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Identification of Potential On-Call Partners for Montgomery County, Ohio FAST in Disaster Relief Shelters

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Identification of Potential On-Call Partners for Montgomery County, Ohio FAST in Disaster Relief Shelters

Angela M. Snyder, MPH
Wright State University
Acknowledgements

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Abstract

Objective: The purpose of this study was to identify potential on-call partners for inclusion in Functional Assessment Service Teams (FAST) to serve residents of Montgomery County, Ohio. Functional Assessment Service Teams provide assessment and care for individuals with functional needs following disaster in disaster relief shelters.

Methods: A questionnaire was constructed and administered to 17 agencies in Montgomery County, Ohio that work in the field of emergency management and functional needs support. The questionnaire measured necessities for functional needs groups in emergency sheltering environments. The questionnaire measured three topics: essential services, assessment, and area agencies’ willingness to participate.

Results: A total 11 of 17 (64.1%) completed the online questionnaire. Most agencies (n=10, 91.0%) indicated advocacy and assessment was necessary for individuals with functional needs in disaster relief shelters but only three (27.3%) of the agencies agreed FAST would be effective in Montgomery County, Ohio. All eleven agencies expressed interest in becoming a member of FAST with seven (63.6%) agencies wanting more information.

Conclusions: Overall, the implementation of FAST in Montgomery County, Ohio could provide essential assessment and services for individuals with functional needs following disasters in emergency relief shelters. Exploring the meld of current Montgomery County, Ohio FNSS plans with FAST could also be advantageous and provide groundwork for effective ways to assist individuals with functional needs. Further review of currently used FAST models, more in depth opinions from area agencies and exercises in the use of FAST in Montgomery County, Ohio are needed to determine if FAST will work.

Keywords: Functional needs, FAST, C-MIST, Disaster relief shelters, Advocacy, Collaboration, Essential services
Identification of Potential On-Call Partners for Montgomery County, Ohio FAST in Disaster Relief Shelters

Disaster relief shelters are opened by the American Red Cross and other entities to provide individuals and families’ safe housing, food and water temporarily until other arrangements can be made. Shelters are opened for various reasons ranging from hurricanes and floods, to tornados and fires. The number of shelters open varies largely by the number of disasters that take place in a given year. According to the American Red Cross Disaster Services Program Review, the number of shelters opened in the United States varied from 1,444 in FY 2008 to 212 in FY 2010 (American Red Cross, 2009, 2011). These numbers do not include the magnitude of other disaster relief shelters opened by other agencies throughout the United States. Even though the number of opened shelters has a huge variation from year to year, the number of individuals with functional needs who use the shelters remain constant regardless of the event or amount of shelters opened.

In 2010 the United States had a population of approximately 303.9 million people (Brault, 2012). The Centers for Disease Control and Prevention estimated that 37 million to 56 million of those people lived with a disability or some kind of functional need (Centers for Disease and Control Prevention, 2011). When broken down by types of disabilities and functional needs within the U.S. population, approximately 12.3 million (4.4%) over 6 years of age needed assistance on a daily basis (Aldrich & Benson, 2008; Brault, 2012); 14.9 million (6.2%) age 15 and over had equipment assistance to walk; 15.2 million (6.3%) adults had a cognitive, mental or emotional functioning problem and 944,000 (0.4%) adults had a developmental disability including, but not limited to, autism and cerebral palsy (Brault, 2012).
These statistics show that the necessity for functional needs services in emergency shelters, based on population needs, is very important and cannot be overlooked.

**Definition of Functional Needs**

*Functional needs* describes a wide variety of populations that require special services on a daily basis. Some populations include older adults, children, developmentally disabled, mentally ill, groups with mobility impairments, hard of hearing and vision and non-English speaking or reading people (Aldrich & Benson, 2008; Elrod, Hamblen, & Norris, 2006; Federal Emergency Management Agency, 2010; Fox, White, Rooney, & Rowland, 2007; Kailes & Enders, 2007; Parsons & Fulmer, 2007). People with Alzheimer’s, depression and anxiety that have a hard time adapting to new environments are also included (Kailes & Enders, 2007). In some cases, having a functional need can be temporary and coincidentally fall within the time frame of a disaster. Examples of these temporary needs are pregnancy and recovery from surgery and other injuries (Federal Emergency Management Agency, 2010; Kailes & Enders, 2007). Other types of populations with functional needs that may not seem mainstream, like obese individuals, people undergoing kidney dialysis, individuals and families without vehicles for transportation and the other limitations that cannot be seen like heart disease and severe allergies need to be addressed (Kailes & Enders, 2007). All types of functional needs populations need addressed in shelter environments and were taken into account for this study.

Most agencies that provide disaster relief are not prepared to service individuals with functional needs (Bloodworth, Kevorkian, Rumbaut, & Chiou-Tan, 2007; Fox et al., 2007; Kailes & Enders, 2007; Rowland, White, Fox, & Rooney, 2007). In a study of randomly selected emergency managers that were involved with United States Federal Emergency Management Agency (FEMA) disaster sites between 1998 and 2003, Fox, White, Rooney, and
Rowland (2007) found that only 2 of the 29 managers said that they had made changes to their disaster plans to coincide with the needs of multiple disability groups and 57% of the emergency managers did not have any information pertaining to the types and amounts of functional needs populations in their communities. Lack of planning for such a large scale topic throughout the United States results in a large amount of individuals with functional needs being turned away from shelters in time of disasters. Unfortunately, other places for these individuals to seek shelter is the hospital, which may or may not be functioning at full capacity, or the streets, which leads to danger, imprisonment or death (Christensen, Blair, & Holt, 2007; Federal Emergency Management Agency, 2010; Jan & Lurie, 2012). Based on this information, a “one size fits all” approach to disaster relief shelters does not work and a solution that integrates individuals with functional needs is necessary to ensure equal and successful care (Christensen et al., 2007; Federal Emergency Management Agency, 2010).

**Statement of Purpose**

The purpose of this study was to identify potential on-call partners for the creation of Montgomery County, Ohio FAST and to determine if FAST would be effective based on area agency opinions.

Research gathered focuses on the items and services necessary for individuals with functional needs to properly be assessed and cared for in a disaster relief shelter during and after disasters. First is establishing a complete definition of functional needs and creating a general idea of the types of individuals needing assistance. Once the target group is defined, the specific needs in sheltering environments can be discovered, mostly through past experiences of researchers and responders. From firsthand experience and past disasters, multiple examples can be found that illustrate the results of not having the proper services and/or supplies in sheltering
environments for individuals with functional needs. Professional suggestions and protocols including specific shelter essentials, proper training of personnel and the need for advocacy and collaboration, is a large amount of the information necessary to achieve a better look into what needs accomplished to assist individuals with functional needs.

**Literature Review**

In the past, when disasters happened, individuals with functional needs were sent to a “special shelter”, given to the responsibility of hospitals or left behind because they were not able to be cared for in general population disaster relief shelters (Fox et al., 2007; Nick et al., 2009; Parsons & Fulmer, 2007). Over time, agencies that are in charge of opening disaster relief shelters have put major efforts into integrating individuals with functional needs into the general population shelters. This development has increased the survival and equality for individuals with functional needs, but more training, advocacy and collaboration are needed for continued success (Nick et al., 2009; Parsons & Fulmer, 2007).

The need for assistance in general population disaster relief shelters for individuals with functional needs is ever growing. Not only is care needed for those whom have a functional need prior to the disaster, but as a result of the disaster, individuals may develop a functional need adding to the special population community (Bloodworth et al., 2007; Kailes & Enders, 2007). Individuals with functional needs require specialized assistance but, for the most part, are familiar with their needs. As individuals develop a functional need as a result of the disaster, they are typically not equipped with the skills or know how to manage these new needs. These individuals become more vulnerable and create a need for more services than planned which, in turn, requires more preparation, training, advocacy and collaboration (Kailes & Enders, 2007).
Because of this, a generalization of the basic needs of individuals with functional needs has to be described.

**C-MIST**

When assessing the assistance required by individuals with functional needs, there is a common anagram adopted by most emergency responders and services providers to ensure that individuals with functional needs are properly cared for. C-MIST stands for the five functional areas that may require special assistance in times of disasters. These functional areas include communication, medical needs, functional independence, supervision and transportation. Making sure that these functional areas are met for individuals with functional needs is key to improving response and reducing any consequences that could have a negative result (Kailes & Enders, 2007; Parsons & Fulmer, 2007).

**Communication.**

Giving and receiving pertinent information before, during and after a disaster is a basic function of survival. In disaster relief shelters, communication is used from opening until closing to make sure that all individuals have the knowledge necessary to have a safe stay. Some of the necessary knowledge is information pertaining to food, water, rules, disaster updates and ways to get assistance if needed (Bloodworth et al., 2007; Kailes & Enders, 2007; Parsons & Fulmer, 2007). Unfortunately, without essential communication, all shelter residents, especially those with functional needs would have a hard time because they rely on this information for the next steps to take. Individuals with functional needs rely on many different types of communication including, but not limited to, sign language, Braille, large print, closed caption, pictures and non-English languages (Kailes & Enders, 2007; Nick et al., 2009). These types of communications need to be made available throughout the shelter environment. Shelter
personnel and/or volunteers that are familiar with these types of communication also need to take part in the communication process and assessment of individuals with functional needs (Kailes & Enders, 2007; Parsons & Fulmer, 2007).

**Medical needs.**

Depending on the type and severity of a disaster, quite a few individuals may need medical assistance before and during their time in a disaster relief shelter. Typically, this description of medical needs is reserved for the more serious, life sustaining needs that some individuals with functional needs possess like respiratory care, dialysis, feeding tubes and major wound care (Jan & Lurie, 2012; Kailes & Enders, 2007; Parsons & Fulmer, 2007). Without the ability to address these medical needs, individuals with functional needs would have to seek shelter in a hospital setting. Depending on the status of the hospital, and how many patients the hospital already has, this may not be possible. It can create a non-necessary stress on the hospital that can hinder its patients. Along with medical care in general, some individuals with functional needs require the assistance of trained medical personnel to assist with life sustaining machines because their normal assistance is not available due to the disaster (Kailes & Enders, 2007; Nick et al., 2009; Parsons & Fulmer, 2007). In order to provide the necessary assistance to individuals with functional needs, an assessment for these individuals by trained staff and the use and availability of medical supplies are required.

**Maintaining independence.**

With the advancement of medicine and medical equipment, individuals with functional needs that need medical assistance are able to stay in their homes and maintain a sense of independence. This is done through family support, visiting nurses, portable medical equipment and familiarity of their homes. After a disaster, many of these supports may not be available for
various reasons and need to be reacquired in a disaster relief shelter setting. In some cases, independence refers to daily activities assisted by caregivers (Bloodworth et al., 2007; Kailes & Enders, 2007; Nick et al., 2009; Parsons & Fulmer, 2007). If the independence of an individual with functional needs is threatened, the individual may not be comfortable in a disaster relief shelter which can lead to unnecessary harm as a result of a disaster. For these reasons, assessing individuals’ needs to maintain independence is crucial.

**Supervision.**

Adults and children with functional needs that have an intellectual or psychiatric disability require an extensive level of supervision on a daily basis to ensure safety and well-being. This supervision is typically provided by a family member, like parents or spouses, or possibly a caregiver. Other types of individuals with functional needs that may need supervised are those who are new to wheelchairs or have some other new or temporary ailment. Without regular supervision, adults and children with functional needs could wander off and be put into more danger than the disaster (Kailes & Enders, 2007; Nick et al., 2009; Parsons & Fulmer, 2007). In a disaster relief shelter, staff and volunteers can be limited and not able to provide the supervision necessary. Being able to assess the need for supervision is a vital role to ensuring the safety for individuals with functional needs in disaster relief shelters (Kailes & Enders, 2007; Parsons & Fulmer, 2007).

**Transportation.**

The ability to get to the disaster relief shelter is a necessity that is sometimes overlooked or not thought of as important. In this case, individuals with functional needs can simply be people and families without a vehicle or an individual with a mobility impairment that needs special transportation like a vehicle with a wheelchair lift or are unable to use an elevator to exit
a multiple story building (Federal Emergency Management Agency, 2010; Kailes & Enders, 2007; Parsons & Fulmer, 2007). Some communities have specialized public transportation vehicles to assist individuals with mobility impairments but, when a disaster strikes, public transportation may not be operational, eliminating that as a transportation option. This assessment of individuals with functional needs is important to be done prior to disasters to make sure that they have a way to get to the shelters and to safety (Kailes & Enders, 2007; Parsons & Fulmer, 2007).

The five functional areas necessary for individuals with functional needs are vital to provide the proper support in disaster relief shelters. Without C-MIST, individuals with functional needs can have major negative consequences while in a shelter environment. When emergency and disaster planning is done, C-MIST has to be taken into consideration all the way from the emergency responder to the shelter personnel and volunteers. Kailes and Enders (2007) suggest asking, “What is needed to maintain functional C-MIST?” when assessing individuals with functional needs (p. 23). This practice helps to avoid inappropriate assumptions of what people need and cuts down on possible waste by providing unneeded services (Kailes & Enders, 2007).

**Essential Modifications**

While in a disaster relief shelter, individuals with functional needs require multiple modifications that may not be necessary for the general public. There are four essential modifications that afford discussion: proper services, an appropriate living environment, effective signage and communication, and personnel and volunteers trained in functional needs support. Providing these modifications in a disaster relief shelter greatly ensures safety and access for individuals with functional needs.
Proper services.

Proper services for individuals with functional needs are a necessity in a disaster relief shelter. Without the proper services, possibility arises for dangerous settings and increased vulnerabilities for individuals that are already vulnerable in the first place. Two key examples show a good representation of this concept. First, if services are not being offered by properly trained personnel and volunteers, other people in the shelter may attempt to help. In some cases this may be a good thing, but if the person is not trained to assist individuals with functional needs, they can cause more harm than good. This can result in unnecessary chaos that can create confusion and use resources in an improper way (Elrod et al., 2006; Rowland et al., 2007).

Second, lack of specialized transportation for individuals with functional needs to the disaster relief shelter can leave individuals in unsafe environments after a disaster and at extreme risk. Possible results of this include becoming victims of violence, making their health or functional needs problems worse and possibly even lead to an unnecessary death (Nigg, Barnshaw, & Torres, 2006). Overall, providing the proper services by the proper personnel and volunteers can eliminate major issues and ensure safety.

Appropriate living environment.

Another way to make disaster relief shelters more appropriate for individuals with functional needs is to have the proper living environment. Currently, the idea is to create an environment and assist individuals with functional needs to adjust. Unfortunately this is not always the best way. Research suggests that the environment needs to be altered to accommodate the individuals with functional needs so they will be at less risk for injury (Christensen et al., 2007). Examples of this concept include separate areas for children to play and areas for hearing impaired. Also needed is a setting that is made specifically for “delirious,
demented and cognitively impaired adults” to create protection for themselves and others (Aldrich & Benson, 2008; Bloodworth et al., 2007, p. 774).

**Effective signage and communication.**

An important component of an effective shelter environment is proper signage and communication tailored towards individuals with functional needs (Bloodworth et al., 2007; Federal Emergency Management Agency, 2010; Kailes & Enders, 2007; Nick et al., 2009). Other pertinent aspects to communication is having trusted community organizations available to spread and discuss information with functional needs individuals that may not be comfortable talking to people they are not familiar with. One way to assist with this idea is having designated times and places where workers from the community organizations come to the shelter and provide assistance (Kailes & Enders, 2007). Communication and signage used in this way helps individuals with functional needs better understand the information relayed and possibly be more comfortable to ask sensitive questions.

**Properly trained personnel and volunteers.**

The use and presence of personnel and volunteers trained in services and care for individuals with functional needs is vital to providing safety and comfort while in a disaster relief shelter. Some individuals require special medical and personal attention and it is essential that those services only be delivered by personnel and volunteers who are properly trained (Christensen et al., 2007; Elrod et al., 2006). Without proper training, individuals with functional needs can fall victim to more than the disaster. Along with medical needs and personal attention, supervision of individuals with functional needs also presents a need for proper training. Being able to help individuals cope with new environments, the disaster itself and atypical problems takes a professionally trained person to ensure relief and comfort (Elrod et
al., 2006; Nick et al., 2009; Rooney & White, 2007; Rowland et al., 2007). Having properly trained personnel and volunteers not only makes a shelter environment more feasible for individuals with functional needs but also makes it a safer environment for all people involved.

**Preparedness**

All of the previously listed items are essential for assisting individuals with functional needs in disaster relief shelters but none of them are possible if preparation is not done. Some basic requirements include effectiveness and inclusion of individuals with functional needs.

**Effectiveness.**

When preparing for any type of event, the people involved strive for their preparations to be effective. This holds true for preparations developed to assist individuals with functional needs in disaster relief shelters. In order to be effective, the preparations need to focus on function-based needs and support. These ideas need to be, “woven into the fabric and the culture of emergency management and disaster planning,” (Kailes & Enders, 2007, p. 234). In 2006, the Department of Homeland Security conducted a national assessment of disaster areas in which they discovered that the relationships between all entities involved in disaster planning and response needs to be stronger (United States Department of Homeland Security, 2006). Based on these ideas and reports, effectiveness of preparations leads to better service for individuals with functional needs in shelter environments.

**Inclusiveness.**

There are not many people in the world that know what individuals with functional needs require more than the individuals with functional needs. In the past, individuals with functional needs were not involved with preparations for disaster and sheltering. As time progresses, including individuals with functional needs in preparation sheds new light on the services and
modifications necessary to have a safe and comfortable environment during and after a disaster. Not only are ideas from individuals with functional needs common knowledge to them, they are fueled by the personal experiences they have undergone in the past (Christensen et al., 2007; Federal Emergency Management Agency, 2010; Kailes & Enders, 2007; Parsons & Fulmer, 2007; Rooney & White, 2007). The use of this knowledge is invaluable to the safety of individuals with functional needs.

Lessons learned from past experiences and disasters give great insight as to what needs done in the future to be more effective. Many observations were made during and after Hurricane Katrina that have become a basis for the need for preparation in disaster relief shelters when it comes to individuals with functional needs. Bloodworth, Kevorkian, Rumbaut, and Chiou-Tan (2007) noticed that during the relief efforts of Hurricane Katrina, individuals with functional needs were not receiving the care that they needed at the “Katrina Clinic” in the disaster relief shelter. The researchers suggested that the services of the functional needs populations need more preparation. Fox et al. (2007) conducted a study of randomly selected emergency managers that had involvement with a United States FEMA disaster site from 1998 to 2003. According to their findings, most of the emergency managers felt that preparation and guidelines were important to have based on reflections of past events. Comments were made that all lives were important and that individuals with functional needs should be included in preparation (Fox et al., 2007).

Advocacy and Collaboration

Preparation is an essential building block to maintaining safety and services for all individuals affected during disasters whether they have functional needs or not. To get the most
out of preparation, two key elements must be included, especially when assisting individuals with functional needs: advocacy and collaboration.

Advocacy and collaboration work hand in hand to develop the best proactive and inclusive preparedness plans for individuals with functional needs in disaster relief shelters. By having agencies work together that assist with individuals with functional needs on a daily basis, a large amount of insight and experience is brought to planning and execution. To build these relationships, advocacy and collaboration teams are constructed which include emergency management, disaster relief shelter coordinators, public health and any agencies that work with functional needs populations (Aldrich & Benson, 2008; Bloodworth et al., 2007; Elrod et al., 2006; Federal Emergency Management Agency, 2010; Fox et al., 2007; Jan & Lurie, 2012; Nick et al., 2009; Parsons & Fulmer, 2007). In order to ensure continuity of these relationships and agreements, regular meetings are conducted to designate roles and create memorandums of understanding for services and supplies (Elrod et al., 2006; Federal Emergency Management Agency, 2010). The valuable information and response gained from these collaborations provide the knowledge and resources needed to accurately and efficiently assist individuals with functional needs in sheltering environments (Elrod et al., 2006).

Groups involved in advocacy and collaboration teams.

Advocacy and collaboration teams typically consist of a wide variety of individuals and players that play an important role with assessment and response. Medical agencies and mental health volunteers are essential to maintaining the health of individuals with functional needs in disaster relief shelters. In past experiences, rehabilitation specialists, more specifically physical and occupational therapists have assisted with assessments of individuals and equipment. Also, because the specialists are trained in working with individuals with functional needs, they are
able to develop ways to accommodate them and help with any types of cognitive issues that may arise (Bloodworth et al., 2007; Kailes & Enders, 2007; Rowland et al., 2007). Doctors, psychiatrists and other medical personnel like nurses and physicians assistants are able to help with any injuries acquired from the disaster and advocate for individuals that have substance abuse problems, mental illnesses or deal with chronic pain (Bloodworth et al., 2007; Kailes & Enders, 2007; Person & Fuller, 2007). Two other players that are vital to an advocacy and collaboration team are government and nongovernment agencies. Government agencies consist of emergency responders, public health and other federal and state funded agencies whose main goal is to protect individuals with functional needs. Nongovernment agencies are typically non-profit or religious groups that care for individuals with functional needs on a regular basis. Both of these agencies would bring a wealth of knowledge to the advocacy and collaboration teams because of the essential needs and policies they provide to individuals with functional needs (Bloodworth et al., 2007; Jan & Lurie, 2012).

Another large and important player involved in advocacy and collaboration teams are community based organizations (CBOs). These organizations provide services and advocacy to individuals with functional needs and reach out to the community to give assistance and care. Because of this community outreach, CBOs are typically very trusted throughout functional needs populations (Nick et al., 2009; Parsons & Fulmer, 2007). That level of trust is pertinent to proper care and communication in disaster relief shelters. Some of the services that CBOs commit to are mobilization of individuals with functional needs, training of shelter volunteers and providing resources including information kits and referrals (Nick et al., 2009).

The last player included in advocacy and collaboration teams, but certainly not the least important, are area businesses. Having relationships with businesses provides numerous
resources and supplies that are already secured before a disaster happens making the supplies easier to obtain when needed. These resources and supplies range from food and water to medical supplies, special equipment and cots designed for individuals with functional needs (Bloodworth et al., 2007; Federal Emergency Management Agency, 2010; Jan & Lurie, 2012).

**Examples of advocacy and collaboration teams.**

Advocacy and collaboration teams that include all of the players and agencies listed above have been very successful in parts of the U.S. and see the importance of such relationships. In the city of San Francisco, California, the emergency managers have partnered with the Centers for Independent Living to create effective protocols for assisting individuals with functional needs during and after disasters. The city has developed a Disability Services Coordinator that works side by side with incident command to make sure essential needs are being properly met. Other job duties are to coordinate with other partner agencies and secure their participation through memorandums of understanding (Jan & Lurie, 2012).

Another example of advocacy and collaboration teams at work is the creation of Functional Support Coordinators within planning and response. Their responsibilities include leadership to build trained response teams prior to disasters, coordinate these teams during and after disasters and to provide the guidance necessary to complete assessments and care for individuals with functional needs while in a disaster relief shelter in a timely and concise manner (Kailes & Enders, 2007).

A final example is the creation of a FAST (Functional Assessment Service Team). Milwaukee County in Wisconsin created FASTs, to conduct assessments of individuals with functional needs as they arrive to disaster relief shelters. The Milwaukee FAST is modeled after the California FAST was created in 2006 to assess the needs of individuals with functional needs
as they entered disaster relief shelters (California Department of Social Services, 2007a; Federal Emergency Management Agency, 2010; Wisconsin Department of Health Services, 2013a) Fast is important because they are able to identify the resources necessary to care for individuals with functional needs while they are at the shelter. A FAST member has proper training in the assistance of individuals with functional needs and can have experience in many areas ranging from mobility needs to aging and any communication need (California Department of Social Services, 2007a, 2007b; Federal Emergency Management Agency, 2010; Wisconsin Department of Health Services, 2013a, 2013b). Supplies for individuals with functional needs are provided to FAST using the Milwaukee County Functional Needs Emergency Shelter Equipment Trailer that is maintained by Human Services. Some of these supplies include necessary medical equipment and specialized cots for individuals with physical needs (Milwaukee County Functional Needs Emergency Shelter Planning, 2011). The FAST works together very well with the Department of Health Services, the American Red Cross and other key agencies that work with functional needs populations (California Department of Social Services, 2007a, 2007b; Federal Emergency Management Agency, 2010; Wisconsin Department of Health Services, 2013a, 2013b). These examples are great tools and blueprints for guiding the creation of successful advocacy and collaborations teams for individuals with functional needs in all areas of the U.S.

**Resistance to advocacy and collaboration teams.**

The idea of advocacy and collaboration teams are ideal for assisting individuals with functional needs in disaster relief shelters but is not always welcomed by key players and agencies that are essential for involvement. Unfortunately, some leaders feel that they do not have the capabilities, including skills and funding, to work with other agencies in this way.
Sometimes, relationships are not made simply because agencies do not like to share responsibilities and roles (Elrod et al., 2006; Kailes & Enders, 2007; Rowland et al., 2007). Another reason for lack of involvement is that advocacy and collaboration are sometimes put on hold because disasters have not happened for a while. Leaders of agencies and groups do not feel it is necessary to keep response and sheltering plans up to date because they may be rarely used and they feel it is a waste of time (Elrod et al., 2006).

Results of not having advocacy and collaboration teams.

Multiple results develop from not having advocacy and collaboration teams in disaster and shelter situations. First, a lack of coordination between emergency, public health and community agencies produces barriers to assisting and identifying the individuals with functional needs in disasters and shelters by not using proper communication (Fox et al., 2007; Nick et al., 2009). Second, is waiting to build advocacy and collaboration teams until the assistance is needed. This leads to a nonproductive response when assisting individuals with functional needs because advocacy and collaboration at this point are too time consuming and too late (Elrod et al., 2006; Federal Emergency Management Agency, 2010). Third, if medical professionals do not advocate and are not included in the collaborative response for individuals with functional needs in disaster relief shelters, medical needs go undetected and the individuals will not receive the care they need (Bloodworth et al., 2007).

Methods

Setting and Sample

Montgomery County is located in southwest Ohio and has an urban center in the City of Dayton. According to the 2012 American Community Survey, Montgomery County, Ohio has an approximate population of 534,000; over half of the population is white (74%) and has mean
income of $56,000 (United States Census Bureau, 2012). Approximately 16.0 percent of the population is 65 years or older. In 2012, 15.4 percent of the population reported having some sort of disability (United States Census Bureau, 2012).

Seventeen agencies were identified through public information about their mission and services to functional needs groups. Selected agencies thought to be appropriate partners in FAST were contacted through email with a request to participate in an online survey or through a telephone interview.

**Questionnaire Development**

FEMA, part of the Department of Homeland Security, has published a criteria guide that addresses the Functional Needs Support Services (FNSS) that are suggested to local governments and agencies for integrating these services into general population shelters. Using these suggested criteria and peer-reviewed literature, a questionnaire was constructed in Qualtrics to gain anonymous insight on the needs necessary for functional needs groups in emergency sheltering environments and advocacy and collaboration groups.

The questionnaire (Appendix 1) consisted of eight questions about necessary services, six questions about involvement in FAST and one question about the responding agencies services. Only one draft of the questionnaire was created and was verified by the chair of this project and the culminating experience director, both at the Center for Global Health, Wright State University. Approval from the Institutional Research Board (Appendix 2) was requested and the study was deemed exempt because it did not use research of human subjects.

**Data Collection**

An email with an explanation of the study and a hyperlink to the questionnaire in Qualtrics was administered to agencies in Montgomery County, Ohio that work in the field of
emergency management and functional needs support (Table 1). The agencies were given two weeks to complete the questionnaire. If any problems arose, the agencies were provided information of who to contact for questions. Agencies were given the option of completing the questionnaire online or through a telephone interview.

<table>
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<tr>
<th>Table 1</th>
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<tbody>
<tr>
<td><strong>Agencies Included in Sample</strong></td>
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<tr>
<td>Access Center for Independent Living</td>
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<tr>
<td>AIM for the Handicap, Inc.</td>
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<tr>
<td>Alzheimer’s Association Miami Valley Chapter</td>
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<tr>
<td>American Red Cross</td>
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<tr>
<td>Area Agency on Aging</td>
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<tr>
<td>Autism Society</td>
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<tr>
<td>Community Services for the Deaf</td>
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<td>Day-Mont Behavioral Health Care, Inc</td>
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<tr>
<td>Dayton Asperger’s Resource Network</td>
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<td>Diabetes Dayton</td>
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<td>Good Neighbor House</td>
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<td>Greater Dayton Area Hospital Association</td>
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<td>Greater Dayton Regional Transportation Authority (RTA)</td>
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<tr>
<td>Miami Valley Down Syndrome Association</td>
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<td>Montgomery County Board of Developmental Disabilities Services</td>
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<td>Montgomery County Office of Emergency Management</td>
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<td>Public Health – Dayton &amp; Montgomery County</td>
</tr>
</tbody>
</table>

**Data Analysis**

Data was uploaded into SPSS for analysis. Answers were relabeled (Table 2) to represent the text answer instead of the numerical answer because the dataset from Qualtrics did not transfer data labels.
Table 2

*Relabeled Variables*

<table>
<thead>
<tr>
<th>Variable Group</th>
<th>Labels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agencies to Include in FAST</td>
<td>Medical Groups</td>
</tr>
<tr>
<td></td>
<td>Government Organizations</td>
</tr>
<tr>
<td></td>
<td>Non-Government Organizations</td>
</tr>
<tr>
<td></td>
<td>Community Based Organizations</td>
</tr>
<tr>
<td></td>
<td>Local Businesses</td>
</tr>
<tr>
<td>Services Offered by Responding Agencies</td>
<td>Functional Needs Assessment</td>
</tr>
<tr>
<td></td>
<td>Emergency Response Services</td>
</tr>
<tr>
<td></td>
<td>Medical Services</td>
</tr>
<tr>
<td></td>
<td>Referral Services</td>
</tr>
<tr>
<td></td>
<td>Advocacy Services</td>
</tr>
<tr>
<td></td>
<td>Functional Needs Training</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
</tbody>
</table>

The responses to questions that were connected to a Likert scale were combined to show better representation of opinions. This was done by combining the Strongly Agree and Agree to “Agree,” Strongly Disagree and Disagree to “Disagree” and Not Sure/Don’t Know remained “Don’t Know.” Frequency tables for each variable were created using SPSS to analyze the responses pertaining to necessary services and knowledge and participation in FAST. In some cases, graphs were created to show a better representation of the data.

**Results**

**Characteristics of the Sample**

A total of 11 agencies out of 17 completed the online questionnaire resulting in a 64.1 percent response rate. The agencies that responded provide the following services:

- Functional needs assessments
- Medical services
- Referral services
- Advocacy for functional needs groups
- Functional needs personnel training
- Emergency planning and management.

The services provided by the six non-responding agencies are represented in the list above. Only one data point was classified as missing due to non-response and did not have any effect on the outcome of the results. No issues were reported in completing the questionnaire.

**Perceived Needs**

The need for collaboration and advocacy in order to provide better services for functional needs groups in disaster relief shelters was agreed upon by all agencies (n = 11). Ten of the 11 agencies (91.0%) agreed that effective assessments of functional needs groups in disaster relief shelters was necessary and that they be conducted by individuals trained in functional needs care. When asked if individuals with functional needs should be included in preparation and planning, all 11 agencies agreed that they should.

Most agencies, but not all, responded that all five areas if C-MIST are necessary (Table 3). In the area of maintaining independence and supervision, two different agencies disagreed that these services were necessary. For each services of C-MIST, except medical needs, multiple agencies responded that they did not know if the services are necessary. One agency did not respond to the medical needs service question.
Table 3

Necessity of C-MIST Services in Disaster Relief Shelters

<table>
<thead>
<tr>
<th></th>
<th>Agree</th>
<th>Disagree</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>9</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Medical Needs*</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Independence</td>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Supervision</td>
<td>7</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Transportation</td>
<td>10</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

Note. One agency reported no answer for the necessity of medical needs in disaster relief shelters.

All agencies agreed that medical groups are necessary to be involved in FAST (Figure 1).

One or two agencies did not think that government organizations, NGOs and CBOs were essential to FAST. The local businesses category presented the most variation among respondents with responses split approximately in half (Yes: n=5, 45.5%; No: n=6, 54.5%).

Figure 1. Possible agency types suggested to be involved in FAST by the responding agencies.
Four of the agencies had never heard of FAST before and three other agencies had only small amounts of familiarity. The remaining four agencies were somewhat familiar with FAST but none of the agencies were currently involved or completely familiar with the model. Definite interest in FAST was expressed by four agencies with one of the agencies unsure about the ability to provide the resources necessary to participate. The remaining seven agencies would like to receive more information about FAST before committing to a definite yes or no answer.

Three agencies (27.3%) agreed that FAST would be beneficial, seven agencies (63.6%) were unsure and one agency (9.1%) responded that FAST would not be beneficial.

Responding agencies were asked to provide two specific agencies within Montgomery County, Ohio that would be the best to include if FAST were created. Table 4 lists the specific agencies suggested and the number of suggestions they were given. Not surprisingly, the American Red Cross was given the most suggestions overall (n = 6, 27.3%) with the Montgomery County Office of Emergency Management and Public Health Dayton Montgomery County receiving the second most suggestions (n = 3, 13.6% for each agency). The less suggested agencies consist of medical personnel and advocacy and referral groups that mostly work with functional needs groups on a daily basis.
Table 4

*Specific Montgomery County, Ohio Agencies Suggested to Participate in FAST*

<table>
<thead>
<tr>
<th>Agency</th>
<th>Number of Suggestions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Center for Independent Living</td>
<td>2</td>
</tr>
<tr>
<td>Alzheimer’s Association</td>
<td>1</td>
</tr>
<tr>
<td>American Red Cross</td>
<td>6</td>
</tr>
<tr>
<td>Area Agency on Aging</td>
<td>2</td>
</tr>
<tr>
<td>Greater Dayton Area Hospital Association</td>
<td>1</td>
</tr>
<tr>
<td>Help Me Grow</td>
<td>1</td>
</tr>
<tr>
<td>Medical Reserve Corp</td>
<td>2</td>
</tr>
<tr>
<td>Montgomery County Board of Developmental Disabilities Services</td>
<td>1</td>
</tr>
<tr>
<td>Montgomery County Office of Emergency Management</td>
<td>3</td>
</tr>
<tr>
<td>Public Health – Dayton &amp; Montgomery County</td>
<td>3</td>
</tr>
</tbody>
</table>

**Discussion**

**Support for Advocacy and Collaboration**

All responding agencies support the creation of FAST in Montgomery County, Ohio. Advocacy and collaboration, properly trained individuals and the inclusion of the functional needs community in the planning process is pertinent to ensure proper assessment and services for individuals with functional needs in disaster relief shelters. Others have found that this idea is supported in the literature as a way to focus on function-based needs support and inclusiveness for all aspects of disaster planning related to sheltering (Christensen et al., 2007; Elrod et al., 2006; Federal Emergency Management Agency, 2010; Kailes & Enders, 2007; Parsons &
Fulmer, 2007; Rooney & White, 2007). Proper assessment and services for individuals with functional needs and C-MIST within shelter environments returned mostly positive results (Table 1). Communication, medical needs and transportation are essential to individuals with functional needs because these are basic items that most people possess in a general shelter environment. Independence and supervision of individuals with functional needs led to small amounts of disagreement. Some agencies strive for equal rights and the realistic idea that resources may not always be available to guarantee independence and supervision.

**Necessary Services**

To provide C-MIST to individuals with functional needs in disaster relief shelters, suggestions for the creation a FAST in Montgomery County, Ohio could prove to be beneficial. Along with previous studies, medical groups, government organizations, non-government organizations and community based organizations were thought of almost equally to be important players in FAST (Bloodworth et al., 2007; Federal Emergency Management Agency, 2010; Jan & Lurie, 2012; Kailes & Enders, 2007; Nick et al., 2009; Person & Fuller, 2007). Unfortunately, the ability for local businesses to provide resources and supplies was overlooked. More than half of the agencies responded the private sector was not necessary in FAST. Local medical businesses typically have medical supplies and equipment that are necessary in a disaster relief shelter. Use of the private sector is not used to its full potential during planning and response (Bloodworth et al., 2007; Federal Emergency Management Agency, 2010; Jan & Lurie, 2012). All agency types need to be involved in planning and response for a FAST in Montgomery County, Ohio to be effective.
Public Health Implications

Individuals with functional needs may need advanced care while in shelters. If shelters and teams are not equipped to provide the proper assistance, those individuals may be overlooked or admitted into the hospital to maintain assistance and services they receive on a daily basis. With the implementation of FAST, individuals with functional needs will be assessed upon entering a disaster relief shelter. The agencies responsible for specialized advocacy and services will already be present to take necessary action. Hospitals and other medical facilities will be relieved from unnecessary surge so they can focus on major injuries and more lives can have the opportunity to be saved.

Safety within a disaster relief shelter is a primary goal of all shelter staff. Some individuals with functional needs may need specialized equipment to ensure their overall safety. Members of FAST can provide the necessary equipment because it is their agencies primary role in the community and they have a stockpile of supplies or they may know how to contact suppliers directly to expedite the delivery process. When residents of a shelter are kept safe by having necessary supplies, the atmosphere and attitude throughout the shelter stays healthy in turn relieving some of the stressors of disaster.

Study Limitations

There are various limitations related to this study. It was not possible to guarantee a 100 percent response rate in order to ensure that all agencies within Montgomery County were included. A response bias could be present because it is a possibility that only the agencies interested in FAST and preparedness responded to the questionnaire. The responses may be skewed towards positive results. A follow up interview would have been helpful to include the agencies that were not willing to complete the questionnaire online or on the telephone. Another
limitation to this study is that FAST is only used in three geographic locations. It is difficult to predict how FAST would work in Montgomery County because the locations that currently uses FAST may not be comparable to Montgomery County. To overcome this limitation, more information about the geographic locations that currently use FAST are needed. Simulations in Montgomery County to try FAST would also be beneficial.

**Future Research**

Continued research into FAST is necessary to accurately establish effectiveness in communities after disasters. Observations from experiencing current FAST procedures in the planning phase and in the field could produce insight into how to make FAST work best for the community. Future studies comparing general population shelters that do and do not use FAST can also provide more information necessary to determine if FAST is right for specific communities. Another way to continue research with FAST is to determine whether it can be integrated into current Functional Needs Support Services plans and possibly better the outcome of assessment and services for individuals with functional needs in disaster relief shelters.

**Conclusion**

Following disasters, some people may need to be relocated into disaster relief shelters until it is safe for them to return home or are able to reside elsewhere. Local emergency management, public health and functional needs agencies can benefit from working together to assist in the recovery and transition of individuals with functional needs after disasters. The creation and implementation of a FAST in Montgomery County, Ohio poses the potential to increase the effectiveness of planning and response for individuals with functional needs in disaster relief shelters.
References Cited


Appendix 1 -
Online/Telephone Survey

Throughout the survey the term Functional Need(s) will be frequently used. In this case, Functional Need(s) is referred to as people that require special services on a daily basis including older adults, children, developmentally disabled, mentally ill, groups with mobility impairments and special medical needs and non-English speaking individuals. Temporary functional needs are women who are pregnant and those recovering from recent surgery and injuries.

Please answer each question to reflect the views of your agency.

Thank you for participating in this survey.

1. Advocacy and collaboration between area agencies, emergency responders and public health are necessary to maintain safety and provide proper services to functional needs groups in disaster relief shelters.

2. Effective assessments of individuals with functional needs when they enter a disaster relief shelter is necessary to determine the appropriate services needed.

3. Assessments of individuals with functional needs are best carried out by personnel and volunteers trained in functional needs services.

4. Communication in all forms varying from Braille to sign language and non-English languages are essential to provide accurate assessments and services for functional need groups in disaster relief shelters.

5. Appropriate medical needs must be met for individuals with functional needs in disaster relief shelters to avoid overcrowding of hospitals with non-life threatening patients.
6. Maintaining the independence of individuals with functional needs while in disaster relief shelters is important to ensure their health and safety.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

7. The need for supervision for individuals with functional needs in a disaster relief shelter is essential to maintaining their safety and the safety of the other residents.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

8. Appropriate transportation for people with mobility issues is necessary to ensure their safety when evacuating to shelters during a disaster.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

9. Representatives from functional needs groups should be involved in emergency preparation and planning.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither Agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

10. Which types of agencies should be included in advocacy and collaboration efforts to assist functional needs groups while in shelter environments? (Choose all that apply)

- Medical Groups
- Government Organizations
- Non-government Organizations (NGOs)
- Community Based Organizations (CBOs)
- Local Businesses

Functional Assessment Service Teams (FAST) consist of a group of trained volunteers with expertise and skills necessary to work with functional needs groups. Their main duty is to staff disaster relief shelters and conduct needs assessments of people with functional needs. As a result of the assessments, FAST members determine the resources and services necessary for individuals with functional needs to stay safely in the shelter.
11. What is your agency's familiarity with FAST?

Never heard of it | Use it

<table>
<thead>
<tr>
<th>01</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Familiar</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

12. Do you or your agency feel that creation of a FAST in Montgomery County would ensure proper services for functional needs groups in disaster relief shelters?

- ☐ Yes
- ☐ No
- ☐ Not Sure/Don't Know

13. If a FAST were created in Montgomery County would your agency be interested in participating?

- ☐ Yes, definitely
- ☐ Yes, but not sure if we have the resources
- ☐ Would like to talk about it / get more information
- ☐ Not interested at this time
- ☐ No, not interested ever

14. List two agencies that you feel would be necessary to participate in a FAST in Montgomery County.

1. 

2. 

15. What type of services does your agency provide? (Choose all that apply)

- ☐ Functional Need Assessment
- ☐ Emergency Response Services
- ☐ Medical Services
- ☐ Referral Services
- ☐ Advocacy Services
- ☐ Functional Need Training
- ☐ Other

Thank you again for your participation in this survey!
DATE: December 20, 2013

TO: Angela Snyder, PI, Student
    Community Health
    Mark Gebhart, M.D., Faculty Advisor

FROM: B. Laurel Elder, Ph.D.
      Chair, IRB-WSU

SUBJECT: SC# 5371
    'Identification of Potential On-Call Partners and Services for Montgomery County,
    Ohio FAST in Red Cross Shelters'

Your study does not meet the definitions for human subjects research. Therefore the
proposal submitted does not need approval from the Wright State University
Institutional Review Board.

If you have any questions or require additional information, please call Jodi Blacklidge,
Program Facilitator at 775-3974.

Thank you!
## Tier 1 Core Public Health Competencies

### Domain #1: Analytic/Assessment
- Identify the health status of populations and their related determinants of health and illness (e.g., factors contributing to health promotion and disease prevention, the quality, availability and use of health services)
- Describe the characteristics of a population-based health problem (e.g., equity, social determinants, environment)
- Use variables that measure public health conditions
- Use methods and instruments for collecting valid and reliable quantitative and qualitative data
- Recognize the integrity and comparability of data
- Adhere to ethical principles in the collection, maintenance, use, and dissemination of data and information
- Describe the public health applications of quantitative and qualitative data
- Collect quantitative and qualitative community data (e.g., risks and benefits to the community, health and resource needs)
- Use information technology to collect, store, and retrieve data
- Describe how data are used to address scientific, political, ethical, and social public health issues

### Domain #2: Policy Development and Program Planning
- Gather information relevant to specific public health policy issues
- Incorporate policies and procedures into program plans and structures

### Domain #3: Communication
- Communicate in writing and orally, in person, and through electronic means, with linguistic and cultural proficiency
- Solicit community-based input from individuals and organizations

### Domain #4: Cultural Competency
- Incorporate strategies for interacting with persons from diverse backgrounds (e.g., cultural, socioeconomic, educational, racial, gender, age, ethnic, sexual orientation, professional, religious affiliation, mental and physical capabilities)
- Recognize the role of cultural, social, and behavioral factors in the accessibility, availability, acceptability and delivery of public health services
- Respond to diverse needs that are the result of cultural differences

### Domain #5: Community Dimensions of Practice
- Recognize community linkages and relationships among multiple factors (or determinants) affecting health (e.g., The Socio-Ecological Model)
- Demonstrate the capacity to work in community-based participatory research efforts
- Identify stakeholders
- Collaborate with community partners to promote the health of the population
- Describe the role of governmental and non-governmental organizations in the delivery of community health services
- Identify community assets and resources
- Gather input from the community to inform the development of public health policy and programs
- Inform the public about policies, programs, and resources

### Domain #6: Public Health Sciences
- Relate public health science skills to the Core Public Health Functions and Ten Essential Services of Public Health
- Describe the scientific evidence related to a public health issue, concern, or, intervention
- Retrieve scientific evidence from a variety of text and electronic sources
- Discuss the limitations of research findings (e.g., limitations of data sources, importance of observations and interrelationships)
- Describe the laws, regulations, policies and procedures for the ethical conduct of research (e.g., patient confidentiality, human subject processes)

### Domain #7: Financial Planning and Management
- Describe the organizational structures, functions, and authorities of local, state, and federal public health agencies
## Domain #8: Leadership and Systems Thinking

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe how public health operates within a larger system</td>
</tr>
<tr>
<td>Participate with stakeholders in identifying key public health values and a shared public health vision as guiding principles for community action</td>
</tr>
<tr>
<td>Identify internal and external problems that may affect the delivery of Essential Public Health Services</td>
</tr>
<tr>
<td>Describe the impact of changes in the public health system, and larger social, political, economic environment on organizational practices</td>
</tr>
</tbody>
</table>

## Concentration Competencies

<table>
<thead>
<tr>
<th>Emergency Preparedness:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate the understanding of model leadership in emergency conditions</td>
</tr>
<tr>
<td>Communicate and manage information related to an emergency</td>
</tr>
<tr>
<td>Demonstrate the mastery of the use of principles of crisis and risk management</td>
</tr>
<tr>
<td>Use research and/or evaluation science methodologies and instruments to collect, analyze and interpret quantitative and qualitative data</td>
</tr>
<tr>
<td>Employ ethical principles in the practice of public health emergency preparedness</td>
</tr>
<tr>
<td>Demonstrate an understanding of the protection of worker health and safety</td>
</tr>
</tbody>
</table>