range of behaviors, profiles, experiences, and outcomes from the various situations or incidents that have occurred (see Cresswell, 2006). Additionally, a larger sample size would reach for the correctness of the analysis and aid in the removal of bias (see Cresswell, 2006). However, multiple cases would limit the depth into which each case may be analyzed, may also have implications on the structure and length of the study, and may not be time or cost effective (see Cresswell, 2006). Dworkin (2012) debated that sample size for qualitative research methods are often small and that in-depth interviews focus on the phenomenon, thus offering suggestions that no more than 25-30 participants should be used when using

in-depth interviews. The desired sample size for this study was 10-20 participants from the first responder categories of Fire, EMS, and Police. Sources of primary data were in-depth interviews. The Walden University's IRB approval number for this study was 04-22-19-0534729.

### **Instrumentation**

The method of data collection for this study was in-depth interviews. In-depth interviews offered a smaller sample size with participants with expertise in the topic area (see Mason, 2010). Additionally, participants may have varying opinions and in-depth interview did not influence participant opinions one way or another (see Mason, 2010). If the participants included personnel in higher levels of supervisory experience, adequately ensuring privacy through individual interviews provided additional information that may not be gathered in a focus group session. For example, a participant may feel they can speak freely if subordinates are not present.

Although the questions I asked were not personal, they may have caused reflection of a lived experience to the participant, which may have cause angst or anxiety. I provided time and space to each participant; letting them tell their stories in their own way. I was respectful of participant opinions, words, and actions in the disaster that had occurred. Having experienced this before in both the first responder setting and working with people with developmental and intellectual disabilities, I was able to phrase ongoing prompts or questions in a tactful way that was not intrusive. I was perceptive enough to know if the topic or stirring memories was causing mental or emotional distress to the participant. I was prepared to remind the first responder that there are services such as

counseling or debriefing available to them to assist with processing the situation and any lingering effects.

### **Procedures for Recruitment**

Initially, procedures for primary recruitment measures included how participants were identified, contacted, and recruited through word of mouth, first responder training events, and referrals. Should primary recruitment measures fail to recruit the desired number of participants, I noted that additional participants would be identified, contacted, and recruited through social media platforms, such as Facebook, since many first responder agencies have member pages. I was able to recruit all participants through word of mouth, training events, and personal relationships.

According to Gelinas, Pierce, Winkler, Cohen, Lynch, and Bierer (2017), the use of social media platforms, such as Facebook or other internet-based applications, for recruiting research participants has grown and will continue to grow because there has been an increased general use of social media platforms. Gelinas et al. suggested that traditional recruitments methods are often a challenge for researchers and lack of enrollment can delay or cancel clinical trials or research. Gelinas et al. also suggested that social media has enabled researchers to reach a broader range of individuals, target populations, and historically hard to reach populations while becoming an important tool for research recruitment. Additionally, Gelinas et al. suggested that social media recruitment offers a practicality for the researcher; it is a free recruitment tool that expands social networking opportunities.

**Procedures for Participation**

Participants were provided with the consent email or form in person. Once the participant had responded with an email or in person with “I consent,” the participant and I determined a mutually agreed upon time and location for the interview. I provided an overview of the study, which can be found in the Appendix 1.

**Procedures for Data Collection**

Participants were interviewed in person or by phone, using the questions from the Interview Guide in Appendix 3. The interviews were recorded. Prior to the interview, the participants were asked where they would be comfortable meeting for in-person interviews and offered my available office space. If those locations were not viable options, I was prepared to offer other places for meetings, such as a private room at a library, conference rooms or offices at places such as the YMCA or community rooms, or if the participant desired, their own office or conference space. I dissuaded the use of a participant’s home so family would not intrude or a public location such as a restaurant, since there would be intrusion of wait staff or other patrons. If in-person interviewing was not comfortable or viable for the participant, the participant was offered an interview through technology using Skype or Facetime, or through phone. Recommendations were for a quiet, private location where the participant could not be overheard or intruded upon. I used the office space for any technology or phone interviews.

### **Historical or Legal Documents**

Primarily, historical and legal documents were used as a source of data to compile background information. Government websites were used for clarification or to establish reputability of a source. Databases were described in Chapter 2.

### **Data Analysis Plan**

Qualitative coding was completed using a combination of coding with software and hands-on coding. I used both software and hands-on coding, which allowed time-saving opportunities. Less time was spent on coding, organization of data, and uncovering connections that I had not observed through manual coding.

### **Coding With Software**

QDA software allows researchers the option of free or paid software that will allow the researcher to be more efficient by saving time and assisting with organization of data, data backup, and additional coding connections. NVivo is qualitative data analysis software that could be used for both qualitative research and mixed methods research. NVivo has the capabilities of coding for the researcher. However, one of the concerns noted was that it does not always pattern or code correctly, which causes the researcher to check coding for validity.

### **Hands-On Coding**

Through this study, I have found that a researcher can conduct a good, well-rounded qualitative interview when using the right tools and techniques that allows the researcher to collect, organize, analyze, and interpret data. Rubin and Rubin (2012) suggested that the process began with an interviewer understanding their role in the

research and interview process. Rubin and Rubin recommended that the interviewer consider their personality, beliefs, bias, and cultural diversities especially regarding managing stress, fatigue, expressing points of view, respect, comments, promises, and ethical responsibilities. I was aware that there was always the possibility of ethical issues arising during the data collection processes, such as doing a study within my own work environment or a perceived conflict of interest. Additional issues could have arisen during hands-on coding; where I was aware that biases, beliefs, and personality could appear in the coding process.

I used hands-on coding, because it was manual coding that was free and allowed me to become very familiar with the subject matter. The coding process that I used involved the six-step Thematic Analysis process. Thematic analysis was the process of gathering data to mapping the most important themes within the data. The process contained six steps which included familiarization with the data, assigning preliminary codes to the data, searching for patterns or themes, reviewing themes, defining and name themes, and producing the report (Blandford, Furniss, & Makri, 2016; Braun & Clarke, 2006). Coding was done in Word, using the Smart Art Table format.

### **Punctuated Equilibrium Theory Coding**

The punctuated equilibrium theoretical coding looked specifically for timing, cycles, and transformations.



## **Issues of Trustworthiness**

### **Credibility**

Consent forms were given by email or in person to each participant. After they received the Consent Form, verbal and/or written consent was provided by the participant. Each of the participants were above the age of 18, as required by law to be certified first responders. Additionally, participants were asked if they are able to read and speak English fluently or if they required a translator. No participant with a previously known disability, as a vulnerable research population, were recruited for this study. Additionally, no individuals with questionable competence were used in this research study.

All appropriate and applicable agreements by the IRB were maintained and honored. Each objective for the study was clearly described and acknowledged by each participant. Each participant was made aware that the interview was voluntary and that they could withdraw from the study at any time. The research overview advised the participant that is they had any questions about the interview question or the study, they were encouraged to ask. This led to the encouragement of participant honesty in their answers. There was no monetary compensation for responses.

Data triangulation was used to gather information from multiple participants in order to support any findings and analyzed against pre-existing data, such as the literature review. Additionally, I asked clarifying questions, restated or summarized information, and asked for clarification to determine accuracy. This allowed me to membercheck the interviews, which clarified answers to be true and accurate based on the participant's

perspective. I was able to establish a rapport with each participant, based on my past personal experiences or personal contact that we shared. I was not a supervisory figure for any of the participants and the study was not done as part of my work or volunteer role.

### **Transferability**

Transferability refers to the ability of a study's findings to be applied to other contexts or settings (see Simundic, 2013). Participants were asked open-ended questions that were used to elicit detailed responses. The interview questions can be applied to other states or jurisdictions that may have had similar experiences to show a similar history of awareness and diversity training of first responders.

### **Dependability**

Dependability concerns the degree to which the study, and its findings, can be replicated by an independent researcher (see Simundic, 2013). This was significant because it allowed for consistency of the study results, no matter when, where, who, or what analytic methods are used. Participants were asked open-ended questions that were used to elicit detailed responses, which maintained the integrity of the data and avoided biasing methodological consequence (see Simundic, 2013).

### **Confirmability**

Confirmability or objectivity of the data collection and research finding were found by using quotes from the participants to support references and themes. Using Sarniak (2015) as a guide to limit the human elements involved in researcher bias, I used open-ended questions that had no right or wrong answer. This allowed the participant to

project their own feelings by using socially sensitive phrases, by engaging in conversation that avoided repetitive answers, and by reinforcing a neutral or independent status as a researcher. Additionally, I used Sarniak's guidance documents to continually reevaluate impressions by challenging assumptions and hypotheses, was cognizant of my own cultural assumptions, avoided summarizing the participants response, tried not to assume any relationships between feelings and behaviors, and addressed all questions about one topic or brand before moving on to another one.

### **Ethical Considerations and Trustworthiness**

A potential ethical issue in qualitative research would be conducting interviews or making recording or observations without consent. This would influence design decisions because the ethical decisions would be based on a lack of truth and trustworthiness of the study. Consent was given by email or in person by each participant replying with "I consent," after receiving the informed consent email.

Each of the research participants were above the age of 18, as required by law to be certified first responders. Additionally, participants were asked if they are able to read and speak English fluently or if they required a translator. I was aware that people with disabilities are considered a class of vulnerable subjects, which was a result of the Willowbrook expose in 1972 by Geraldo Rivera and the unauthorized and unethical biomedical research done on the residents of state-run developmental centers prior to that. In the wake of the blatant abuses, disregard for human dignity, disregard for human life, and disregard of rights found in historical examples like the Nazi concentration camps and Willowbrook (Skinner, 1972), much attention has been focused on the

necessity of protecting people with intellectual and developmental disabilities because of their vulnerabilities. There can be challenges in determining competence and ensuring that individuals with intellectual disabilities understand the nature of the research and the attendant risks and benefits, therefore no known individuals with questionable competence were used in this study.

### **Ethical Procedures**

I have the responsibility to respect each participant. All appropriate and applicable agreements by the IRB were maintained and honored. Each objective for the study was clearly described and acknowledged by each participant.

The recruitment and data collection steps were articulated to each participant, verbally and in writing. The research procedures ensured privacy during data collection, as I offered two private office locations and recommendations so the participants would not be overheard. Data storage and disposal will follow established guidelines; secured, with passwords and codes, with consent forms stored separately from the data, and in a locked, secured location. Disposal of data will be completed after 5 years with advice from an IT professional for technology best practice standards at the time of disposal.

Data collection was not 100% anonymous, as participants who chose face-to-face interviews signed consent forms with a printed name and signature. Participants who chose technology-based interviews received the consent form via email and responded with "I consent." I avoided the use of names during the interview to provide more anonymity. Participant identities were not disclosed and were referred to as Participant

and a corresponding number, which was less likely to directly or indirectly disclose participant identities.

Potential risks to the participants are minimal. Psychologically, participants may have an emotional reaction, distress, and/or fatigue. Research participants may be coworkers, professional contacts, family, or friends who volunteer for the study which may alter the relationship dynamics if they have a psychological reaction to the questions are may be embarrassed by it. Legally, there was minimal or no risk. The duty to act Law, requires the first responder to provide assistance based on their level of training/scope of practice, if they are performing in the line of duty. If they are not on duty, the good Samaritan law would protect participants from liability. In many jurisdictions, as long as a first responders acts rationally, they are protected from liability. Economically, professionally, and physically, there are minimal or no risks since participation is voluntary and there are no violations that could be damaging to the participant. There were no substantial risks to the participants.

There risks and benefits were described in the Consent Form. I offered additional information for support, including free confidential support available at Code Green 1-800-968-1242 or with the participant's local EAP offices.

### **Summary**

This chapter introduced the research methodology for this qualitative punctuated equilibrium theory case study regarding the awareness and diversity training practices of first responders across New York State regarding at-risk populations. The applicability of the punctuated equilibrium theory and a case study approach research plan were

discussed in-depth in this chapter, including the methodology, study participants, procedures, analysis method, and ethical concerns.

Chapter 4 will contain the results of the punctuated equilibrium theory study conducted to answer the following research question: How has awareness and diversity training among first responders in New York State led to changes in preparedness and response strategies to at-risk populations during disasters after September 11, 2001? The purpose of Chapter 4 is to summarize the findings of the study, including themes that emerged from the data analysis and quotes from participants who were interviewed. Chapter 4 will also include discussion of the punctuated equilibrium theory methodology and how the analysis aligns with the research question.

## Chapter 4

### **Introduction**

This chapter contains the results of the punctuated equilibrium theory study conducted to answer the following research question: How has awareness and diversity training among first responders in New York State led to changes in preparedness and response strategies to at-risk populations during disasters after September 11, 2001? The purpose of this chapter is to summarize the findings of the study. The findings include themes that emerged from the data analysis, including quotes from participants who were interviewed. This chapter also includes discussion of the punctuated equilibrium theory methodology and how the analysis aligned with the research question. Included in this chapter are figures used to present detailed coding and theme data, as well as quotes from the individual interviews to emphasize key findings.

### **Purpose of the Study**

The purpose of this study was to assess the awareness and diversity training practices among first responders across New York State in assisting people with at-risk characteristics during disasters. The objective was to address the gap between the knowledge of first responders and their preparedness and response capabilities based on their level or type of training. Additionally, I assessed the practices of awareness and diversity training in first responder agencies. Further, I explored the attitudes of first responders toward awareness and diversity training and their lived experiences assisting people with at-risk characteristics during disasters.

### **Setting**

Interviews were conducted between May 2019 and July 2019. During the data collection period, I and several participants experienced personal and organizational conditions that may have influenced the interpretation of the results. In New York State, the anticipated flooding of Lake Ontario resulted in an Emergency Operations Center activation to Level 4. Enhanced Monitoring began April 19, 2019 and lasted until September 18, 2019. This resulted in many state or local municipality agencies providing assistance to eight counties affected by the rising waters. Several of the participants and I worked for or volunteered with the responding state or local municipality agencies and experienced long hours, many times in excess of 14-hour days, while juggling personal and professional lives. No participant indicated to me that the Enhance Monitoring activation or the response to the anticipated flooding influenced their interview. However, the possible influence of personal conditions cannot be ignored in interview-based research.

### **Demographics and Description of the Sample**

There were 15 participants interviewed for this study. No participants withdrew or were withdrawn from the study. This study took place in New York State. Figure 1 includes the New York State DHSES five emergency management regions and 10 emergency response zones.



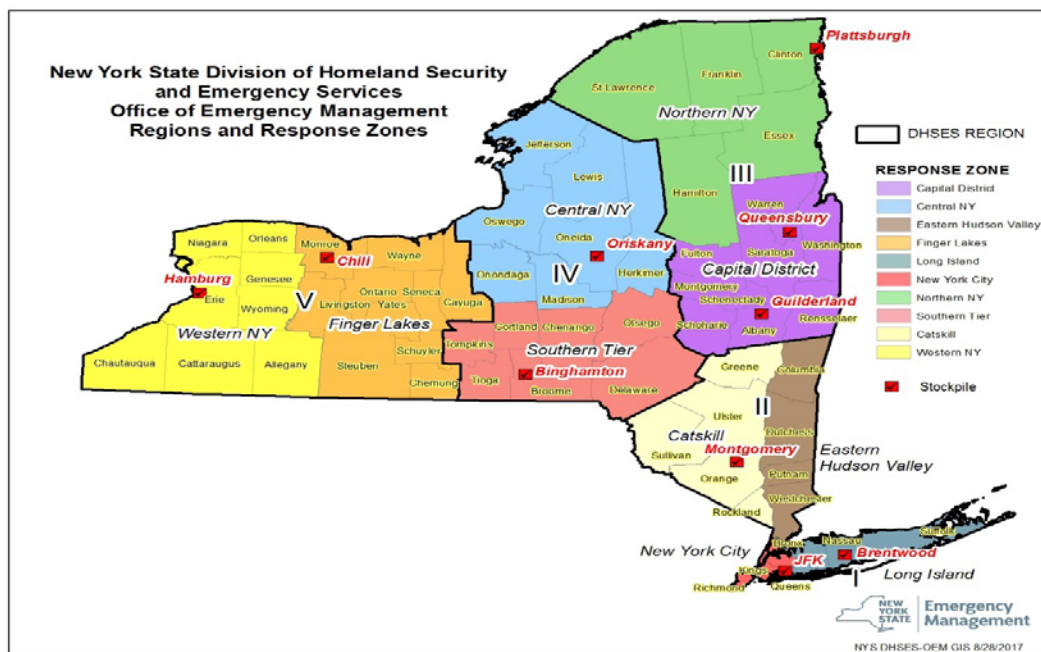


Figure 1. New York State Division of Homeland Security and Emergency Services Office of Emergency Management regions and response zones (8/28/2017).

Figure 2 depicts the locations where the participants had assisted with at-risk populations during disasters. Participants had assisted in more than one location, either based on mutual aid agreements, relocation of the first responder to new areas within the state, or location of employment or volunteer work.

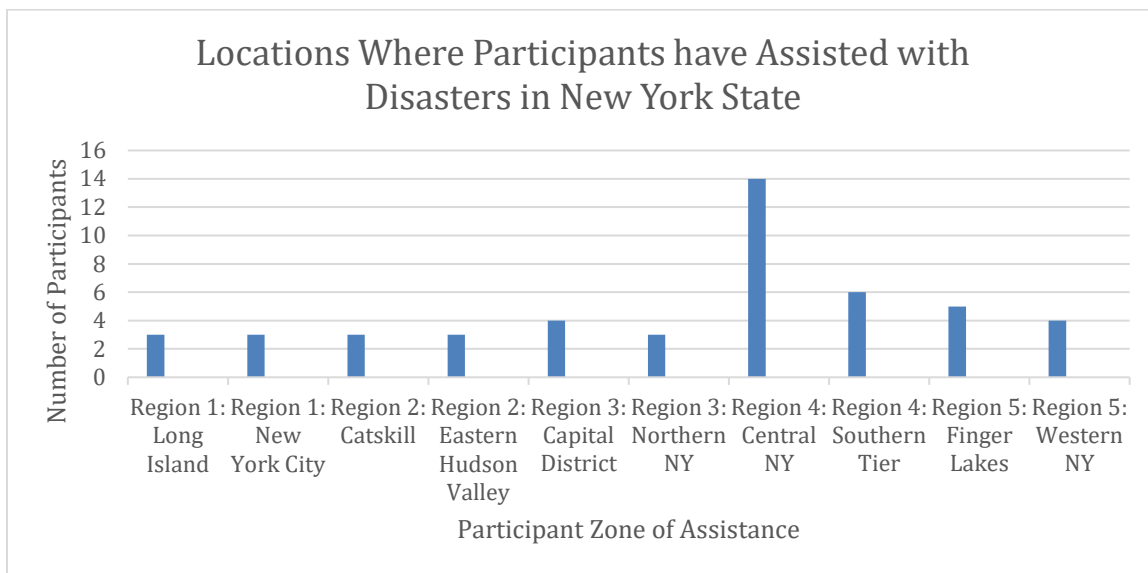


Figure 2. Location where participants have assisted with disasters in New York State.

All three first responder professions of EMTs, firefighters, and police officers were represented in the sample; three participants worked as career or volunteer first responders in single roles, while 12 were career or volunteer first responders in multiple roles. Figure 3 depicts the roles participants have held.

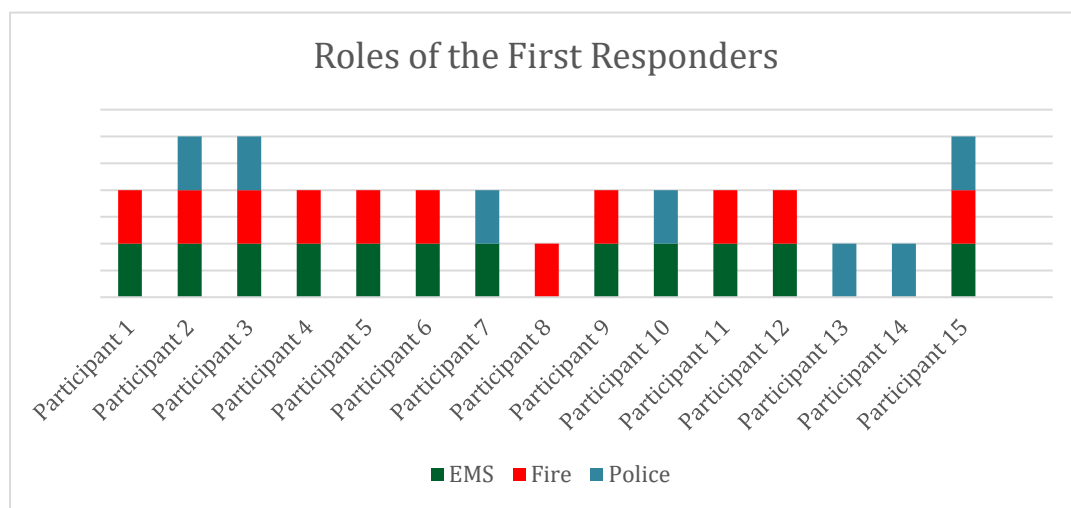
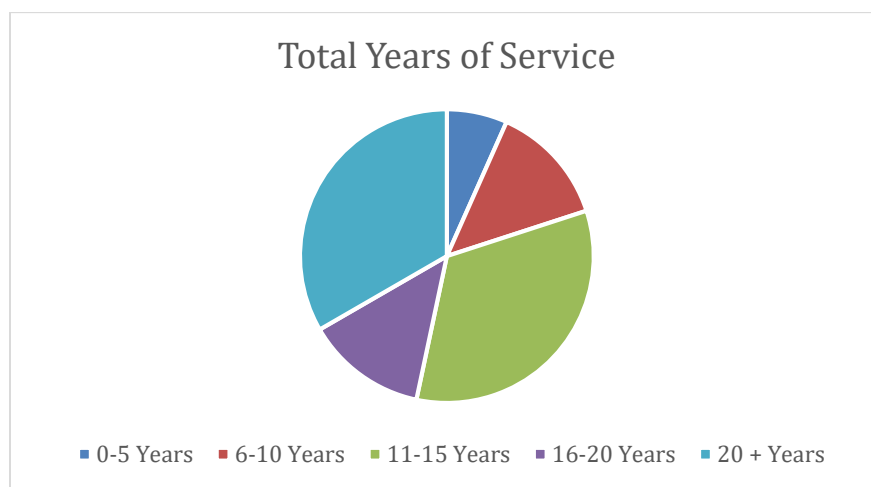


Figure 3. Roles of the first responders.

The total years of service in the first responder professions varied among the 15 participants. Participants with over 20 years of service and participants with 11-15 years of service each represented 33% of the sample. Participants with 6-10 years of service and participants with 16-20 years of service each represented 13% of the sample. Participants with 0-5 years of service represented 6% of the sample. Figure 4 depicts the total years of first responder service in New York State.



*Figure 4.* Total years of first responder experience.

### **Data Collection**

Data collection was conducted using in-depth interviews that were recorded. Twenty-two first responders whom I knew either through my background as a first responder or my attendance at meetings, symposia, or conferences were asked if they were interested in assisting with this research project. Of the 22, 19 agreed. However, due to limitations related to personal issues, employment issues, or the ongoing Level 4 Emergency Operations Center activation, 15 participants were interviewed, and data saturation was determined.

These 15 research interviews with career and volunteer first responders served as the primary source of research data. Interviews were done in person or by phone based on the availability of the participant. Participants were offered in-person interviews in my office space. Phone interviews were completed using the office space to ensure privacy.

Interviews were recorded using a Philips Voice Tracer DVT4000 Digital Voice Recorder. Interviews lasted between 13 minutes and 35 minutes. Variations in interview length were due to length of time of service, trainings, or experiences of the first responder.

The Initial Questions to Determine Eligibility served as a demographic questionnaire to confirm that participants met the selection criteria. At the end of the interview process, the interviews were coded manually and reviewed for emerging themes. Next, the interviews were coded using software and reviewed for emerging themes. Following this method, I ensured that the punctuated equilibrium theory methodology was embedded throughout the data collection process. The original interview protocol was followed as outlined in Chapter 3.

Historical and legal documents were also collected as sources of data to provide background information. Primarily, scholarly articles and legal documents were used. Government websites were used for clarification or to establish reputability of a source. Databases, documents, and articles are described in Chapter 2.

### **Data Analysis**

Qualitative coding was completed using a combination of coding with software and hands-on coding. By using both coding options, I was able to have time-saving

opportunities, organization of data, and connections not observed during manual coding. Initially, hands-on coding was used for all interviews. I manually used the six-step thematic analysis process.

Coding with software was then used to code all interviews. I uploaded the transcripts into the computer software, NVivo 12 Plus, for further analysis. The auto code wizard was used to identify themes by sentence. However, the initial coding was skewed because it included the entire transcript, which included the introduction to the study, the questions, the interview responses, and the closing. I was able to adjust the transcript files in NVivo 12 Plus to only be the interview responses for analysis. The auto code wizard was then used to identify themes by paragraph, which is how I broke down the answered questions.

In the next analysis phase, I searched to find emerging themes from the similarities in the hands-on and software coding. The software coding was compared to the hands-on coding, with differences and similarities noted in the Summary of Results section. Comparing all 15 interviews and 12 interview questions on the Interview Guide aided in constant comparative analysis and helped me remain consistent in emphasizing key points during coding. This process reviewed for discrepant cases, which did not alter how cases were factored into the analysis. Lastly, punctuated equilibrium theory coding was completed for the interviews. The coding looked specifically for timing, cycles, and transformations.

Four themes that emerged from hands-on coding: first responder perception of at-risk populations, development of awareness/gradual realization, expertise and training,

and need for systemic changes. Three themes emerged from software coding; first responder training practices, helping and caring for people, and timing and frequency of first responder training. Two themes emerged from the punctuated equilibrium theory coding which focused on timing, cycles, and transformations: timing and frequency of first responder training and need for systemic changes.

### **Thematic Analysis**

Blandford, Furniss, and Makri (2016) and Braun and Clarke (2006) described thematic analysis as the process of gathering data to map the most important themes within the data. The process contains six steps which include familiarization with the data, assigning preliminary codes to the data, search for patterns or themes, review themes, define and name themes, and produce the report (Blandford, et al., 2016; Braun & Clarke, 2006).

The first step of the thematic analysis was to become familiar with the data (Blandford, et al., 2016; Braun & Clarke, 2006). This was done through the transcription process; as the researcher self-transcribed the interviews. The second step of the thematic analysis was to generate preliminary or initial codes of the data (Blandford, et al., 2016; Braun & Clarke, 2006). This was done when I composed brief descriptions and notes during the interview process. Notes were taken on the printed transcript and by using NVivo 12 Plus computer software.

The third step of the thematic analysis was to search for themes or sort the codes into themes (Blandford, et al., 2016; Braun & Clarke, 2006). I completed the third step by writing codes on sticky notes for each answered question and then collating for broader

themes. It was observed that not all codes fit together or with other codes. The NVivo 12 Plus software system charted the codes, using mapping and graphs.

The fourth step of the thematic analysis was to review and refine the themes identified in the third step (Blandford, et al., 2016; Braun & Clarke, 2006). This was done by reading through the extracts related to the codes to see if themes overlapped or contradicted one another. Additionally, this was done by question, related questions, and then the entire data set until nothing else of significance could be added to the analysis.

The fifth step of the thematic analysis was to define and name the themes (Blandford, et al., 2016; Braun & Clarke, 2006). This was done by describing the themes identified in the fourth step. The description of the theme was identified through the idea of describing which story the theme tells and how the story relates to other themes and the overall research question (Blandford, et al., 2016; Braun & Clarke, 2006).

The sixth and last step of the thematic analysis was to produce the final report (Blandford, et al., 2016; Braun & Clarke, 2006). The final report described the process used to carry out the study and used participant's quotes to demonstrate the findings.

### **Evidence of Trustworthiness**

To address credibility and dependability in the study, multiple sources were used to gather and cross reference data. Triangulation was used through the original interviews being analyzed against government reports, after-action reports, or historical or legal documents. The interview questions that were used can be for transferred to other research projects. The research tool was transparent and honest to maintain integrity of

the data and avoid potentially harmful consequences (see Simundic, 2013).

Implementation of the strategies listed in Chapter 3 were followed as described.

As a researcher and a professional, I have the responsibility to respect each participant. All appropriate and applicable agreements by the IRB were maintained and honored. Each objective for the study was clearly described, in writing and verbally, and acknowledged by each participant.

The research procedures ensured privacy during data collection, as I offered two private office locations and recommendations for additional alternate locations so the participants would not have privacy. Data storage followed established guidelines; secured, with passwords and codes, with consent forms stored separately from the data, and in a locked, secured location. Disposal of data will be completed after 5 years with advice from an IT professional for technology best practice standards at the time of disposal, which may include shredding or burning.

Data collection was not 100% anonymous, as participants who chose face-to-face interviews signed consent forms with a printed name and signature. Participants who chose technology-based interviews received the consent form via email and responded with "I consent." I avoided names during the interview to provide more anonymity. Participant identities were not disclosed in study results and were referred to as Participant and a corresponding number, which was less likely to directly or indirectly disclose participant identities. I did refer to gender, in the form of him or her and their pronouns, for possession in a sentence.



Throughout the process, each participant was made aware that the interview was voluntary and that they could withdraw from the study at any time. Participants were asked open-ended questions that were used to elicit detailed responses and there were no right or wrong answers. Memberchecks were used to confirm responses or for clarification.

### Hands-on Coding Summary of Results

Interpretation of the hands-on coding process identified four themes. The following chart summarizes the findings for the hands-on coding.

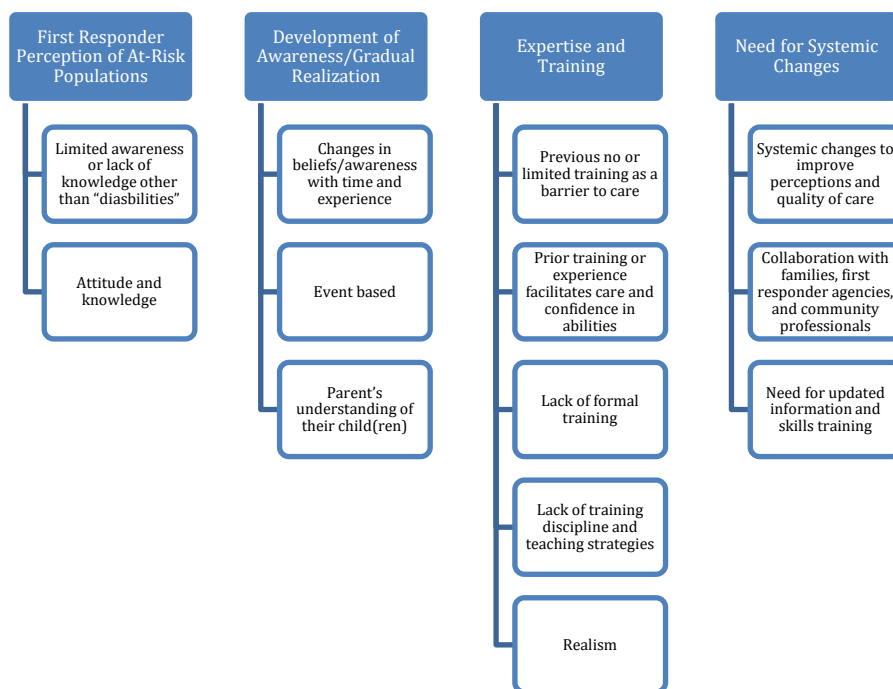


Figure 5. Summary of findings for hands-on coding.

#### First Responder Perception of At-Risk Populations

The first theme found with hands-on coding was first responder perception of at-risk populations. Two codes were present: limited awareness or lack of knowledge other than “disabilities” and attitude and knowledge. Eleven of the 15 participants expressed

“disabilities” in their definition of “at-risk populations,” while four of the 15 participants either stated they did not know what at-risk populations included or expressed a negative connotation. It was noted that a person with more experience with at-risk populations, such as familial or career path experience, often answered positively or with a thorough description. Participant 2 defined “at-risk populations” as “anyone who needs additional assistance” and listed examples. Participant 4 stated “all people with differing abilities” and listed examples. Participant 5 said “more than just disabilities” and listed examples. While Participant 15, with more than 20 years of service in New York State, stated that “prior to the last six years, I had no idea.”

In this study, generational age combined with experiences often influenced the first responder’s perceptions of at-risk populations. For example, Participant 5, a career or volunteer first responder for over 20 years, was retired at the time of this study. He was asked to define “at-risk populations.” He stated, “When I was working, it was just people or saying someone wasn’t all there, or special. There wasn’t any of this politically correct stuff.” Additionally, when Participant 5 was asked to describe the timeline for any awareness or diversity training that he may have had, he replied, “None, we didn’t believe in that stuff. You have to be a little more sensitive nowadays, but we didn’t have training for that.” His attitude changed when he was asked about any lessons learned that were important for others to know. He stated, “Don’t take people for granted. Don’t be closeminded.”

On the other hand, Participant 4, has been and continues to be a first responder with over 20 years-experience. Participant 4 does have additional background working

for a non-profit agency that assists people with developmental disabilities. When he was asked about lesson learned that are important for others to know, he responded, “You’re there to take care of the patient, not judge them. Everyone deserves help. Doesn’t matter the color of their skin or the color of their hair.” When describing his experiences dealing with at-risk populations, he stated, “I built a relationship with my people and I learned it was about looking at things from their perspective because we all see things differently.”

### **Development of Awareness/Gradual Realization**

The second theme found with hands-on coding was development of awareness/gradual realization. Three codes were present: changes in beliefs/awareness with time and experience, event based, and parent’s understanding of their child(ren). Thirteen of the 15 participants chose a career path or had a family member with at-risk characteristics. Participant 1 found that awareness had changed on the job when there was flooding on a campus for at-risk teenagers and that everyone worked together because they were scared versus when there was a fire at a day program for individuals with developmental disabilities and there were behavior issues because people were scared for the disruption in routines. Participant 4 stated “I learned it was about looking at this from their perspective because we all see things differently.” Participant 7, realized after becoming a parent with a child on the autism spectrum, that “Everything is a disaster to someone who is used to a routine.” Participant 13 noted that awareness changed with the realization after 9/11 that not all survivors spoke English. Participant 14, who had experience with 9/11, Hurricane Irene, Tropical Storm Lee, Superstorm Sandy, flooding, and weather-related incidents across New York State, stated “A lot of people need

assistance during and after a disaster. Our priority is life safety.” Participate 14 also noted that most awareness gradually developed after 2011, when FEMA integration to access and functional needs was implemented in training programs, again around 2014 when New York State started the Citizen’s Preparedness Program, and within the last year or so with a marked increase of awareness and diversity trainings and requests across New York State.

### **Expertise and Training**

The third theme found with hands-on coding was expertise and training. Five codes were present: previous no or limited training as a barrier to care, prior training or experience facilitates care, lack of formal training, lack of training discipline and teaching strategies, and realism. All participants with over 10 years of experience noted that training was not provided in the first responder field when they first started or was very limited. Previous trainings were noted as coming from books, lectures, or on-the-job training. There were very little mandatory trainings noted, unless the participant was associated with a New York State agency. From their experience, Participant 1 noted that the first time that autism or awareness training was offered at conventions or onsite locations for ambulance agencies was in 2018. Currently, it was noted that many agencies rely on computer trainings, online modules such as the FEMA Independent Study courses, lunch and learn lectures, real-life experience, hands-on labs, conferences, or simulations and drills.

Participants noted that training needs to be more realistic. Participant 4 taught classes and preferred to use real-life stories and hands-on training. “If someone can

relate, then they can understand it better.” Participant 11 noted that “When you’re training, you don’t fight back or the person being the training dummy doesn’t fight back. The guys, they almost always fought back. The guys would almost always hit, bite, fight. That kind of thing. So, it wasn’t truly realistic.” Participant 13 expressed “It can be so frustrating walking into something and not know what you’re doing.”

### **Need for Systemic Changes**

The fourth theme found with hands-on coding was need for systemic changes. Three codes were present: systemic changes to improve perceptions and quality of care, collaboration with families, first responder services, and community professionals, and need for updated information and skills training.

Participant 2 noted that there was a significant stigma associated with special needs and that first responders need to understand life from that person’s perspective. “[I] often see a lack of patience and/or compassion.” Participant 4 stated “You’re there to take care of the patient, not judge them.” Participant 15 noted that there needs to be more awareness for first responders, including how to react and expectations.

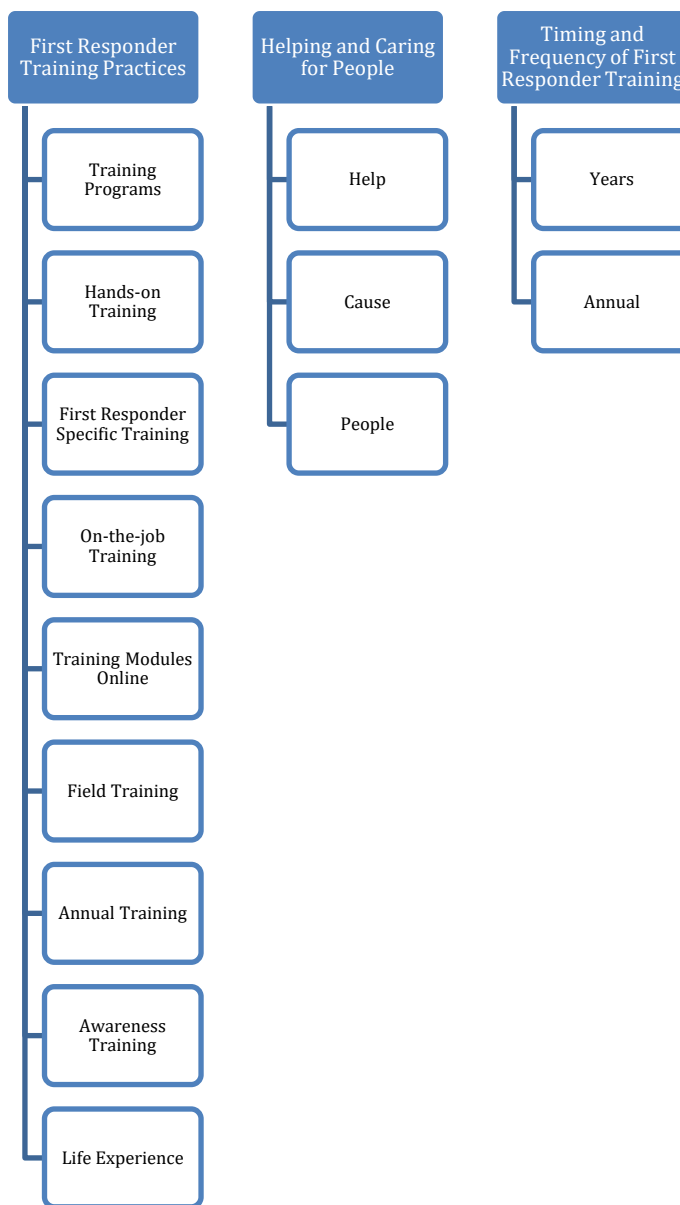
All participants identified community entities that could be instrumental partners in developing emergency planning networks. It was noted that there needs to be deliberate interaction and collaboration between first responder agencies, community agencies and professionals, and families. Participant 6 stated “There are a lot of caring people out there and we all need to work together.”

There was an overwhelming interest that this was an important area of study and that systemic changes need to be made. Participants expressed that they really needed a

better training program and that something like this needed to be done years ago. Participant 1 stated “I only know how to work with at-risk populations from my experience, not what I’m trained as a first responder.”

### **Software Coding Summary of Results**

Interpretation of the software coding process identified three themes. The following chart summarizes the findings for the software coding.



*Figure 6.* Summary of findings for software coding.

### **First Responder Training Practices**

The first theme found with software coding was first responder training practices. Nine codes were present: training programs, hands-on training, first responder specific training, on-the-job training, training modules online, field Training, annual training,

awareness training, and life experience. A word frequency query found the words training, knowledge, and experiences with synonyms as the top three words, found 399 times throughout the interviews. According to the comparison by number of coding references, the majority of first responders referenced hands-on, hands-on training, hands-on learning, and hands-on updates suggesting that hands-on training practices are the preferred method for learning.

### **Helping and Caring for People**

The second theme found with software coding was helping and caring for people. Three codes were present: help, cause, and people. A word frequency query found the words help, cause, and people with synonyms 298 times throughout the interviews.

### **Timing and Frequency of First Responder Training**

The third theme found with software coding was timing and frequency of first responder training. Two codes were present: years and annual. A word frequency query found the words years and annual with synonyms 70 times throughout the interviews. All first responders discussed little or no training during the beginning of their careers as first responders, with timing and frequency of training opportunities increasing in the past few years.

### **Similarities and Differences of Hands-on and Software Coding**

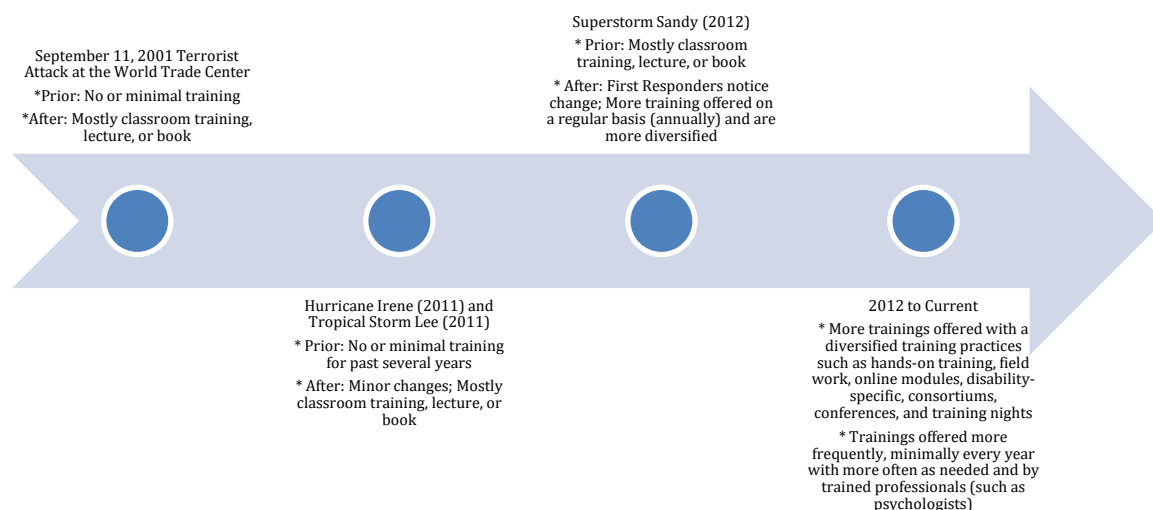
Hands-on coding allowed for a more in-depth review of the interviews, while software coding queried word frequency as part of the identification of themes. Although both provided similar themes in the areas of training, the hands-on coding focused on



perceptions, realizations, and transformation. The software coding picked up on the theme of helping and caring for people, which was not identified with hands-on coding.

### **Punctuated Equilibrium Theoretical Coding Summary of Results**

The punctuated equilibrium theoretical coding looked specifically for timing, cycles, and transformations. As noted in the software coding, the overall theme timing and frequency of first responder training was found. The two codes that were present were years and annual. The timing and frequency of training was noted an increasing in the last few years. After looking at a timeline of events or disasters in New York State, the following results were construed.



*Figure 7.* Timeline of disasters in New York State and training results.

It was noted that prior to the 9/11 Terrorist Attacks at the World Trade Center, first responders noted no or minimal training. It was noted that afterwards training opportunities were mostly classroom training, using lecture or books. In 2011, first

responders noted that there was no or minimal training for the previous several years. After the hurricanes, there were very minor changes noted by again, it was mostly classroom training, using lecture or books. After Superstorm Sandy in 2012, first responders noticed a change where more training were being offered on a regular basis and they were more diversified. In the last 8 years, trainings are noted as being more frequent, minimally once a year and done by trained professionals such as psychologists (in certain settings). There is more hands-on training, field work, online modules, disability-specific trainings (autism), consortiums, conferences, lunch and learns, and training nights.

As noted in the hands-on coding, the theme need for systemic changes was found. Transformations or systemic changes can be noted with the improvements in training opportunities and the diversified training practices since 2012. Transformations can also be noted in the attitude of the first responders. However, a majority of the first responders suggested that further change and additional training needed to occur.

### **Summary**

This chapter contains the results of the analysis, connects the analysis back to the research question, and demonstrates consistency of the analysis with the punctuated equilibrium case study methodology. Fifteen participants were interviewed for this study. In-depth interviews offered a smaller sample size of participants with expertise in their first responder roles; many of whom held multiple roles as first responders. The interview questions were structured to understand the awareness and diversity training practices

among first responders across New York State in assisting people with at-risk characteristics during disasters, to potentially identify the gap between the knowledge of first responders as well as their preparedness and response capabilities based on their level or type of training, to assess the practices on awareness and diversity training in first responder agencies, and to explore the relationship between the attitudes of first responders toward awareness and diversity training as well as their lived experiences assisting people with at-risk characteristics during disasters.

There were six steps of thematic analysis performed with four themes that emerged from hands-on coding: first responder perception of at-risk populations, development of awareness/gradual realization, expertise and training, and need for systemic changes. Three themes emerged from software coding: first responder training practices, helping and caring for people, and timing and frequency of first responder training. Two themes emerged from the punctuated equilibrium theory coding which focused of timing, cycles, and transformations: timing and frequency of first responder training and need for systemic changes.

While great strides have been made in creating awareness and diversity training opportunities to first responders in recent years, it is evident in the research results that there is variability in how participants manage training opportunities and lessons while involved in real-world events. Chapter 5 includes a discussion of major findings as related to the awareness and diversity training practices of first responders assisting at-risk populations during disasters. Also included is a discussion on connections to this

study and associated theories and workplace policies, limitations of the study, areas for further research, and a brief summary.

## Chapter 5: Discussion

### **Introduction**

The purpose of this qualitative punctuated equilibrium theory case study was to assess the awareness and diversity training practices among first responders across New York State in assisting people with at-risk characteristics during disasters. The objective was to address the gap between the knowledge of first responders and their preparedness and response capabilities based on their level or type of training. Additionally, the purpose of this study was to assess the practices of awareness and diversity training in first responder agencies. Further, the purpose was to explore the attitudes of first responders toward awareness and diversity training and their lived experiences assisting people with at-risk characteristics during disasters.

This chapter contains discussion and interpretation of findings to answer the research question: How has awareness and diversity training among first responders in New York State led to changes in preparedness and response strategies to at-risk populations during disasters after September 11, 2001? There were six steps of thematic analysis performed, and four themes emerged from hands-on coding: first responder perception of at-risk populations, development of awareness/gradual realization, expertise and training, and need for systemic changes. Three themes emerged from software coding: first responder training practices, helping and caring for people, and timing and frequency of first responder training. Two themes emerged from the punctuated equilibrium theory coding, which focused on timing, cycles, and transformations: timing and frequency of first responder training, and need for systemic changes.

This chapter includes a discussion of major findings related to the awareness and diversity training practices of first responders assisting at-risk populations during disasters. Also included is a discussion of connections to this study and associated theories and workplace policies. The chapter concludes with a discussion of the limitations of the study, areas for further research, and a brief summary.

### **Interpretation of the Findings**

Although career specialties, paths, and experiences varied for each participant, common themes were prominent factors in the awareness and diversity training practices of the first responders interviewed for this study. These themes indicated that what are considered important training practices to the first responder change over time. Each theme is described in detail in the following sections. The gap in the literature indicated that there was a lack of awareness and diversity training to first responders, the costs of the training were often the first cuts in the budget, relationships and a lack of knowledge regarding at-risk populations produced inaccurate perceptions of at-risk people, and policy revolved around disasters.

Many first responders who participated in this study acknowledged there was a lack of consistent awareness and diversity training practices and that local agencies within the same region often used different training methods or had different or no awareness and training practices for first responders to assist at-risk populations during disasters. However, in contrast to previous literature, the cost of training was not noted as a monetary or budgetary concern, but concerns regarding the value of time, based on alternate or family responsibilities. Specific policy was not discussed by the first

responders in this study. The results of this study align with the literature regarding the importance of awareness and diversity training to first responders assisting at-risk populations during disasters.

### **First Responder Perception of At-Risk Populations / Helping and Caring for People**

Two codes were present in the first responder perception of at-risk populations theme: limited awareness or lack of knowledge other than disabilities, and attitude and knowledge. Findings indicated that the first responder's perception of at-risk populations has an effect on awareness and diversity training practices, which aligns with the literature. The second theme found with software coding was helping and caring for people. Three codes were present: help, cause, and people. Findings indicated that the first responder awareness mind-set needed to assist at-risk populations included the qualities for helping and caring for people, which aligns with the literature.

Most awareness and diversity training practices had not occurred prior to the last 5 to 7 years, and most of these training practices were voluntary. Participants who reported mandatory attendance at awareness and diversity trainings or those who had more experience with at-risk populations, such as familial or career path experience, often answered positively or had a positive perception of at-risk populations. Although some participants admitted that exposure or training was limited or that sensitivities had changed as more training occurred, their perceptions of at-risk populations were influenced by their experiences and knowledge.

There appeared to be a difference in a first responder's attitude or perception of at-risk populations based on age, experience, and length of career. Age combined with

experience was often associated with the first responder's perceptions of at-risk populations. First responders reported that disabilities tended to be a focus of at-risk populations, mainly because awareness and diversity training since 2011 had focused on disabilities and the whole community concept. First responders with a shorter and more recent career were often found to have a more positive perception but were also exposed to more awareness and diversity trainings.

### **Development of Awareness/Gradual Realization**

The second theme found with hands-on coding was development of awareness/gradual realization. Three codes were present: changes in beliefs/awareness with time and experience, event based, and parent's understanding of their children. Findings indicated that the first responder development of awareness and the gradual realization that there is a need for awareness and diversity training practices aligns with the historical literature. In this study, first responders emphasized development of awareness or changes in awareness based on having children or other family members with at-risk characteristics, or previous or concurrent careers working with people with at-risk characteristics. First responders reported event-based development of awareness, specifically after 9/11, Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy, which were larger disasters that occurred in New York State. Some awareness resulted from national events that occurred with national mandates to states or from minor local events, such as the Wells fire or Western New York flooding in August 2018, which resulted in local or agency-specific policies.



As more emphasis was placed on a specific at-risk characteristic, such as autism or people with access and functional needs, awareness and diversity training specific to those at-risk characteristics became more prevalent. For example, after the Wells fire occurred in 2009, first responders who were career or volunteer firefighters reported increased emphasis on fire safety training for facilities that housed people with developmental disabilities. Additionally, as more attention was placed on at-risk populations in the media, awareness and diversity training specific to those populations became more prevalent.

### **Expertise and Training / First Responder Training Practices**

The third theme found with hands-on coding was expertise and training. Five codes were present: lack of previous training or limited training as a barrier to care, prior training or experience facilitates care, lack of formal training, lack of training discipline and teaching strategies, and realism. Findings indicated that there had been a lack of consistent awareness and diversity training provided to first responders in New York State, which aligns with the literature.

The first theme found with software coding was first responder training practices. Nine codes were present: training programs, hands-on training, first responder specific training, on-the-job training, training modules online, field training, annual training, awareness training, and life experience. Findings indicated that there had been a lack of consistent awareness and diversity training practices for first responders in New York State, which aligns with the literature and the hands-on coding noted for expertise and

training. Most first responders used synonyms of hands-on training, suggesting that hands-on training would be preferred over books, lectures, and online training.

In this study, first responders with over 10 years of experience emphasized a lack of awareness and diversity training or limited training upon employment or volunteer service. First responders who were employed by a New York State agency often reported mandatory training requirements versus community or volunteer agencies having voluntary training requirements. All participants noted a lack of realism to the training, as the training was often done via book or lecture.

In this study, participants noted a difference in awareness and diversity trainings received in more recent years. It was noted that many agencies rely on computer trainings, online modules such as the FEMA Independent Study courses, lunch and learn lectures, real-life experience, hands-on labs, conferences, or simulations and drills. However, the lack of realism to most of the training was still noted as a concern. For example, there may be a live person used in the lab, but a bandage with ouch written on it versus realistic applied moulage to simulate a wound.

Throughout their training and career journey stories of assisting people with at-risk characteristics during disasters, the first responders in this study largely shared their awareness and diversity training practices with a positive lens. Many directly spoke about, or implied, that they had several occasions where their preparedness efforts led to positive response results. Participants who volunteer as a first responder conversely spoke about the conscious choices of prioritization of trainings, or online versus hands-on training. This outcome was especially the sentiment expressed by first responders who

sacrificed family time for training, which caused several participants to choose not to participate in training if it was not mandatory.

### **Need for Systemic Changes / Timing and Frequency of First Responder Training**

The fourth theme found with hands-on coding was need for systemic changes. Three codes were present: systemic changes to improve perceptions and quality of care, collaboration with families, first responder services, and community professionals, and need for updated information and skills training. Findings indicated that there is a need for systemic changes across New York State to provide consistent awareness and diversity training to first responders aligns with the literature.

Additionally, the third theme found with software coding was timing and frequency of first responder training. Two codes were present: years and annual. Findings indicated that there is a need for increased timing and frequency of awareness and diversity training to first responders aligns with the literature.

All first responders discussed little or no training during the beginning of their careers as first responders, with timing and frequency of training opportunities increasing in the past few years. It's predictable that when a first responder is not equipped to deal with at-risk populations, then the perceptions, attitudes, and skills necessary to deal with the encounters with people with at-risk characteristics especially during disasters fails both the people who are in need and those attempting to help. Because there are no systemic requirements across New York State for awareness and diversity training for first responders assisting at-risk populations during disasters, there are inconsistencies with the response and care provided to people. Agency and organizations have their own

training practices and policies, which is often voluntary when it is outside systemic requirements. For example, anyone wishing to be a firefighter must take and pass Firefighter I, a systemic requirement whether the person is in a career or volunteer capacity. However, there was no specific mandatory training or policy noted in either the literature or the interviews that suggested a systemic requirement for assisting at-risk populations during disasters in any of the three first responder fields.

One interesting aspect of the first responder interviews was that there continues to be a significant stigma associated with at-risk populations, especially regarding first responder reactions and expectations. Because some of the negative attitudes regarding at-risk populations still exist, it is reasonable to suggest that the modern-day awareness and diversity training practices of first responders are not completely free from the remnants of the past. The positive step-changes toward training policies and culture seem to be evidence of broad organizational changes that help through more frequent and more characteristic-based trainings. Although there was an overwhelming interest that systemic changes need to be made, there is no deliberate interactions or collaborations between first responder agencies, community agencies and professionals, and families in developing emergency planning networks.

### **Limitations of the Study and Recommendations for Future Research**

While the researcher still agrees that qualitative research using the case study design was the right choice for this study, qualitative research tools, such as interviews, are not designed to capture hard facts. More credibility could be given to this study if it were coupled with quantitative research. For example, a survey designed for quantitative

research and subsequent statistical analysis may offer more evidence to strengthen the data discovered using qualitative research tools.

Several areas for future research on targeted demographics within the at-risk population definition could add to the findings of this study. Another demographic to study differences in would be trainings available to career versus voluntary first responders or the differences trainings in urban or rural first responder agencies, potentially even soliciting candidates of different age groups that would be willing to answer survey questions over a five to ten year period to determine if there are large shifts over time in the awareness and diversity policy and training practices of first responders and if there are similarities across first responder professions.

Another quantitative study that would help to couple with this study's finding would be a study using a larger and more diverse population, potentially comparing the perspectives of people with at-risk characteristics with the training practices of first responders. With regard to qualitative research, using a participant and first responder combination may be able to describe the role of the whole community. A broader demographic of participants and first responders may give more insight into the study if the development of awareness and diversity training practices is credited as heavily to geography as is in this study.

Another angle to explore may be to a qualitative research study that compares first responders who leave either career or voluntary service as a first responders with those who have stayed in the first responder field after assisting at-risk populations during disasters. That would target whether training had an impact on a person's decision

to leave service as a first responder after a disaster or if mental, emotional, or physical aspects of the disaster influenced their decision.

A literature review research project that studied changes in U.S. law impacting awareness and diversity training compared with when new training was implemented or revised might be useful to view for any changes over time. A study that looked closer into the effects of career versus voluntary training requirements and policies associated with those training requirements could also be useful.

### **Implications for Theory and Research**

Chapter 2 included descriptions of several research models. These models included the theoretical frameworks that have been identified in emergency planning for people with at-risk characteristics: the whole community concept, grounded theory, sense of community, and change theory. How the punctuated equilibrium theory fits with this research study is discussed in the following sections.

Punctuated equilibrium theory is the theory that public policy changes rapidly over a short period of time. Baumgartner and Jones (2009) stated that the punctuated equilibrium model of policy change changes incrementally, characterized by long periods of policy stability followed by large changes in society or government. Baumgartner and Jones suggested that this is often found when a governmental party changes or there is a change in public opinion. Findings of this study indicated that policy changed when there was a change in public opinion, as awareness and diversity training for first responders was noted as occurring within the last few years, consistent with the increased emphasis that has been placed on at-risk characteristics, especially after a disaster.

Findings indicated that policy changes occurred in the aftermath of major disasters or lawsuits, specifically designed toward training practices of first responders assisting people with at-risk characteristics. In 2009, increased emphasis was placed on fire safety training with people with developmental disabilities who lived in group homes. This was a result of the Wells Fire, where four individuals who lived in the group home died when a fire destroyed their home. However, as also noted from the aftermath of the Wells Fire, the awareness and diversity training practices and policies were only specific to the firefighter first responder role, not systemic across all first responder roles.

Baumgartner and Jones (2009) suggested that the structure of the policy or policy making becomes stagnant over time, which often leads to stagnation or collapse of a policy. In terms of first responder training, this means that training requirements often became lax or non-existent over time, until the next disaster perpetuated a policy change. In 2012, policies and trainings had become stagnant, as noted with the lack of emergency services and emergency planning during Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy. The aftermath of Superstorm Sandy and the results of the Brooklyn Center for Independence of the Disabled v. The City of New York (2013) included a noted uptick in awareness and diversity trainings for first responders statewide, as noted in the interviews and the training timelines.

As more emphasis is placed on a specific at-risk characteristic, such as autism or people with access and functional needs, more awareness and diversity training specific to those at-risk characteristics become more prevalent. Additionally, as more attention is in the media about at-risk populations, more awareness and diversity training specific to

those populations become more prevalent. Ishimatsu (2015) suggested that bursts of social change will move polices in new directions. Ishimatsu suggested that the trigger events, or basis of change, may include persuasion, whether from negative media focus or lawsuits following a disaster. Ishimatsu also suggested that the changes are not an easy transition for those involved and may include significant controversies and debates.

For example, a Central New York chief made a request to the members of his agency and his extended network of emergency medical providers to see if anyone would like to assist in teaching first aid and CPR to the Amish population. This was a result of an incident that occurred recently with an Amish child. There is a large Amish population within Central New York and first responders are attempting to be proactive and make changes to assist a population that are historically culturally isolated. The chief was clear in his request that although some members of the Amish community are interested in learning about first aid and CPR, it may not be a widespread welcome by all members of the community. And, this integration of training practice is specific to EMS first responders, not systemic across all first responder roles.

When comparing this study's results with punctuated equilibrium theory, similarities and differences exist. The punctuated equilibrium theoretical coding looked specifically for timing, cycles, and transformations.

This study factored in where a person had participated in a first responder role, since the prevalence of coastal storms occur in areas closer to the Atlantic Ocean and winter storms occur near areas of where there are increased lake-effect snow falls. Tilcsik and Marquis (2013) suggested that location played a significant role in the punctuated



equilibrium theory. With 62 total counties across New York State, including New York City, the state experiences a wide variety of natural or human-caused disasters and emergencies that may affect a variety of populations, the results often negatively impact community members through loss of life, damage, or destruction of property. However, it was noted that the participants across the state have assisted in more than one location, either based on mutual aid agreements, relocation of the first responder to new areas within the state, or location of employment or volunteer work. The only clear differences in training practices based on geography appeared to be the urban versus rural areas with specific applications needed, such as farm incidents versus gang shooting, and the trainings specific to the department that was doing the awareness and diversity training. Within the same region, some participants noted that some agencies used online training while others did more on-the-job training.

This study factored in the length of time a person was in the role of a first responder. All first responders discussed little or no training during the beginning of their careers as first responders, especially if they had more than 10 years of experience, with timing and frequency of training opportunities increasing in the past 5 years. First responders in this study placed increased emphasis on the types of training, not the policies involved in the training.

While the results of this study confirmed that locations and disasters determine the policy change affecting types of training for first responders and the role it plays in future preparedness, it also noted that systemic changes are needed across all three first responder disciplines, not limited to a specific first responder role.

### **Implications for Practice and Positive Social Change**

Findings indicated that the first responder's perception of at-risk populations has an effect on awareness and diversity training practices and that the first responder awareness mindset needed to assist at-risk populations included the qualities for helping and caring for people. Additionally, findings indicated that there has been a lack of consistent awareness and diversity training provided to first responders in New York State and there has been a development of awareness and the gradual realization that there is a need for awareness and diversity training that will help first responders assist at-risk populations during disasters. Furthermore, this findings indicated that along with the realization that there has been a lack of consistent awareness and diversity training practices for first responders in New York State, there is a need for systemic changes across New York State to provide consistent awareness and diversity training to first responders. Part of the systemic changes includes a need for increased timing and frequency of awareness and diversity training to first responders.

This study utilized the case study approach of the Problem-Oriented Method. The findings indicated above can provide first responder agencies with a tool to begin focus for awareness and diversity training. The following recommendations to assist with awareness and diversity training for New York State first responders will help the first responders better assist at-risk populations during disasters.

Findings suggested that first responders could benefit from awareness and diversity training to improve the first responder's perception of at-risk populations and people with at-risk characteristics. The findings suggested that first responder attitudes

need to be caring and helpful to assist people with at-risk characteristics. The implications of this study on positive social change suggest that awareness and diversity training assist with changing the perceptions and attitudes of first responders, which lead to positive interactions when caring for and assisting people with at-risk characteristics.

Findings suggested that first responders could benefit from awareness and diversity training that promotes realism. This is important to the educator or trainer as the results of this study imply that first responders prefer hands-on training versus book or online learning. The implications of this study on positive social change suggest that by promoting realistic-based learning using a hands-on approach would allow first responders a realistic view of how they need to act and perform while assisting at-risk populations during disasters.

Findings suggested that another area that could benefit from a better understanding of systemic changes to awareness and diversity training practices is a consistent awareness and diversity training among all disciplines of first responders, inclusive of fire, emergency medical, and law enforcement. This is important to people with at-risk characteristics since many first responders in New York State often perform multiple roles, the more a person has consistent training, the more practice they have, and the better they will be able to perform the necessary services to assist at-risk populations.

Findings indicated that first responders felt that there was a need for a consistent, statewide awareness and diversity training curriculum for assisting at-risk populations during disasters. In order to provide consistent, statewide awareness and diversity training, state-level policies need to be implemented for minimal first responder training

requirements. This is important for administrators because it is recommended that local agencies and organizations need to expand upon current training practices to provide first responders with more realism-based training, which would in turn provide first responders with the skills they need to prepare for and response to at-risk populations during disasters.

### **Who Should Oversee Training Requirements and Policy**

Phung, Trueman, Togher, Ørner, and Siriwardena (2018) concluded that training for Community First Responders (CFRs) should be locally driven. Phung et al. suggested that this stemmed from the desire of the CFRs to give back to their local communities and help their neighbors. However, as the findings indicated with this study, there is no consistent awareness and diversity training requirements, either locally or statewide. Locally driven training has occurred, especially after events such as the Wells Fire, but systemically all first responders could benefit from a statewide policy of minimum requirements that include specific awareness and diversity training to assist at-risk populations, since over 50% of people in the United States have characteristics that fall within the definition of at-risk.

### **Trainings Currently Offered in or to New York State First Responders**

The following state and federally organized trainings that could be beneficial as part of a consistent, systemic awareness and diversity training are currently offered in or to first responders in New York State. However, many New York first responders and first responder agencies are unaware of these trainings or have a limited understanding of these trainings. Findings indicated that first responders prefer hands-on training and

would like realism incorporated into the awareness and diversity training curriculum.

However, a multidimensional approach may be beneficial for students who learn using different methods.

**FEMA independent study courses.** This self-paced online training is designed to assist first responders, emergency managers, and the general public with a basic understanding of a variety of emergency management related topics. More information can be found at: <https://training.fema.gov/is/>.

**New York State Division of Homeland Security and Emergency Services Emergency Management Certification and Training Program.** This training is intended for three tiers based on specific roles: county chief executives, county emergency managers, and/or local officials, first responder leadership, and other partners. The core components of the training are the same, but the topic details will be based on the tier and audience. Ultimately, the goal of this training is to ensure a consistent and uniform executive-level understanding of emergency management planning and response for all residents in New York State. The first training is delivered in-person in a classroom setting with presentations and scenario-based discussions. The annual refresher can be completed online. This training is mandatory for county chief executive and county emergency managers in order for the counties to remain eligible for NYS DHSES grant funding. This training is voluntary for local officials, first responder leadership, and other partners. More information can be found at: <http://www.dhSES.ny.gov/oem/training/emct.cfm> or by contacting [OEM.Training@dhSES.ny.gov](mailto:OEM.Training@dhSES.ny.gov).

**New York State Division of Homeland Security and Emergency Services**

**Office of Counter Terrorism Exercise Simulation Trailer.** The OCT Exercise Simulation Trailer is stocked with a variety of simulation equipment that is specifically designed to enhance realism in hands-on trainings and exercises. A Casualty Simulation team assists with the application of moulage for injury simulation during disaster training or medical trauma for mass casualty events. The goal of the OCT Exercise Simulation Trailer is to provide first responders with realistic hands-on exercises using the four of the five senses; sight, sound, smell, and hearing. In order for a New York municipality to request the OCT Exercise Simulation Trailer for an exercise, they need to contact their county emergency manager to submit the request to DHSES. More information can be found at: [http://www.dhses.ny.gov/oem/exercise/documents/trailer\\_catalog.pdf](http://www.dhses.ny.gov/oem/exercise/documents/trailer_catalog.pdf) or by contacting [exercise@dhses.ny.gov](mailto:exercise@dhses.ny.gov).

**New York State Division of Homeland Security and Emergency Services**

**State Learning Management System and the State Preparedness Training Center.**

DHSES offers a variety of trainings online through the State Learning Management System (SLMS) or in-person at the State Preparedness Training Center or satellite sites. Students who wish to enroll in courses must first obtain an account in SLMS. These courses are a combination of instructor-led classroom, scenario-based training, and reality-based training. More information can be found at: <http://www.dhses.ny.gov/training/calendar/>.

**New York State Office of Fire Prevention and Control Fire Safety House.**

The OFPC Fire Safety House is a hands-on training program designed as a virtual home

on wheels that assists children, families, and communities with a realistic view to fire safety. By using sight, touch, and smell, students have realistic educational opportunities. This program offers community integration and collaboration and can be modified for different at-risk populations, such as young children and college students. More information can be found at: <http://www.dhSES.ny.gov/ofpc/publications/documents/fire-prevention/HowtoRequesttheFireSafetyHouse.pdf> or by contacting the nearest Fire Prevention Bureau.

### **Types of Beneficial Training**

Findings indicate that a blended learning model would be the best method for awareness and diversity training for first responders to assist at-risk populations during disasters. First responders are a multi-generational, multi-level workforce with both seasoned and new career or volunteer members. The challenge is creating an awareness and training program that creates learning opportunities for each generation and each level of competence and promotes retention of information to be used during a disaster.

O'Donnell (2018) concluded that internal training is critical to the effectiveness of an organization. However, O'Donnell noted that traditional classroom style setting was an effective means to deliver information to large groups, it was an ineffective way to educate employees. O'Donnell indicated that the results of the Axonify study showed that over 90% employees want trainings that are easy to complete and understand, that is personalized and relevant, and that is engaging and fun. Additionally, O'Donnell suggested that employees need trainings that help them retain knowledge and skills but spacing out trainings throughout the year.

In addition to traditional classroom-based training program and the above listed programs available through state or federal resources, the following types of training could be beneficial as part of a consistent, systemic awareness and diversity training for first responders in New York State. These awareness and diversity trainings would need to be developed and implemented specifically for New York State, as the demographics of New York State vary but first responders could be called to assist anywhere in New York State based on mutual aid agreements.

**Computer-based online education.** The results of the Rescue-D computer-based online education research study concluded that that online courses simulate real-life and offer the first responder an interactive response scenario that increase skills, enhance and reinforce knowledge, and motivate learning (Wolf-Fordham, et al., 2014). Although Rescue-D was a prototype, and I cannot find any additional development or implementation of the Rescue-D program, the positive results of the use of computer-based online simulations could be beneficial to agencies with limited training funds or the ability to reach first responders who could train on their own available time and at their own pace. Additionally, simulations can mimic real-life events and offer the first responder a realistic interaction without harm to patients or a psychological risk associated with the loss of patient.

**Virtual reality training/augmented reality.** Menke, Beckmann, and Weber (2019) indicated that virtual reality and augmented reality training methods are becoming a popular training platform, especially for complex and highly demanding tasks. Menke et al. suggested that several existing environments, such as the military or health



professionals, use virtual reality or augmented reality training to train in a risk-free manner where time and space can be manipulated. Menke et al. suggested that virtual and augmented reality training platforms use a computer to stimulate human senses, thereby creating an immersive simulation with the perception of an alternative reality.

Cooperstock, Sterle-Contala, Sharma, and Blum (2019) are working on a project using an augmented reality tool that works with Google Glass to provide a real-time link between the training first responder and the trainee coordinator. Cooperstock et al. indicated that this would allow the coordinator to provide real-time guidance and introduce challenges during practice scenarios. Cooperstock et al. indicated that the tool records the responder's performance, which allows for identification and assessment of any strengths and weaknesses during the debrief, which in turn allows the first responder to learn and improve in needed areas.

**Apprenticeship.** O'Donnell (2018) suggested that career or volunteer first responders are the subject matter experts. Findings indicated that oftentimes, first responders have dealt with a situation in the field where the training they received was beneficial or something that they had to learn from. O'Donnell suggested that with a multi-generational and multi-level workforce, seasoned employees often have expertise that is not tapped to its full potential. Seasoned first responders would have the most experience and are a wealth of knowledge. By supporting the connection of seasoned first responders with new hires, it allows colleagues to connect informally, share information, and be able to work together better during a disaster (see O'Donnell, 2018).

## **Conclusion**

Chapter 1 introduced the study with a background of the problem, the research question, and the theoretical framework used in the study. The literature review in Chapter 2 explored published material on the problem statement of across New York State first responder agencies, awareness and diversity training is not consistent, which can negatively impact the response and care of at-risk populations during disasters. Additionally, Chapter 2 expanded on the research question, and provided support for the intended research and validated the use of the Punctuated Equilibrium Theory and a case study. Chapter 3 discussed the methodology of the research study and provided experienced researchers and investigators necessary information to have the ability to replicate the study. Chapter 4 presented, in detail, a summary of the research findings and data analysis of this research study. And, Chapter 5 included a conclusion of the report, an interpretation of the study, and an ensuing discussion of the study. The significance of this research in the immediate context of awareness and diversity training for first responders assisting at-risk populations was examined. Additionally, recommendations for further research concluded the chapter.

There were seven overall themes that emerged from this study: first responder perception of at-risk populations, development of awareness/gradual realization, expertise and training, need for systemic changes, first responder training practices, helping and caring for people, and timing and frequency of first responder training. From those seven themes, two themes emerged from the punctuated equilibrium theory coding which

focused of timing, cycles, and transformations: timing and frequency of first responder training and need for systemic changes.

While great strides have been made in creating awareness and diversity training opportunities to first responders in recent years, it is evident in the research results that there is variability in how participants manage training opportunities and lessons while involved in real-world events. The optimal approach for first responder awareness and diversity training to assist at-risk populations during disasters would be the use of a blended learning model, which involve multiple methods to reach the multi-generational and multi-level workforce.

By assessing the awareness and diversity training of first responders from September 11, 2001 to the present day in New York State, findings indicated that first responders felt that there was a need for a consistent, statewide awareness and diversity training curriculum for assisting at-risk populations during disasters. In order to provide consistent, statewide awareness and diversity training, state-level policies need to be implemented for minimal first responder training requirements. Local agencies and organizations need to expand upon current training practices to provide first responders with more realism-based training, which would in turn provide first responders with the skills they need to prepare for and response to at-risk populations during disasters. Ultimately, the implications for positive social change are that practice makes better, which assists first responders with being prepared, having a better response, and saving the lives of at-risk populations during disasters.

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## Appendix A: Invitation

Hello (participant's name),

I hope this note finds you well.

As you may know, I am currently attending Walden University and pursuing my PhD in Public Policy and Administration. As part of my research study, I'm seeking first responders such as fire fighters, police officers, and emergency medical technicians that have assisted at-risk populations during disasters and that could participate in interviews.

Would you be interested in assisting with this?

The study will include completing an Informed Consent statement (I'll e-mail this to you); and allowing me to interview by phone or in person. The whole process should take no more than 90 minutes of your time.

Please let me know if you would like to participate. The study has deadlines, so we'll need to begin the process by May 1, 2019, and finish the interview by July 1, 2019.

You can contact me by phone (315)729-1556, e-mail Sara.Parry@waldenu.edu if you have any questions.

Thank you for your time.

Sara Parry

Prior to participation in the research study, applicants were asked the following questions:

- Are you 18 or older?

- Have you been employed as or volunteered as a first responder in New York State during a disaster where you assisted or observed a person who met the characteristics of at-risk populations?
- How long have you been employed or volunteered as a first responder in New York State?
- What county or counties have you assisted with at-risk populations during a disaster?

Once it has been ascertained that the participant met the above criteria, the following procedures for participation ensued.

## Appendix B: Overview

Thank you for your time and participation in this research study. The purpose of this research study is to assess the awareness and diversity training practices among first responders across New York State in assisting people with at-risk characteristics during disasters. The objective will be to potentially identify the gap between the knowledge of first responders as well as their preparedness and response capabilities based on their level or type of training. Additionally, this study will assess the practices on awareness and diversity training in first responder agencies. Further, it will explore on the relationship between the attitudes of first responders toward awareness and diversity training as well as their lived experiences assisting people with at-risk characteristics during disasters.

At-risk populations are defined by the Emergency Management Accreditation Program as

individuals or groups whose needs are not fully addressed by traditional service providers or who feel they cannot comfortably or safely use the standard resources offered during preparedness, response, and recovery efforts. These groups include people who are physically or mentally disabled (e.g., blind, deaf, hard-of-hearing, have learning disabilities, mental illness and/or mobility limitations), people with limited English language skills, geographically and/or culturally isolated people, homeless people, senior citizens, and/or children (EMAP, 2016, p.1).

If, at any time, you have any questions about the interview question or the study, please ask. Also, if any at time during the interview, you feel unable to continue or are uncomfortable, for whatever reason, please stop me. If this interview, or any thoughts or experiences discussed during the interview, bring up any physical or emotional reactions, please know that there are counselors available, both in your department on through a hotline, that can help you work through these feelings and emotions. Let me know when you are ready to proceed. The interview questions used are listed below. Clarification questions or a prompt for a more-in depth answer were used.

## Appendix C: Interview Guide

1. Let's begin with what you can tell me about the types of disasters that you have experienced as a first responder in New York State.
2. What role did you play? (Example: first responder for fire, police, or EMS, supervisor, chief, command unit)
3. As a first responder, how would you define the term "at-risk populations?"
4. What kind of experiences have you had with dealing with at-risk populations?
5. What kind of experiences have you had with at-risk populations and disasters?
6. What kind of training, preparedness efforts, or simulations prepared you for dealing with at-risk populations and disasters?
7. Can you describe the timeline for any awareness or diversity training you may have had? For example, when you first started as a first responder to present day?
8. What was helpful or not helpful with your training when it pertained to real-life situations?
9. What lessons did you learn that are important for others to know?
10. How does you or your agency identify locations populated by at-risk populations to either mitigate risks or provide advanced training to responders?
11. What community entities might be instrumental partners in developing an emergency planning network?
12. Is there anything else you'd like to tell me?

#### Appendix D: Conclusion/Closing Statement

Thank you for your time and participation in this research study. This research will be used to fill the gap in understanding between the knowledge of first responders as well as their preparedness and response capabilities based on their level or type of training. The information should help first responder agencies, emergency personnel, and emergency managers to develop and implement awareness and diversity training programs that promote and provide needed training, services, and resources for at-risk populations during disasters.