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**EXAMINING THEORIES OF PUBLIC-PRIVATE SECTOR COLLABORATION:  
HEALTH CARE FOR PEOPLE WITH DISABILITIES IN EMERGENCY  
MANAGEMENT.**

A Dissertation

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*Photograph 1.*

*Photograph of a stranded vehicle and damage from a snow storm in Indiana and Ohio. How would a disabled person and emergency specialist cope with such an incident? March 8<sup>th</sup>, 2008*

*“On July 22, 2004, I signed an Executive Order that makes government agencies responsible for properly taking into account agency employees and customers with disabilities in emergency preparedness planning and coordination with other government entities. To help coordinate this effort, the Executive Order establishes the Interagency Coordinating Council on Emergency Preparedness and Individuals with Disabilities.”* President George W. Bush

Executive Order. No. 13347 (2004)

### **ABSTRACT**

As Americans observed in horror the incidents in Japan following a major earthquake followed by a tsunami and then a nuclear disaster, it is important to assess emergency planning effectiveness for all citizens, particularly the most vulnerable. Emergency managers in counties across the United States plan for every American citizen in case of natural disasters. Theories of Public Administration can illuminate the dynamics of the formulation and implementation of these plans. This study tests the level of cooperation, coordination and collaboration between local administrators and affected individuals and groups resulting from disaster and subsequent emergency response. The study examines the relationship between the needs of the disabled and the work of emergency management. As commitment increases, cooperation and collaboration have increased among emergency managers, health care providers and people with disabilities. This study involves interviews with 38 emergency managers who answered a series of questions about their level of contact, cooperation, coordination and/or collaboration with people with disabilities and health care professionals.

The study results demonstrate some degree of progress in the collaboration of Emergency Managers, Health Care Professionals and People with disabilities. Health Care works have especially become more involved in planning and responding to emergencies as a result of the “pan flu” incident from a year earlier. But, there is still much room for improvement. People with disabilities serve on some local emergency planning committees in some locations in Indiana and Ohio. However, many emergency managers ignore this problem citing a lack of resources and time to make these connections. Many are addressing the resource and time constraints by engaging in continuous volunteerism to improve collaboration in support for people with disabilities in the emergency management process.

## I.

### Introduction

#### *The Disaster and Emergency Management Context*

Stories emerging from earthquake, tsunami, widespread destruction and nuclear disaster in Japan give Americans much to contemplate about the adequacy of emergency planning and management in the United States. It is especially important to consider in light of the high number of deaths in Japan including many who were elderly or disabled. Since March 11, 2011, there have been an estimated 8,000 deaths with over 13,000 missing (Nakamura and Achenbach, 2011). The cost of this disaster is expected to exceed \$300 billion (Bellman, 2011). By comparison, the 2004 tsunami epi-centered in Indonesia but impacting a large geographical area in Southeast Asia, cost over 200,000 lives but only \$10 billion dollars in economic loss. With all of this in mind it is important to consider that Japan is one of the best prepared countries in the world when it comes to emergency planning, response and recovery (Moore, 20011), (Glanz and Onishi, 2011). However, despite all of the best Japanese preparations, the impact is just beginning to be felt by the whole world (Kester, 2011). Shock waves from the March 11th earthquake in Japan were felt as far away as Cleveland, Ohio according to a seismological scan (appendix V). Since 1953, the U.S. government has been keeping records on the number of disasters in the United States (FEMA, 2012). In 1953 the US suffered 13 major disasters. But, this number of disasters has been growing steadily. By 2011, the US had 99 serious disasters. In addition, the Federal Emergency Management Agency (FEMA) records breakdown disasters by state. In the same period, Indiana has had 39 major disasters while Ohio has had 45. To put this in perspective, the worst ten states for disasters in recent history based upon property damage

are: 1. Louisiana, 31.9 billion in Hurricane Katrina; 2. Florida, 31.5 billion for numerous hurricanes and tornadoes; 3. Texas, 23.9 billion from numerous tornadoes; 4. New York, The World Trade Center Attacks, 21.56 billion and the highest number of casualties 5. Mississippi 14.9 billion from numerous hurricanes, flooding and tropical storms, 6. Oklahoma, 5.3 billion from numerous tornadoes; 7. Alabama, 4.96 billion numerous hurricanes and winter storms; 8. California, 4.7 billion from numerous wildfires and earthquakes. 9. Missouri, 4.5 billion from numerous winter storms. 10. Ohio, 4.1 numerous “lake effect” winter storms. Indiana follows after due to smaller size and population (Kiplinger, 2012). In considering the current state of emergency planning in the USA, this study begins by establishing key introductory issues and dimensions. First is the history of disasters, followed by the focus of this study on disasters in the Midwest. After all, if disasters rarely happen, then emergency preparedness could be a low level priority. Although it is true that the Midwest ranks behind most of the coastal regions in the likelihood of disasters, the Midwest is third out of ten in the total number of disasters (FEMA, 2010).

Emergencies and disasters are defined by various means. One quantitative definition is that a disaster incident involves at least 100 deaths of people, 100 injured people or one million dollars in damage (Keller et al. 1997). The “Bradford Disaster scale” named for Bradford University in England, involves a magnitude scale of fatalities in an incident starting with 10 and ranging upward. For example magnitude 1.5 disasters includes at least 36 deaths. Complete destruction of the entire planet is a magnitude 10 disaster (Keller, et. al., 1997). But, other qualitative factors may enter into the disaster definition. For example, a train derailment in a small town may be devastating, but it could be handled easily in a large city Quarantelli (2005). Finally, Quarantelli advises “Let us define disasters in terms of social characteristics of responses

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in crisis occasions that are part of social change” (Quarantelli, 2005). On the other hand an “emergency” can be a small crisis in one person’s life like a heart attack. Or it could involve an “emergency room,” where single individuals can go to get assistance with a medical condition. Emergency is a broad all inclusive term. Disasters then are larger in scale than emergencies. Indiana law states: "disaster" means an occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property resulting from any natural phenomenon or human act. IC 10-14-3 (amended 2005). Ohio on the other hand legally defines emergency as, “Emergency” means any period during which the congress of the United States, a chief executive as defined in section 5502.21 of the Revised Code, or a chief executive of a participating political subdivision has declared or proclaimed that an emergency exists” ORC 5502.41, (amended 2012).

As a result many agencies respond to both single emergencies and also large scale disasters Drabek, (2010). Major disasters have occurred throughout the Midwest (Waugh, 1996). Some examples include tornadoes, floods, winter storms and human-induced emergencies. For example, Indiana suffered a major anthropogenic disaster in 1963. It was the worst on record in this state. Eighty one people died and 400 were injured when propane gas tanks exploded at an ice show held in the Coliseum at the state fairgrounds in Indianapolis, Indiana (Drabek, 2010, p. 2). In 1925 for example, 695 people were killed in a tornado ranging across the states of Missouri, Illinois and Indiana. Over 2,000 people were injured (Drabek, 2010, p. 31). Both Ohio (34) and Indiana (52) suffered more deaths in 1974 due to yet another tornado. A study by FEMA of Presidential disaster declarations indicates that the Midwest, or region V, had 215 major disasters between 1964 and 2010. This is the third worst level of incidence behind regions IV, the Southeastern U.S. and VI the South Central Region of the United States. The States in Region VI are Arkansas, Louisiana, New Mexico, Oklahoma, and Texas. This regional list is

established by FEMA, but it involves every states local disaster or homeland security resources. It also provides assistance to 66 federally-recognized Native American Tribal Nations. Tribes of America Indians do have their own emergency management personnel in some locations, but many also participate in cooperative agreements between tribes. At least 17 distinct groups participate together in planning for emergencies and have direct access to the white house in presidentially declared emergencies AIH (2012); SPOD (2012).

By Comparison the Southeast, Region IV, including Florida experienced 312 disasters in between 1964 and 2010. The South Region VI including Texas and Louisiana had 244 disaster events. But, District IX or California had 178 (FEMA, 2010). (See Appendix I and II).

Natural Disasters include inclement weather, earthquakes, tsunami and floods while human-induced disasters can be either planned such as the World Trade Center and Pentagon attacks of September 11, 2001, or accidental like the propane tank explosion in Indianapolis (Drabek, 2010). In 2001 most Americans were aware of the attacks on the World Trade Center and Pentagon. However, around the world, other disasters caused over 25,000 deaths. Thirty six billion dollars were also lost in disasters ranging from an earthquake in India to floods, forest fires, typhoons and many other incidents (Waugh and Sylves, 1996). It is estimated that over 70,000 people are killed every year by disasters around the world (WDA, 2006). Natural disasters far outnumber manmade incidents in frequency and severity. Manmade incidents can be further broken down between “technological accidents” and attacks (Drabek, 2010). Over 99 percent of all disaster incidents have involved weather or other natural disasters (Public Entity Risk Institute, 2001).

### *Indiana and Ohio as Emergency Management Case States*

Indiana and Ohio were chosen as the primary case venues of this emergency management study because they offer an opportunity to closely and critically examine the interrelated issues of emergency management, the disabled and the nature and extent of administrative cooperation and collaboration. Specifically it involves emergency managers, health care and people with disabilities in those two states. The author has substantial experience with both states as both a local government administrator and as a volunteer in emergency response. Consequently, the research methodology combines a “convenience study” with survey and narrative research within the two case states (Northrup and Arsneault in Yang and Miller, 2008 p. 213, 225).

Health care and emergency managers have generally had a weak relationship in the past. However, incidents such as the outbreak of H1N1 has caused health care departments and hospitals to work more closely with Emergency Management Agencies (EMA) directors (Brown, 2010). Health care can occasionally be inadequate, particularly for those who are defined as “disabled”(Ansell, 2011;Patel and Rushefsky, 2008). However, how do health care workers respond to the surge of disasters even when it is difficult to handle the pressure of day to day operations in the health care system?

Defining “people with disabilities” or PWD is often difficult. There are multiple definitions of “disability” experts argue that a disability is an inability to cope with one’s environment in some way (Enders and Brandt, 2007). The Census Bureau defines People with Disability as:

“Individuals were classified as having a disability if any of the following three conditions was true:
1. They were five years old and over and reported a long-lasting sensory, physical, mental or self-care disability;
2. They were 16 years old and over and reported difficulty going outside the home because of a physical, mental, or emotional condition lasting six months or more; or
3. They were 16 to 64 years old and reported difficulty working at a job or business because of a physical, mental, or emotional condition lasting six months or more.” (Census Bureau 2008).

Figure 1 Census Bureau 2008, Brault, (2009)

The Social Security Administration defines disability in relation to the ability to do work. Social Security pays benefits only for people who are “totally disabled” or unable to do any substantial gainful activity according to the Social Security disability laws.

“Social Security pays benefits to people who cannot work because they have a medical condition that is expected to last at least one year or result in death. Federal law requires this very strict definition of disability. While some programs give money to people with partial disability or short-term disability, Social Security does not (SSA, 2011).”

Whether we utilize these official definitions of disability, or others, individuals with disabilities have not fared well in actual emergencies. Most are ignored especially by emergency managers according to some experts, (Young, 2010). There is a debate about the best way to work with people with disabilities. Experts argue they should be sought out and included on a list to receive special attention in times of disaster (West, 2010). Others claim that people with disabilities should be allowed to be independent and fend for themselves (Schwartz, 2010). Still others believe that people with disabilities should have a voice in emergency planning similar to other groups, but should also be allowed to be “interdependent,” to have input in planning, to be part of the give and take as with everyone else and to choose which way they need to approach



disasters (Snow, 2010). This study is designed to examine how local emergency managers define and act on these definitions and issues and how cooperation and collaboration impacts on emergency management for the disabled.

In summary, the Introduction points out the vulnerability of the Midwest to possible future disasters based upon past incidents. It also describes some definitions for aspects of disasters, emergencies and people with functional needs, vulnerability and disability. It exposes a problem, the lack of collaboration around the country between emergency managers, healthcare professionals and people with disabilities. Finally, it focuses the examination on the level of collaboration in Indiana and Ohio.

### **The Problem: *Linking Disaster, Emergency Management and the Disabled***

Hurricane Katrina exposed a major deficiency in emergency planning, response and recovery. That deficiency is the failure to plan for assisting people with special needs. In fact, of the 1800 people who died in Katrina, the majority were elderly and people with disabilities (Clary, and Pui-Kay, 2010);(AARP, 2007). National studies indicate a poor effort by emergency managers nationwide to include people with functional needs in their plans for dealing with disasters (Fox, 2006). Of emergency managers who were surveyed in a national research study in 2005, 30 participated and only four stated that they had consulted with people with special needs in the development of an emergency plan; accounting for just over 13 percent (Fox, 2006). Since 2005, there has been substantial and significant discussion and debate about how emergency management practice and process best addresses the needs of people with disabilities, particularly in states like Ohio and Indiana who frequently experience various kinds of disaster incidents.

### *The Research Question Guiding the Study*

Given the exceptional challenges of disaster, the dynamics of emergency planning and management and the needs of the disabled, the central research question guiding this study is:

“What is the level of cooperation or collaboration between emergency managers and health care providers and people with disabilities in Indiana and Ohio?”

How do public sector collaboration, cooperation and coordination facilitate the roles of health care and is there any cooperation among health care agencies, functional needs professionals and emergency managers? One study by Fox (2006) indicates that cooperation in planning is nationally is almost nonexistent. If so, what can be done about the level of cooperation, coordination or collaboration in disaster planning and response involving people with special needs? Can collaboration be improved in the Midwestern United States for people with special or functional needs?

These issues and questions are inextricably intertwined with and can be considered subsidiary questions to the central research question guiding the study.

## Chapter II.

### *Literature Review*

Given the central objectives and research question guiding the study, this chapter critically examines selected theoretical, conceptual, professional and policy literature. The criteria for the selection of materials critically reviewed in this chapter are the extent to which they discuss key concepts and theories of cooperation, collaboration and the disabled in the context of emergency planning and management and provide key data or material to document these relationships.

From 1980 to 2009 the USA has suffered 90 weather- related disasters. This has cost 700 billion dollars over the 29 year period. Cost in loss of lives is in excess of 25,215 (NCDC, 2011). In the Midwest from 1980 to 2010, more than 201 people have died in a series of storms, droughts, tornados and other natural disasters. The loss in monetary terms was over 78 billion. In 2008 alone, the Midwest suffered some of its worst natural disasters in many years, costing 21 billion with a loss of lives of 112. Much of this loss of life and damage was due to tornadoes and flooding (NCDC, 2011). Thomas Birkland commented that “Natural disasters are among humanity’s most expensive, deadliest and fearsome events,” (1977, 47). There were 10 billion dollar weather incidents in the United States in 2011, the largest number since FEMA started keeping records (MPR, 2011).

Japan is one of the best prepared countries in the world when it comes to emergency planning, response and recovery (Moore, 20011), (Glanz and Onishi, 2011). However, despite all of the best Japanese preparations, the impact is just beginning to be felt by the whole world

(Kester, 2011). Shock waves from the March 11th earthquake in Japan were felt as far away as Cleveland, Ohio according to a seismological scan (appendix V).

Over time, various descriptive terms have been used to designate a substantial group of people in society. Current estimates establish that nearly 20 percent of all Americans suffer from some condition that causes that person to have challenges and or difficulty in daily processes of life. Age, diabetes, cancer, heart disease are common debilitating conditions. But, in addition, blindness, hearing disorders and lack of mobility afflict many Americans. Further, mental illness and developmental disorder also affect some U.S. citizens. The descriptive term for this group is “in flux” (Kailes and Enders, 2007).

### **Special Needs Populations**

Surprisingly this term has been fraught with substantial confusion. Special needs today are seen as too inclusive. For example, non-English speakers are being included in some jurisdictions. Others include prisoners. Still in contrast, scholars defend this definition that if a person has no transportation, he or she has special needs (Kailes and Enders, 2007). Many agencies are now using “functional needs” to connote a physical or mental infirmity or disability. Still other jurisdictions like California use an even broader approach “vulnerable populations.” This includes the poor and people with “ESL” or English as a Second Language, (Hoffman, 2009). By comparison, as stated above, the Social Security Administration defines disability much more strictly as unable to do any substantial or meaningful work (SSA, 2011).

### **Functional Needs Population**

There is a lack of consensus on who should be considered “special needs” (Clary and Pui-Ka So, 2010). Using a more narrow method of identification, the functional needs groups

have been identified as: Person with psychiatric disorders, cognitive disorders, neurological disorders, physical disorders, respiratory disorders, alcohol and drug disorders, sensory disorders and a catch all for disorders not otherwise mentioned like chronic pain syndrome (University of Missouri, 2010). Each of the disabling conditions poses different problems for the client, disability professionals and emergency managers. Each general disorder can be further broken down into sub areas of disability, and some people suffer from multiple disabilities (Zaretsky, Richter, and Eisenberg, 2005).

### **Vulnerable Populations**

This generally includes the entire list in the functional needs population plus the poor, non- English speaking people, and offenders in prison or local jails. In an emergency, for example, if the emergency manager sounds a siren or sends a police car down the street with a loud speaker telling everyone to evacuate, the message will not get to a person on that street that is hearing impaired. If the individual does not speak English and does not understand the message that person would not know to evacuate. If a person can hear but cannot walk they may know of the problem but not have transportation to evacuate. One of the big concerns for many experts is identifying all people with special or functional needs in a community (Heake 2010).

Some people with functional needs are easily identified. They are found in sheltered workshops, nursing homes or hospitals, but others sit alone in their home. A system needs to be established to help identify these citizens and assure that the safety net is sufficiently wide to assist them in times of disaster.

### **Relationships**

There are relationships involved in daily living that make life easier and in some cases it makes life harder. At least three productive relationships exist that humans can experience

cooperation, coordination and collaboration (Axelrod, 1984), (Linden, 2002), (Wondolleck and Yafee, 2000).

### **Collaboration**

Russ Linden (2002, p.6) explains that, “Collaboration is about *co-labor*, about *joint effort and ownership*. The end result is not mine it is ours.” There may be a hierarchy of relationships. Perhaps collaboration is the highest level of a relationship, involving trust and more effective sharing of resources among all parties to a disaster than say cooperation or coordination. Russell Linden (2002, p. 73) included a quote from Jim Barksdale, former Netscape CEO: “The main thing is to keep the main thing the main thing.” Linden says you have to cover the basics. Keeping the main thing as the main thing seems pretty basic. Linden studied a collaborative effort between the Baltimore Police Department and social workers from local agencies that deal with families and children. Linden acknowledged that these two groups come from different cultures. One Police officer referred to social workers as “tofu eaters,” (Linden, 2002, p. 22). But, the groups were able to align themselves effectively and work together to achieve collaboration. The purpose of this paper is to seek evidence of collaboration among public, private and non- profit groups in protecting people with health problems and disabilities during disasters. An example of this collaboration is seen in Linden’s book (2002, p. 176).

JABA is the “Joint Area Board on Aging” in Charlottesville, Va. It is a nonprofit organization (Non-Governmental Organization or “NGO”) that focuses on improving the lives of older residents. The organization covers the city and five rural counties. It had been state and federally funded, but the board recognized a decline in federal funding. The group shifted their focus to a more local source of funds. It reinvented itself as a 501(C) (3) nonprofit corporation. Included in the mission was home health care for senior citizens. This included a “meals on

wheels” program. JABA needed new sources of income to support this mission. They turned to the University of Virginia, (UVA). UVA is a prestigious public university in Charlottesville. UVA had its own outside corporation that provides medical care for the elderly called “Continuum” (Linden 2002).

An agreement was explored to create a new home health care corporation with support from two agencies, one public and one nonprofit. Problems arose; UVA staff became concerned that this would not work. JABA forged ahead with a plan to spin off a home health care private Limited Liability Corporation. This new agency would be called Care Advantage Plus, or CAP. JABA’s home health care staff would shift over to CAP (Linden, 2002). It continued to serve the elderly along with others who are disabled and confined to home. CAP would be a for profit corporation who could bill insurance, Medicare or Medicaid. Some people on the board resisted this move, but it was necessary because sources of funding were drying up for non- profits in this area. This program has resulted in great success and still supports the mission while generating profits which are being used to expand services to the elderly. The only difference is that CAP considers the bottom line in this process.

Kapuchu, Augustin and Garayev (2009), studied collaboration at the state level in major disasters. The theoretical framework is “networking” among states in emergency management. Networking can involve “coordination, cooperation or collaboration” (2009, p. 298). Respect, trust and regular interaction are seen as vital in promoting collaborative relationships according Kapuchu, Augustin and Garayev (2009, p. 299). Repeated use of networks in actual disasters or exercises and drills are seen as a vital part of building collaboration (Waugh, 3004).

Wondolleck and Yaffee (2000) identify the basic dilemma of collaboration: “a lack of trust.” A classic dilemma scenario is the “prisoner’s dilemma” (p. 49). Two accomplices to a

crime are arrested and questioned in separate rooms. Neither can talk to each other and neither knows if the other is talking to police. Each is promised that if he confesses, he will receive a lesser sentence than the other criminal. The police have no case unless one of the defendants confesses, but the offenders do not know if they can trust their co-conspirator, so the dilemma is, take the deal and negotiate with the police, or trust your partner and cooperate with him. Basically, for collaboration to work there needs to be something in it for everyone. Inflexibility and self-interest are the enemies of collaboration (Waugh, 2006).

For example, if two potential partners are in fields that work at cross purposes, like a Japanese whaling operation and Green Peace, no amount of collaboration will occur. If a person is working in a field that is amenable to win - win situations, this has a high potential for successful collaboration.

Emergency Managers are charged with a duty to help everyone in an emergency scenario. Functional needs advocates and health care professionals are charged with a duty to help their patients or clients in all scenarios. When collaboration involves government public administration refers to this as “a collaborative governance regime,” (Emerson, Nabatchi and Balogh, 2012). Important aspects of a collaborative governance regime include procedural and institutional arrangements between networks of public and private organizations. Plus, an important aspect of collaborative governance is leadership (Waugh, 2006). Leaders lead by being the spark for innovation, the sponsor, convener, facilitator, mediator, and or representative of an organization that is attempting to collaborate. Often these roles evolve as the processes proceed. Good leadership is essential (Waugh, 2006).

Knowledge is another important characteristic of collaborative governance. Leaders and members of these different groups attempting to collaborate in a meaningful way should attempt



gather and digest information that may be useful in this process. Resources are also essential for effective collaborative governance. But, all too often resources are scarce. Leaders find ways to marshal assets including volunteers and or shared resources with other agencies. Above all **trust** was seen as a key ingredient built over numerous meetings cooperation, coordination and collaboration (Emerson, Nabatchi and Balogh, 2012).

Arganoff (2003) discusses the importance of leadership, building networks, establishing trust through multiple meetings and finally reaching a level of collaboration. Arganoff sees different stages of networking, “Informational, Developmental, Outreach, and Action Networks, each type as a way to share knowledge while the “action” networks apply this knowledge to problem solving (Arganoff, 2003, p.10).

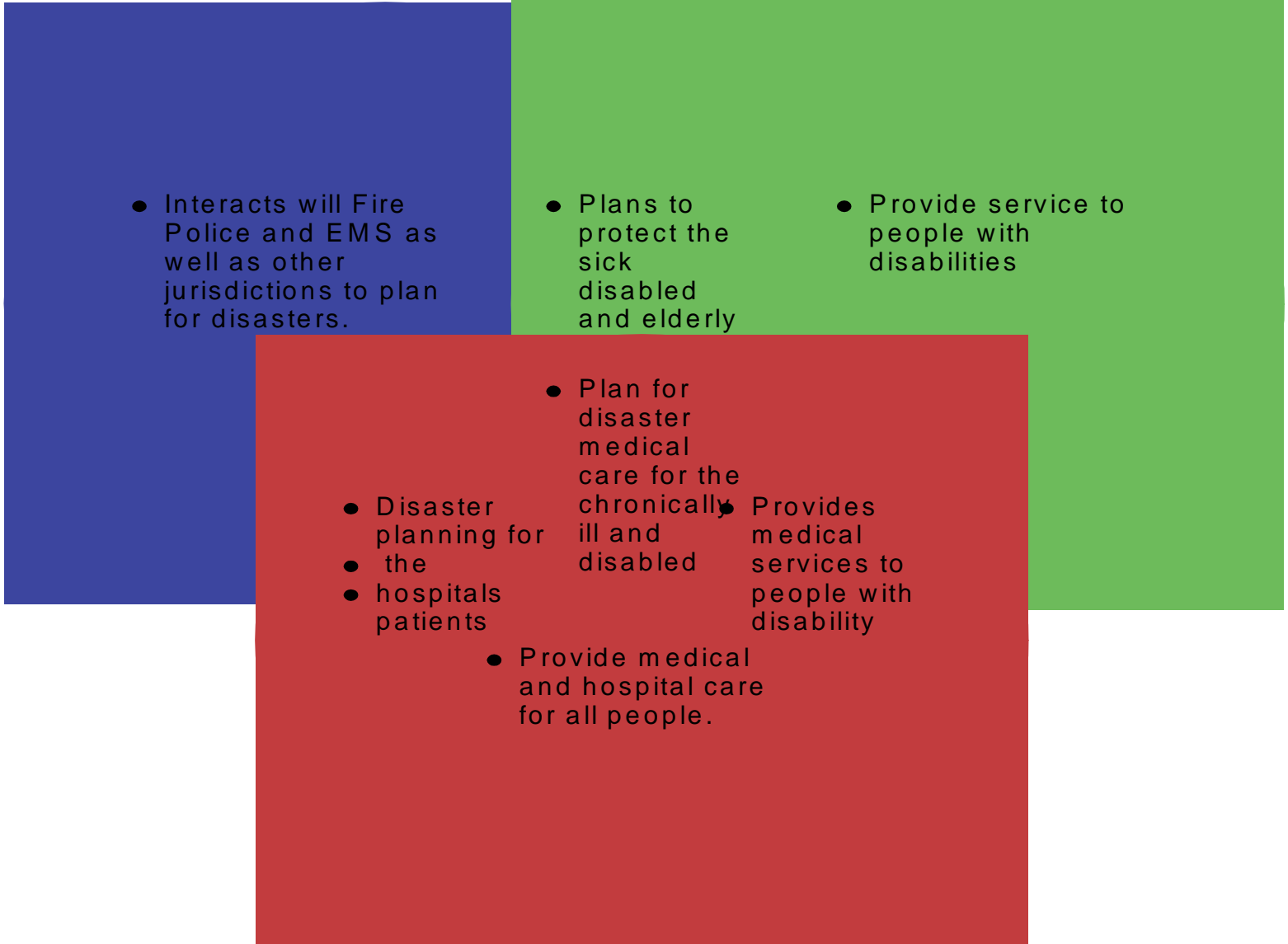
The role of local government includes that leadership and outreach to develop relationships with other stakeholders in the community to plan and prepare for disasters (Waugh, 2006). Disasters are generally local problems and very often local governments should expect to be on their own for at least the first 72 hours after a disaster (Col, 2007). Although the governments of China and the USA are very different, a study of Qinlong County in the 1976 Tangshan earthquake (a 7.8 magnitude on the Richter scale) reveals that due to the effective planning and response to the earthquake, although 180,000 buildings were destroyed in the county, no one was killed or seriously injured in Qinlong county. All citizens were evacuated from their homes and other buildings, four days before the actual earthquake to open fields far away from the collapsing buildings (Col, 2007, p. 119). Members of the local government had received information from a “document 69” some years earlier and began a process of planning and practicing for earthquakes. Included in this plan was evacuation from the town into open fields in the surrounding country side. By comparison many neighboring counties lost many

lives, over 246,000 (Col, 2007). A Venn diagram illustrates an overlapping of interests. Therefore, there is a high potential for collaboration as shown in Figure 2 on page 23.

# Relationship between Public, Private and Non Profit in Emergency Preparation and Response

EMA

Disability Service Agency



County Hospital

Figure 2 Dawalt

## **Coordination**

Kettl et al. (2006, p. 261) refers to coordination as, "...rekindling the sort of conversation about intergovernmental coordination and cooperation that Washington hasn't seen in a long time." Coordination is more about working separately, but not at cross purposes. Each agency is focused in its mission, but it is not interfering with other agencies in dealing with the needs of the agency and its constituents. Some see coordination to be very difficult without effective means to communicate and make joint informed decisions; however, improvements in communication technology are making coordination a greater possibility. (Comfort, Rosenthal and Boin, 2001).

## **Cooperation**

According to Kettl (2005, p. 87) "... governments can no longer operate alone. cooperation and coordination are the name of the game." Governments must find other organizations and individuals to cooperate with Boin and McConnell, (2007, p. 50- 59). Cooperation being the third "C" in this study involves at least some level of working together toward the same goal in an emergency. Issues like prioritizing, or who will get scarce resources, must be solved using the term used in combat "medical triage." This same term comes into action in response to disasters. There is only so much assistance to go around. The day should never dawn when a considered decision must be made that those with functional needs, the chronically ill, people with disabilities or the elderly have to be ignored in order to save others who have a better chance at survival.

Mintzberg, (1998) sees a pentagon shape develop with different forms and forces at work and sometimes these forces tend to cooperate and at other times they tend to compete. The different forces are in control at different times. Sometimes people just need to be told what to do. This is “direction.” Other times people need to be efficient. That is a “machine like” quality. Still other times they need to be “proficient” when they are trying to be professional. Other forces are “concentration and learning,” which involve diversification and innovation, respectively (Mintzberg, 1998, p. 256). While the goal should be to work in collaboration, different agencies, groups and individuals need to work cooperatively or at least in coordination to deal with planning and responding to disasters in an effective manner which includes people with disabilities.

### **Emergency Administration**

Emergency Administrators are working at all levels in federal, state and local government to foster cooperation, coordination and collaboration in the planning for emergencies. The issue in this study is to what extent Emergency Managers are meeting with health care providers and people with disabilities in preparation, response and recovery from disasters, if at all. Special needs populations need “a place at the table” literally in the planning for disasters and the training that goes into the preparation phase of emergency management. At the local level, most emergency managers are alone or may have one employee in their department (Waugh, 2006). As one emergency manager reported, the county commissioners of one small county (5,000 people) wanted to do away with the job altogether, but found that they would be violating the law and that would make the county ineligible for federal or state assistance. As a result the emergency manager was hired part time with a tiny budget (Henderson 2011). The experience by

Henderson (2011) is not unusual according to a study conducted by Wheratt (2010). In a study of all Indiana Emergency Management offices in Indiana he found that 23percent of all emergency managers are part time, 62 percent make less than \$35,000.00 and 63percent have only a high school diploma or less. In addition, 4percent have \$0.00 dollars for a budget and 40percent have a budget of between \$1.00 and \$50,000.00 to run their whole department. It is clear by Wheratt's report that emergency management in Indiana is dependent on volunteers.

Every county in the U.S. and some cities have an emergency manager. All states have a Department of Homeland Security or a similarly named agency to comply with federal requirements and to qualify for federal aid (Stafford Act 1978). This is much like the IV D program of the Social Security Act (amended in 1974) which Dr. Radin (2000) discussed in her study on the current approach to federalism. It is called a "carrot and stick" approach. The carrot is federal money for equipment and training for emergency managers and responders. A stick is denial of federal aid if the local emergency manager fails to follow the requirements of federal law in training planning or responding to emergencies.

The federal government is represented by the Federal Emergency Management Administration or FEMA. Many EMA personnel are not well trained or sensitive to the needs of people with functional disabilities. In one case in Hurricane Katrina, for example, a woman in a wheel chair was able to call a dispatcher on her cell phone as flood waters propelled her in her wheel chair toward the ceiling. The FEMA operator told her to "head for high ground" while ignoring that the caller was wheel chair bound (Clary and Pui-Ka So, 2010). But, some progress is being seen in improvements in the ability of emergency managers to collaborate with health care. Experience learned from dealing with emergencies like H1N1 has opened some new channels of communication and networking.

The good news is that in a preliminary interview with local EMA director C.R. Brown of Anderson, Madison County Indiana, Brown indicated that H1N1 has actually been a blessing in disguise because it forced EMA staff, hospitals, special needs groups and nursing homes to work together to combat the flu. This opened up channels of cooperation for future coordination and collaboration.

Brown's reaction to the H1N1 crisis is also echoed in a recent journal article by Bellavita in 2010,

“The top story of 2009 is the H1N1 Flu and the reaction at all levels government to prepare for and to combat the spread of the virus. Lacking a single catastrophic event or a clear cut prevention of the same, my measure for determining the importance of an issue isn't the immediate impact of the incident but what it tells us about our ability to prevent or to respond to a catastrophic event. The H1N1 virus gave us the opportunity this year to examine our capabilities as they relate to biological attacks or pandemics. On many levels we succeeded.”

Some examples of these successes include:

1. The early identification of the virus in Mexico and the subsequent risk.
2. Communication about the virus, including messaging to properly name the virus.
3. The actions to increase anti-viral production and the successful use of Tami-Flu.
4. The ability of state and local governments to implement and deliver vaccinations.
5. The ability of local government to develop vaccine prioritization plans and implement the same without significant public push-back.

Prior to the outbreak, the status of these capabilities were in question. Since the outbreak, at the very least, we have now practiced these capabilities and have been able to test plans and identify specific gaps. In a sense – “what doesn't kill us makes us stronger” (Bellavita 2010).

## **State Disaster preparedness**

Do disaster preparedness plans consider the problems of special or functional needs populations? For example, what about service dogs in an evacuation? How are they supposed to be handled? Legally all service dogs are to be taken with a person with disability, yet many were abandoned during Hurricane Katrina. As a result the Pets Evacuation and Transportation Standards Act (PETS) was enacted by Congress in 2006 as an amendment to the Stafford Act. Under this law service animals and even pets must be evacuated with their owners (Nolen, 2005). Also, where does one get something as simple as hearing aid batteries in a disaster? Who takes care of providing those simple things that are so essential for people with functional needs? One example of an Emergency Operations Plan is from the State of Ohio. The Ohio “Emergency Operations Plan” or EOP is freely available on the internet. The website is 567 pages long. However, services for people with disabilities are not clearly identified. Since health care is an essential part of the emergency service functions or “ESFs,” health care is clearly identified and discussed (ESF 8).

As a guide to all local governments and citizenry, it is important that the EOP be easily accessible to all citizens. The Ohio EOP is very accessible, but so voluminous that it is a little unclear for persons with disabilities. Page 42 discusses the need to work to “develop targeted outreach for special needs groups.” All local jurisdictions in Ohio are to be in compliance with the requirements of the Ohio Revised Code Sections 5502.21 through 5502.99 regarding the development and maintenance of local Emergency Operations Plans. One of the primary people in charge, Brad Schwartz, was contacted June 25, 2010 for a preliminary interview. He indicated that it was his understanding that “Ohio is a home rule state.” What this means is that local



government has lots of power. Although the state can order the county EMA to have an Emergency Operations Plan or “EOP,” the state cannot dictate what those EOPs will say. Recently Schwartz attended a meeting with local EMA directors in 2010. In the meeting he asked one of the EMA Administrators if their EOP had provisions for people with special or functional needs. The Administrator replied, “It had better, we just spent over \$20,000.00 on revising our EOP.” Unfortunately, the EMA director had no idea what his EOP states. This is endemic in local government based upon the author’s thirty years of experience in local government. Money is spent on an important planning document for improving performance in state and local government. It goes in a three ring binder and it lands on a shelf never to be seen again. This problem is consistent with the observations of many public administration experts (Moynihan 2008). Moynihan decried the problem, saying, “...behavioral change is weak” (p.50).

In contrast Indiana has contracted with “Net Planner” a private group out of Kansas City, Missouri to provide EOP planning services online. Prominently on the front page of the program is a click box for “vulnerable needs registry.” This way if a person has a disability or knows a person with a disability that person’s address and information can be entered into a data base to help locate him or her for evacuation in an emergency. This is a very good feature. However, the net planner does require some level of computer knowledge and many people may not be comfortable with this approach. Brian West is a contact person for Net EOP and net planner. West was contacted for a preliminary interview June 25, 2010. Net Planner was first developed for the State of Kansas. The idea is to put the state’s EOP out where everyone everywhere can easily access it and use it rather than just throw it on a shelf. The Net EOP concept was such a

success that the idea has been developed for use in other states beside Kansas. Indiana has adopted NET EOP.

One of the primary purposes of net planner is to put vulnerable populations first and foremost right on the front of the home page. This way an individual with a disability or a care giver, family member or friend can put over five pages of information about that individual up on the EOP for local responders to access. Then the United Way operators from the “211” system can call the individual with disability or care giver and verify all of the information. Every year on the anniversary of the first contact, 211 operators will be flagged to follow up. Does the person with disability still live there; is the information correct? If a disaster does happen the individual with a disability who has signed up for assistance will get the help he or she needs. The requirement for an EOP is found at Indiana Code 10-14-3-17(c). Some emergency professionals have indicated a lack of confidence in such a net planner system. They believe that this registration is unmanageable. Instead they favor empowering people with disabilities to be more independent and capable of fending better for themselves in times of emergency. No plan can find or help every person with a disability. Frankly this approach is consistent with approaches by many special needs professionals. For example, Michael Kennedy (2008) argues in favor of “self-determination” for people with special needs.

People with special needs are people first and should be allowed to work out their own plan for emergencies just as they should plan for their everyday life. Mary Beth Mooney (2007) also advocates for people with special needs to be prepared. A guide for people with special needs to work out an emergency plan has been prepared by Mooney and others from the Center on Aging and Community, the Indiana Institute on Disability and Community, Indiana

University Center for Excellence in Developmental Disabilities through a grant from the U.S. Department of Health and Human Services. Kathie Snow a parent of a child with a disability and an author advocates for “interdependence” between people with disabilities and all people (2010). “No man is an island unto himself,” John Donne (1572-1631).

“Historically, people with disabilities have been marginalized by the emergency management community. Instructions relating to the unique needs of people with disabilities have typically been limited to a few lines in an emergency plan, if they are mentioned at all” (Vaughn, 2009). Sadly, the comments by Dr. Vaughn, the president of the National Council on Disability, an organization for people with disabilities, in his testimony before a Congressional Committee appear to be true of both disaster plans for the states of Indiana and Ohio. Ohio has an Emergency Operations Plan that is hundreds of pages long, yet they fail to mention planning for people with disabilities in a single phrase. Indiana appears to have a better plan, but according to some it is just some bells and whistles that will not work when the chips are down because it requires people with disabilities or the care giver or families to register with EMA and keep the registration up to date. If people with disabilities are unable to register or are unaware that they need to register because of their disability, or if people with disabilities have no caregiver, family members or friends they will not be registered. Further, information on the registry changes on a daily basis. Even though there is a plan for 211 operators to follow up, it is only once a year. Things could change overnight for a person with functional needs; it could be better or worse. This could frustrate efforts to provide emergency services to them. There is still much work to do and it appears that a significant number of emergency managers at the local level resist including people with disabilities in the planning process or in making vital changes that will make EOPs more inclusive (Young 2010). An interesting side note is that John Vaughn

is originally from Wabash, Indiana. Vaughn went blind at age 34, overcame his disability and was very successful as a banker before he retired and moved to Fort Meyers, Florida. He was appointed to his position as the head of the National Council of Disabilities (NCD) by President Bush. When President Obama was elected he replaced Vaughn with Jonathon Young from Baltimore Maryland. Young broke his neck in a wrestling accident in high school. He became disabled as a result. Despite this he has completed his doctoral studies and his law degree.

Another interesting approach is a project springing out of public radio. As a need for communication with people with disabilities of impending disaster or emergencies such as weather emergencies was acknowledged, a study was conducted by a division of WGBH, a public radio group in Boston, Massachusetts. Stakeholders from all walks of life were surveyed on how notice of an emergency is given (2008). Of the 200 people who responded to this survey, most were employed in emergency management or dispatching. Some were from related fields like commercial vendors of products used by emergency administrators. Television and radio are the primary method of notice of impending emergencies. People with disabilities indicated that they were counting on friends and relatives to help them get notice. But a large number were counting on television. Sadly, at least one third had no plan in place to get notice of a disaster. A small number used text to speech capability for people with visual impairments. Forty percent of emergency manager or dispatcher respondents were not aware of any special provisions to notify persons with disabilities (WGBH 2008). About one third were aware that their agency has a person in place who assures compliance with federal laws on emergency notification of people with disabilities. A small number reported efforts to obtain funding for reverse 9-11 and other forms of notification system that would be especially helpful to people with disabilities. A lack of funding and staff and resources were most cited as the reasons that more was not being done

to improve communication with people with disabilities in their jurisdiction. Other possibilities are “social networking” sites like Face book and Twitter. Even people with profound disability can be trained to use a computer and the internet. Dr. Eamon Doherty has had great success in developing computer recreation programs with all types of functional needs (2005). Perhaps this adaptation can be useful in creating a functional disaster alerts system through social network sites as well as texting and other computer resources.

### **Citizen Corps**

The role of Citizen Corps in an emergency is to organize volunteers and help average people to be ready before the disaster. They help deal with the needs of people with disabilities by teaching and explaining what needs to be done. Citizen Corps has many worthwhile flyers and handouts online. One of these links, “[www.ready.gov](http://www.ready.gov)” was established to help citizens prepare for all types of emergencies. It appears frequently on some county emergency management websites in Indiana and Ohio, and there is at least some effort by some local emergency managers to disseminate information for people with functional needs to prepare for a disaster. If more county emergency managers would add this type of information it would be at least some evidence of a commitment to help people with functional needs. There may be a problem because many people with disabilities do not know where to find this information and bridging that communication gap is important.

### **Community Emergency Response Teams (CERT)**

CERT teams could train to work with people with disabilities in planning and responding an emergency. These are neighborhood groups of volunteers who train to be prepared to

responds to emergencies. Perhaps they could be of assistance in identifying and coordinating with emergency managers to make sure their neighbor gets the help he or she needs in times of an emergency. If CERT-trained volunteers would spend time getting to know who in their community would need special care and consideration due to functional needs, this would be a great effort and very rewarding. As of now just a few counties have an organized effort to mobilize CERT volunteers to work with people with special needs. CERT members in Prince George's County Maryland, for example, has a link to make people with disabilities in their neighborhood aware of services available for them in times of disaster (CERT Prince Georges, 2012).

### **Disability Services**

Many agencies work with people with disabilities at the federal state and local level. Little information appears to be easily available regarding what federal, state and local plans exist to assist people with disabilities in an emergency. There are specialized agencies that deal with the multitude of physical problems that people suffer, but it appears that there is a lack of communication between many of the disability service agencies and emergency managers (Fox, 2006).

### **Special Needs Communities**

Special needs communities include senior centers, retirement communities, nursing homes, group homes, and sheltered workshops. Senior center administrators and group home administrators should know their local emergency manager and should work with him or her to understand what to do in an emergency. If the experience in the Pentagon in 9-11 and the

Minnesota bridge collapse are any indication, it is vital to get to know other participants in disaster response long before the incident actually happens, in the planning and preparation stages (Brown, 2001). It is vital to establish these collaborative relationships and most of all a high level of trust. Once again, however, earlier nationwide studies on this point are discouraging (Vaughn, 2009).

### **Health Care Community Preparation**

There appears to be a viable and growing solid relationship among health providers and the emergency managers and administrators in local jurisdictions brought about by the recent H1N1 scare (Brown, 2010). But the question arises about just how effective the American health care system is on a good day. Patel and Rushefsky (2008) outline failures, disparities and short comings of the health care system in the U.S. even without considering a disaster scenario. As a result, an overtaxed disorganized system of health care could be thrown into even more dysfunction in an emergency as was the case in New Orleans and surrounding areas during and after Hurricane Katrina. Horror stories have come out of the aftermath of Katrina where hospitals failed to move generators to higher locations in preparation for a major hurricane despite warnings. As a result hundreds of people died due to a lack of ventilation from breathing machines or dialysis from kidney dialysis clinics. One of the best ways to prepare for a disaster is to improve primary care on a day to day basis (Tulin, 2007).

In contrast, Steve Brown (2001) reported shortly after the Pentagon attack on Sept 11, 2001, that hospitals were very effective in treating the injured throughout the Washington D.C. area and into Maryland and Virginia. Since Washington D.C. is a prime target for terrorist

attacks, the area's hospitals train frequently on disaster scenarios. This could be a model for all hospitals to drill and conduct exercises frequently in order to be ready for anything.

The recent H1N1 scare established new avenues for cooperation between health care providers and emergency managers (Brown, 2010); (Bellavita, 2010). In a sense this is like the "Tit for Tat" game mentioned in implementation (Axelrod 1984 p. 30). This game involves cooperation with people who do good things for you. Here the health departments were required to give shots to people who needed them. Emergency managers "managed" the process by organizing systems to dispense shots in the most effective manner (Brown, 2010). Some methods used included a "POD" or cafeteria type of approach where people walked through a line, filled out papers at the first station, went through a quick interview at a second station, then if they qualified moved onto to a nurse's station and got their shot. Volunteers then directed the people who were finished out of the building (Reed, 2010). Another group actually developed a drive through shot delivery method (Brown, 2010).

### **Mental Health**

There are two aspects of mental health to consider. The first issue is dealing with people with mental health disabilities in times of emergency (Gard and Ruzek, 2010). A second issue is the strain and loss that first responders suffer as they respond to a disaster. Invariably, some responders will become overwhelmed by the constant exposure to injury and death, the visual scene, the smells; the gruesome details of the incident are not natural for first responders to view anymore than anyone else. A preliminary interview was conducted with a volunteer firefighter from Indiana who responded to Hurricane Katrina, shortly after the Hurricane struck in August of 2005. He recounted that his job was to go door to door in the ninth ward and look for dead



bodies. He did this for eight hours a day every day for two weeks. He soon learned that the way to tell if there was a dead body in a house was to look at the windows. If the windows are black, that means they are covered with flies. If the windows are covered with flies, there is a dead body in the house. This work can take a toll on a person; he was still visibly shaken when he talked about his experience years later (Wells, 2010). At the planning stages, preparation and collaboration should be made to combat post-traumatic stress disorder for all parties that are involved, victims and first responders (Gard and Ruzek, 2006, p. 1030).

### **Organized Volunteers**

Organized volunteers can include State Defense Forces, Civil Defense, Volunteer Firefighters, Reserve Police and Sheriff Deputies. These groups should be trained in working with people with disabilities in the response to an emergency. The effectiveness of these groups has been questioned in an earlier case study. There were many people in these groups who mean well but have not received even the basic National Incident Management Systems or “NIMS” training necessary to respond to a disaster let alone assist people with disabilities (Dawalt, 2010).

### **Service Groups**

Service groups include the Lions Club, Optimists, American Legion, AMVETS, VFW and others. The role these groups play in disaster preparedness and response especially concerning people with disabilities needs to be established well in advance of any actual emergency. Many of these groups have programs for people with disabilities especially veterans, but how this should fit into the planning for a disaster is not determined as of this writing.

## **Schools, Churches and Other Groups**

Schools, churches and other similar groups can have an effective role to play in planning for a disaster and assisting people with functional needs. By law, they need to be ADA accessible (42 U.S.C. § 12101). Churches may act as shelters but the church must also be accessible to the disabled population. People with disabilities must be able to enter all public buildings according to the ADA anytime, but especially in a disaster. One quick example is, that by law, schools are obligated to cooperate in times of disaster by providing all school property, buildings, buses, food and water and other resources in the response. School superintendents should be consulted in planning for these problems. Some examples of how schools could assist include two Emergency Support Functions, ESF #1 transportation and ESF # 6 mass care; shelter, food and water. Both implicate resources that schools have which are available in times of disaster (IC 10-14-3).

## **Key Groups**

### **Emergency Management Agencies**

These agencies operate at the state and local level as well as FEMA at the national level (Waugh, 2006). Questions about planning in cooperation with health care providers and other special needs professionals need to be discussed. What is the level of collaboration between people with disabilities, disability professionals, health care workers and emergency managers in various local jurisdictions around the Midwest? A case study of a broad spectrum of emergency managers from around the U.S. resulted in thirty Managers participating. Of this group only four had any involvement in planning with special needs populations in mind, allowing people with

disabilities to be part of the planning process. Of this group of thirty, only four had a plan in place that took into account how to deal with the issue of disabilities (Fox 2006). In another study and in testimony before a Congressional subcommittee it was reported by the head of the National Council of Disability (NCD), a position that reports to the President of the United States, that 66 percent of emergency administrators surveyed had no intention of modifying their guidelines to accommodate people with disabilities (Young, 2010).

### **Citizen Corps**

Citizen Corps is a group of volunteers that plan for and respond to emergencies. In like manner local volunteers will be sought out and interviewed as to their involvement with health care and special needs professionals. This organization works at all levels, federal, state and local to provide resources for planning, response and recovery from disasters. One of the resources that can easily be linked to each local website is the link to “Ready.gov” which has instructions for people from all walks of life on how to get prepared for an emergency. In a preliminary review of websites which have been put on the “world wide web” by some emergency managers, Ready.gov is consistently appearing on many of these sites.

### **Community Response Teams**

Community Response Teams are local groups that may be organized to prepare for disasters. These can include members of service clubs, military veterans clubs, and churches or schools and colleges. Groups like this need to make connections well in advance of an emergency to plan and communicate with emergency managers to learn what their role will be in case of a real emergency. Some retired military members drive elderly veterans to the hospital on

a daily basis. Perhaps these same people could be responsible for identifying and evacuating the elderly veteran in times of emergency. This needs to be planned and practiced long before a disaster ever happens.

### **Special Needs Communities**

Individuals with developmental disabilities include sheltered workshops. Developmentally disabled individuals often participate in training and enrichment activities, including sheltered workshops. Some even have jobs. Many live in a group setting (Snow 2011). Provisions should be made by these staff members to prepare for an emergency and to protect these individuals with developmental disability. Other statewide and national groups advocate for people with functional needs. A well-known advocate is Kathie Snow, a mother of a child with functional needs. She became informed about the issues of people with functional needs, one thing led to another and she became famous among people with disabilities and their care givers. Ms. Snow is an often requested speaker on this topic all over the United States. Her main arguments include the interdependence of mankind, regardless of labels like “special needs or functional needs.” All people deserve respect and she feels that people with functional needs are ignored and disrespected. Her most radical position is to do away with all labels (Snow, 2011). The author interviewed Kathie Snow on the topic of this study and she believes that all stakeholders should have input into developing an emergency plan from all walks of life.

### **Hospitals**

Shortly after the incidents of 9-11, 2001 a stern warning came from Dr. Joseph Barbera of the John F. Kennedy School of Government at Harvard (2011) that while the rest of the

country was making radical improvements in emergency preparedness, the health care system was totally unprepared for a surge in mass casualties. Health care could hardly handle the day to day needs let alone anything unusual. Nothing seemed to be happening to improve that situation (Barbera, et al. 2001 p. 1).

*“As concerns for WMD terrorism rise, incorrect assumptions are being made about existing medical capabilities to treat mass casualties. In reality, hospital surge capacity and specialized medical capability across the United States has never been more restricted. While the public and the political communities assume that the healthcare systems are adequately preparing for terrorism incidents that would generate catastrophic casualty loads, the medical community is struggling just to maintain its everyday capacity. This paper outlines the current financial issues that restrict adequate hospital preparedness for mass casualty events, and proposes model approaches for the United States to address this preparedness shortfall. Without prompt action, the nation carries the risk that victims of a mass-casualty disaster might end up in “ambulances to nowhere.”*

The level of cooperation between the hospitals and emergency managers has improved in recent years According to some (Brown 2010). But, it is well known that Methodist Hospital in New Orleans was sued because the hospital’s generators were flooded. This happened even though one of the hospital’s previous administrators had warned about a potential problem of flooded generators and a need to move them in response to a question by a city health officer (Jervis, 2010). Hospitals must identify problem areas and address these areas to assure that patient care will continue effectively. As with nursing homes, hospitals are subject both state and federal law which requires the hospital to plan for disasters and carry out the plans in an effective manner. The author has participated recently in two exercises involving communication by all hospitals in a district with each other and the emergency administration in counties and districts.

## **Paramedics**

Emergency medical services or “EMS” by their nature, are often involved at a higher level than some other health care groups in emergency and disaster planning. Paramedics work on the front line and interact with police and fire fighters almost every day. This is helpful in expanding this preparation to include other health care groups. Paramedics act as ambassadors and/or a liaison to health care administrators and doctors. They could be the member of a planning team with police and emergency managers to prepare for response to a disaster.

## **Nursing Homes**

Nursing homes are private businesses which are usually thought to deal with the elderly, the largest single group of people in the special needs group (Heake, 2010). However, many also work with people with severe and profound disabilities of all ages. Plans should have been made in advance of an emergency to serve the needs of all of their patients in a disaster. Nursing homes are interesting because even though they are private businesses, they are subject to heavy regulation by both state and federal governments due to Medicaid. For example 42 USC 1395i -3 Sec.(d)(4)(A) and 42 USC 1395i -3 Sec. (f)(5)(C) require nursing homes to comply with all federal laws in order to receive Medicaid payments. Additionally, nursing homes are required to engage in “disaster preparedness.” On August 29, 2005, 130 elderly residents at the Lafon Nursing Home of New Orleans, LA were left with no evacuation plan, no air conditioning due to no electricity from generators and no food or water . As a result 22 people died. A lawsuit is pending for negligence in failure to plan for and implement an evacuation in the flood that followed Hurricane Katrina (McVeigh, 2007). Some in the field of health care point to improvement across the board in disaster planning and preparation for the health care field since

2001 (Inglesby, 2011). An interview was conducted with a nurse and a certified nurse's assistant "CNA" who have worked in nursing homes in Southern Indiana and Northern Kentucky. One reports that there is some training and preparation for disasters at the staff level, which "looks good on paper, in fact, nursing homes are usually so understaffed on a daily basis, they cannot effectively respond to a normal daily problem let alone an emergency like a Hurricane Katrina or terrorist attack." Further, there is absolutely no mention of any collaboration with outside agencies (Garrard, 2010; Brestwick, 2010).

The Inspector General, Daniel Levinson, for the Department of Health and Human Services (DHHS) conducted an investigation after Hurricane Katrina (2006). He found that nationally and locally in the Gulf region ninety percent of all nursing homes had met Federal standards for disaster planning before Hurricane Katrina. Eighty percent had a sufficient plan for training staff of the nursing home. The actual response during Hurricane Katrina was considered to be inadequate because administrators and staff did not follow their plan. One of the major findings of the study was that there was a complete lack of collaboration between nursing homes and local emergency managers (Levinson, 2006, p. 18.) This impeded nursing home access to resources and important information. In studies conducted on other nursing homes around the country Levinson found that some rural counties had very effective collaboration between local emergency managers and local nursing homes (Levinson, 2006, p. 20). There was a very high level of variability from community to community on this issue.

Another more detailed study of local and state laws, codes and regulations was conducted by Brown, Hyer and Plivka-West (2007). In this study 25 important provisions were presented based upon priorities that should be included in each nursing home plan according to rules

established by the Office of the Inspector General of DHHS and interpreted by experts in the field of emergency planning. These include: Hazard Analysis which include specific vulnerabilities like proximity to water: Direction and Control, including plans for a command center in the nursing home during a disaster: Decision criteria to shelter in place or evacuate; Communication; Staff, family members; Securing facility in case of shelter in place; Emergency Power; Food; Water; Serving as a host facility for others; Transportation; Evacuation Procedures; Host facility agreement with other facilities of like kind; Transporting food; Medications; Medical Records; Staffing; Residential personal belongings; Reentry; Water supply during evacuation; Evacuation route. Of these 25 important state and federal priorities, Alabama only requires 3; Florida, 11; Georgia 7; Louisiana 5; Mississippi 4; North Carolina 3; South Carolina 4 and Texas 4 (Brown, Hyer and Plivka-West, 2007). Other problems include that some nursing homes are part of large corporations located out of state. These nursing homes need permission from the home office to engage in evacuation or pay for unusual expenses like transportation. This directly interferes with the ability of the nursing home to engage with local emergency managers in collaborative planning or response to an emergency. In fairness, in more than one instance, State EOCs confiscated fuel and transportation intended for local nursing homes leaving them stranded during Hurricane Katrina with no transportation for evacuation or fuel for generators which is so essential for electric equipment needed by many patients. Nursing home were not a priority for power, fuel or transportation, following, Hospitals, police, fire and sewer plants Brown, Hyer and Plivka-West, (2007). As a result many elderly patients died. Today, as a result of the Hurricane Katrina, Louisiana has passed strict regulations to avoid this in the future. Many other Gulf States lag behind in regulating nursing home plans for disasters.



Blake, Howard and Eiring (2008) reported that there was a wide variation between nursing home collaboration with local emergency managers in different states. States studied included California and Georgia. Eleven Nursing Home Administrators were interviewed in Georgia while five were interviewed in California. The cooperative endeavors between nursing homes and local emergency managers included planning, training and assistance in actual emergencies. Most nursing homes actually work more within their trade association than in concert with the government according to this study. Trade groups in California tend to direct nursing home owners to engage with local officials and even sign “mutual aid agreements.” Among the findings of the study by Blake, Howard and Eiring (2008) was that 64percent of Georgia nursing home participate in disaster drills with local government emergency responders frequently while 60percent California nursing homes participate frequently.

### **Organized Volunteers**

Organized volunteers include firefighters, civil defense, state defense forces, reserve police and sheriff’s deputies as well as “VOAD’s” or Volunteers Organized Against Disasters including the Red Cross and Salvation Army as well as many other groups (Simo and Bies, 2007). Many non-profit volunteers have worked in cross sector collaboration in disasters. Non-profit volunteers are seen as “filling in the gaps” in a disaster (Simo and Bies, 2007 p. 125). This is not new Arganoff and Pattakos reported collaborative activity among volunteer groups as early as 1979. But inadequate planning among these groups with emergency managers is seen as major failure in major disasters like Hurricane Katrina. Most of this failure is seen as a failure of leadership among government agencies to reach out to non- profits to form desirable collaborative relationships (Simo and Bies, 2007). “Trust” is a word that continues to bubble up

to the surface in study after study. How do non-profits and government agencies build trust? Through continued interaction in meetings, drills and exercises as well as working together in actual disasters (Simo and Bies, 2007, p. 135) Critical to this increased trust is to manage conflict and promote shared power dynamics and networking. Real leadership does not require a title of “Leader” but, instead involves inspiring others and leading by example.

Volunteer firefighters probably have more training than most people in responding to disasters, but there are problems getting volunteer groups properly trained and ready to help anyone let alone people with disabilities (Dawalt, 2010). Firefighters for example must have over 160 hours of training. This is very time consuming and volunteers have families and jobs. Many resist the need for additional training in emergency response.

### **Postal Workers**

In an interview June 9, 2010 with George Heake, an expert in community awareness on disability and disaster from Temple University, it was learned that postal workers are a valuable source for information about functionally disabled populations in the community. Heake has worked to develop a systematic data collection method using geographic information systems or “GIS” and cooperation with local agencies that work with special populations. However, in talking to a postal delivery worker (formerly the “mailman”), David Hill (2010) of Fort Wayne Indiana, Hill made it clear that while he does have a wealth of information on the daily activities of all of his customers on his route, he is not allowed to share that information without approval from the postmaster. Further research might involve obtaining approval from a number of postmasters from various areas. This could reinforce the study from the perspective of home bound people with disabilities.

## Service Groups

Service groups may include the Lions Club, Optimists, American Legion, AMVETS VFW, for example. These groups would assist in a purely voluntary manner by providing help to local responders. This may include fixing meals, providing water or other similar support.

Schools and churches, these include the School Superintendents for example who are required by law to cooperate with emergency managers in cases of disaster by providing buses and buildings as well as food and water for evacuation and shelters in Indiana, according to IC 10-14-3 which requires all government agencies to assist local emergency managers in any way practicable. Such is the case in 32 states. National studies exist that show a growing apathy toward emergency preparedness since 9-11. For example, the following quote is taken from a national survey (Citizen Corps, 2009, p. 55):

“Fourteen percent reported having a physical or other disability that would affect their capacity to respond to an emergency situation. Alarming, however, less than one-third of individuals with disabilities had taken specific actions to help them respond safely in the event of an emergency, with only 20 percent attending a meeting on how to get prepared and 27 percent attending a CPR or first aid training. Less than half or 47percent of those with disabilities had a household plan. Another 14 percent of survey participants indicated they lived with and/or cared for someone with a physical or other disability. Of these individuals only 23 percent attended a meeting on preparing, 36 percent attended a CPR training, and 39 percent attended a first aid training – about the same as individuals who did not identify themselves as caregivers (25percent, 37percent, and 38percent, respectively)” (Citizen Corps 2009, p. 55). In November of 2005 the FCC amended its emergency announcement rules or “EAS” rules “to ensure that persons with disabilities have **equal access** to public warnings” (emphasis added).

Effective December 31, 2006, the order requires all emergency alerts to include a “visual message” containing all key emergency information (FCC 05-191 §60). The visual message cannot interfere with other visual messages, such as closed captioning. (FCC 05-191§11.51(d).

In this order, the FCC “encourages,” but does not require, FEMA and state emergency centers to include “fully accessible” audio and visual formats of emergency messages (FCC 05-191 § 78). The order also expanded emergency alert obligations to include digital content providers, whereas only analog and cable content providers were required to broadcast emergency alerts prior to the order (FCC 05-191 § 74).

### **Connection to Public Administration**

Dr. Stanley Supinski (2009) at the Homeland Security Management Institute believes that homeland defense, from an academic perspective, falls at the intersection of three primary disciplines: national security affairs, emergency management, and public administration. Public Administration can provide ideas and methods to improve preparedness for emergencies. Donald Kettl (2002) asserts that emergency management is clearly a part of the role of public administration. Kettl refers to the paradoxes of modern administration. Kettl refers to public administration as a disciplinary “back water.” At the same time the role of public administration in emergency management and many other problem areas in government cry out for assistance of public administration in solving the problems in these areas (Kettl, 2002, p. 23).

These are the new problems that rear their ugly head as society implements solutions to the old problems (Kettl, 2002, p. 23). The FDA tried to limit access to products of cattle coming from Europe where “mad cow” disease had been identified. Wide amounts of vaccines for children were implicated. But, despite all of its efforts, the FDA was not 100 percent effective in stopping European cow products from coming into the U.S. Similarly, problems arose with engineered corn products that were not to be consumed by humans. This illustrates that no matter how hard the government tries it is difficult to get a perfect outcome. As mentioned by Sylves

(2008) much time is spent on classical concepts such as the relationship between Jeffersonian government and administration and Hamiltonian government and administration. Hamilton is clearly credited with being truly the first to develop an administrative state in the U.S. He is credited with establishing our government (p. 29). Hamilton strongly argued for a more centralized government based upon the failure of the Articles of Confederation. He argued for a “balance of power” among the three branches of government (Federalist 71). Hamilton also argued for responsibility by every citizen for his own well-being. But much of this depended upon policies which created opportunity for private business which would create jobs so that people could be self-sufficient.

Finally, Hamilton was killed by one of his political opponents Aaron Burr, the vice president under Thomas Jefferson. Jefferson is still widely popular. His main concern was abuse of power by the executive, first the King of England and later anyone who would try to place too much power in a central government. One example was the National Bank. Hamilton proposed it while Jefferson opposed it (Sylves, 2008, p. 33). Jefferson would maintain a limited role for government in all things while Hamilton proposed a more expansive and centralized one. Much of this thinking is said to underlie the Civil War. Not the issue of slavery for many, but the role of the federal government was the reason for the war. With all of this in mind, Kettl (2002) turns to the ideas of James Madison who strengthened the balance of powers first proposed by Hamilton. Madison was also instrumental in explaining the connection between economics and government in the U.S. But regardless of his belief in the balance of power, Madison opposed Hamilton’s centralized government. This is because of the connection between state’s rights and slavery that lead to the Civil War.

Kettl (2002) also considered the role of Woodrow Wilson many years later. Wilson saw a need for progressives to advocate for a strong central government to regulate big business. Wilson, also saw a need for limits on the powers of this government to protect the average citizen. Wilson advocated figuring out what government can do and then allowing the government to do it in the most effective and least costly way (p. 39). Even though Wilson and Jefferson are considered Democrats politically, Wilson and Hamilton are more alike in their views (p. 44). However, it is strange because Wilson supported the South in the Civil War. It is thought that perhaps Woodrow Wilson was more of an opportunist than a progressive. James Q. Wilson (1986) contended that the government consists of three types; these are: operators who do the work of government, managers who help organizations navigate through politics and executives who maintain the power and authority of the organization.

The Jeffersonian-Madisonian imperative is that government springs from the people, that is, perhaps a more horizontal than vertical approach to emergency management is better. For example, when one looks at the success brought about by local responders who practiced until they got it right before the Minneapolis bridge collapse, as opposed to the huge input of big government into New Orleans, one wonders why it is difficult to figure out which approach is better. Cooperation is the unstated imperative according to Kettl (2002). Using Robert Axelrod's (1994) game theory, Kettl explains that once individuals and organizations figure out what succeeds in government, they tend to do it over and over. It is a basic Darwinian idea (2002 p. 113). This Axelrod calls "complexity." Since World War II the U.S. government has been devolving by granting grants in aid to solve the problems of government. Consider the child support collection program known as "Title IVD" which stands for a section D of Title IV, the Social Security code of the United States (as amended in 1974). In the 1970's local government

collected incentives if they collected more child support to offset the amount of welfare and food stamp payments in their jurisdiction. But if the local governments fail to collect child support then they will lose all welfare and food stamps. Here is an illustration of the carrot and stick principle (Radin, 2000). If it works, just as Axelrod says, it needs to be used more often.

This cooperation, though somewhat forced in this case, can be effective in emergency management (Waugh and Sylves, 1996). For example, if the federal government demanded a higher level of compliance and engaged in a higher level of assessment of compliance, private organizations such as nursing homes and hospitals will achieve a higher level of success in dealing with people with disabilities in times of disaster. Kettl explains that coordination is the key to success in any governmental endeavor (2004, p. 163). Transparency is also important to success; it engenders trust.

Lennon and Corbett (2002) have edited a book on implementation, a mainstay of Public Administration. In that book, one chapter by Kaplan and Corbett (2002) concerns three generations of implementation research. That chapter discusses some great successes of Public Administration implementation. These include Civil War Pensions (late 19<sup>th</sup> century), Social Security (beginning in 1937) and the Tennessee Valley Authority (during the 1930's). Still others were less successful like the war on poverty, The Elementary and Secondary Education Act of 1965, as well as some smaller grant and loan programs such as a redevelopment program in Oakland, California. Many of these are seen as compromises which in essence “throw the baby out with the bath water.” This compromise results in less than stellar outcomes despite the good intentions. Mazmanian and Sabatiers' (1989), “tractability” is also considered in some other programs. Tractability is “solvability.” That is taking all general factors together such as the

attitudes of the people affected. Will they change their life style? Can the problem be solved? These are issues along with statutory factors; how well is the legislation written? “Non-statutory” variables such as historical events, the economy, as well as public support based upon how the program is “sold” to the wider community are included. In order to get broad grass roots support, there must be genuine, effective support from “sovereigns.” Sovereigns are defined as ruling authority in the law, one possessing or held to possess supreme political power (Webster, 2012). Formulation is the key to implementation. Everything needs a good solid base. At the earliest times key government officials need to put their full support behind these programs. Moreover, the program must be “simple, transparent and credible” (Kousky and Zechauer, 2006). Mazmanian and Sabatier (1989) also consider “programs” to be a sub set of policy and programs become like the personal belief systems of the leaders of these programs (Mazmanian and Sabatier, 1989). If emergency managers believe in the programs that are an outgrowth of the policy announced by President Bush to be more collaborative with health care workers and people with disabilities, programs will succeed. If the emergency manager does not believe in the programs, they will not succeed (Executive Order No. 13347, 2004).

When one considers the need for a concerted effort to prepare and respond effectively to disasters while caring for all functional needs of populations in a collaborative and coordinated way, it is important to gain wide support of those in power as well as stakeholders and professionals (Waugh, 2006). But everything must be open and above board. Whatever someone promises to do, he or she must do it. Any plan which should be implemented to improve collaboration and coordination among emergency responders and functional needs and health care professionals must be formulated and implemented in a thoughtful and realistic way. It should not be a plan based upon grudging compromise that lacks full support from all involved.



Laurence O' Toole is an icon in Public Administration. He edited, "American Intergovernmental Relations," (2004). It is very instructive in considering the relationships between a local government, state governments and the federal government. For that reason it is instructive in the planning for, responding to and recovering from disasters. There is the issue of effective and efficient networks between a government agency, emergency managers, private agencies, hospitals and nursing homes, and a nonprofit agency, as well as people with disabilities or disability professionals. Wright authored a chapter in that book about national state and local relationships (2004 pp. 75-88). Wright envisioned three distinct models of inter relationships among state local and federal government.

First, "Bryce's analogy," (is cited in the case of, In re: Tarble, 80 U.S. 397 (1871): "Such being the distinct and independent character of the two governments, within their respective spheres of action, it follows that neither can intrude with its judicial process into the domain of the other, except so far as such intrusion may be necessary on the part of the national government to preserve its rightful supremacy in cases of conflict of authority. In their laws, and mode of enforcement, neither is responsible to the other. How their respective laws shall be enacted; how they shall be carried into execution; and in what tribunals, or by what officers; and how much discretion, or whether any at all shall be vested in their officers ..." (Bryce, 1891, p. 54).

In this case a state court in Wisconsin ruled that a U.S. Army recruiter must release a minor in a habeas corpus case. The U.S. Supreme Court ruled that the state court could not interfere with the recruiter, a federal agent, since the Constitution gave the federal government the authority to raise an Army. State interference would greatly impair the effectiveness and efficiency of the U.S. military In re: Tarble, 80 U.S. 397 (1871).

The first diagram shows the relationship in the 1880's around the time of In Re: Tarble.

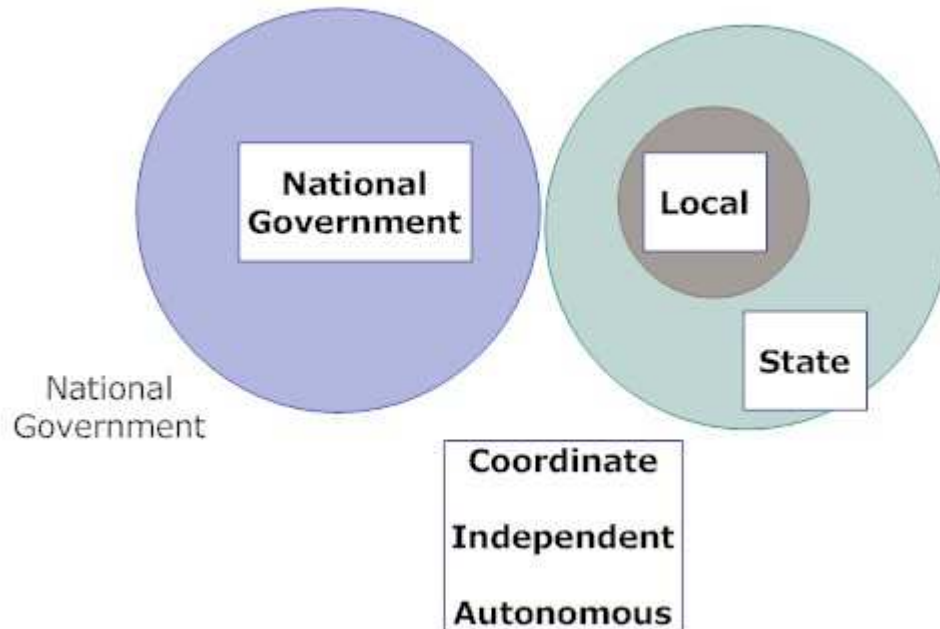


Figure 3

Wright's second model is reflected in the case of National League of Cities v. Usery, 426 U.S. 833 (1976) at page 845. The court ruled that Congress could not force cities to obey the minimum wage law for its employees. The court stated that the 10th amendment gave the states power to operate free from federal intrusion. The commerce clause did not give Congress the power to regulate state or local government in this area.

The second diagram shows the relationship in 1976 during the Usery case:

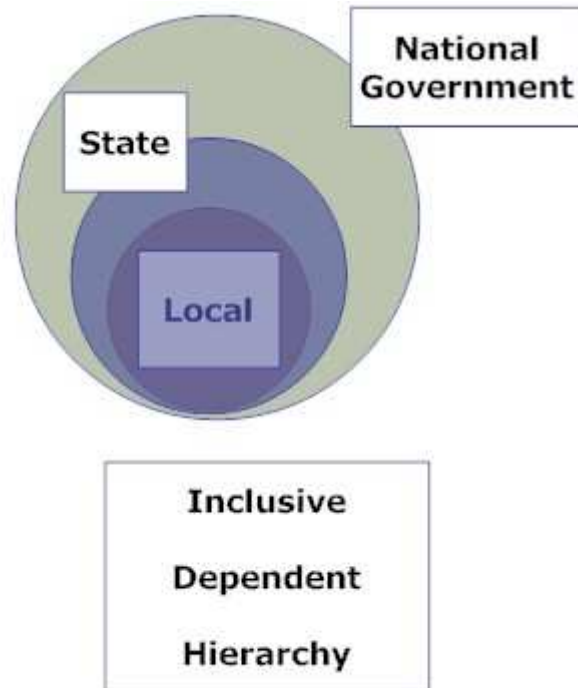


Figure 4

Finally, Wright’s third model is seen in the Garcia case. Usery was overturned in the case of Garcia v. San Antonio Metropolitan Transportation, 469 U.S. 546 (1985). Therefore, the commerce clause was again transcendent over the 10th amendment.

This last position, when taken together with the article by Beryl Radin (2000) concerning use of funds as a “carrot and stick approach,” illustrate that the federal government has great authority in forcing the state and local governments to perform certain functions in the way that the federal government dictates. If states want transportation money, the state must enforce the ADA Law, which follows along with other federal rules and orders which are implicated in planning and responding to and recovering from disasters.

The third Venn diagram Shows the USA after the 1985 case of “Garcia.”

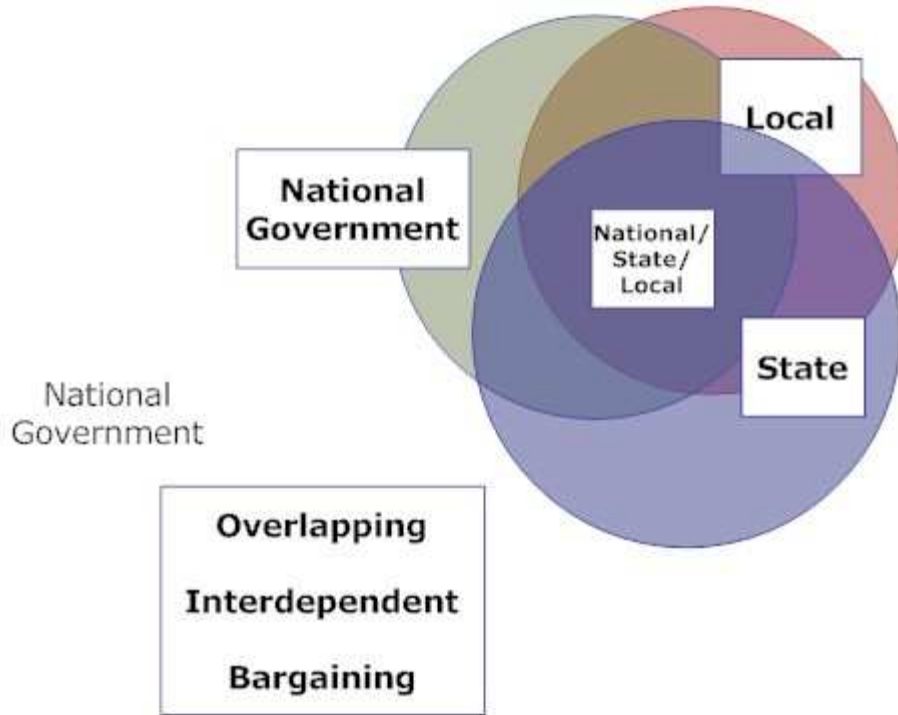


Figure 5

### **Section 504 of the Rehabilitation Act of 1973**

This section of the Act provides that no otherwise qualified individual with a disability in the United States shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance or under any program or activity (29 U.S.C. §794). This law is becoming more and more important and is often cited in federal lawsuits contending that people with disabilities are not getting the services that they are entitled under this law. Some of these cases originated from Hurricane Katrina, but many more are arising around the country.

### **Legal Liability**

Emergency Managers, health care and disability services professionals should consider the potential for legal liability if they fail to plan or fail to heed the plan (Nicholson 2007). Tort

liability in emergency management is a growing topic. Corporations such as hospitals and nursing homes face exposure to huge liability if they fail to prepare for disasters. They also risk liability if they fail to carry out the plans that they have made in the event of a real emergency (Nicholson 2007 p. 46 -49 and 51 to 53). In Hurricane Katrina, two nursing home owners were charged with crimes in the deaths of 32 patients. Although they were acquitted of crimes, they were later sued civilly for these deaths. Methodist Hospital was sued for the deaths of a large group of patients that needed breathing assistance, ventilation and dialysis, but could not get it due to generators being located in a flood plain. Other problems included a lack of air conditioning in sweltering heat, no food or water and no effective evacuation plan. If nursing homes and hospitals violate laws which require them to plan for disasters and follow the plan effectively in times of disaster, this could be considered as “Negligence per se” (Prosser and Keaton 1984). Perhaps using the specter of liability would be a good incentive to health care and disability groups to plan and prepare for emergencies. Recently, a federal judge has determined that even the City and County of Los Angeles is unprepared to assist the people in their communities who have functional needs (CALIF v. Los Angeles \_\_\_\_ F. Supp. \_\_\_\_ (2011). This case could have huge implications for emergency managers around the country.

Evacuation procedures is a source of increased litigation now and in the future “People with disabilities have a right to safety and security and the state has an interest in ensuring that (people with disabilities) are equally as safe as the able bodied” (Roberts, 2005 p. 127). Many lives were lost in the World Trade Center attack of September 11, 2001. Among the dead were people with mobility impairments. Substantive due process litigation claims may arise among people with disabilities who are forced to wait while others flee a disaster. Some states may resort to sovereign immunity defense meaning that they cannot be sued as long as the

government makes a good faith effort. In the case of *Tennessee v. Lane* 541 US 509, (2004), a substantive due process model was raised. The Court determined that under Title II of the ADA, sovereign immunity will not suffice as a defense. Title II holds that all people shall have equal access to public services. These services include evacuation in an emergency. Some states have attempted to pass laws that suspend this important Title II provision. This has been met with Federal rebuke. *Buckhannon Board and Care Home Inc. V. West Virginia Department of Health and Human Services* 19 F. Supp. 2d. 567, 570 (N. D. W.V. 1998). The facility was required to assure that all residents could be removed safely. State and local government officials must take this evacuation problem seriously in light of these cases.

**Americans with Disabilities Act of 1990 (ADA)**

**and the DOT ADA Regulations at 49 CFR Parts 37 and 38.**

The ADA prohibits discrimination and ensures accessible transportation for persons with disabilities. The Department of Transportation “DOT” and ADA regulations contain provisions on acquisition of accessible vehicles by private and public entities, requirements for complementary Para-transit service by public entities operating a fixed-route system, and other provisions of nondiscriminatory accessible transportation service (42 U.S.C. §12101. et seq.). This law has become even more important since the federal judge ruled in a summary judgment order that due process requirements of the 14<sup>th</sup> Amendment establish that people with disabilities are entitled to a meaningful Emergency Operations Plan that includes provisions for the evacuation, sheltering and accommodation of people with disabilities in Los Angeles according to *CALIF v. Los Angeles* \_\_\_\_\_ Fed. Supp.\_\_\_\_\_(2011). If this order survives appeal, it will fly in the face of research by the National Council on Disabilities. Testimony by the President of

the organization before a Congressional committee indicated that 66 percent of all emergency managers in the study had no intention of modifying their emergency operations plan to accommodate people with disabilities (Young 2010).

### **Executive Order 13347, Individuals with Disabilities in Emergency Preparedness July 2004**

This order by President Bush states that it is the policy of the federal government to ensure the safety and security of individuals with disabilities in situations involving disasters, including earthquakes, tornadoes, fires, floods, hurricanes, and acts of terrorism. According to the order, each federal agency is required to consider, in its emergency preparedness planning, the unique needs of agency employees with disabilities and individuals with disabilities whom the agency serves. The order also encourages the consideration of the unique needs of employees and individuals with disabilities served by state, local, and tribal governments and private organizations in emergency preparedness planning.

### **Age Discrimination Act of 1975**

This act "...Prohibits discrimination on the basis of age in programs and activities receiving federal financial assistance," (34 CFR Part 110). These laws further strengthen the requirement that state and local government assure that people with disabilities are given consideration in the planning, responding to or recovery from disasters.

An article by Hankla and Downs (2010) takes up the case of "devolution," which is a way of saying the federal government is trying to get out of the business of doing all of the things it does and is instead wanting to help provide funds to state and local governments in order to accomplish the greater good. However, Hankla and Downs suggest that instead of devolving to state and local government, the federal government should force the creation of a

regional form of government in major metropolitan areas to deal with opportunities and threats that are common to whole regions that surround major metropolitan areas. If one looks at the tremendous amount of damage and disorder that was common to the area around Louisiana and Mississippi after Katrina, perhaps another level of government at an intermediate level would be appropriate. Similarly, New York City and Washington D.C. were faced with communication and intergovernmental problems between New York and New Jersey: Washington D.C., Virginia and Maryland also suffered from the same problems although the Pentagon responders seemed better prepared to handle it than the other areas did.

Cross-sector collaboration is defined as “partnerships involving government, business, nonprofits and philanthropies, communities, and/or the public as a whole” (Simo and Bies, 2007). This a concept that would work to promote governmental representatives from emergency management in working with nonprofits who support persons with disabilities while private corporations and proprietors in the nursing home or hospital business also collaborate to solve the larger problem of how to work together to avoid the terrible consequences of disasters.

According to Comfort (2007, p. 189), cognition is the key to successful performance in emergency management. Cognition is defined as “... *the capacity to recognize the degree of emerging risk to which a community is exposed and to act on that information* (Comfort 2007, p. 189). Put another way, risk awareness and speed in recognizing that risk and addressing it are the keys to success. The standard three C’s in emergency management are “communication, coordination, and control of the situation. Comfort advocates adding another C, cognition, to this threesome. She claims that the hierarchical approach so often used in emergencies in the past was shown to be impractical in the events that followed Hurricane Katrina. Preparedness,



response and recovery phases of Katrina have all been shown to be full of failures and mistakes.

But rather than point fingers and blame others, it is better to fix the mistakes and learn from them. It is important to understand that emergency management does not proceed along day to day like other governmental functions; it is full of surprises, straining capacity at every level in some cases and then suddenly stopping. Unfortunately, at the outset no one really saw Katrina for what she was one of the worst impacts from a storm of all time. Because of the initial failure to correctly assess the risk posed by the storm, the city and state were largely caught off guard and the response spiraled out of control. But, some people did respond appropriately and left immediately after the announcement of a voluntary evacuation order. Sadly, however, many had no choice in the matter and could not leave. These were 100,000 people, mostly the poor, sick and functionally disabled.

The U.S. Coast Guard did a masterful job in scanning the city of New Orleans for survivors (GAO, 2006). The Coast Guard is established on certain guiding operational principles. These principles include leadership, accountability and responsibility. Search and rescue is the day to day mission for most members of the Coast Guard. They practice this all the time. The Coast Guard is credited with saving over 33,500 people shortly after Hurricane Katrina. At the same time the Coast Guard suffered no significant damage to equipment or injury to personnel. Members from diverse units all over the United States came together and worked together seamlessly.

These efforts were uneven in other agencies because other parts of the response plan were totally ineffective. All parts of an emergency response are interdependent. The whole operation will not succeed unless all of the parts of the response work together. When there is a break down, old hierarchical methods return. These are familiar if outdated ways of responding

(Comfort, 2007, p. 192). Frankly, this fallback position demonstrates a lack of practice with the newer NIMS and ICS methods. There was an extreme amount of diversity among the response groups which promoted lack of trust and caused a level of uncertainty. Massive numbers of volunteers flooded down to help, but many were turned away due to a lack of capacity to investigate the volunteers to assure their qualifications or trustworthiness. Comfort (2007) reported a high level of asymmetry in information processing. Information asymmetry makes operations become inefficient. Since all the participants do not have the information they require for their decision- making processes, failure follows. One example is the incident between poor inner city residents of New Orleans and the sheriff of a parish which included the suburb of Gretna. The sheriff forced the people back into storm ravaged New Orleans instead offering refuge in Gretna, which was his humane duty (Comfort, 2007, p. 192). Reframing this process is the new challenge. It involves an unending series of questions, observation and more questions.

Additionally, Comfort (2007) claims that communication is more than just working to assure that two types of radios can talk to each because they have like technology. It also involves an ability to solve problems as a group. This was sorely lacking in Katrina again, because a lack of familiarity among groups of responders. “Practice makes perfect” it has often been said.

Effective communication leads to effective coordination which leads to effective control of the situation. Coordination is the ability to conform one’s actions with others in a group to achieve goals. Control then is the ability to bring the emergency into some semblance of a manageable incident instead of a totally chaotic mess. Using the Coast Guard as an example, first responders must work harder at learning the most effective ways to deal with emergencies before the emergencies happen. Reframing the response in the future is a necessity to assure that a

higher level of success is achieved. In this case success means lives saved, injuries are avoided and the status quo restored as soon as possible (GAO, 2006).

A reframed response may include the “bow tie” design. The knot and fan symbolize a central processing unit like an emergency operations center or EOC. Multiple agencies in the “fan” of the bow tie feed information into the EOC which is the “knot.” Then information is analyzed and sent where ever it needs to go. New technology called “WEBEOC” stands for “world wide web emergency operations center.” This is an internet driven system of communication that allows people in a police car to see what is going on at every level of an emergency throughout the affected area (Comfort, 2007).

This WEBEOC can help operators process large amounts of information, distill it down to the relevant facts and then send it out to almost everyone in the field who has a lap top computer. Of course this technology depends upon availability of internet and electricity. Many people who work with people with functional disabilities could be trained in the use of WEBEOC in order to transmit important information to those who have problems with hearing, or understanding or cognitively processing the information. The ability to obtain and process information is the key to prompt accurate decisions on how to respond to a disaster (Jenkins, 2007).

A relatively new product that can have good potential for improved communication is “wifi.” Wifi has many “failsafe” features which allow it to operate even in a major disaster. Every first responder should have access to wifi at all times in order to communicate effectively in a small or large emergency situation (Malamud and Hundt, 2005). This system allows a redundant ability of first responders to communicate using the internet, email, social networking sites or WEBEOC as a backup method of communication if radios fail due to manmade or

weather related disasters. As wifi becomes more widely available it can be provided to people with functional needs at a low or no cost to provide them with a method of communication.

Another article on communication by Comfort and Haase (2006) consider the problems encountered in New Orleans with communication. “The course of the storm during those eight days crossed the jurisdictional boundaries of at least nine states, three federal regions, and international borders within the Caribbean and with Mexico and Canada” (Comfort and Haase, 2006, p. 329). The infrastructure needed to promote communication would be exceedingly large. Failure of communications leaves it to guess work for all concerned. This same failure occurred on 9-11, 2001, in New York City. Communications Interoperability is now a high priority in New York City. Another issue in both the World Trade Center and New Orleans is that the infrastructures (including antennas) were destroyed in the attack and storm. For three days after Katrina there was no formal means of communication. Even satellite phones were inoperable. Many of the trucks and trailers that could restore communication could not be moved because the roads that accessed the sites where the trailers needed to be located were washed out. Finally, on September 7<sup>th</sup> communications were restored by the U.S. Army. There was no access to any communication from August 26<sup>th</sup> to September 7<sup>th</sup>. New Orleans police confirmed that even they had no access to communication for that period. None had the ability to seek help, coordinate a response or even let anyone know what was happening. U.S. Coast Guard helicopters had to land to discuss their plan of action since no one had a working radio or telephone. Comfort and Haase (2007, p. 332) identify the following failures:

1. Lack of risk assessment capability.
2. Lack of infrastructure, power, water, radio, transportation, gas or sewage.
3. Lack of organizational design and investment in training to enable personnel to understand their role in a disaster and work with outside groups of responders.
4. Lack of public perception of the risk and capacity to reduce risk.

5. Diversity of first responders and a lack of ability to integrate fully in to a response team.

Rick Sylves, (2008) wrote persuasively about four themes in disaster management, much like Allison's, "three frames" from the Cuban missile crisis, (1971). Theme one is that most people consider emergency management to be a part of law enforcement and fire fighting professions that they know and trust. But emergency management extends far beyond these two groups. In addition to the practical side, emergency management must be prepared to consider problem identification and planning. In theme two, Sylves asserts that emergency management is a worthy academic pursuit involving multi- disciplinary training. Thirdly, management needs to include the city mayor or manager or both. It also should extend on up to governor and president. If presidents or governors or mayors cannot present a strong image as a leader, failure will follow. Witness the difference between the Mayor Rudolf Giuliani of New York on 9-11, and Mayor Nagin and Governor Blanco in New Orleans and Louisiana dithering in times of great peril. Giuliani appeared strong, supportive, compassionate and effective in communicating because he was always composed and controlled his emotions (Griffin and Allison, 2010). In contrast, Nagin was immediately frustrated by the slow rate of response and later desperate for assistance and even angry, petulant and childish at times. He did not control his emotions and cried openly while on camera (Griffin and Allison, 2010).

The Fourth theme involves civil and military relations. Natural disasters sometimes confound this delicate balance while terrorism and other manmade incidents are more amenable to dual management and a division of labor. National security and defense policy must be part of the total equation for emergency management. Sylves (2008) proceeds to consider historical underpinnings. He sets forth a Jeffersonian and a Hamiltonian explanation as normative theories. These theories take into account the political issues in a disaster. In this regard the "Posse

Comitatus act of 1878” was very confounding in the response to Hurricane Katrina. But, many believe that the U.S. military other than the State National Guard and the US Coast Guard cannot be used in a local disaster unless terrorism is involved (Trebilcock, 2000).

Section 15 of this act states:

“From and after the passage of this act it shall not be lawful to employ any part of the Army of the United States, as a posse comitatus, or otherwise, for the purpose of executing the laws, except in such cases and under such circumstances as such employment of said force may be expressly authorized by the Constitution or by act of Congress;”

Some argue that in light of the terrorist attacks of 9/11 and Hurricane Katrina the Posse Comitatus Act needs to be completely rewritten (Brinkerhoff, 2002). As currently written this hampers response to disaster in this country especially for natural disasters.

Issue salience or importance to the public is balanced with issue attention cycle. This is the waning of public interest as other news crowds out the original fantastic story. Failure of coordination between local, state and federal responders causes a vertical fragmentation of the response to the problem. Again, strong leadership is needed at all three levels to collaborate effectively in disaster response. A realization that there is a high level of government interdependence calls for a forthrightness working as the “rational actor” as Allison coined the phrase (Sylves, 2008, p. 40). It is also possible to have “horizontal fragmentation,” which is a failure of local resources to work together in a disaster. This was seen all too often in New Orleans. However, in other incidents such as the Minneapolis bridge collapse of 2007 (p. 24, 90 and 130), the first responders had practiced together for years and had developed a high level of trust and familiarity. Mutual aid agreements put in place years before were highly effective in providing a very well-organized and effective response that is said to have reduced the injuries and death considerably.

In a book written before the BP disaster, Daniels, Kettl, and Kunreuther, (eds.) (2006), Kousky and Zeckhauser decried the abuse of the environment by oil companies after Hurricane Katrina. This was obviously very prescient in light of the disaster in 2010 in the Gulf of Mexico caused by the explosion of an oil platform. The authors accused private companies of failing to consider remote future events which would be consequences of their current activities. Public Administrators are left to regulate, enforce and plan for the extreme outcomes or “worst case scenarios” (Pp. 62- 65).

Some local groups are having success in training and equipping citizen groups to be prepared for emergencies, using a bottom up approach. For example, both the Salvation Army and the Red Cross are active players in disaster preparation and response. Sometimes there is an overlap in these services, other times the Red Cross and the Salvation Army coordinate their response. For example, in one community both the Red Cross and the Salvation Army provide emergency shelter and food and clothing. In another city, by coordinating with the local emergency manager, the Red Cross focuses on emergency housing and the Salvation Army focuses on food and clothing. Both groups need to plan to assist with special or functional needs populations in emergencies (Bender, 2011).

Kettl (2007) considers the culture of different organizations in trying to coordinate their efforts. Kettl describes the unwritten rules mentioned by Khademian (2002). The Coast Guard can integrate other Coast Guard members because they are trained to do so. Some disparate groups, with their own informal systems, have not trained together and struggle to find common ground. These include volunteer fire fighters (Dawalt, 2010).

Another important subject in the area in public administration is implementation. Maskin and Sjostrom (2001) discuss the importance of using resources effectively to accomplish the important goals using the ability to communicate within the group and make coordinated even collaborative decisions about the best use of those resources (Waugh, 2004). In a way, this is much like a game. Even though in a disaster the stakes are very high life and death. Members of society are the players in this game. Social choice rules control the problem. The smaller the population, the simpler the problems to solve.

Axelrod (1997) warned that cooperation is a complex problem. But, he concedes that the more alike two individuals are the more they have in common and the more likely they are to cooperate (p. 151). An early example is smoking among teenage boys. It spreads because their friends, who are like them, are doing it. Earlier, Axelrod (1984) grappled with the problem of selfishness as opposed to a cooperative, sharing spirit. Axelrod turns to Hobbs the great philosopher to explain that central authority or government is needed to promote civility. Cooperation is essential to security so people band together and form alliances because no one can stay awake twenty four hours a day. Taken to more complex levels like disaster preparedness, this idea can explain why it is important for public, private and nonprofit groups to band together in a cooperative spirit to plan for worst case scenarios and respond accordingly when the worst does happen.

Axelrod also mentions the prisoner's dilemma and game theory in inter-relationships (1984, p. 27). How does one play the game well? What is the definition of "well?" If one player cooperates to become the most successful; is that playing well? Or, if one player sacrifices to allow someone else to obtain some level of success, is that better? It all depends upon the



player's motivation. If a player has a take no prisoners, win at all costs attitude, in theory at least he should not succeed in games that emphasize a need for cooperation (Axelrod 1984 p. 30). Interestingly, different disciplines, such as sociology, economics, political science, all approached the problem differently in actual games based upon the prisoner's dilemma. The winning program was "TIT for TAT." If someone does something good for you, you do something good for that person (p. 31-32).

Adult education theory provides that some skills are best developed by practice. One example includes typing, another is firing a rifle. There is a strong correlation between game-playing and developing these rote skills (Merriam and Cafarella 1999). The Army calls it "muscle memory." Much of what is needed to know in emergency management involves this practical approach; exercises and drills teach volunteers and other responders what to do and what to expect. This is the "preparedness phase." Those that work together in the preparedness phase have better outcomes in the real disasters (Moynihan 2007). In this way game theory may have application. Perhaps game theory can help answer the question, "What is the optimal number of practice exercises that should be completed for a community, including health care, disability professionals and first responders to participate in to be prepared for a disaster?"

As recent disasters such as in Japan , 2011, and Hurricane Katrina, 2005, have shown a profound lack of coordination in the planning and preparation stages in exercises and other planning for emergencies. Tragedy has been compounded, especially among special needs populations. Some examples include at least thirty -two deaths in nursing homes and many more in hospitals because of failure to heed warnings about loss of power, food, water and transportation (McVeigh, 2006).

An analysis of some improvements that have been made since Katrina is included in this case study. A random sampling of local state and federal officials have been interviewed as to the level of cooperation, coordination and collaboration among emergency managers and professionals in the health care field and special needs disciplines in preparing for or responding to emergencies in their areas. Similarly, state and local professionals in health- care and special needs were interviewed to test whether both emergency managers and health care and special needs professionals are consistent in their readiness assessment.

Emergency managers and health care professionals are working on this problem. The author has participated and observed recent events in the Northern Indiana area that suggest a heightened awareness of a need to work on health- related issues by both health care professionals and emergency administrators. Most of these exercises relate specifically to H1N1 flu. The same collaboration needs to be developed in working on planning for weather related disasters, terrorism and other types of activities. For example, a recent study was published on the importance of using actual people with disabilities in a tornado exercise instead of simulating just your average victim; Markenson et al. (2007) used people with actual disabilities to demonstrate what individuals with special needs go through during the course of an emergency. All too often this is overlooked. Markenson, Fuller and Redlener (2007) assert that at least 5 percent of all participants in disaster exercises should be persons with disabilities. This type of question needs to be put to both emergency managers and special needs and health care providers. It seems important to establish just how many actual people with disabilities have participated in exercises in the past year, two years or five years. If the Emergency manager has had little or no contact with people with functional needs, it seems impossible for the EMA to be able to plan effectively for helping people with functional needs in an emergency. Markenson,

Fuller and Redlener (2007) and others recommend that people with disabilities should be recruited to help plan the Emergency Operations Plan in the first place. In addition people with disabilities should serve in the Emergency Operations Center as advisors for drills and exercises and also play an important role during actual emergencies. This could include disability subject matter experts or other professionals also Individuals with disabilities make up a sizable portion of the general population of the United States. According to the U.S. Census (2000), they represent 19.3 percent of the 257.2 million people ages five and older in the civilian non-institutionalized population, or nearly one person in five.

A Harris poll (2003) found only forty- four percent of people with disabilities knew whom to contact to get information in times of disaster or emergency, compared with forty percent in a 2001 poll conducted soon after the events of September 11. There has been a very small improvement in preparedness by people with functional needs.

In a telephone survey of emergency managers, the majority of the emergency managers are not trained in “special needs” populations, which includes persons with mobility impairments. There was at least one county in the research which created a comprehensive Appendix on Persons with Disabilities in their local emergency plan to assure functional needs are met. Little to no representation of persons with mobility impairments have been involved at the planning/revision stages of the emergency plan. A majority of the emergency managers did not know how many persons with mobility impairments live within their jurisdiction (White, Fox, Rooney, Willits, and Rowland, 2007).

A national quantitative survey was conducted of county emergency managers from all over the U.S. Thirty emergency managers were chosen at random and asked a series of questions

concerning people with disabilities in disasters. Of the thirty, only four included people with disabilities in the disaster planning process. Only six counties out of thirty had plans in place that specifically dealt with the functional needs population (White, Fox, Rooney, Willits, and Rowland, 2006).

In a research study in 2003-2004, conducted over sixteen months, the National Council on Disability interviewed numerous people in and out of government who had relevant knowledge and experience in the area of disabilities and emergency management (NCD, 2004). This included local, state and federal agencies along with emergency managers. It also involved people with disabilities. Many anecdotal stories were collected about disaster incidents experienced by people with disabilities. Yet it was found that most of the time people with disabilities are left out of the disaster planning process (Frieden, 2005). In a report prepared by AARP (2006) over 70 percent of all people killed in Hurricane Katrina (over 1800) were vulnerable elderly adults. But, most government plans mention no consideration of the needs of the elderly or disabled. This flies in the face of violation of laws and Presidential orders and judicial findings previously mentioned.

### **Levels of Disability**

Freedman, Martin and Schoeni (2004) report that roughly 50 million people in the U.S. have a disability. This is nearly one in five Americans. This number is expected to grow as baby boomers reach old age. Of these people with a disability, 30 million are of working age while only 14 million are over age 65. More men than women are disabled. In the older ages women outnumber men. Forty- two percent of all people over 65 have at least some disability. The types of disability can be broken down even further. Physical disability, such as mobility, makes up

over eight percent of the total. The next largest group is cognitive at 4.8 percent. This is mental disease or disorder. Sensory disabilities like hearing and sight make up 3.6 percent. As a percentage of underlying population, minorities tend to report more disabilities than whites. But whites do make up a larger part of the total of people with disabilities. About 8.7 million adults and children with disabilities also live in poverty. People with disabilities are less likely to be married. It is important to keep in mind that many elderly people with disabilities are also widowed (Freedman, Martin and Schoeni, 2004).

Most people with disabilities live in the states with the most overall population. California has the highest population and the most people with disabilities followed by Texas, New York and Florida. Illinois and Ohio in the Midwest are ranked 6<sup>th</sup> and 7<sup>th</sup> respectively while Michigan is 8<sup>th</sup>. The south has a very high percentage of people with disabilities. Nearly 25 percent of people in the South age 21 to 64 have a disability. About 50 percent of people in the South have a disability. By comparison, in the Midwestern states around 18 percent of the population between the ages of 21 and 64 have a disability and about 42 percent of people over 65 have a disability (Freedman, Martin and Schoeni, 2004).

### **Public Accommodation or Transportation**

Any new public bus or over- the- road coach that was purchased after 1996 must be ADA compliant. Any public accommodation must be ADA accessible. This includes evacuation vehicles and shelters for people with functional needs (49 C.F.R. Part 38) (42 U.S.C. §§12142)(a), 12162(b)(2) . Any federal money used to purchase any vehicles, equipment or accommodation is subject to audit by the federal government. Failure to be in compliance with

these laws and regulations can result in penalties including fines and a bar against future grants in aid.

### **Nursing Homes**

In 1999 there were over 18,000 nursing homes in the U.S. and nine out of every ten residents are over age 65. About 83 percent, need help with basic needs, such as cleanliness and dressing, eating and using the toilet. In the year 2000, 33,000 assisted living facilities, which require less medical assistance, served 800,000 people. Of these, one third had a cognitive disability. In addition community living centers and group home served 400,000 residents and 387,000 residents respectively ( Freedman, Martin and Schoeni, 2004, p. 23).

According to Harrington et al. (2001), more than 1.6 million Americans live in 18,000 nursing homes and probably will not leave the homes until their deaths. Several small studies have suggested that for-profit nursing homes, which make up two-thirds of the nation's nursing homes, offer poor care. Of the homes in this study that had similar findings, 65.8 percent were investor owned, 27.7 percent were nonprofits, and 6.5 percent were public. Nurse staffing in all types of nursing occupations was lower at investor-owned homes, which may have something to do with care quality. Investor owned homes were larger than private nursing homes, which may impact quality. Yet public nursing homes were usually larger than investor- owned homes and rated higher on care quality. Obvious explanations for poor care, the researchers theorized, is that profit seeking takes funds from clinical care. Some of the nation's largest nursing homes often make on average \$5.28 per patient each day.

Although most nursing homes were considered compliant in planning for disasters (90 percent) and were also compliant to a lesser extent in training their staff (80 percent) no nursing home handled the Hurricane Katrina disaster appropriately. Many failed to follow their own plan (Levinson, 2006 p. 18 and 20). Also important was the notation that there was a lack of collaboration between nursing homes and emergency managers.

The San Diego Model (2009) is a skilled nursing disaster preparedness and response plan adopted in San Diego after the wildfires of 2007 in California. Some features include a “communication tree” which includes all stakeholders in and out of government. A collaborative plan involving key elements identified in case of disasters. A formal written agreement among all parties and specific innovations which includes long term care facilities, clarifying roles, set fees to be paid to receiving hospitals by sending nursing homes. This plan was worked out after parties experienced threats from wildfires which forced evacuation of many skilled care nursing homes. Prior to this, no clear plan had been developed. Many public, private and volunteer agencies came together to develop this plan. GIS was used to map out the locations of all of the stakeholders in many possible emergency scenarios. Then the counties’ former disaster plan was redeveloped to include all the Skilled Nursing Facilities or SNFs. The plan was developed along geographic lines to keep groups of nursing homes within a division of 10 to 15 SNF’s per response group. Each group has an Area Coordinator. Each of the Area Coordinators meets with his group of SNF and other public and volunteer groups in regular meetings. This builds trust and understanding. Each Area Coordinator meets with all other Area Coordinators and County and Volunteer officials for large scale coordination. The full task force meets on a monthly basis. Finally, a memorandum of understanding was developed and circulated and signed by all concerned. Over 60 percent have signed this agreement. The details in the agreement involve

communication and relationships. Organizations of SNF in small groups of 10 to 15 were established. Then each hospital agreed to accept a set number of patients from SNFs depending upon their average available beds. Evacuation, transportation and routes are also specified for each group. Daily billing rates for patients evacuated to hospitals was also resolved (San Diego 2009).

### **Key Groups in Emergency Planning and Response**

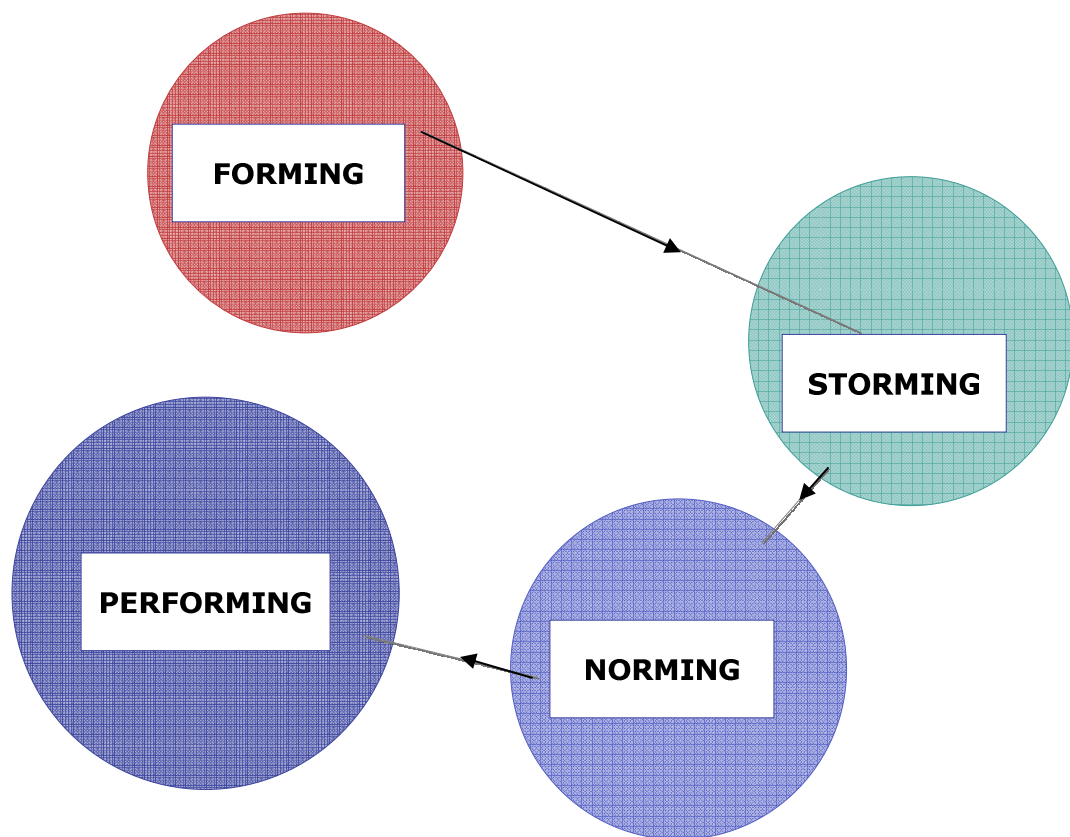
Medical Reserve Organizations throughout the Midwest are being created. The Medical Reserves support local hospitals in Indiana, Ohio and Illinois during “surge” periods which occur in emergencies. These medical reserve members are a good source of information from their observations. The groups include retired doctors and nurses as well as others with some medical experience.

Groups like the National Council on Disabilities as well as local institutions including the Indiana Institute on Disability and Community at the Indiana University Center for Excellence in Developmental Disabilities are examples of active groups in this field. These professionals who assist people with functional needs may have valuable observations about the level of collaboration with emergency managers (Snow, 2011).

Other functional needs population groups exist such as the “The Arc” which represents people with intellectual and developmental disabilities. Every state has an affiliated group of people who support people with developmental disabilities. It is hoped that these groups along with Emergency Managers on the local level can develop a worthwhile relationship and develop a workable plan for emergency response that addresses the needs of people with disabilities.



Figure 6 represents the usual process of planning that occurs among parties to a new small group, according to Bruce Tuckman (1965). Tuckman developed the idea that people start off formally, by introducing by forming then as people feel untrusting and uncomfortable in a new group so they “storm” that is the tend to argue or act stand offish. Then the group recognizes that they will never get anything accomplished in that mode so they individually change tactics and start “norming. Finally when they are comfortable and start developing trust the begin “performing” or getting the mission accomplished. It is predictable then that forming a new emergency planning group will probably go through these steps.



FROM BRUCE TUCKMAN

Figure 6

## **Possible Solutions**

### **Geographic Information System or “GIS”**

Geographic Information System technology GIS is often proposed by those experts as a tool to the problem of identifying people with functional needs in order to arrange to connect them with resources of special interest for people with disabilities. A person utilizing GIS can collect data from many sources and identify the people with functional needs and show where possible evacuation is available as well as ADA compliant shelters (Enders and Brandt, 2007). GIS is called a ‘dynamic tool’ as it has great potential to assist leaders to make the best decisions when it comes to identifying, evacuating and sheltering people with disabilities. Much of the data already exists through census records and other similar sources at the federal and state level. The idea is that disability policy advocates will help locate this information and get it to emergency planners (Enders and Brandt 2007, p. 225). Some examples of sources of information include Centers for Independent Living Offices and Section 5310 Recipient Transportation Providers. Another group that is using GIS as a tool for local emergency managers in achieving the goal of identifying and serving all of the people with functional needs in their community is from Temple University in Philadelphia, Pennsylvania. Heake (2010) developed a model for data collection using GIS technology. His program is called “SPAR” standing for “Special Populations Analysis and Research with GIS.” Heake uses GIS in two ways, first to develop working relationships with local agencies that represent special needs populations and second to create shared data and centralized data processing through a GIS analysis system (Heake, 2011). They also locate resources as mentioned above and try to connect the dots using GIS.

This GIS concept is already being used in Oakland California. The City of Oakland was sued by a group of people with disabilities in the case of Disability Rights Advocates v. City of

Oakland California (DRA) in 2009 this is much like the California Association for Living Independent and Free (CALIF) group who sued Los Angeles in 2011. As part of the settlement agreement of the lawsuit in 2010, Oakland agreed to add a functional needs annex to all EOP plans and to install a GIS system to assist first responders with identifying the location of all people with disabilities. In addition it will help first responders by suggesting the nearest available transportation and shelters that are ADA compliant (Schutzberg, 2010). This system in Oakland is being recommended for every emergency management office in the United States.

### **Social Media Networks and the Internet**

New emerging phenomena include social media networks like “Facebook” and “Twitter” as well as few other similar products. Using Facebook or Twitter, communities of people with like interests can be developed. These include groups that address planning for disasters in collaboration with local emergency planners and planning committees. This is a quickly emerging yet very new concept. This is sometimes called “Second Life” (Stewart, Hansen and Carey, 2012) Other concepts include “play to train” a virtual world with a town and emergency services where scenarios can be played out to improve collaboration and response for people with disabilities while saving the extreme cost of actual exercises. People with disabilities who can operate computers can participate in these “play to train” exercises (Boulos, et al., 2008).

### **Safe Rooms**

If local government is required to provide transportation to people with disabilities in order to evacuate them to a shelter, it stands to reason that the destination needs to be a safe but accessible place to provide shelter for people and especially those with functional needs or

mobility issues (Waugh, 2004). Another idea involves building easily accessible “safe rooms” in community centers near the residences of people with disabilities (FEMA, 2008). These rooms are being built in increasing numbers and can withstand an F5 tornado with up to 250 mph winds. The “F” in F0 through 5 stands for “Fujita scale.” In 1971 Dr. T. Theodore Fujita introduced his scale to measure the seriousness of a tornado. He and his group studied every tornado in the U.S. since 1950. In 1992 Fujita revisited his Fujita scale and made modification to correct errors that he and others were finding with the outcomes of prior studies of tornado damage. The new scale is known as the “enhanced Fujita scale.” It was created after Fujita’s death (NOAA, 2011). Safe rooms have steel walls, floor and ceiling panels that are welded into a box in some cases. There are no windows. The room is placed in the center of the building. A steel door with a steel frame is mounted to the box with extra strong hinges and multiple dead bolt locks. Since the Midwest is part of the worst tornado “alley” with many EF5 tornados on record, it is the worst tornado zone in the world. For example, in the past decade, serious tornadoes occurred in the Midwest in June, 2008; May, 2008; April 2006; March, 2006; as well as May and June 2005. Each storm included damages in excess of one billion dollars and between 10 and 25 deaths and many more injuries. Therefore, developing a plan for surviving a tornado should be a high priority (FEMA, 2008). The rooms must be ADA accessible, so for example, a basement would not be the best choice for people with disabilities due to accessibility issues. Other safe room technologies include a fiberglass interior wall structure or steel rebar reinforced concrete. Additionally, three fourths inch plywood on interior walls can be used for a safe room It is highly important to assure that these rooms are not built in a flood plain (FEMA, 2008). Community safe rooms should accommodate up to 100 people or 25 wheel chairs (FEMA, 2008). In addition supplies for up to three days should be stored in these rooms. These

rooms could be located according to GIS data where they will be accessible to the most people with disabilities. If 18 to 20 percent of the population in the Midwest is disabled according to the 2008 census, then an easy calculation can be made as to how many safe rooms are needed along with the GIS technology to figure out where they should be placed.

### **Summary, Synthesis and Conclusion**

In summary the literature shows that there are difficulties in defining the focus groups involved in this issue. There are also many groups that can contribute to solutions to the need for collaboration. Additionally, there are possible solutions to these problems and there are severe legal repercussions that could occur if no solution is found to the need for collaboration among emergency managers, health care professionals and people with disabilities.

This literature shows that emergency management is a very complex field. There are many influences from federal, state and local governments; it is also impacted by private, public and nonprofit sectors. Emergency management has very few resources. Recent incidents, like 9-11, Hurricane Katrina and other disasters have taxed these resources greatly. Yet, emergency managers are under tremendous pressure to plan and respond in times of disaster. Experiences in these recent disaster incidents have exposed a weakness in the area of collaborative planning and responding to people with disabilities in disaster. This study will attempt to measure the status of collaboration among emergency managers, health care workers and people with disabilities in disaster planning and response.

## **Chapter III.**

### **Research Methodology**

Given the summary and conclusions from the literature review, this chapter describes and discusses the methodological strategy designed to address the central research question. The chapter describes the rationale for the identification of the evidence or data pursued in the methodology, the procedures utilized to collect and record the data and the modes of analysis employed to make meaning of the data and to generate the study results.

What counts as evidence here is any experience by emergency managers and their collaborators in their attempts to meet the needs of people with disabilities in times of disaster.

### **The Context for Qualitative Research**

An empirical study on performance measurement in public organizations was conducted by de Lancer Julnes and Holzer (2001). In that study a sample was drawn from a sampling frame which included members of the group “Government Accounting Standards Board or “GASB.” A mailing list was obtained from the group. A total of 934 questionnaires were sent to this group from the mailing list of state and local government officials. The survey consisted of Likert scaled questions which were scaled from 1 to 4. The questions were based upon a well-known theoretical framework and refined with practitioner input. This current dissertation study attempted to use methods adapted from the de Lancer, Julnes and Holzer study (2001).

Another qualitative study was conducted by de Lancer Julnes and Derek Johnson (2011) of Hispanic citizens in the state of Utah. The purpose of the study was to consider engagement of Hispanics in governance. Two levels of engagement were considered, “participation” and

“engagement” (2011, p. 222). The difference between participation and engagement can be seen as merely voting as opposed to activism and eight levels of engagement quoting Arnstein (1969, p. 2). Arnstein’s levels include “information, consultation and placation.” These levels may be interpreted for practical purposes as attendance at government meetings, serving on committees or even running for office.

This study by de Lancer Julnes and Johnson has great application in the current study.

If one replaces “Hispanic” with “People with Disability” there is a lot of commonality in the usefulness of this information. Where voting may be considered as “participation” in the Hispanic study, participation in a drill or exercise would be the lowest level of engagement of a person with disabilities in the current study. “Activism” would translate into engagement by people with disabilities on a committee for the development of emergency response plans. Finally, participation in an actual emergency as some part of the volunteer staff of an EOC or Incident Command would be the ultimate engagement of a person with disability. The methodology used in de Lancer Julnes and Johnson included: “25 face to face interviews and two telephone interviews between August and December 2007 with known Hispanic leaders in Utah advocacy groups.” Questions involved government attempts to engage Hispanic involvement, modes of engagement, barriers to engagement and strategies that worked and for whom. There were 11 questions, and the format was flexible to allow for emergent issues to surface. Most interviews lasted 30 minutes to one and one half hours.” “Snow ball sampling technique was used where one participant recommended additional participants.” (de Lancer Julnes and Johnson 2011, p. 224).

This study could be described as a “study of convenience” (Northrup and Arsneault in Yang and Miller, 2008 p. 213, 225) which was conducted from October through December of 2011. Additional follow up questions were asked of the same group in March of 2012. The questions were drawn from the literature of public administration (Waugh, 2006) and specific emergency management cases (Waugh and Sylves, 1996); (Cotton, 2002) laws (42 U.S.C. § 12101) “The Americans with Disabilities act of 1990; and anecdotal stories that emerged as important during the course of the research. This research is on multiple county emergency management agencies from around Indiana and Ohio. Indiana and Ohio were chosen for the sample because both states offer a substantial number of potential respondents drawn from mailing lists of emergency managers freely available on the internet (175 in total). The author worked in local government in both states and was very familiar with the systems of government and some of the government officials in emergency management in both states. There are 38 respondents who participated on a volunteer basis in the study. Each one was interviewed, most by telephone. All were asked a set series of 24 questions. In addition, each emergency manager was allowed to amplify or add comments at three points during the interview. Additionally, the author collected archival material of interaction among health care providers, functional needs professionals and emergency management directors. Some evidence has been previously collected such as the nationwide survey of emergency managers on inclusion of people with disabilities in the disaster planning process (Fox, 2006) and emergency communication systems for disaster alerts by emergency managers to people with disabilities (WGBH, 2008). These studies indicate a very poor level of planning and collaboration with people with disabilities. They will be used for comparison purposes with the data in this study.



Then, all stakeholders should be involved in drills and exercises to test the plan and perfect it. In addition everyone involved would have an opportunity to get to know each other and become friendly. This would aid everyone in a real disaster. Kathie Snow has many connections throughout the United States who are just beginning to bring their power to bear on this problem (Snow, 2011).

In regard to health care professionals involvement in planning cooperatively with emergency managers, since the H1N1 flu scare there has been a heightened level of cooperation, coordination and in some cases, collaboration between health care professionals and emergency managers in some counties (Brown, 2010); (Bellavita, 2010).

This is a mixed methods survey and qualitative study of emergency managers on cooperation, collaboration and coordination among health care providers and people with functional needs. It involves narrative interviews of randomly selected individuals from these groups and a Likert scaled survey of a larger representative selection from each group. This involves a mailing of 175 letters to emergency managers in Indiana and Ohio which included a short questionnaire and a request to interview the emergency administrator for that county. A self-addressed return envelope was included to attempt to maximize participation. The next phase of the research involved obtaining responses, reviewing the answers to a few questions and follow up phone calls to the emergency managers who “self-selected” or volunteered to participate by agreeing to be interviewed. In addition, it was desired that emergency managers would share their emergency operations plans for comparisons to be made and analysis to determine the level of planning for people with disabilities in these counties. Interviews were conducted along a set “script,” but emergency managers were given opportunities to comment on

anything that was on their mind which in turn was included in the results of the study (Yin, 2004).

Approval was granted by the Institutional Review Board at the University of Baltimore to assure that the surveys and interviews follow proper protocols. Since all of the questions related to public employees engaged in information which is public record, this research was classified as exempt on October 24<sup>th</sup>, 2011. Additional approvals were issued in June 2012 for follow up questions.

The author also solicited responses by email using email addresses provided by the states of Indiana and Ohio. However history tells the author that many EMA directors do not use email (Dawalt, 2010). Hence, this justifies a need for a multi- methods approach. Follow up contacts to emergency managers by phone calls and emails have been made. If the results of this study coincided with a national study conducted by the faculty and staff of the University of Kansas Center on Disaster and Disability, a very small number of emergency managers would have consulted with people with disabilities and the majority would not have included people with disabilities into the emergency operations plan (Fox, 2006). Analysis of the responses to determine actual levels of cooperation, coordination and collaboration among the subjects follows below. The results showed some improvement.

A study of the websites for all emergency management offices in Indiana and Ohio was also performed. All of this information is then recorded on a performance measurement instrument which summarizes a “grade” for each emergency management office in the context of cooperation, coordination and collaboration among emergency managers, health care providers and people with functional needs in Indiana and Ohio. By cross referencing all of the sources it is

possible to verify levels of cooperation, coordination and collaboration among the emergency manager health care provider and special needs population. Some basic information was gathered to get a base line understanding of the diversity of geography, level of experience and education of the emergency manager. In addition a low level of contact between Emergency Managers and people with special needs indicates a low level of collaboration between the two groups. On the other hand a high level of meetings and interaction indicates a high level of collaboration. The same applies to health care workers and other agencies such as the Red Cross or Salvation Army.

There is national data available which suggests the level of nationwide citizen preparedness including plans for people with functional needs. A review of the national data has been performed to confirm the accuracy of the national study. A comparison of the outcome of this case study conducted in the Midwest in two states, Indiana and Ohio, has been made with the national data. An analysis of all of the data has been done to determine if the Midwest the same as the situation suggested by the national data. Some conclusions are proposed as to the level of preparedness of local citizens in the Midwest for disasters or other emergencies. In addition the levels of collaboration are discussed.

William Waugh, commented that in the “old days” back in the 1950’s emergency managers were seen as dictatorial “air raid wardens” from the cold war (Waugh and Streib, 2006). Over the years this image has slowly changed. Many small town EMA offices consist of one person, sometimes in a part time role (Henderson, 2011). Others are older, former police or fire fighters who have taken this job to supplement their retirement. Collaboration is essential for such a small agency with such a large job. Networking is essential to develop a collaborative

foundation to deal with the multitude of emergencies that can befall even a small town (Vaugh and Streib, 2006). Volunteers must be relied on to assist with the response to disasters because budgets do not allow for the large expense of paid first responders. Most communities rely on volunteer fire departments (Dawalt, 2010). Other groups of volunteers include Salvation Army, Red Cross and other local groups of volunteers. Unfortunately, some emergency managers in this study write their emergency operations plan to divest their responsibility for evacuation and sheltering people with functional needs to volunteer groups like the Red Cross. The Court in *CALIF v. Los Angeles* (2011) said this is not permissible under the Americans with Disabilities Act. The emergency manager must fully plan for evacuation and sheltering of people with functional needs. Yet some of the 38 emergency managers that were interviewed for this study contend that this is their plan. Using the experience from New Orleans as an example, Keifer and Montjoy (2006) did a case study on the outcome of evacuation plans for the majority of residents who left by their own means and used a very successful evacuation plan to turn both the inbound and outbound lanes of the interstate system were converted into all out bond lanes. This is called, “contraflow” (Wolshon, 2001). It was developed over many years and used effectively during Hurricane Floyd in South Carolina in 1999 (Wolshon, 2001, p. 106). This idea was planned and practiced well in advance of Hurricane Katrina. It is an example of something that worked very well. It is juxtaposed against the failure to successfully evacuate people with no transportation and other functional needs who were left behind. This widely publicized failure indicates a blind spot in planning (Kiefer and Montjoy, 2006). Although collaborative public management is essential, networking to solve problems such as these can sometimes be unpredictable. “Serious preparation is often expensive, requiring planners to divert resources from tangible current needs and demands to things they hope will never happen” (Kiefer and Montjoy, 2006, p. 123). New

Orleans did not have a serious plan to evacuate people with special needs or the “immobile population” according to Kiefer and Montjoy. They gave broad tasks to the regional transit authority to provide transportation “as needed” in broad, vague terms. One of the major modern developments in planning is so called “SMART objectives.” SMART objectives have evolved on many fronts, business, and education, the military and now emergency management (KSDE, 2011). SMART objectives are specific, measurable, attainable, results oriented and time sensitive. As such they put deadlines and details in place to assure complete success in the mission. Unfortunately the city of New Orleans instead used some vague notion of a plan for people with functional needs and as a result a nightmare ensued. No specific guidance was given as to where to locate assets, how to find people with functional needs or where to take them, and there was no effective communication network to guide responders during the actual emergency (Kiefer and Montjoy, 2006). Mayor Nagin opened the Super Dome as a “special needs shelter” the night before Katrina struck. The plan was for this to be a short term stop gap measure. The city was overwhelmed by the sheer number and magnitude of the disaster. Sadly, in viewing the response to this study, many of the Indiana and Ohio emergency managers have vague and incomplete plans to “pass the buck” to the Red Cross in dealing with the problem of functional needs populations. In looking for gaps and voids in planning and responding to Hurricane Katrina, Blomgren – Bingham and O’ Leary find the story of Hurricane Katrina to be about “parallel play” not collaboration (2006). Everyone played cooperatively (using a game theory analogy) but no one played collaboratively. Basically they each did their own thing in parallel with each other, trying not to interfere, but failing to get the value added from working together in collaboration. Cross sector collaboration occurs when various public, private and nonprofit groups as well as individual stakeholders work together to develop the best plan, then implement

the plan by conducting drills and exercises to be prepared for emergencies and later, execute the plan in real world responses to emergencies (Blomgren – Bingham and O’ Leary, 2006, p. 162). Networking is critical to collaboration. Any conflicts need to be resolved in win-win solutions. Inclusion is critical to this process. Democracy demands this approach; moreover it has been highly successful in many areas of public administration. One example is the Western watershed Partnerships studied by William Leach and Mark Lubell (2005) who outlined six (6) important criteria, 1. inclusiveness which means all affected parties are represented, 2. impartiality or equal treatment and transparency in government, 3. lawfulness which is not allowing consensus to undermine laws and regulations, 4. deliberativeness, which includes brainstorming, 5. exchange of ideas, and 6. empowerment which means the members actually influence the outcome of the deliberations.

The life of an emergency manager could have the potential to be compared to that of a soldier in the Civil War: "War is days and weeks of tedium and boredom punctuated by moments of sheer terror" (Rhodes, 1885). The emergency manager must do a better job of planning in times that are “boring and tedious” in order to avoid sheer terror. Networking is essential in this paradoxical world. But the emergency planner cannot totally divest himself or herself from the responsibility of assuring that all citizens are safe. “On one hand emergency response requires meticulous organization and planning, but on the other hand it is spontaneous” (Waugh and Streib, 2006).

Transparency is highly important in any government endeavor (French, 2011). Uncertainty causes mistrust and a lack of cooperation and ultimately a lack of collaboration. Input from stakeholders is very important in achieving transparency, and achieving collaboration

among governments, public and private agencies, Nongovernmental Organizations or “NGO’s” and citizens. By allowing the affected citizens to have a “give and take” type of relationship with the government, all people involved can have an influence on the process. For example, emergency managers can assist people with functional needs in an emergency best by bringing people with functional needs into the planning process.

28 cities were studied and evaluated by French (2011) on their preparedness for pandemic influenza. The 50 largest cities by census were identified of those 28 agreed to participate in this study. Then a plan for pandemic influenza was sought from public records and interviews with city officials 28 cities were forthcoming with an influenza plan. They were graded based upon the Department of Health and Human Services Standard. This was considered the “best practice” (French, 2011). Each of the sub parts of the plans were scored according to the importance of that sub part. One example is: Pandemic flu Planning Committee; “0 no mention of a committee, 1, Committee only includes health officials, 2 Community includes 3 or more different stakeholders as suggested by DHHS. There are 11 subparts to this study. These include: “1. Leadership, 2. Ethical Considerations, 3. Communications, 4. Operational Objectives, 5. Limitations on Liberty, 6. Networking, 7. Ethics and Allocation of Scarce Resources, 8. Preparedness, 9. Equity, 10. Inclusion, 11. Stakeholder Representation” (French, 2011, p. 259).

Of the 28 cities in this study, less than half (11) have a broad- based committee including government officials from a broad spectrum of agencies. None have a planning committee which includes people from the community. This is a poor approach according to the DHHS. Transparency requires a broad based inclusive committee with actual input into decision making.

Fifty percent have a plan for pandemic flu which includes people with both functional needs and vulnerable populations primarily English as a Second Language or people with language barriers. In most cases there are no detailed plans for people with functional needs or vulnerable populations. There are no SMART objectives for people with functional needs and pan flu plans. Only one city in the national study had detailed plans to address the issues of people with functional needs and ESLs (French 2011, p. 260).

In the current research, 38 different cases consisting of 38 different county emergency management offices from Ohio and Indiana are being compared to an ideal standard based upon the “best practices” suggested by different experts from around the United States. Some of these characteristics include “inclusion” this means that people with functional needs will be included in the planning process according to the recommendations of at least three different experts. Fox (2006) argued that people with functional needs were the “consumers” of services offered by emergency managers and emergency managers should be more sensitive to the needs of their consumers. In addition, Kathie Snow (2010) a well-known advocate among the disability community, argues that all people are interdependent and people first. People with various functional needs can give valuable input to emergency managers and emergency managers should respect that and want to hear it. Finally, David Markenson and his group (2007) give the best organized standard for emergency managers to follow. First, include people with sensory and mobility disabilities in the planning stage of making the emergency plan. For example if part of the plan involves assessing shelters to open in times of an emergency, people with mobility disabilities should judge those shelters to assure that the shelter will meet the needs of people with mobility concerns. If a siren is being considered, have people with sensory disabilities serve on a committee to establish multiple means of communication to assure that no one is left



uninformed of a major disaster. Second, Markenson and his group recommend that disability subject matter experts, should be involved at the state and local level in Emergency Operations Centers to give guidance during training and actual emergencies in order to assist Emergency Managers to consider people with functional needs in planning for and responding to emergencies. Third, Markenson and his group recommend that local emergency managers actively recruit people with disabilities, their family and friends onto volunteer groups like Citizen Corps, CERT and Medical reserve teams.

Questions for each of the 38 County Emergency Managers have been tailored to fit those standards which indicate what a near perfect emergency management office would be in the eyes of a person with disability, their advocate or what their medical doctor might expect. In addition, GIS and “safe room” technology may serve as a solution to finding people with disabilities in times of disaster and sheltering them effectively. So some questions about the feasibility of using GIS and safe rooms in each Emergency managers jurisdiction have also been included. Each of the volunteer participant’s responses will be compared to the ideal standard that includes:

1. Inclusion of people with functional needs in the planning for disasters including assessing shelters, sirens and all parts of an emergency operations plan.
2. Include Experts at the state and local level as consultants at the emergency operations center during exercises drills and real life disasters.
3. Recruit people with disabilities to serve on CERT teams, Citizen Corps and Medical reserve Corps to prepare for disasters in such a way as to always include plans for people with functional needs.

4. Obtain GIS technology to identify all individuals who are living alone with functional needs. Also use GIS to identify resources that are available to assist people with functional needs in evacuation, with needs for electricity, food water, etc.
5. Develop a system of “safe rooms” in senior centers, churches schools and other public buildings that are away from flood zones, easily accessible for people with disabilities and built or reconstructed to with stand at least a level F5 on the modified Fujita scale for tornados. These shelters should be fully prepared with water, food and power from electric generators.

Each of the 38 voluntary participants from the study where asked these five questions along with some secondary questions that will be explained. Each was also given an opportunity to discuss whatever they considered to be important.

Waugh and Streib (2006) contend that local responders must be prepared to deal with major incidents and “stand on their own.” This is because it may take days or weeks for help to arrive. Every emergency manager that responded to this study agreed with the assessment that “all disasters are local” in their interview. They depend most heavily on local resources. Next are adjacent counties, followed by state and federal assistance. The National Guard is in last place as far as a resource. The NGO or Non-Governmental Organization that is mentioned most frequently in this study is the Red Cross.

Waugh and Streib (2006) reported that the National Fire Protection Association or NFPA 1600 is an international standard for the overall performance of emergency management programs. Their Best Practices standard is called, “emergency management accreditation program” or “EMAP.” An advisory committee is required to represent stakeholders and promote collaboration. A baseline is established. A critical aspect is cooperation and collaboration of all

participants including NGOs. The current study is similar to the NFPA 1600 because it involves some of the same mechanisms, but focuses more heavily on meeting the requirements of people with functional needs. As each of the “best practices” that was culled from the available literature is considered, the emergency managers in this study responded as follows:

1. Inclusion of people with functional needs in the planning for disasters including assessing shelters, sirens and all parts of an emergency operations plan. A very small number, 5 emergency managers out of 35, have this system in place. A few others have voiced a desire to start this approach to planning. The vast majority say they have planned for people with functional needs yet they have not even asked people with functional needs for their input.
2. Include Experts at the state and local level as consultants at the emergency operations center during exercises drills and real life disasters. Here again very few, three emergency managers have people with functional needs or their care givers working on committees or in the EOC in times of emergency.
3. Recruit people with disabilities to serve on CERT teams, Citizen Corps and Medical Reserve Corps to prepare for disasters in such a way as to always include plans for people with functional needs. Only two agencies report actively recruiting volunteers to serve on CERT or Medical Reserve Corps who are connected to the Functional needs community.
4. Obtain GIS technology to identify all individuals who are living alone with functional needs. Also use GIS to identify resources that are available to assist people with functional needs in evacuation, with needs for electricity, food water, etc. Only one Emergency Manager reports a vibrant system in place to locate people with functional needs.

5. Develop a system of “safe rooms” in senior centers, churches schools and other public buildings that are away from flood zones, easily accessible for people with disabilities and built or reconstructed to with stand at least a level F5 on the modified Fujita scale for tornados. These shelters should be fully prepared with water food and power from electric generators. No emergency manager reports having funding for this program of safe rooms, but at least one is trying to find the matching funds to obtain a federal matching grant to develop this safe room program.

Scoring: by giving a series of points for each of the “best practices” the participants are graded as to the level of professionalism, preparedness, and collaboration with people with functional needs and medical professionals. A ten is a perfect score. Each item of above is worth two points. Emergency managers can earn two points if they report that they are fully engaged in each one of the best practices. They can receive one point if they are seen as “moving toward” engaging in the best practice. The 38 emergency managers were given a random number and a short description of their location and size by population according to the 2008 census.

### **Limitations**

Limitations of the study implicate many other important considerations. Among these considerations are: “triangulating, validating, reliability, and generalizability. Triangulation is critical in qualitative research (Stake, 1995). Triangulation comes from celestial navigation. The stars were used to locate position on a map using at least three points. In this dissertation an attempt has been made to use multiple methods in order to develop a “substantial body of uncontestable description (Stake, 1995, p. 110).” The methods in this dissertation include,

survey, interviewing, participatory observation and documentary investigation. This satisfies the requirement to use multiple sources of evidence (Yin, 2003, p. 97).

Validation involves “trustworthiness, authenticity and credibility,” (Creswell, 2009, p. 191). Effective triangulation promotes improved validity. “Bias” checking is also important. The research must do some soul searching to assure that the study is not biased. If a researcher has a case study with an “agenda” that is demanding a certain outcome based upon certain preset needs of the sponsor of the study for example, bias is very likely (Salant and Dillman, 1994, p. 26). One should ask the same question the detective asks involving bias, “Who stands to profit (Levin, 2003, p. 25)?” Non- response bias is a very big problem in mailed surveys. Since the method of surveying in this study involved mailing a request prior to a telephone survey and interview this is a consideration. Mailed surveys with response rates of over 30 percent are rare. Response rates of 5 to 10 percent are not unusual for mailed surveys (Alreck and Settle, 1995, p. 35). In the current study of 175 emergency managers, 38 responded for a response rate of 22.17 percent. This would indicate that the response rate meets validation standards.

Reliability includes a ruler. A ruler is a very good “measuring stick.” In like manner it is important to develop tools to assist in assuring reliability (Fink, 2009, p. 41). Reliability includes “test-retest” and internal consistency (Yang and Miller, 2008, p. 208). In interviewing, for example, it is good to use restraint in conducting interviews. Do more listening than talking. Some of these procedures include a brief introduction; try to make an impression upon the subject regarding the importance of the topic. Be flexible if a subject wants to move off the question list and make an observation. Interview people alone; this will cause less distractions. Follow the question list ask and each person all of the questions. Finally,

interviewers should follow all instructions (Fink, 2009, p. 40). Stable responses from similar interview conditions promotes reliability. Obtaining the same answers from responders at different times is evidence of reliability (Denzin, 2009); (Champion, 2006).

Generalizability is a critical part of research. People may wish to use the outcomes of this study to draw conclusions about collaboration among emergency managers, health care professionals and people with disabilities. This is a hard question because every study is a human endeavor which means that every study has some degree of error. The best thing to do to avoid misunderstandings about generalizability is to “delimit” or “confine” the study. So, it is important to say that this study is limited to the Midwest during the time of 2010 to 2012. This narrows the scope of the study in order to avoid misunderstandings about generalizability (Creswell, 1994, pp. 110, 111). A fatal flaw in many case studies is to attempt a *statistical* generalization as the only way to report results of a study (Yin, 2009, p. 38). Cases are not sampling units. It is an *analytic* generalization meaning that it is a template with which to compare whole case studies with other case studies. If two or more cases support a theory replication can be claimed as this is a “level two inference” (Yin, 2009, p. 39). Since this case study involved 38 different cases it indicates some trends in the Midwest toward improved collaboration among some emergency managers, health care providers and people with disabilities. It does not say that there was a percentage improvement, but an indication of a trend toward improvement in many counties. Finding *meaning* is an important part of analyzing these case studies. Generalization is an important aspect of making meaning out of both quantitative and qualitative studies (Thomas, 2003, p. 82). It is important to recognize the limitations like the lack of statistical generalizations. Some may say that this study is not “empirical” and therefore not important. But, boundaries are important to reach an understanding of the meaning of the

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study (Rodríguez, Quarantelli and Dynes, 2007, pp. 62, 63). The best approach is to perform multiple future case studies in different regions to determine the progress being made on collaboration in planning and responding to disasters among emergency managers in order to establish reliability by replication.

### **Summary**

In summary the Methodology chapter considers some other studies and how they were structured before focusing in on how this study is structured. It involves both quantitative surveys and qualitative interviews which develop a multilayered rich inquiry into the question of levels of collaboration among emergency managers, health care professionals and people with disabilities.

## Chapter IV.

### Results

After collecting data from the emails and mail, telephone interviews were conducted from October 2011 through March 2012 with 38 emergency managers being most cooperative. Most were very cooperative. A questionnaire was used to control this author and keep the study moving forward. Also, individual emergency managers were allowed to amplify or add comments at certain points during the questions. In some cases face to face interviews were conducted when convenient. In some cases multiple follow up telephone interviews were conducted for clarification. While the results of this study are not generalizable to larger groups, it is interesting for purposes of a taking a snap shot of the level of collaboration of this group of emergency managers with local health care providers and people with disabilities.

### Participants' Background

Data was collected from total of 38 respondents. As demonstrated in Table 1, respondents were from a variety of geographic locations. The largest numbers of participants were from the North East Indiana, ( $n = 7$ ) North Eastern Ohio region ( $n = 4$ ) and the West Central Ohio region ( $n = 4$ ). Figure 1 is a graphic representation of the geographic distribution.

Table 1

#### *Participants' Geographic Location*

Location	<i>n</i>	<i>percent</i>
Central Indiana	1	2.6
East Central Indiana	1	2.6
North Eastern Indiana	7	18.4



North Central Indiana	2	5.3
North East Ohio	4	10.5
Northern Indiana	1	2.6
Northern Central Indiana (Near Indianapolis)	1	2.6
North Western Indiana	1	2.6
North Western Ohio	1	2.6
Southern Indiana	3	7.9
South Central Indiana	1	2.6
South Eastern Ohio	1	2.6
South Western Ohio	1	2.6
South Western Indiana	1	2.6
South Western Ohio	3	7.9
Western Ohio	1	2.6
West Central Indiana	2	5.3
West Central Ohio	4	10.5
Western Ohio (Near Cincinnati)	2	5.3
Total	38	100

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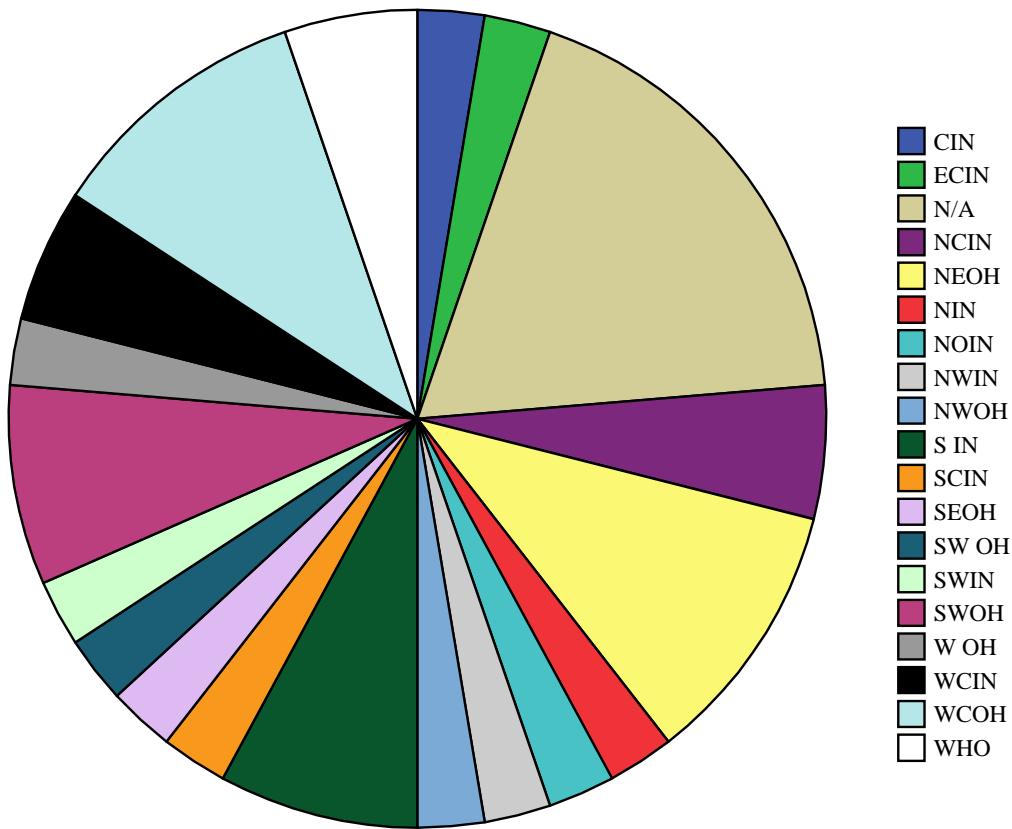


Figure 7. Geographic location.

Participants had previous experience as an emergency manager and other related experience (e.g., as a police officer or fire fighter). Emergency Managers had a mean of 9.74 years ( $SD = 6.74$ ) of experience as a emergency manager; six years of experience was the most common number of years of previous experience in this area. Participants had a mean of 7.89 years ( $SD = 9.68$ ) of other related experience, zero years of experience was the most common number of years of previous related experience. There was very little formal or informal training. Participants indicated an average of 1.37 years ( $SD = 1.82$ ) of formal/informal training with zero

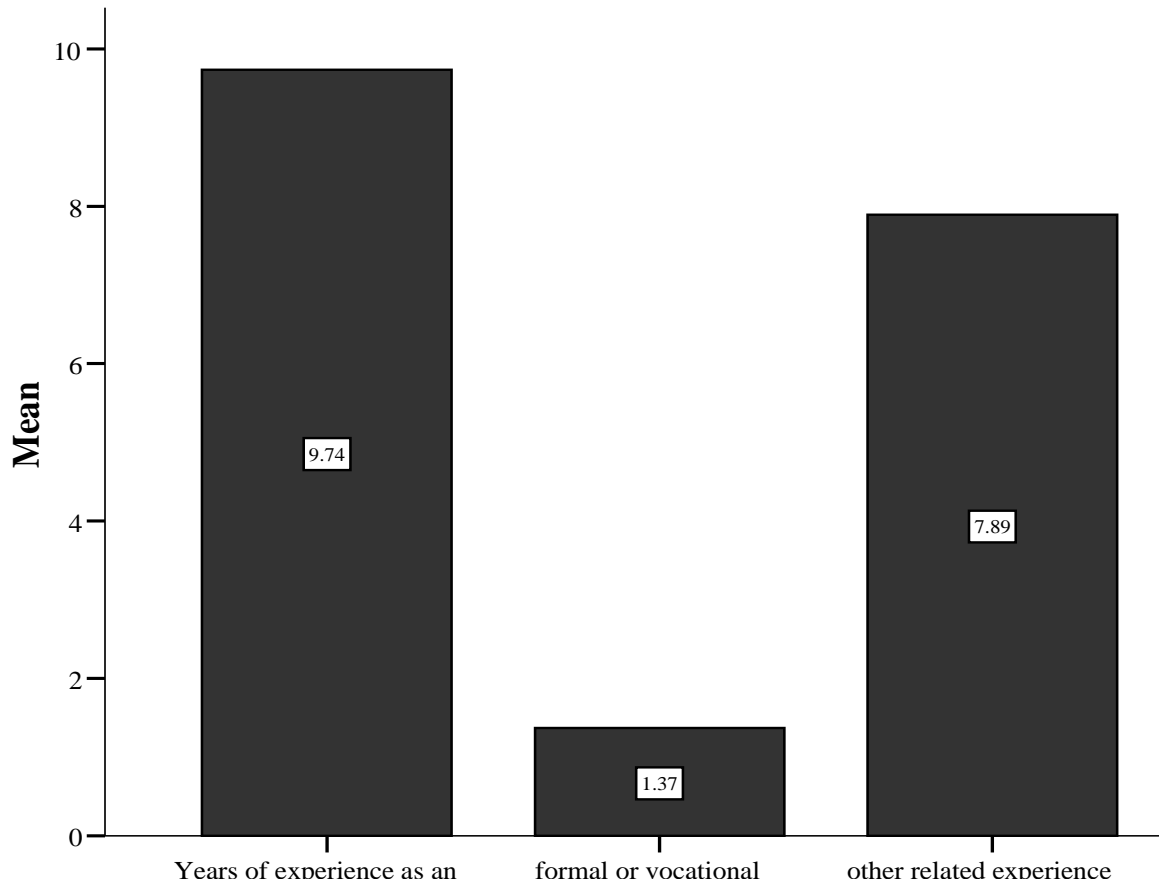
years of formal/informal training being the norm. The mean years of experience as an emergency manager, mean years of related experience and mean years of formal and informal training are represented graphically in Figure 8.

Table 2

*Years of Experience as an Emergency Manager, Other Related Experience and Training*

Experience and Training	<i>N</i>	Min.	Max.	<i>M</i>	<i>SD</i>	Median	Mode
Years of experience as an emergency manager	38	1	30	9.74	6.74	8.50	6
Years of other related experience	38	0	32	7.89	9.68	2.50	0
Formal or informal or vocational training	6	0	6	1.37	1.82	1	0

*Note.* *SD* = standard deviation, *M* = Mean, Min. = minimum, Max. = Maximum, *N* = the number of responses.



*Figure 8. Years of experience.*

Thirty eight participants were asked five primary questions and some additional secondary questions. Each participant was also given an opportunity to make open ended comments. The results for each question are presented in this section.

Many of the participants in this study fall into a group that has not planned well for emergencies according to the best case standard above. There are many reasons, most say they cannot afford to do better. Experts argue they do not have enough time. Some are oblivious and think their plan is great! All responses are considered in turn against the best practices standard and are rated accordingly.

### Question One: The American Red Cross

The first question was in regard to the American Red Cross. Both the Salvation Army and American Red Cross are highly recognized participants across the country in VOAD or “Volunteers Organized for Disaster” (FEMA 2010). More specifically, the results here indicate whether participants mention the American Red Cross or Salvation Army in the planning for disasters. Many well-recognized emergency management administrators have a very high level of collaboration with the Red Cross and Salvation Army (Brown, 2010). The analysis revealed that the majority of respondents did not mention the Red Cross ( $n = 29$ ). In contrast, only eight participants mentioned the Red Cross (see Table 3 and Figure 9). This indicates a lack of collaboration with a highly visible member of the health care volunteer community. But, a wholesale giving over of the emergency planning process to volunteer groups violates the law according to the ruling in federal court in CALIF v. Los Angeles \_\_\_ Fed Supp\_\_\_ (2011). It is important to strike a balance between wholesale surrender of emergency planning and response and a collaborative all inclusive planning process.

Table 3

*Frequencies and percentages for Mentioning Red Cross*

Response	<i>n</i>	percent
No	29	76.3
Yes	8	21.1
N/A	1	2.6
Total	38	100

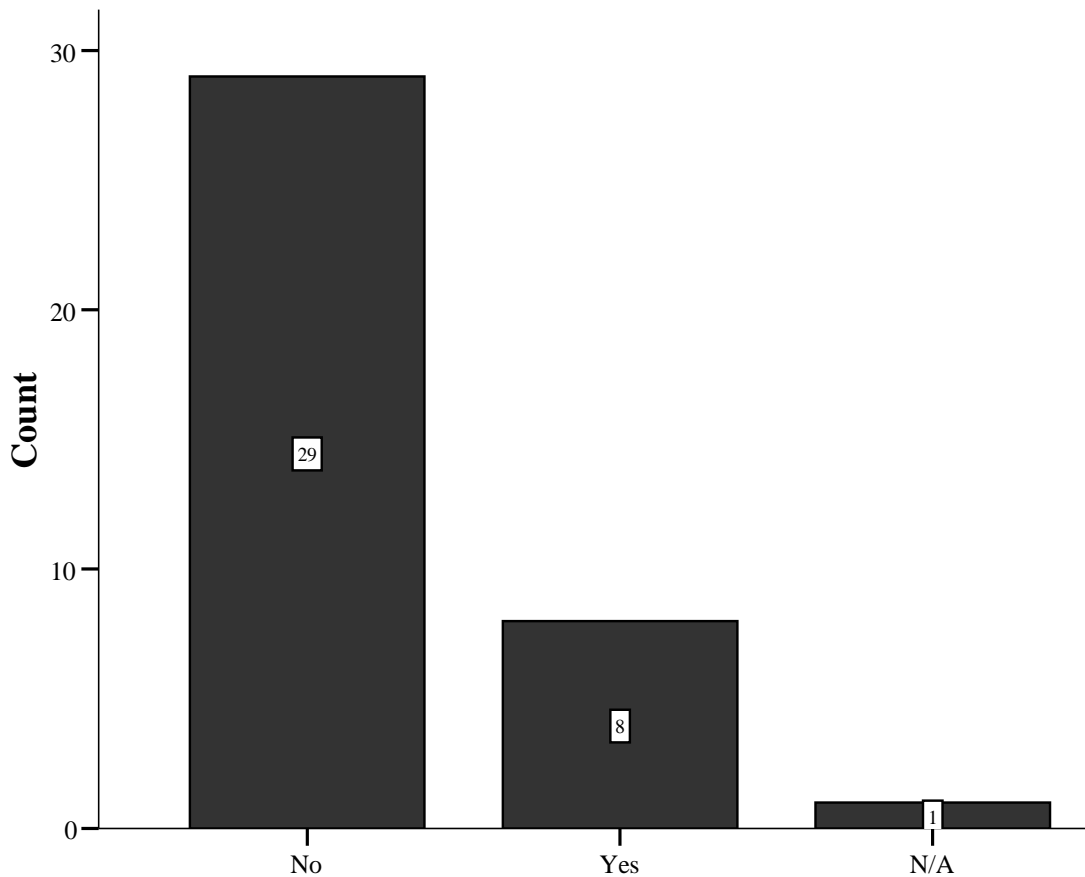


Figure 9. Mentioned the Red Cross.

### **Question Two: Inclusion of People with Disabilities in Exercises for Disasters**

The second item addressed inclusion of people with disabilities in exercises for disasters. A little over half of the respondents indicated that they include people with disabilities in exercises for disasters ( $n = 21$ ); whereas 17 respondents indicated that they do not include people with disabilities in exercises for disasters (see Table 4 and Figure 10). This is also important because it indicates a lack of collaboration with people with disabilities in the planning for disasters. It appears that many emergency managers prefer to plan for people with disabilities

instead of working together. But, based on the prior research by Fox (2006) and White (2004) this is an improvement. Both of those national surveys of emergency managers show that very few emergency managers worked at all with people with disabilities in planning or training for disasters. In 2005 and 2006 of 30 EMA directors surveyed, only four (13 percent) were working collaboratively with people with disabilities in planning and or exercising for disasters. The results of this study show results of over 55 percent. While including one person with disabilities in emergency exercises is a huge improvement over past practices, there is still room for improvement because Markenson et al. (2007) recommend including multiple people with disabilities from multiple functional needs backgrounds. That means, for example, you would not just include a drill to remove a person in a wheelchair from a house during a flood, but you would also evacuate a person who is blind or deaf or both.

Table 4

*Frequencies and percentages for Exercise with People with Disabilities*

Response	<i>n</i>	percent
No	17	44.7
Yes	21	55.3
Total	38	100

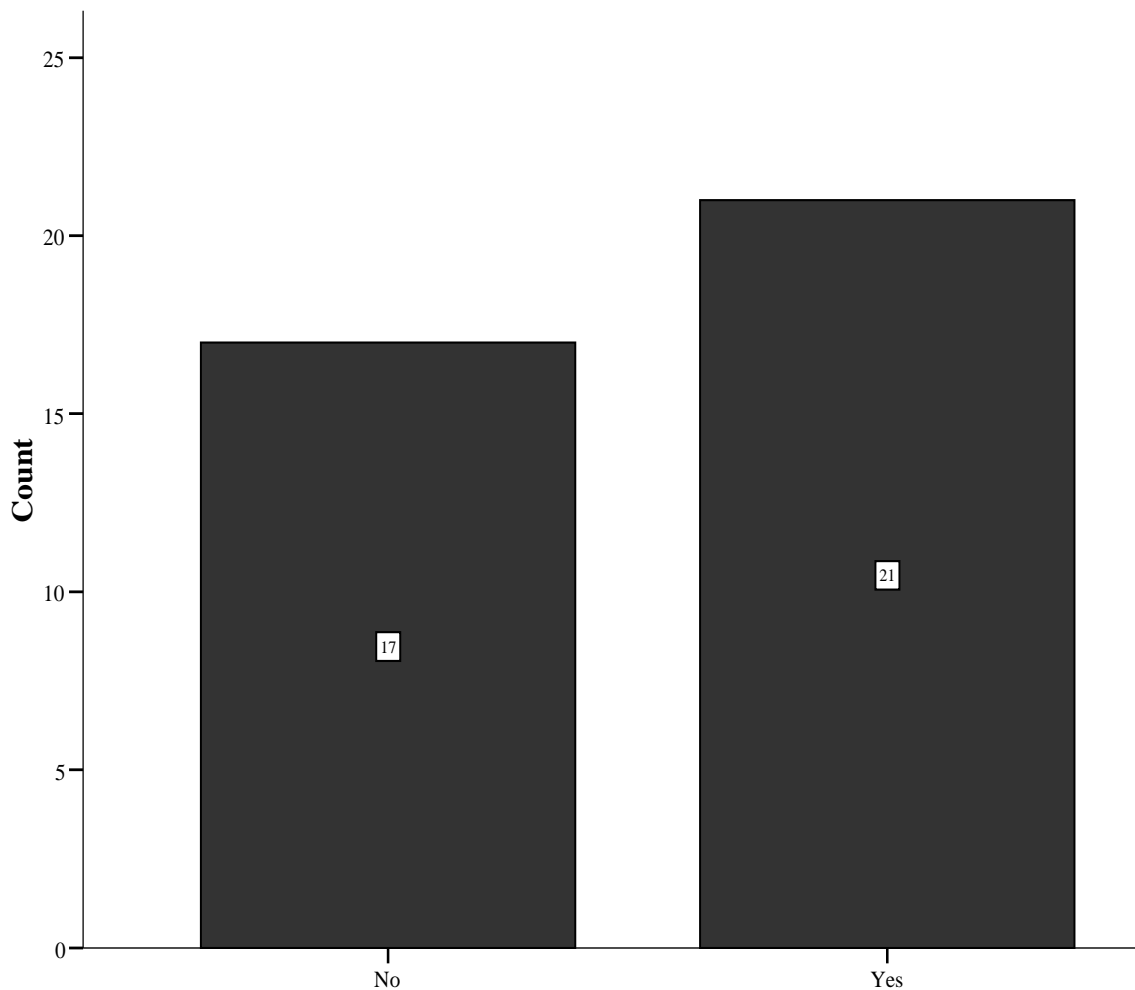


Figure 10. Inclusion of people with disabilities in exercises for disasters.

### Question Three: EMA Director Met with People with Disabilities

The third item addressed whether the EMA director actually met with people with disabilities while planning disaster response. In certain cases respondents indicated how often they met with people with disabilities. One person responded yes, while nine respondents indicated “no.” Over 50 percent ( $n = 21$ ) of the respondents indicated they often met with people with disabilities to plan the disaster response; seven respondents indicated they met with people with disabilities to plan the disaster response one time (see Table 5 and Figure 11).



Table 5

*Frequencies and percentages for EMA Director Met with People with Disabilities*

Response	<i>n</i>	percent
No	9	23.7
Yes	1	2.6
1 time	7	18.4
often	21	55.3
Total	38	100

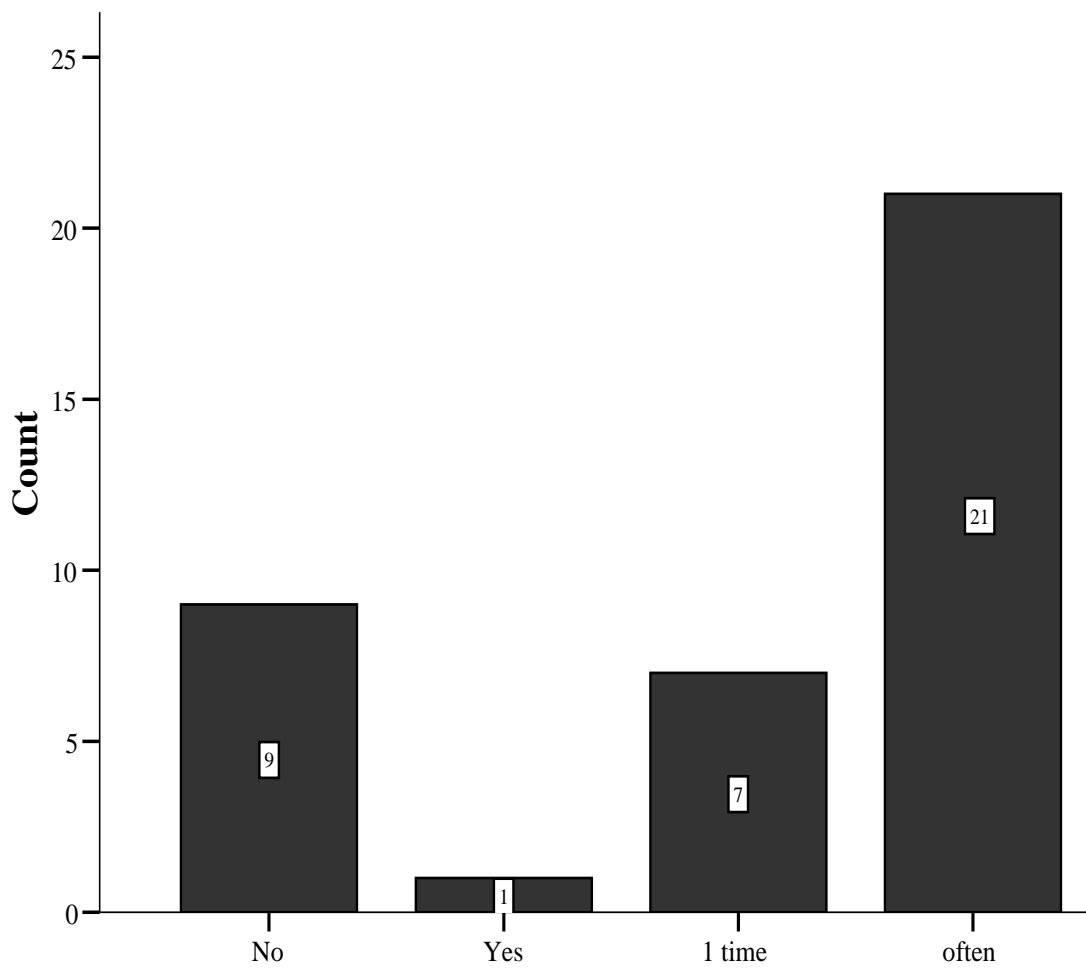


Figure 11. EMA director met with people with disabilities.

#### Question Four: Met with Health Care Professionals

Whether or not respondents met with health care professionals as part of the planning was assessed. In certain cases respondents indicated how often they met with health care professionals to plan the disaster response. One person responded yes, while five respondents indicated “no.” Roughly 73 percent ( $n = 28$ ) of the respondents indicated they often met with health care professionals to plan the disaster response; four respondents indicated they met with health care professionals to plan the disaster response one time (see Table 6 and Figure 11).

Table 6

*Frequencies and percentages for Met with Health Care Professionals*

Response	<i>n</i>	percent
No	5	13.2
Yes	1	2.6
1 time	4	10.5
often	28	73.7
Total	38	100

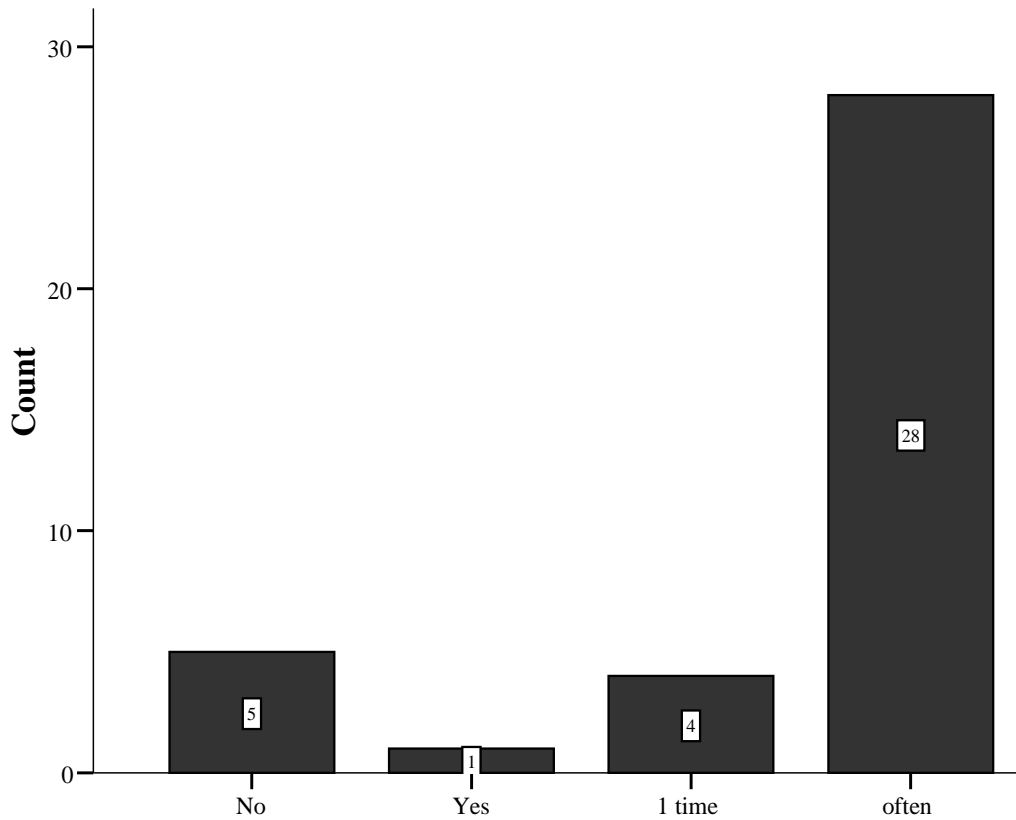


Figure 12. Met with health care professionals.

### Question Five: Inclusion of People with Disabilities in Planning for Disasters

A little over 97 percent ( $n = 37$ ) of respondents indicated that they include people with disabilities in the actual planning for future disasters. Only one respondent indicated that they do not include people with disabilities in the actual planning for future disasters (see Table 7). The responses are represented graphically in Figure 7.

Table 7

*Frequencies and percentages for Inclusion of People with Disabilities in Planning*

Response	<i>n</i>	percent
No	1	2.6
Yes	37	97.4

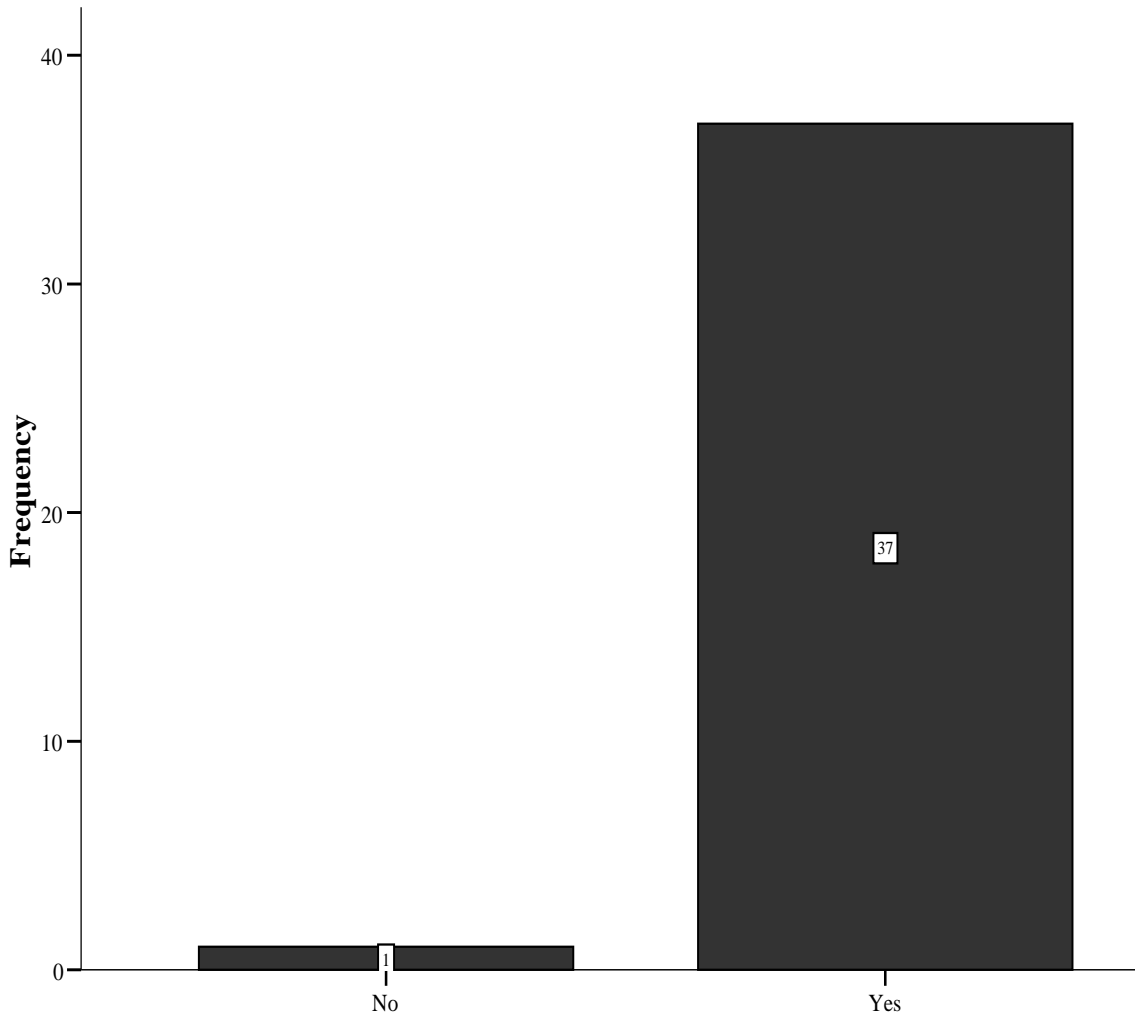


Figure 13. Inclusion of people with disabilities in planning.

### Qualitative Factors

In addition to the more compelling questions above, each emergency manager in this study was asked some Likert scaled question (“Rate this from 0 to 5, 0 being totally inapplicable to your county and 5 being very serious or important.”) Each emergency manager was asked to rank various types of disasters. Almost all rated flooding, ice, snow and tornadoes as the highest

“very serious” or number 5. Terrorism was seen by most emergency managers as 2., “not serious” or 3., “somewhat serious” for their community. There were some exceptions. Those counties that were in or near major urban centers classified terrorism much higher as at least a 4., “quite serious” or a 5., “very serious.” Specific examples of instances of different types of emergencies were then requested. Nearly all (over 30) mentioned an incident that occurred in 2008 while a few mentioned 2006 and 2008. A handful indicated that they had not had anything that could be characterized as a disaster in their tenure as emergency manager. When asked for more detail, snow, ice Storms, floods or tornadoes were mentioned by all but one emergency manager. One mentioned a collapsed building scenario that occurred and trapped some injured people in 1990. In looking at the data which was mentioned earlier in this paper about frequency of types disasters, all of the prior studies are consistent with the experience in this study, natural disasters are becoming more and more frequent (FEMA, 2012). The year 2008 was an especially bad one for the Midwest (FEMA, 2012);(NCDC, 2009). This would indicate some degree of triangulation between the available data and the reports of emergency managers that participated in this study.

When asked about planning for disasters most emergency managers indicated that they had recently revised their plan within the last five years. Almost all indicated that they included people with disabilities in their plan. One insisted that they did not have any money for such a thing, another one said, “The Red Cross takes care of that.” Each was asked about using volunteers in planning and responding to disasters and all indicated that they were very dependent on volunteers since their budget was very small. There were 21 emergency managers who said they meet frequently with people with disabilities to include them as volunteers in the planning for disasters and exercises. There were 16 who indicated that they do not meet with

people with disabilities but they know what to do for everyone, so it is not necessary to meet more often. This attitude of course runs afoul of many expert opinions and even some litigation that was mentioned earlier (CALIF. v. Los Angeles, 2011). Most emergency managers indicated that they have learned a lot by working closer with health care professionals and people with disabilities. Two emergency managers alluded to the fact that they work in close cooperation with nursing home owners and senior living centers. Although, a nurse and a nurses aid who work as employees of a nursing home indicate that they are never prepared for disasters. It is all they can do to keep up with the day to day operations of the nursing home (Brestwick, 2010). This topic bears further inquiry.

Beginning on March 5, 2012, and throughout the week until March 30, 2012, the respondents were contacted for additional questions based upon emergent factors that were found in the responses. Emergent information often drives qualitative research (Creswell, 2004, p. 175). Five additional open ended questions were asked of 31 emergency managers who were available from the original group of 38.

One question involved whether the emergency manager had considered trying to recruit parents of people with disabilities as volunteers to assist with planning for disasters or if actual people with disabilities could serve on a committee as some emergency managers had reported in the earlier interview in Fall of 2011.

A second question involved use of safe rooms and GIS as had been suggested by some emergency managers (Scavo, 2008, p. 314); Chen, 2008, p. 324). Research indicates that GIS is especially good to locate people with disabilities long before a disaster happens, then when a disaster is imminent, first responders can use the GIS data to locate and evacuate people with

disabilities. Some emergency managers in Southwestern Ohio are working very hard on this method of locating and planning for people with disabilities (See Appendix VI).

A third item involved Arganoff’s study (2003, p. 10) which concluded that an increase in meetings between members of different agencies develops trust which leads to collaboration.

The fourth question related to what percentage of people, if any, were disabled who participated in the exercises or drills that the emergency manager conducted. Markenson et al. (2007) had recommended that all exercises include at least 5 percent of people with varying disabilities to participate in an exercise.

The fifth and final question was whether the emergency manager had anything new to report in regard to this topic, collaboration among emergency managers, health care professionals and people with disabilities in planning for and responding to disasters.

### **Responses to the First Open-ended Questions**

Everyone was given an open ended question at the end of the survey. The author condensed their words to fit the space available on the form. The first sets of answers are from the open ended question from fall of 2011.

	Frequency	percent	Valid percent	Cumulative percent
We have all inclusive drills	1	2.6	2.6	2.6
We include assisted living in drills	1	2.6	2.6	5.3
Big City	1	2.6	2.6	7.9
Building collapse 90 H 1 N1 helped us	1	2.6	2.6	10.5
We are building trust now!	1	2.6	2.6	13.2
Cooperation, not collaboration yet	1	2.6	2.6	15.8

Drill was an eye opener	1	2.6	2.6	18.4
excellent collaboration	1	2.6	2.6	21.1
GIS	1	2.6	2.6	23.7
We have good communication	1	2.6	2.6	26.3
We have a good plan	1	2.6	2.6	28.9
We include the health dept	1	2.6	2.6	31.6
We include PWD in plan response	1	2.6	2.6	34.2
We include all affected people	1	2.6	2.6	36.8
We have limited staff and resources	1	2.6	2.6	39.5
PWD: mobility is a problem	2	5.3	5.3	44.7
We have a multi county spec needs plan	1	2.6	2.6	47.4
Our plan needs work	2	5.2	5.2	55.2
We are networkers	1	2.6	2.6	57.8
No	4	10.5	10.5	68.3
No useless 5 lb plan	1	2.6	2.6	71.1
We have No resources	1	2.6	2.6	73.7
Nursing home is our focus	1	2.6	2.6	76.3
OXYGEN	1	2.6	2.6	78.9
Our plan is being revised	1	2.6	2.6	81.5
Our plan in revision	3	7.9	7.9	88.4
PTSD is a problem after disasters.	1	2.6	2.6	93.0
Red Cross	1	2.6	2.6	95.6
Red cross handles our plan.	1	2.6	2.6	97.4
Special needs group	1	2.6	2.6	98.6
We have trouble locating	1	2.6	2.6	100.0



transportation

Total	38	100.0	100.0
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### **2012 Follow Up Questions**

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The author made numerous telephone calls in 2012 to follow up on any changes or developments and tried to contact all 38 emergency managers who previously responded.

Contact was made with 31 out of the original 38. These questions were asked:

**Question 1. Have you begun recruiting volunteers to represent People with Disabilities (PWD) in planning and responding?**

Of the managers who participated, 25 of the 31 emergency managers that participated indicated that they were making increased efforts to find people with disabilities or their representatives to participate on a planning committee. Six indicated that while they are interested in this idea, they have been extremely busy with tornadoes in their area since February, 2012. They hope to return to this idea when things settle down in the future.

**Question 2. Have you found that using GIS and safe rooms improves survivability and transportation of People with Disabilities?**

All responders, (31) reported that they were interested in the information on GIS. But 28 reported that they were having some difficulty in working out the details on how to incorporate GIS in their county.

Only a handful (3) reported that they were fully functional in using GIS. In central and southwest Ohio GIS is currently being used to identify people with disabilities in order that all levels of emergency response, (police, sheriff, paramedics and fire fighters) could respond effectively to people that they knew in advance had some level of disability. No emergency

manager indicated any interest in safe room technology for large scale responses such as in

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senior centers or schools. No one felt that they have sufficient resources to endeavor to adopt such an expensive solution to the problem of sheltering people with disabilities in spite of recent tornadoes which demonstrates up the likely need for such a solution (Waugh, 2004).

**Question 3. Have you found that networking and increase in meetings builds trust and collaboration with health care professionals and people with disabilities?**

One County, Kosciusko County, Indiana actually invited the author to attend a broad-based planning meeting in Warsaw, Indiana. Something new emerged from the meeting. It was learned from the local hospital administrator that a very large number of mobile home dwellers, many elderly or disabled, tend to self- evacuate to the lobby of the hospital whenever there is a tornado warning in their area. While the hospital does not mind this as an immediate solution for these groups, in the long term, the hospital does not have the resources to shelter, feed or care for these people. The Indiana Guard Reserve indicated that they would provide security for the hospital, attempt to get permission to open the armory and provide mass care transportation and medics in these times in order to assist the hospital to relieve the surge pressure during tornados. It is remarkable to remember that the hospital did not even attend these meetings until the pandemic flu incident. This is just one example of recent collaboration among a network of government agencies, volunteers and private companies on the problems that arise during a disaster. It also includes a possible collaborative solution working across agency, volunteer, private and public borders.

Others from throughout the Midwest reported similar improvement in a collaborative spirit among health care and emergency management professionals as a result of more frequent meetings. But, many reported limited or no involvement of people with disabilities because emergency managers can look in a phone book and find the administrator of a hospital. It is more

difficult to identify people with disabilities who would be willing to participate in these meetings. Most of the people who report collaboration with individuals with disabilities actually new the person before or are related to them.

**Question 4. How many people with different disabilities participated in drills or exercises?**

21 of the 31 emergency managers who responded to this question reported having only one person with a disability participate in their drills or exercises. One emergency manager reported a very good collaborative relationship with a nursing home which participated on an exercise involving a mass scale evacuation of most of the 60 residents in the nursing home. The only people who were not moved were gravely ill and near death. This was a major undertaking and fortunately the nursing home bore the cost of transportation based upon a high level of interest by the home office of the corporation. This exercise was viewed as useful across the board for many other nursing homes in the corporation and across the membership of a trade group of nursing home owners. Ten reported that while they are interested in this idea, they have not been able, for various reasons, to include people with disabilities in their drills or exercises. Most of this group cited a lack of resources (money) to devote to this aspect of planning.

**Question 5. Have you, the emergency manager, seen any changes or observations since the last conversation that affects collaboration with health care and people with disabilities?**

Just about everyone in the group of 31 report an increase of interest and cross collaboration between emergency managers and health care professionals. Although a much smaller group of 21 reported an increase of collaboration with people with disabilities. One from northwestern Ohio who was mentioned earlier (Item, 17, page 113 above) has a very good ongoing relationship with a nursing home. This came about as a result of a bad winter storm causing a power outage at the nursing home which resulted in an evacuation. The nursing home

was struggling to find ambulances to evacuate the patients. The emergency manager was able to find school buses and ambulances from other jurisdictions using mutual aid agreements with multiple agencies in the area. As a result a long standing friendship, trust and collaborative relationship have grown among the local emergency managers in that county and local nursing home managers. This is an example of a chance occurrence that could be replicated again and again if this information was communicated among the various emergency managers and nursing home operators (Waugh, 2006). Three other managers reported family members with disabilities who have been cooperative in explaining the problems faced by people with disabilities in everyday life. This has helped some emergency managers adapt emergency plans to meet the needs of people with disabilities. One example that was given involves doorway width and stairs. Some emergency managers are checking all possible evacuation shelters to make sure doorways are wide enough to accommodate wheelchairs. Also, any churches, schools or other buildings with stairs are being eliminated from evacuation shelter lists. New shelters which meet all ADA requirements are being sought.

### **Performance Measure Score**

By giving a series of points for each “best practice,” the researcher evaluated the participants with regard to the level of professionalism, preparedness, and collaboration with people with functional needs and medical professionals. Each previously mentioned item was worth two points if emergency managers reported that they were fully engaged in each best practice. Emergency managers received one point if they were viewed as “moving toward” engaging in a specific best practice. A ten indicates a perfect score. The combination of these items is referred to as the performance measure score. De Lancer Julnes and Holzer (2008, p.

105) discussed state and local performance and especially “grassroots” citizen involvement for planning for the future. County level effectiveness was also discussed (quoting Berman and Wang, 2000). Importance of performance measurement was recognized, but implementation of a measurement scheme was also seen as a problem. This tool that has been developed for this study may be useful for emergency managers to grade themselves and their progress over time by revisiting this score card and regarding themselves. This guide offers a coherent, explicit, broad-based, structured, clear, and informative measurement tool (de Lancer Julnes and Holzer, 2008, p. 101 to 103). Performance measurement is important at the county level to provide accountability to the county residents and higher levels of government. Counties are an understudied area, the so called “dark continent” of public administration (Berman and Wang, 2000, found in de Lancer Julnes and Holzer, 2008 p. 128). Johnson, Brignall, and Fitzgerald (2002) also assert that there is a tradeoff between activity and action by managers. Although many participants may see any progress as good, if the change does not result in fundamental ground shift in the way things are done, it is not a true change. Some improvement may be seen as a mere nod to the requirements of higher superiors without a heartfelt need by the local manager being studied to improve, which is motivated by an altruistic wish to achieve improvement in the lives of constituents. Therefore substantial improvement is seen as the true test of these measures.

Descriptive statistics for the performance measure can be found in Table 8. Scores ranged from 15 to 100 with a median score of 73. The score was 72.13 ( $SD = 25.99$ ). A most frequent modal score was 99.

Table 8

*Descriptive Statistics for the Performance Measurement Score*

Variable	<i>N</i>	Min.	Max.	<i>M</i>	<i>SD</i>	Median	Mode
performance measurement score	38	15	100	72.13	25.99	73	99

In summary the Results section compiles and analyzes the results of this study. Then the results are compared to parts of the literature from literature review chapter to see how the results of this study compare to prior studies. Additionally, qualitative information is discussed to provide a better understanding of the data. Finally the limitations of the study are also considered

## **Chapter V.**

### **Summary and Conclusion**

While there are obvious limitations with this study, it is useful in considering the level of progress with this group in the Midwestern states of Indiana and Ohio. This case study considered specific interviews with emergency managers, health care providers, people with disabilities and disability professionals in the Midwest, in the two states of Indiana and Ohio. People from federal, state and local levels of government have been contacted and interviewed. In addition private citizens who, as stakeholders, have something to contribute on the topic of the cooperation, coordination or collaboration between emergency managers, health care providers and special needs populations have been sought out and interviewed. This information was compared to other existing studies on this specific and related topics. The results show that there is still much work to do in achieving an inclusive approach to planning and responding to disasters. But, collaboration is improving with many agencies. Interestingly, not all agencies are large urban centers. Many small emergency management agencies have been working in collaboration with volunteer groups to develop a feasible plan for people with disabilities by asking local health care experts to develop a plan and test the plan with drills and exercises. While earlier studies by Fox (2006) and White (2004) indicate a very poor response to their survey, (4 out of 30 indicated that they had a plan that included people with disabilities), research in this study found 21 out of 38 (55percent) of participants had a collaborative plan with people with disabilities and health care professionals and included people with disabilities in the exercise phase. This is a major improvement from prior studies.

Additional sources for evidence showing an effort to inform and collaborate with special needs populations include internet websites maintained by emergency managers for many of these counties. Many of these websites contain useful information that can educate and help people of all walks of life prepare for emergencies. Some even target information to people with disabilities. Others include links to other websites with even more information to assist people with functional needs and disabilities. In addition, many websites were viewed that are maintained by the counties involved in this study. Some provide for people with disabilities to fill out a form online or contact the EMA office to arrange special accommodation in advance in preparation for an emergency. Other websites are very perfunctory; they may only have a phone number. Still other counties have no website at all. The evidence of a website is not the “be all” of emergency preparedness for people with disabilities, but it is an important step in the right direction. The totals are as follows: 1. In Indiana no county rated as very good because none made any reference to services for people with disabilities, but, A. Those with fully function websites with links to important services (rated good) = 40 websites or 43% of emergency managers. B. Perfunctory sites with static phone numbers = 32 websites or 35% of emergency managers. C. No website = 18 or 20% of emergency managers. 2. Ohio: A. Websites with easy access for people with disabilities = 8 websites or 9% B. fully function websites with links to important services (rated good) = 50 websites or 57% of emergency managers. B. Perfunctory with static phone numbers = 10 websites or 11% of emergency managers. C. No website = 20 or 23% of emergency managers. Other interesting facts include that 2 of the smaller emergency management offices in Indiana have introduced special services for all people which make access to emergency warnings much more accessible this should benefit all people who avail themselves of the services. One is called, “Blackboard connect” and it is being offered by



Newton County Indiana population 14,000. The other is “WENS” or “Wireless Emergency Notification Service.” It is offered by Shelby County, Indiana, population 44,436. Both of these services require voluntary enrollment and could be helpful to people with disabilities.

This dissertation attempted to discover the current state of emergency preparedness, response and recovery in the Midwest in the event of a disaster incident. It calls for additional study into the level of cooperation, coordination and collaboration among emergency managers, health care providers and people with disabilities in planning for, responding to and recovering from disasters.

Only one emergency manager out of 38 reported that his focus includes working collaboratively with local nursing homes (item 17 p. 113 above). This is a pretty poor reflection considering the report from the Inspector General of the Department of Health and Human Services that nursing homes should collaborate with local emergency managers (Levinson, 2006, p. 18 and 20).

Results show that there is still much work to do in achieving a collaborative and inclusive approach to planning and responding to disasters for all people. While 55percent is a major improvement, it means that many people, as many as 45percent, do not have an adequate level of collaboration in planning, training or responding to disasters. Although many emergency managers (37 out of 38) report that they are planning for people with disabilities, only 21 out of 38 meet regularly with people with disabilities in planning for disasters. But, this study is about collaboration among emergency managers and people with disabilities and health care professionals. Emergency managers cannot plan for disaster response for people with disabilities without even consulting them. Furthermore, 21 emergency managers include people with

disabilities in drills and exercises while 17 do not. For a drill or exercise to be effective it must include people with many different kinds of disabilities to be realistic. Likewise, only eight emergency managers include the American Red Cross in participating in planning and exercise for disasters. Yet the Red Cross plays a vital role in finding shelters and housing displaced persons. Of the 38 emergency managers in this study, 28 report that they meet often with health care providers. Here again the number should be 100 percent for an effective plan or exercise, but this is seen as significant progress in the collaboration between emergency managers and health care providers. Markenson et al (2007) recommends that 5 percent of all participants in all exercises be people with various disabilities.

The author participated in the National Level Exercise in Butlerville, Indiana in May 2011 (NLE, 2011). It was noted that no people with disabilities participated. Therefore, it is doubtful that every exercise reported as “including” people with disabilities actually included the five percent of people with disabilities contemplated by the experts like Markenson (2007). Progress is being made, but there is still much work to do to engage in planning, training and responding in the best and most collaborative manner among emergency managers, health care professionals and people with disabilities.

Finally, the answers to questions, which rated participants on best practices, were based on a scale developed in this study ranging from 15 to 100. The median score was 73. While the mean score was 72.13 and the modal score was 99. What is happening is that many Emergency managers are planning FOR people with disabilities (16 out of 38 EMA responses). More importantly it is suggested that all EMA offices should be planning WITH people with disabilities as required by federal law (Freidan, 2005), even though 21 out of 38 EMA offices

responded that they do collaborate in this way. Emergency Managers need a realistic plan for disasters that deals with the needs of people with disabilities. The best way to develop such a plan is to include many people with different kinds of disabilities in collaboration with health care providers in the planning and in exercises and drills (Markenson, et al., 2007).

Looking back at the collaborative governance model (Emerson, Nabatchi and Balogh, 2012), it can be seen that real, effective collaboration requires procedural and institutional arrangements. This means that emergency managers should engage people with disabilities in the process and sort out the relationships with others like people with disabilities and health care providers. In addition emergency managers should exhibit leadership in this process, using many kinds of actions to promote improvement of collaboration. Furthermore, emergency managers need to be more knowledgeable in this area in order to communicate effectively with other groups like people with disabilities and health care professionals. While it is true that emergency managers struggle with too few resources, many times advocates for people with disabilities are eager to volunteer as demonstrated in some of the emergency manager interviews. All in all if emergency managers will adopt a collaborative governance model as advocated by Emerson, Nabatchi and Balogh (2012), progress can be made in solving this problem. Trust is the outgrowth of the numerous meetings among these groups: emergency managers, people with disabilities and health care professionals.

Markenson et al, (2007) contend that the best way to collaborate in this situation is for emergency managers to seek out many different types of people with disabilities to participate in the planning process and response to disasters. While much progress has been made in the Midwest in engaging with people with disabilities and health care providers in the emergency

planning process, much more progress is needed to be more inclusive and collaborative. Future studies in this area should include more research in the area of the extent to which the emergency manager actually engages people with disabilities in planning and response to disasters.

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## Appendix I

### FEMA Record of Disasters

#### From Introduction Chapter 1 Page 4.

**Widespread Drought** (entire year 2008); preliminary estimate of over \$2.0 billion in damage/costs; no reported deaths.

**Hurricane Ike** (September 2008); preliminary estimate of over \$27.0 billion in damage/costs; 82 deaths reported.

**Hurricane Gustav** (September 2008); preliminary estimate of at least \$5.0 billion in damage/costs; 43 deaths reported.

**Hurricane Dolly** (July 2008); preliminary estimate of over \$1.2 billion in damage/costs; three deaths reported.

**US Wildfires** (Summer-Fall 2008); preliminary estimate of over \$2.0 billion in damage/costs; 16 deaths reported.

**Midwest Flood** (June 2008); preliminary estimate of over \$15 billion in damage/costs; 24 deaths reported.

**Midwest/Mid-Atlantic Severe Weather/Tornadoes** (June 2008); preliminary estimate of over \$1.1 billion in damage/costs; 18 deaths reported.

**Midwest/Ohio Valley Severe Weather/Tornadoes** (May 2008); preliminary estimate of over \$2.4 billion in damage/costs; 13 deaths reported.

**Southeast/Midwest Tornadoes** (February 2008); preliminary estimate of over \$1.0 billion in damage/costs; 57 deaths reported.

**Great Plains and Eastern Drought** (entire year 2007); preliminary estimate of over \$5.0 billion in damage/costs; no reported deaths.

**Western Wildfires** (Summer-Fall 2007); preliminary estimate of over \$1.0 billion in damage/costs; at least 12 deaths.

**East/South Severe Weather** (April 2007); preliminary estimate of over \$1.5 billion in damage/costs; nine deaths reported.

**Wildfires** (Entire year 2006); preliminary estimate of over \$1.0 billion in damage/costs; 28 deaths, including 20 firefighters.

**Widespread Drought** (Spring-Summer 2006); preliminary estimate of over \$6.0 billion in damage/costs; some heat-related deaths, but not beyond typical annual averages.

**Northeast Flooding** (June 2006); preliminary estimate of over \$1.0 billion in damage/costs; at least 20 deaths reported.

**Midwest/Southeast Tornadoes** (April 2006); preliminary estimate of over \$1.5 billion in damage/costs;

10 deaths reported.

**Midwest/Ohio Valley Tornadoes** (April 2006); preliminary estimate of over \$1.1 billion in damage/costs; 27 deaths reported.

**Severe Storms and Tornadoes** (March 2006); preliminary estimate of over \$1.0 billion in damage/costs; 10 deaths reported.

**Hurricane Wilma** (October); preliminary estimate of over \$ 10.0 billion in damage/costs; estimated 40 deaths.

**Hurricane Rita** (September); preliminary estimate of over \$ 10.0 billion in damage/costs; estimated 40 deaths.

**Hurricane Katrina** (August); preliminary estimate of around \$100 billion in damage/costs, making this the most expensive natural disaster in U.S. history; circa 1800 deaths - the highest U.S. total since the 1928 major Hurricane in southern Florida.

**Hurricane Dennis** (July); preliminary estimate of over \$2 billion in damage/costs; at least 12 deaths.

**Midwest Drought** (Spring-Summer); preliminary estimate of over \$1.0 billion in damage/costs; no reported deaths.

**Hurricane Jeanne** (September); preliminary estimate of over \$6.9 billion in damage/costs; at least 28 deaths.

**Hurricane Ivan** (September); NY. estimate of over \$14 billion in damage/costs; at least 57 deaths.

**Hurricane Frances** (September); estimate of approximately \$9 billion in damage/costs; at least 48 deaths.

**Hurricane Charley** (August); estimate of approximately \$15 billion in damage/costs; at least 34 deaths.

**Southern California Wildfires** (Oct.–Nov.); estimate of over \$2.5 billion damage/costs; 22 deaths.

**Hurricane Isabel** (Sept.); estimate of approximately \$5 billion in damages/costs; at least 55 deaths.

**Severe Storms and Tornadoes** (May); over \$3.4 billion in damages/costs; 51 deaths.

**Storms and Hail** (April.); over \$ 1.6 billion in damages/costs: 3 deaths.

**Widespread Drought** (Spring–Fall); estimate of over \$ 10.0 billion in damages; no deaths.

**Western Fire Season** (Spring–Fall); \$ 2.0 billion in damages/costs; 21 deaths.

**Tropical Storm Allison** (June); preliminary estimate of approximately \$5.0 (5.1) billion; 43 deaths.

**Midwest and Ohio Tornadoes** (June); \$1.9 billion in damage/costs, at least 3 deaths.

**Drought/Heat Wave** (Spring–Summer); preliminary estimate more than \$4.0 (4.2) billion; estimated 140 deaths nationwide.

**Western Fire Season** (Spring–Summer); more than \$2.0 (2.1) billion; no deaths reported.

**Hurricane Floyd** (Sept.); at least \$6.0 (6.5) billion; 77 deaths.

**Eastern Drought/Heat Wave** (Summer); more than \$1.0 (1.1) billion; estimated 502 deaths.

**Oklahoma-Kansas Tornadoes** (May); at least \$1.6 (1.7) billion; 55 deaths.

**Arkansas-Tennessee Tornadoes** (Jan.); approximately \$1.3 (1.4) billion; 17 deaths.

**Texas Flooding** (Oct.–Nov.); approximately \$1.0 (1.1) billion; 31 deaths.

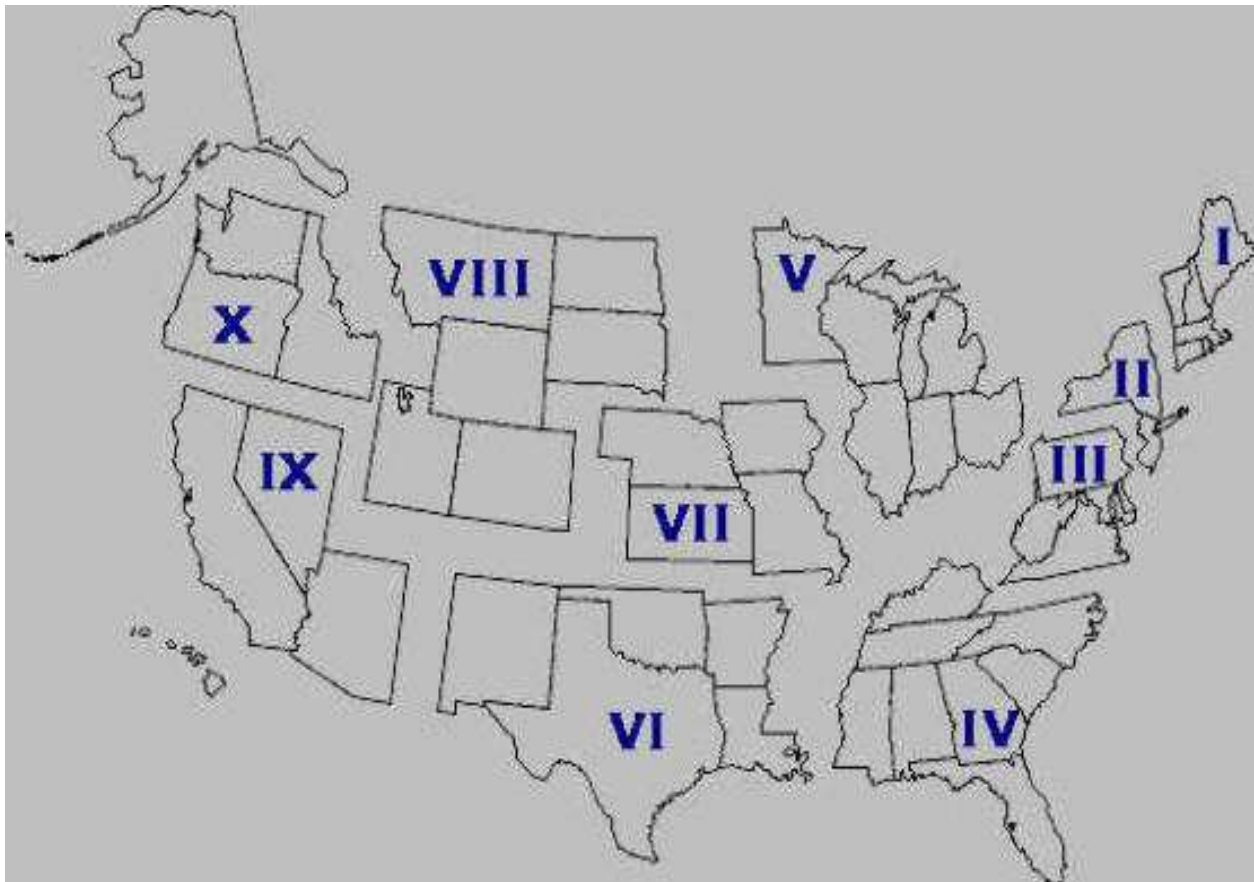
<b>Hurricane Georges</b> (Sept.); estimated \$5.9 (6.5) billion; 16 deaths.
<b>Hurricane Bonnie</b> (Aug.); approximately \$1.0 (1.1) billion; 3 deaths.
<b>Southern Drought/Heat Wave</b> (Summer); \$6.0-\$9.0 billion; at least 200 deaths.
<b>Minnesota Severe Storms/Hail</b> (May); more than \$1.5 (1.7) billion; 1 death.
<b>Southeast Tornadoes and Flooding</b> (Winter–Spring); more than \$1.0 (1.1) billion; at least 132 deaths.
<b>Northeast Ice Storm</b> (Jan.); more than \$1.4 (1.5) billion; 16 deaths.
<b>Northern Plains Flooding</b> (April–May); approximately \$3.7 (4.1) billion; 11 deaths.
<b>Mississippi and Ohio Valleys Flooding and Tornadoes</b> (March); estimated \$1.0 (1.1) billion; 67 deaths.
<b>West Coast Flooding</b> (Dec. 1996–Jan. 1997); approximately \$3.0 (3.4) billion; 36 deaths.
<b>Hurricane Fran</b> (Sept.); more than \$5.0 (5.8) billion; 37 deaths.
<b>Southern Plains Severe Drought</b> (Fall 1995–Summer 1996); approximately \$5.0 (6.0) billion; no deaths.
<b>Pacific Northwest Severe Flooding</b> (Feb.); approximately \$1.0 (1.2) billion; 9 deaths.
<b>Blizzard of '96 and Flooding</b> (Jan.); approximately \$3.0 (3.5) billion; 187 deaths.
<b>Hurricane Opal</b> (Oct.); more than \$3.0 (3.6) billion; 27 deaths.
<b>Hurricane Marilyn</b> (Sept.); estimated \$2.1 (2.5) billion; 13 deaths.
<b>Southern Severe Weather and Flooding</b> (May); 5.0-\$6.0 (6.5-7.1) billion; 32 deaths.
<b>California Flooding</b> (Jan.–March); more than \$3.0 (3.6) billion; 27 deaths.
<b>Western Fire Season</b> (Summer–Fall); approximately \$1.0 (1.2) billion; death toll undetermined.
<b>Texas Flooding</b> (Oct.); approximately \$1.0 (1.2) billion; 19 deaths.
<b>Tropical Storm Alberto</b> (July); approximately \$1.0 (1.2) billion; 32 deaths.
<b>Southeast Ice Storm</b> (Feb.); approximately \$3.0 (3.7) billion; 9 deaths.
<b>California Wildfires</b> (Fall); approximately \$1.0 (1.3) billion; 4 deaths.
<b>Midwest Flooding</b> (Summer); approximately \$21.0 (26.7) billion; 48 deaths.
<b>Drought/Heat Wave</b> (Summer); about \$1.0 (1.3) billion; at least 16 deaths.
<b>“Storm of the Century” Blizzard</b> (March); \$3.0-\$6.0 (3.8-7.6) billion; approximately 270 deaths.
<b>Nor'easter of 1992</b> (Dec.); \$1.0-\$2.0 (1.3-2.6) billion; 19 deaths.
<b>Hurricane Iniki</b> (Sept.); about \$1.8 (2.4) billion; 7 deaths.
<b>Hurricane Andrew</b> (Aug.); approximately \$27.0 (40.6) billion; 61 deaths.
<b>Oakland Firestorm</b> (Oct.); approximately \$2.5 (3.5) billion; 25 deaths.
<b>Hurricane Bob</b> (Aug.); \$1.5 (2.1) billion; 18 deaths.
<b>Texas/Oklahoma/Louisiana/Arkansas Flooding</b> (May); more than \$1.0 (1.4) billion; 13 deaths.
<b>Hurricane Hugo</b> (Sept.); more than \$9.0 (13.9) billion; 86 deaths.

<b>Northern Plains Drought</b> (Summer); at least \$1.0 (1.5) billion; no deaths reported.
<b>Drought/Heat Wave</b> (Summer); estimated \$40.0 (61.6) billion; estimated 5,000 to 10,000 deaths.
<b>Southeast Drought/Heat Wave</b> (Summer); \$1.0-\$1.5 (1.8-2.6) billion; estimated 100 deaths.
<b>Hurricane Juan</b> (Oct.–Nov.); \$1.5 (2.8) billion; 63 deaths.
<b>Hurricane Elena</b> (Aug.–Sept.); \$1.3 (2.4) billion; 4 deaths.
<b>Florida Freeze</b> (Jan.); about \$1.2 (2.2) billion; no deaths.
<b>Florida Freeze</b> (Dec.); about \$2.0 (4.0) billion; no deaths.
<b>Hurricane Alicia</b> (Aug.); \$3.0 (5.9) billion; 21 deaths.
<b>Western Storms and Flooding</b> (1982–early 1983); \$1.1 (2.2) billion; at least 45 deaths.
<b>Gulf States Storms and Flooding</b> (1982– early 1983); \$1.1 (2.2) billion; at least 50 deaths.
<b>Drought/Heat Wave</b> (June–Sept.); estimated \$20.0 (48.4) billion; estimated 10,000 deaths.

## Appendix II

### FEMA Regions

From Introduction Chapter 1 Page 4



## Appendix III

From Chapter 2 page 69



Safe room is engineered to with stand up to 250 mile winds in an “F5” tornado



Safe room from 1974 Xenia Ohio tornado 250 mph winds

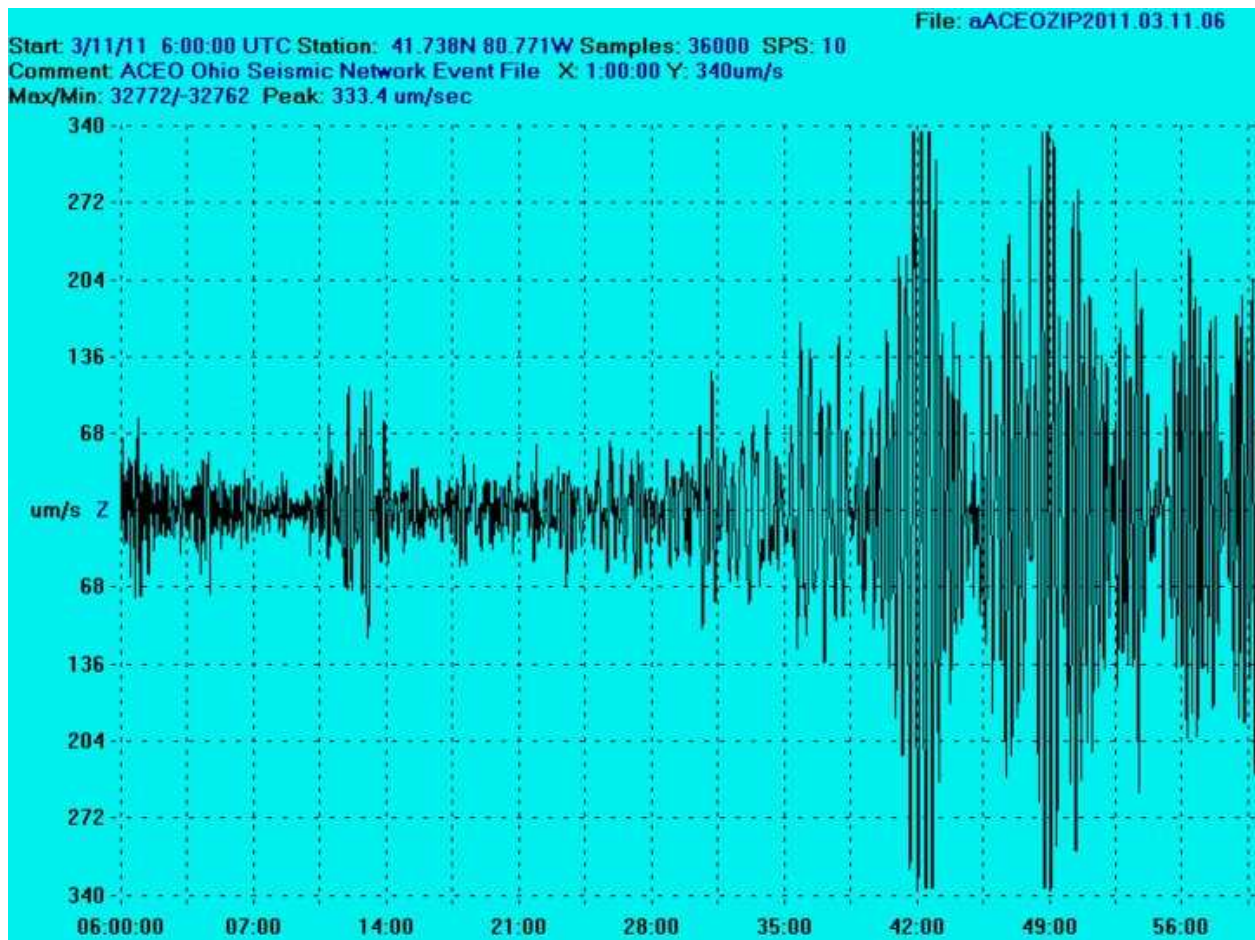


Retrieved April 2011 from:

<http://www.familyhandyman.com/DIY-Projects/Home-Safety/Home-Emergencies/how-to-build-a-storm-shelter/Step-By-Step>

## Appendix IV

Chapter 1 Introduction Page 2 and 3, Seismic record of March 11 2011 Earthquake in Japan detected near Cleveland Ohio



## Appendix V

### From Chapter 4 Evidence of efforts to collaborate between EMA, Health care and PWD and Chapter IV Results.

## Delaware County registry alerts paramedics to special-needs residents

*Monday, April 26, 2010 2:51 AM Columbus Dispatch, Columbus, Ohio.*

BY [DANA WILSON](#)  
THE COLUMBUS DISPATCH

Beth Haner dialed 911 several years ago when her son was having uncontrollable seizures because of a rare form of epilepsy.

Paramedics arrived within minutes. They ran upstairs to his bedroom and quickly treated him. One of the emergency workers told Mrs. Haner later that he had studied the boy's condition for two years.

"It made me feel good," she said. "What a relief that is."

That the paramedic was familiar with the boy's condition wasn't luck. His family was the first to sign up for a special-needs registry at the Liberty Township Fire Department in southern Delaware County.

Liberty Township's registry, which began in 2005, has been expanded countywide. Delaware County now offers residents with disabilities or chronic health conditions more-personalized treatment during emergencies.

A database lists the names and addresses of people who require special assistance. Registration is voluntary, and personal information is protected by medical privacy laws and shared only with emergency workers, said Capt. Bill Piwtorak of the Liberty Township Fire Department.

Firefighters and paramedics had visited with the Haners long before their emergency to gather information about their son.

"There's always a heightened state of readiness when it comes to a child," Mrs. Haner said.

"If you're prepared ahead of time, you have better confidence of knowing it's going to turn out right."

Emergency-management agencies in at least two other central Ohio counties, Fairfield and Marion, are developing similar registries.

In Delaware County, each registrant's address is added to a computer-aided dispatching system, and an alert pops up when a 911 call is made from their home. The system allows emergency workers to tailor their response.

"They're learning about their community, and it's more specific to what they'll be exposed to," Piwtorak said.

Twenty-seven Liberty Township residents are listed. About a dozen more county residents have been added since the registry went countywide in February.

The service is designed for people of all ages, particularly those with physical or mental disabilities or chronic medical conditions. It's also helpful for people with vision, hearing or speech impairments or who speak little or no English.

The database also could be used during a flood, power outage or other large-scale disaster, said Brian Galligher, county Emergency Management Agency director.

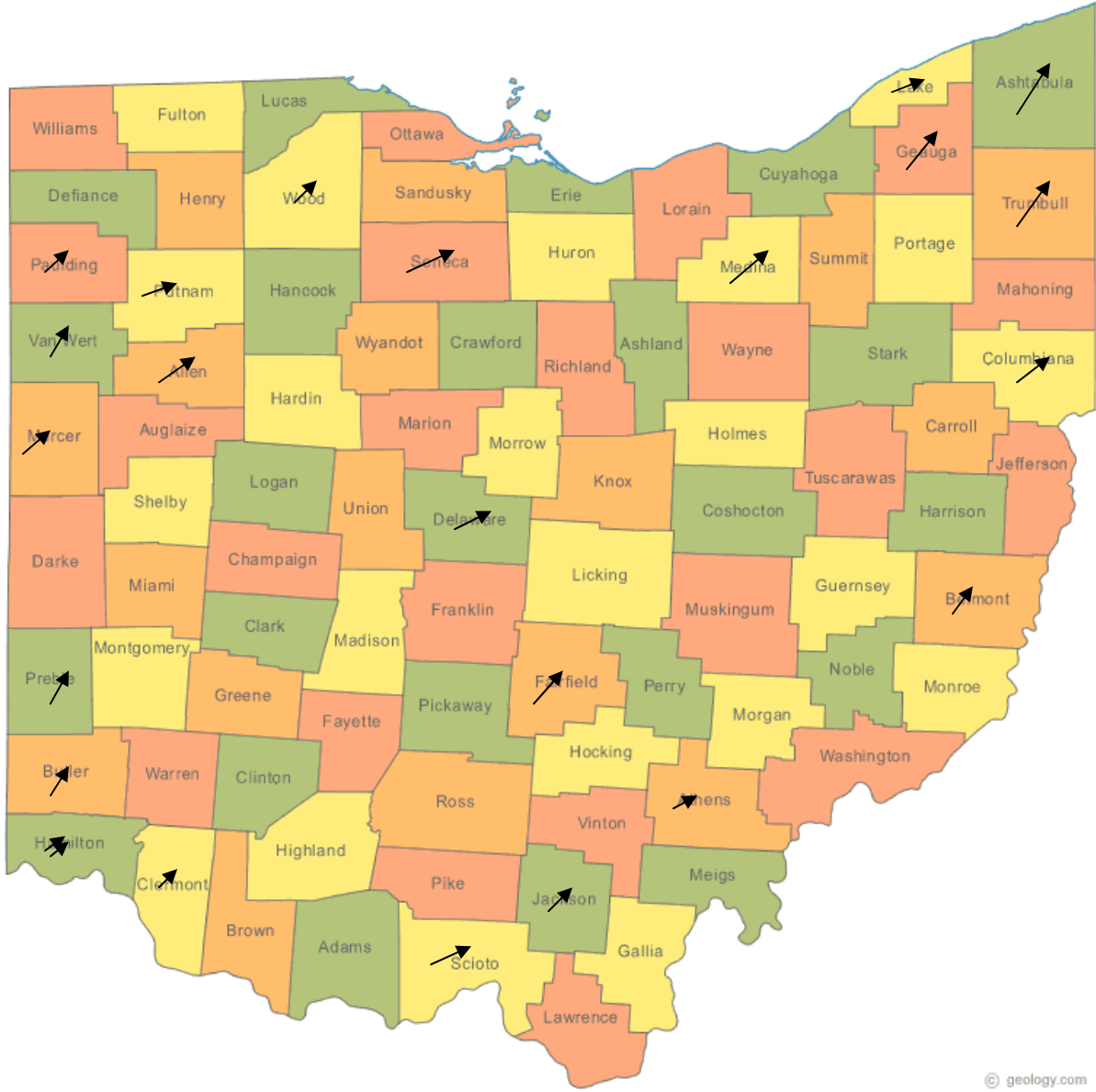
"Think about New Orleans and if they would've had something like this" before Hurricane Katrina hit, Galligher said. "Any EMA director in the state would love to have this."

Delaware County's registry is worth studying, said Mark Anthony, spokesman for the Franklin County Emergency Management Agency. "In doing that, we've got to consider the differences between the two counties," Anthony said. "We've got a larger population and jurisdiction."

Franklin County EMA officials are developing a plan to locate residents who have special needs during disasters, but the concept has not been shared yet with emergency workers.

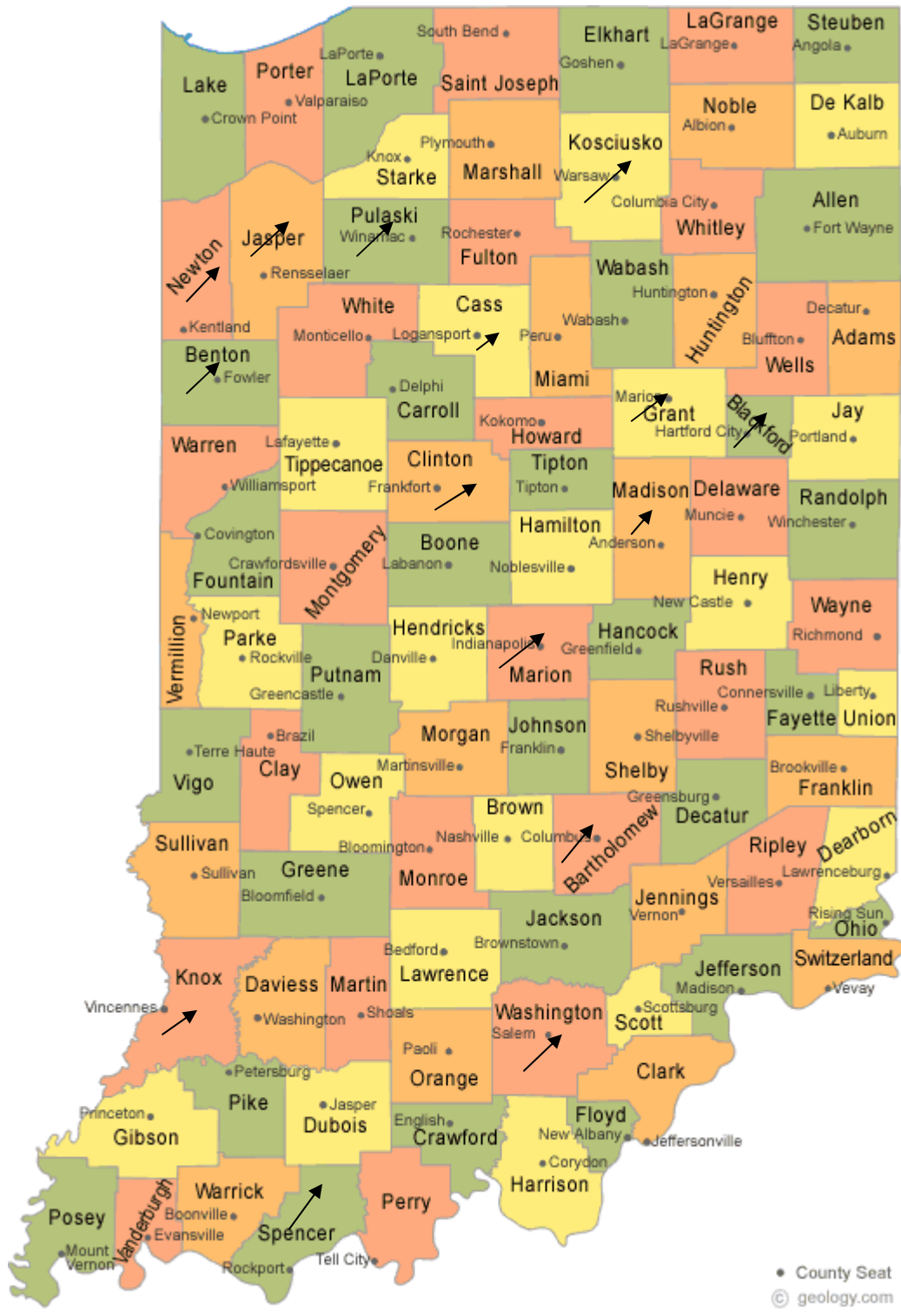
The Licking County Emergency Management Agency established a special-needs registry after the Sept. 11, 2001, attack and encouraged more people to sign up after Hurricane Katrina in 2005, said Jeff Walker, agency director. His office has registered about 1,000 people.

*To register for the Delaware County Special Needs Registry, visit [www.delcospecialneeds.com](http://www.delcospecialneeds.com).*



**Ohio County EMA directors that participated**





Indiana county EMA directors that participated in this study (total of 38 in both states, but some did not wish to be identified).