

Reducing Disaster-Related Risk for Vulnerable Populations

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Certification Statement

I hereby certify that this paper constitutes my own product, that where the language of others is set forth, quotation marks so indicate, and that appropriate credit is given where I have used the language, ideas, expressions, or writings of another.

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Date: July 18, 2019

Abstract

The problem was that the Local Emergency Operations Plan (LEOP) for the Town of Ridgefield did not specifically address the needs of vulnerable and at-risk citizens, leaving them at increased chance of preventable harm from disaster. The purpose of this applied research project (ARP) was to reduce risk in the community by identifying solutions specific to disaster-related problems experienced by vulnerable and at-risk citizens and recommending them for inclusion in the *Town of Ridgefield Local Emergency Operations Plan*. Descriptive methodology was used to guide the following research questions: (a) What vulnerable populations exist in the Town of Ridgefield? (b) What disasters are most likely to impact members of the Town of Ridgefield community? (c) What factors increase disaster-related risk for vulnerable populations in the Town of Ridgefield? (d) What strategies should be considered for adoption into the LEOP to reduce disaster-related risk for at-risk populations? (e) What disaster-related community risk reduction practices specifically for vulnerable and at-risk populations are already in place in the Town of Ridgefield? (f) What disaster-related community risk reduction strategies specific to vulnerable and at-risk populations should be included in the *Town of Ridgefield Local Emergency Operations Plan*? The data collection procedures included a survey sent to stakeholders for disaster-related risk-reduction and vulnerable populations in and around the Town of Ridgefield while a second survey was sent to executive fire officers across the United States. The results showed that while a number of key strategies to reduce risk are already in place, many remain to be included in the LEOP. Recommendations included consideration of nine key strategies specific to vulnerable populations for inclusion in the LEOP as well as further evaluation of these recommended strategies by a group including both government and vulnerable population stakeholders to help ensure effective and efficient implementation.

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Reducing Disaster-Related Risk for Vulnerable and At-Risk Citizens

Intense storms, weather-related emergencies and other types of disasters in the Northeast have become more frequent and more severe in recent years (Shih et al., 2018; Yale New Haven Health, Center for Emergency Preparedness and Disaster Response, & Connecticut Department of Public Health, 2018). Vulnerable populations including the elderly, those reliant on medical supplies and equipment, people with impairments that affect communication, mobility, their ability to care for themselves, as well as those with reduced access to resources are all at increased risk of physical, mental, emotional, and financial harm during disasters (Hoffman, 2009; Malik et al., 2018; World Health Organization, 2013; Yale New Haven Health, 2018). The problem was that the Local Emergency Operations Plan (LEOP) for the Town of Ridgefield does not specifically address the needs of vulnerable and at-risk citizens, leaving them at increased chance of preventable harm from disaster (Richard & Marconi, 2019). The purpose of this applied research project (ARP) was to reduce risk in the community by identifying solutions specific to disaster-related problems experienced by vulnerable and at-risk citizens and recommending them for inclusion in the *Town of Ridgefield Local Emergency Operations Plan*. (Richard & Marconi, 2019).

Descriptive methodology guided the following questions: (a) What vulnerable populations exist in the Town of Ridgefield? (b) What disasters are most likely to impact members of the Town of Ridgefield community? (c) What factors increase disaster-related risk for vulnerable populations in the Town of Ridgefield? (d) What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? (e) What disaster-related community risk reduction practices specifically for vulnerable and at-risk populations are already in place in the Town of Ridgefield?

These questions will be addressed primarily through the results of a survey of risk reduction in vulnerable populations (Appendix B) distributed to key stakeholders in disaster preparedness for the Town of Ridgefield as indicated in the LEOP (Richard & Marconi, 2019). A second survey (Appendix C) was distributed to executive-level fire-service and emergency response personnel across the globe in order to improve the availability of options to reduce disaster-related risk for at-risk populations that may not have been considered at a local level, but may be applicable to vulnerable populations in the Town of Ridgefield.

Background and Significance

The Town of Ridgefield, located in the center of Fairfield County Connecticut, is primarily a bedroom community of approximately 35 square miles serving an estimated population of 25,000 residents (United States Census Bureau, 2018). Ridgefield, CT is bordered by the City of Danbury to the North, the Town of Redding to the East, the Town of Wilton to the South, and the New York State towns of North Salem, South Salem, and Lewisboro to the West.

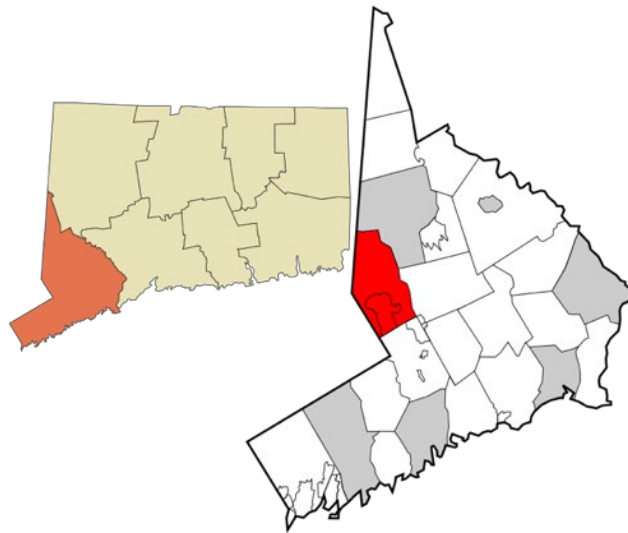


Figure 1. Map of the Town of Ridgefield, Connecticut within Fairfield County (United States Census Bureau, 2010)

The Ridgefield Fire Department is the sole provider of fire and EMS to the town of

Ridgefield (Marconi & Burford, 2009; Town of Ridgefield, Connecticut, 2018). The department administrative staffing consists of a full-time career fire chief, full-time career assistant chief, department administrator, and fire marshal (Burford, 2011). The Ridgefield Fire Department is tasked through Town Charter to protect life and property and to enforce all laws, ordinances, and regulations related to fire safety (Town of Ridgefield, 2018). The department is further tasked with providing full emergency medical services at a paramedic level, hazardous materials and rescue response, and providing assistance (Burford, 2011; Marconi & Burford, 2009).

The fire chief is responsible for the maintenance and administration of the department as well as the oversight of all departmental functions (International Fire Service Training Association, 2014 p. 1; Town of Ridgefield Human Resources Department, 2014). The Department maintains four shifts of eight to nine full-time career firefighters, all of whom are certified at a minimum of EMT level, sixteen of whom are paramedics (Burford, 2011). Each shift has two officers, one captain who acts as shift commander at headquarters, and one lieutenant who supervises the Ridgebury Fire Station and acts as acting shift commander at headquarters in the absence of the captain (Burford, 2011; Town of Ridgefield Human Resources Department, 2014a). The department also maintains a volunteer component of approximately fifty firefighters who work under the career chief and assistant chief, but maintain their own internal leadership structure (Burford, 2011). These firefighters and officers have a variety of qualifications, but primarily serve in support role to the career personnel (Burford, 2011).

Between 1999 and 2019 the State of Connecticut had a total of 13 FEMA declared disasters (Federal Emergency Management Agency, 2019). During the same period the Town of Ridgefield was directly impacted by four major hurricanes, 14 severe thunderstorms, and 16 severe winter storms along with other disasters including wildfires, tornados, and more (Milone

& MacBroom Inc., 2015. p. 1-6). Such full-scale disasters produce significant flooding, extended power outages, fires, hazardous materials releases, and disruptions to transportation increasing both the demand for emergency services and the challenges of delivering those services (Milone & MacBroom Inc., 2015; Yale New Haven Health et al., 2018).

Incidents such as these can have a significant impact on the safety and well-being of all residents of and visitors to the Town of Ridgefield, but certain subgroups of the community may experience even greater harm from these and even lesser disasters (Khan, Vasilescu, & Khan, 2008). These subgroups, are termed in this research as “vulnerable populations” are well described as follows:

Populations whose members may have additional needs before, during, and after an incident in functional areas, including but not limited to maintaining independence, communication, transportation, supervision, and medical care. Individuals in need of additional response assistance may include those who have disabilities; who live in institutionalized settings; who are elderly; who are children; who are from diverse cultures; who have limited English proficiency or are non-English speaking; or who are transportation disadvantaged. (Center for Disease Control and Prevention, 2012, p. 5)

However, not everyone who is vulnerable is inherently “at-risk” of harm. The 2017 article, *What is a Vulnerable Population* explains that while some people may be considered vulnerable due to their demographics such as being over 65 or under five, or due to their conditions, such as chronic illness, these do not immediately put them “at-risk” of injury (CareCentrix, 2017). A person who is vulnerable may simply require greater or continued resources in order to avoid risk. Thus, a person is vulnerable if they are dependent on an oxygen concentrator that runs on electricity and a storm causes an extended power outage. Yet they are

not at-risk as long as they have adequate resources such a backup generator, or a store of extra oxygen tanks, or a relative who can take them to a shelter with electricity. This person becomes at-risk only if a disaster occurs and they don't have such access to such resources secured ahead of the disaster (CareCentrix, 2017; Center for Disease Control and Prevention, 2010). Thus, while some national, state, and local data is available to help identify some vulnerable populations, it is inadequate to accurately identify: (a) all vulnerable populations, (b) the types of disasters that may cause them harm, (c) the factors that put vulnerable people at-risk of disaster-related harm, and (d) the resources that might prevent this harm (cite).

Until 2016 the Chief of the Ridgefield Fire Department also held the position of Emergency Management Director. In 2016 the Assistant Chief was promoted to Chief of the Fire Department, and without an Assistant Chief the Fire Commission elected to move the position of Emergency Management Director outside of the fire department in order to relieve the fire chief's task load (J. Myers, personal communication, June 14, 2019,) (Appendix F). Despite this change, as the provider of emergency medical services, mass-care, risk-reduction, and all-hazards emergency response the Ridgefield Fire Department has remained heavily involved in all phases of emergency management.

To fulfill the Ridgefield Fire Department's stated mission (Burford, 2011, p. 2) to protect the community from the hazards of any situation that threatens the life, safety, and well-being of people and property, the actions of fire department administration and line personnel must go beyond reactive emergency response. The fire department's role in community risk reduction is clarified in National Fire Protection Association Standard 1452 (2020) which states:

It is essential that Community risk reduction programs become an integral part of the total fire and life safety programs in a community and an effective community risk

reduction program is the primary method of prevention and mitigation of all hazards, with proven success in reducing loss of life, injury, and property damage in the community. (p. 7)

This aligns with the Town of Ridgefield, Connecticut: Hazard Mitigation Plan (Milone & MacBroom Inc., 2015) which, when discussing the four phases of emergency management: mitigation, preparedness, response, and recovery, states “Mitigation differs from the remaining three phases in that hazard mitigation is performed with the goal to eliminate or reduce the need to respond” (p. 12). While the exact dimensions of disaster-related risk for vulnerable populations have yet to be determined, it is already clear that the future impact of this risk is likely to grow if not mitigated. According to the National Oceanic and Atmospheric Administration National Centers of Environmental Information intense storms and other emergencies are likely to become more frequent in part because of climate change (Code Red, 2019; National Oceanic and Atmospheric Administration, 2019). According to the U.S. Census Bureau (2017, para. 2), by 2060 adults age 65 and over will make up nearly 25 percent of the U.S. population. If investment in community risk reduction is not made now, a lack of planning and preparation will lead to increased needs for disaster emergency response at the times when system stress is at its greatest.

According to Mahapatra :

“Research on health response to disaster has picked up momentum only recently in the 21st century. There is also a need to develop disaster healthcare research capacities to address regional vulnerabilities. Generating evidence is not enough. Concerted societal action is needed to sensitize, train, and equip adequate human resources to fill in various key emergency medical and public health roles when disaster strikes.” (2014, p. 238)

This is echoed by Sharona Hoffman in her report “*Preparing for Disaster: Protecting the Most Vulnerable in Emergencies*”:

“Planning and production of planning documents alone are not sufficient to achieve comprehensive and effective disaster readiness. Consequently, the terms “planning” and “preparation” in this article are meant to include not only the contemplation of response approaches, but also the implementation of readiness initiatives.” (2009, p. 1496)

A failure to effectively connect vulnerable populations with the resources they need to reduce disaster-related risk can potentially increase liability for the Town. Acts that provide federal funds such as the Pandemic and All-Hazards Preparedness Act and the Older Americans Act require communities receiving grants to address aging and engage in preparedness planning (Assistant Secretary for Preparedness and Response, 2016). Likewise, consideration for at-risk populations including those with functional needs have been mandated to be part of public health emergency plans (Assistant Secretary for Preparedness and Response, 2016).

This research relates directly to the National Fire Academy Executive Fire Officer Program course: Executive Analysis of Community Risk Reduction as this course states that:

Community risk reduction is an approach that helps you: identify fire and life safety risks, prioritize those risks, determine how to prevent or mitigate risks, focus your efforts, become more of a community player, provide value-added services, and improve the quality of life in your community. (United States Fire Administration, 2018, p. 46)

Specifically, this research applies directly to unit two of this program, “*Assessment*”, by utilizing the community risk assessment process, analyzing local community risks, assessing vulnerability to these risks, and recognizing the importance of community involvement (United States Fire Administration, 2018, p. 2-6). According to the five steps of the community risk-reduction model from the Executive Analysis of Community Risk Reduction program student manual (United

States Fire Administration, 2018, p. 1-8) this project addresses step I; Getting Ready, step II; Assessment, and the first sections of step III; Planning.

This research also aligns with Goals one, two and three of the United States Fire Administration Strategic Plan, to reduce fire and life safety risk through preparedness, prevention, and mitigation, to promote response, local planning and preparedness for all hazards, and enhance the fire and emergency services' capabilities for response to and recovery from all hazards (Long, 2014).

Literature Review

The purpose of this literature review was to examine and summarize prior research on efforts to reduce disaster-related risks faced by vulnerable populations (National Fire Academy, 2018). This review looked at prior global, national, and local literature to identify key problems and associated solutions presented within the past twenty years. This time frame was selected because shortly after the year 2000 a series of disaster events caused emergency preparedness specialists to realize that risk reduction efforts expected to be effective for the general populations were woefully inadequate if not specifically designed for vulnerable populations (Davis & Styron, 2009). At the same time, the few disaster-related risk reduction solutions designed for special populations were found to be highly effective in reducing risk (Davis & Styron, 2009).

Davis & Styron (2009) demonstrated the success of customized solutions in the United States, in 2001 rolling blackouts across Northern California could have been devastating for vulnerable persons relying on electrically operated medical equipment if it had not been for the San Francisco Office of Emergency Services working with utility companies to specifically notify and accommodate these individuals wherever possible. Davis & Styron (2009) also found

that during the 2001 World Trade Center Attacks, some individuals with disabilities survived due to special evacuation preparations they had made following the 1993 World Trade Center Bombings.

Globally, an understanding that disaster-related risk-reduction resources adequate for the general public do not suffice for vulnerable populations came during a heat wave in France in 2003, of the 14,800 deaths that occurred, 70% were over 75 years old (Hutton, 2008, p. 1). Hutton found that although the country has a premiere first world healthcare system they suffered from:

A lack of preparation, [a] shortage of cooling equipment in nursing homes and hospital facilities, and [a] lack of any clearly defined roles. Authorities failed to identify which of these non-institutionalized elderly persons were at risk, and to communicate about or provide life-saving interventions like bottled water, ice packs and cooling equipment. for agencies involved. (Hutton, 2008, p. 2)

In a report on the CDC Disaster Planning Goal: Protect Vulnerable Older Adults, Dr. Vincent Campbell stated, “9/11 got the attention of the disability community, caregivers, and service providers, but it didn’t really penetrate the emergency response community that much. That came with Katrina” (Benson, 2007, p. 1). Al-rousan, Rubenstein, & Wallace (Al-rousan, Rubenstein, & Wallace, 2014, p. 12) found that in 2005 during hurricane Katrina in the United States, roughly 71 percent of the victims were older than age 60. Wingate, Perry, Campbell, David, and Weist (2007) found that as New Orleans prepared for the storm to make landfall the majority of the city’s 280 nursing homes were unable to evacuate not because resources did not exist, but because there were no drivers to staff the many school buses available for evacuating ambulatory residents. Furthermore, the emergency operations plan did not include transport

options for non-ambulatory residents, elderly or otherwise. According to Frieden (2006, para. 33), almost 86% of people providing care and services for people with disabilities did not know how to contact their emergency manager.

Events such as Hurricane Katrina, where gruesome images of abandoned elderly were visible on the nightly news, caused a change in focus towards risk-reduction strategies customized for special populations such as the disabled, poor, and elderly. American Association of Retired Persons (AARP) Group Executive Officer Christopher Hansen noted, “There is truly a need to plan and accommodate all Americans during emergencies, particularly older Americans” (Benson, 2007, p. 1). Likewise the National Organization on disability began work on an Emergency Preparedness Initiative, “to ensure that emergency managers address disability concerns and that people with disabilities are included in all levels of emergency preparedness—planning, response, and recovery” (Davis & Styron, 2009, p. 1).

A review of the literature does not find any consensus definition to answer the question, “What is a ‘Vulnerable Person’?” (Center for Disease Control and Prevention, 2012) . For example, in one global report, the World Health Organization focuses on defining vulnerable populations based on the many conditions that place a person at greater risk than the general population of physical, mental, financial, or other harm (2013). These include having low income, low social status, being homeless, being of a single family household, etc. (World Health Organization, 2013). A national report from the American Red Cross (ARC) (Federal Emergency Management Agency & American Red Cross, 2009, p. 1) defined vulnerable populations based more on their demographics such as children under five years old, the elderly over 65 years old, ethnic minorities, and prisoners among others. As does much of the global and national literature, one local vulnerable person’s registry for the Town of Wethersfield,

Connecticut presents a “laundry list” of defining characteristics including:

Blind, visual impairment, autism, nonregulatory, mobility assistance required, verbal impairment, prescriptions, cognitive disability, intellectual disability, behavioral concerns, deaf or hard of hearing, Alzheimer’s, bedridden, oxygen required, service animal, lives alone, may become disoriented, may roam, may be unable to communicate under stress, likely unable to cope with three or more days of power outage, unable to evacuate from home and summon proper assistance, possesses a medical condition to hamper communication or mimic hostility, intoxication, etc. (Tomczyk & Mitney, 2017, p. 1)

In a guide for reducing risk and providing assistance to vulnerable populations, the Federal Emergency Management Agency (FEMA) (2017) identifies vulnerable populations by focusing more on their functional needs. This presents a broadly encompassing, but more usable definition focusing on the persons’ vulnerabilities, rather than the demographics to which they may belong or the conditions that they are likely to have. Here FEMA defines vulnerable populations in disasters as individuals needing functional support services to maintain their independence such as durable medical equipment (DME), consumable medical supplies (CMS), and personal assistance services (PAS) (Federal Emergency Management Agency, 2017). This definition may be useful as it can help in the identification of vulnerable and at-risk populations by making note of their special functional support needs that must be met.

The challenge of defining vulnerable populations is further complicated by an important distinction that must be made, that of those who are vulnerable versus those who are at-risk. The Center for Disease Control and Prevention (CDC) (2012, p. 4) explains that among vulnerable populations such as the elderly who may or may not have adequate resources to continue their activities of daily living without aid, there are sub-groups considered at-risk such as those, “who

cannot comfortably or safely access and use the standard resources offered in disaster preparedness, relief and recovery” (p. 4) For example, in a relatively affluent community such as Ridgefield it may be easy to identify the elderly as a vulnerable population, those with a potential increase in disaster-related risk, but many of these elderly residents and visitors need no additional or specialized risk-reduction resources beyond what is provided to the general population to maintain their activities of daily living (ADLs). However, some elderly members of the community are at-risk, with a need for greater or more specialized resources or increased access to those resources to avoid a probable increase in disaster-related risk. As an example of this, Banks (2013) found that the ability of the elderly to physically, financially, and psychologically deal with an event that might be called a disaster depends heavily on their living arrangements categorized as independent with no need for daily assistance, living in the community, but requiring regular assistance, or living with major health issues resulting in dependence on care or residence in a healthcare facility. In short, vulnerable population are possibly at increased potential for harm but are easier to identify, while at-risk populations are probably at increased potential for harm but are harder to find.

The phrase from the CDC (2012) report, “comfortably or safely access and use the standard resources” deserves further examination as well (p. 4). For effective community risk to be reduced, there cannot exist an assumption that disaster resources are available, therefore it is up to citizens to make use of them. This is exemplified by a 2012 national survey that found 15% of US adults over age 50 would not be able to evacuate their homes without help (National Association of Area Agencies on Aging, UnitedHealthcare, & National Council on Aging, 2012). According to Heagele and Pacquiao, most elderly and medically frail, “do not want to leave their pets or service animals behind” (2019, p. 55). This strong sentiment is mirrored in the United

States, best exemplified by the comment from Bert Kilpatrick when authorities prompted her to evacuate in advance of Hurricane Florence. “I’ve been here since 1949. I’m used to these hurricanes,” the 87-year-old said. “Me and my cat, Maybank, we’re staying” (Liz Szabo, Jonel Aleccia, & Doug Pardue, 2018, para. 28).

Some vulnerable populations rely even more heavily on their comfort pets and service animals. As such, the Americans with Disabilities Act Tool Kit encourages the evaluation of shelter plans for accommodations of these animals (United States Department of Justice, 2016). Community risk reduction efforts must therefore concentrate not only on ensuring that specialized risk-reduction resources are available, but that the availability is known and comfortably and safely accessible to at-risk populations in order for them to be effectively utilized.

Heagele and Pacquiao (2019) identify a variety of other factors that may impede the evacuation or sheltering of members of vulnerable and at risk populations. These include difficulty in walking or moving, lack of appropriate transportation, lack of financial resources, mistrust of scientific or political authorities, lack of assurance that shelters will be able to care for their needs, and that asking for assistance may place emergency responders at risk (Heagele & Pacquiao, 2019, p. 55). Heagele and Pacquiao conclude that if vulnerable and at-risk members of the community are not identified and their risks reduced in advance of disaster operations, the difficulty and cost of emergency operations increases dramatically and, in some cases, the opportunity for emergency and rescue assistance is lost (2019).

Thus, at-risk populations are perhaps best defined as those who, when it comes to disaster risk-reduction resources, have some combination of less access, more need, and little to no functional reserve to deal with change or stress without specialized support (Fernandez, Byard,

Lin, Benson, & Barbera, 2002). Because of the comparative ease with which elderly can be identified in a community and the great association between elderly persons and vulnerabilities, the elderly are often used in literature as a surrogate for vulnerable populations (Federal Emergency Management Agency & American Red Cross, 2009). However, FEMA and the American Red Cross indicate that not all vulnerable persons are elderly and not all elderly are at-risk (Federal Emergency Management Agency & American Red Cross, 2009). The ability of communities such as Ridgefield to identify and track vulnerable and at-risk persons has been identified as a significant risk-reduction gap by Shih et al. (2018).

Residents of the State of Connecticut have an overall favorable health profile compared to the rest of the country, but positive health is not evenly distributed across population groups or geographic regions (Connecticut Department of Public Health, 2014). Limitations to this report do not allow useful identification of at-risk individuals in the Town of Ridgefield. Similarly, the CDC Disability and Health Data Systems database identifies persons with disabilities, but is limited only adults over 18 years of age in the entirety of Connecticut, and only as recently as 2017 (Center for Disease Control and Prevention, 2017). Another resource that at first appears promising is the emPOWER Map 3.0 which helps identify local residents reliant on electrically operated medical equipment (Department of Health & Human Services, 2019). However, even though this map presents data specific to the Town of Ridgefield, it is only limited to self-reporting Medicare recipients and provides only total numbers, not geographic locations or contact information.

Another solution to help better identify at-risk populations is a risk registry. While this has met with some limited success in the UK, but has been to be less effective in the United States and throughout Connecticut (Cabinet Office, 2017; Hiscock & Jones, 2017; Tomczyk &

Mitney, 2017; Shih et al., 2018) (L. Tomczyk, personal communication, April 15, 2019), (Appendix G).

In short, while vulnerable populations such as the elderly may be easy to identify in a community, it is their at-risk subgroups that have the actual increased need. It is these at-risk subgroups that need to be identified specifically and locally by stakeholders including their caregivers, advocates, and the at-risk individuals themselves as well as the factors that move community members from the vulnerable populations category to the at-risk sub-group.

The National Fire Protection Association (NFPA) 1035 Standard on Fire and Life Safety Educator, Public Information Officer, Youth Firesetter Intervention Specialist and Youth Firesetter Program Manager Professional Qualifications (National Fire Protection Association, 2015) defines community risk reduction as, “ Programs, actions, and services used by a community which prevent or mitigate the loss of life, property, and resources associated life safety, fire, and other disasters within a community” (p. 10). Reading this within the context of at-risk populations means that the typical understanding of disaster must be expanded to consider not only events and incidents that significantly affect typical members of the community, but also those smaller events that may have disaster-level impact to at-risk community members. Thus, regardless of how well vulnerable and at-risk populations are identified, in order to most effectively reduce their disaster-related risk they must be considered in relation to the disasters most likely to impact the community. Most people would consider a disaster something that closely follows the Merriam-Webster Dictionary definition, “a sudden calamitous even bringing great damage, loss, or destruction”(2019, p. 1). Fernandez et al. (2002) explain that for at-risk populations the threshold for what may be an event that would cause them damage or loss is often much lower. Khan et al. (2008) further clarifies that what may be considered minor hazards

by emergency responders, emergency managers, and public health officials may have major impacts on at-risk individuals. The American Red Cross (2009) acknowledges this in their reference *Disaster Preparedness for Seniors, by Seniors*, using the example of an extended power loss that may be only an inconvenience to most of the community, but could have significant consequences for at-risk individuals reliant on electrically operated durable medical equipment.

At first glance, the Hazard Mitigation Plan commissioned by the Town of Ridgefield in 2015 answers the question “what disasters are most likely to impact members of the Town of Ridgefield community” (Milone & MacBroom Inc., 2015). However, the answer only applies to the general community, focusing primarily on disaster impact to assets owned by the Town. The report makes mention of “special populations” in only one paragraph, stating only that, “It is important for Ridgefield’s emergency personnel to continue to be prepared to assist these special populations during emergencies such as winter storms” (Milone & MacBroom Inc., 2015, pp. 6-9). While the evaluation of hazards to the Town along with mitigation strategies will, no doubt, reduce risk for vulnerable community members, it is inadequate due to the focus on protection of Town assets and the thorough lack of perspective or considerations of any vulnerable populations (Milone & MacBroom Inc., 2015). In addition, incidents and disasters that occur within the borders of the Town of Ridgefield, CT is not necessarily the same thing as disasters that impact vulnerable populations within the borders of the Town of Ridgefield, CT. Benson (2007) indicates that events that impact local communities can disrupt access to resources that may be relied on by at-risk populations for activities of daily living (Benson, 2007). According to the 2018-2022 FEMA Strategic Plan (Long, 2018), threats to infrastructure such as large-scale and long-term power outages are emerging that may particularly affect older and vulnerable

populations (Long, 2018). The Hazard Mitigation Plan is a retrospective review focusing on the Town of Ridgefield and does not consider evolving hazards nor hazards that strike primarily beyond the borders of the Town of Ridgefield (Milone & MacBroom Inc., 2015). Furthermore, as described in the Executive Analysis of Community Risk Reduction Student Manual, this reflects the general reliance on emergency response after disaster strikes rather than the more effective pre-disaster community risk reduction (United States Fire Administration, 2018). Thus, it remains to be determined what disasters are most likely to impact members of the Town of Ridgefield from the perspective of community risk-reduction for vulnerable populations.

Emergency response can be divided into four phases beginning with mitigation and preparedness before an incident, moving on to response during the incident, and recovery afterwards (Milone & MacBroom Inc., 2015). According to the Executive Analysis of Community Risk Reduction program, community risk reduction focuses on the first two phases, but are directly connected to reducing need for the second two (United States Fire Administration, 2018). In order to accomplish this, community disaster risk reduction recommendations may often cover a wide variety of communities, community members, disasters, and risks.

There is no shortage of general community disaster risk reduction recommendations available. On a global level, the United Nations Office for Disaster Risk Reduction (United Nations Office for Disaster Risk Reduction, 2019) makes numerous recommendations and resources available primarily for policymakers through their *Sendai Framework for Disaster Risk Reduction 2015-2030*. On a national level, the FEMA website Ready.gov alone has dozens of recommendations for individuals, families, responders, and policy makers for a wide range of situations (Department of Homeland Security, 2019). So many recommendations are available that it can be a challenge to navigate them, especially for those belonging to or attempting to

meet the needs of vulnerable or at-risk groups with specific requirements and situations.

Locally, the State of Connecticut State Response Framework (SRF) mentions vulnerable, special, or at-risk populations only once, simply identifying them as to be addressed under emergency support functions (ESF) six Mass Care, and ESF eight Public Health and Medical Services (Department of Emergency Services and Public Protection, 2014). This SRF provides the template for local emergency operations plans, including the one currently used by the Town of Ridgefield (Richard & Marconi, 2019). While this local emergency operations plan is a significant improvement on prior plans that made no mention whatsoever of vulnerable, special, or at-risk populations, like the state SRF, it only mentions them briefly to make the same ESF assignments of responsibility (Marconi & Burford, 2009; Richard & Marconi, 2019).

The 2018-2022 FEMA Strategic Plan (Long, 2018) includes a target of diversity and inclusion stating, “The U.S. population is growing older and more diverse in terms of culture, language, and perspective. This places pressure on authorities to incorporate specialized needs, expectations, and methods of communications into their plans to maintain equitable access to services” (Long, 2018, p. 10).

While general community disaster risk reduction recommendations may be more widely available, there is still no shortage of recommendations specific to vulnerable populations. One example was found in the World Health Organization (WHO) report on Older Persons in Emergencies (Hutton, 2008, pp. 29-35). Table 1 shows the key objectives proposed by WHO for each phase of disaster and emergency management. It is valuable to note that even the objectives in the emergency response and recovery phases suggest proactive community risk reduction efforts rather than actions to take place only during and after reactive disaster operations.

Table 1

World Health Organization Considerations for Action and Policy Development for Older People in Emergencies

<u>PHASE</u>	<u>Objective 1</u>	<u>Objective 2</u>	<u>Objective 3</u>	<u>Objective 4</u>
Planning	Increase visibility and raise awareness among health agencies and humanitarian organizations of older people's needs and priorities in emergencies. - Promote better practice policies and documents among all stakeholders.	Develop essential medical and health resources for older people in emergency practices.	Develop emergency management policies and tools to address older people's health-related vulnerabilities.	n/a
Emergency Response	Ensure that older people are aware of and have access to essential emergency health care services.	Provide age-sensitive and appropriate health and humanitarian services to maintain older people's health.	Promote cross-sectoral planning and coordination to raise awareness of older people's needs in crises and reduce their risk of marginalization and deteriorating health in emergencies.	n/a
Recovery	Build institutional capacity and commitment to ensuring the health and safety of older people in emergencies.	Strengthen the capacity of ministries of health and health care systems to meet the needs of older people in emergencies.	Develop mechanisms to ensure continuing development and exchange of expertise as these relate to older people in emergencies.	Promote active ageing as a strategy to reduce vulnerability and develop resiliency to disasters.

However, even if recommendations and requirements are followed to include such considerations in local emergency operations plans this inclusion does not guarantee that they will result in the desired reduction of community risk. In following up on hard lessons learned from Hurricane Katrina, Renne & Mayorga (2018) found that only marginal improvements to the evacuation of vulnerable populations had occurred in America's 50 largest cities in the decade following the disaster.

Al-rousan et al. (2014) presents the recommendation that, “this situation suggests the need for a comprehensive emergency preparedness plan through cross-sector collaboration to identify and meet the specific needs of vulnerable older adults during each phase of an emergency” (p. 510). But Shih et al. (2018) found that while public health department agents found significant gaps and limitations in interagency collaboration and expressed interest in partnering with other organizations and agencies to improve outreach to vulnerable populations, none currently did. Some agents explained that their lack of focus on vulnerable populations was due to another agency or department being perceived as the lead agency for these people (Shih et al., 2018).

The overall recommendation from global, national, and local levels is that active collaboration between risk reduction, resiliency, and response specialists and the specific vulnerable populations that they seek to protect. (Al-rousan et al., 2014; Banks, 2013; Center for Disease Control and Prevention, 2012; Daniel R. Levinson, 2012; Davis & Styron, 2009; Fernandez et al., 2002; Frieden, 2006; Hoffman, 2009; Hutton, 2008; Shih et al., 2018; The University Center for Excellence in Developmental Disabilities, 2016). Thus, despite the fact that a wide range of recommendations exist in the literature as summarized in Appendix A the literature appears to suggest that recommendations in the Local Emergency Operations Plan be answered not only by national experts, but also by the local risk-reduction and response experts familiar with resources available to the Town of Ridgefield along with members of the local vulnerable populations, their care-givers and advocates familiar with their needs.

The FEMA Strategic Plan (cite) (Long, 2018) contains objectives of sharing the responsibility of disaster preparedness and response with local community governments as well as to contain or reduce rising disaster costs (Long, 2018). Examining risk-reduction practices that

may already exist but are outside of the Local Emergency Operations Plan and or may not be effectively coordinated provides an opportunity for local government and private partnerships and collaboration to reduce cost and waste while improving resiliency and risk reduction for vulnerable populations in the community. Even if some existing items may need to be modified at cost to the town, FEMA reports that, on average, every dollar spent on mitigation efforts saves six dollars in future spending (Long, 2018, p. 14).

Shih et al. (2018) states that, even almost two decades into the modern era of disaster-related risk-reduction for vulnerable populations, it is still developing as a field requiring more research, data collection, and evaluation to continue to improve practices.

Procedures

Data was collected through two separate surveys over the course of on six weeks from June 1, 2015 to July 15, 2019. One survey, called the local survey (Appendix C), was of stakeholders in the emergency management, public health, emergency response, and vulnerable populations in and immediately surrounding the Town of Ridgefield. The second survey, called the global survey (Appendix C), was of executive fire officers outside of the Town of Ridgefield.

The first source for respondents the 2019 Town of Local Emergency Operations Plan distribution list with one exception (Richard & Marconi, 2019). This list of stakeholders included all relevant local partners, and heads of agencies and organizations directly involved in the development, communication, and/or implementation of this Local Emergency Operations Plan (Richard & Marconi, 2019). The one exception was the town attorney who is involved only for the purpose of legally filing the document according to state requirements. Communicating with the town attorney was not approved by the fire chief, nor the town chief executive officer as a part of this research project as doing so would incur significant cost. A list of these stakeholder,

minus the town attorney, is presented in Table 2.

Table 2

Local Emergency Operations Plan Stakeholders

Chief Executive Officer	Rudy Marconi
Emergency Management Director	Dick Aarons
Fire Chief	Jerry Myers
Assistant Fire Chief	Mickey Grasso
Police Chief	Jeff Kreitz
Emergency Medical Services	Rommie Duckworth
Emergency Medical Services	Mike Trenck
Public Health Director	Ed Briggs
Superintendent of Schools	Dr. William C. Collins
Public Works Director	Peter Hill
Finance Director	David F. Ulmer
Social Services Director	Tony Philips
Fire Marshall	Guy Miglinas

An introductory email was sent to all potential respondents (Appendix D). For respondents who replied positively to this initial email, a standardized response was sent (Appendix D). For all potential respondents to the local survey, a follow-up email containing the direct link was sent along with information for respondents to request clarification or assistance with the survey (Appendix D).

The second source for respondents for the local survey was a list of relevant stakeholders, caregivers, and advocates for persons who would qualify as vulnerable populations as defined by the literature review summary (Appendix A). This contact list was obtained from the fire chief. A list of these stakeholders, caregivers, and advocates is presented in Table 3.

Table 3

Local Vulnerable Populations Caregivers and Advocates

Director of Laurel Ridge	Administrator	Mary Tobin
Director of Benchmark Senior Living		William Crawford
Ridgefield VNA Director of HomeCare and Client Services	Director of HomeCare and Client Services	Melissa Woodhouse, OTR/L
Advisor of commission on aging		Karen Gaudian
Executive Director of Founders Hall		Grace Weber
SPHERE	President and Chairman of the Board	Lori Berisford
Ability Beyond Disability		Holly Schultz
Kids in Crisis	Managing Director of Crisis and Clinical Services	Denise Qualey, MSW
SART Region V Director		Dr. Donna Cobelli,
Regional EMS Coordinator		Blair Balmforth
Community Emergency Response Team (CERT)		Karen Tappe
Emergency Management Director	Danbury	Paul Estefan
Emergency Management Director	Redding	Steve Schnell/Doug Hartline
Emergency Management Director	Wilton	Mark Amatrudo

The local survey (Appendix B) was developed on the Survey Monkey web platform (www.surveymonkey.com) consisting of 23 questions with a Survey Monkey estimated completion time of 15 minutes and an ease of use rating of good. Local survey question one asked the respondent to identify their current position in relation to disaster services. This served to identify the expertise and perspective of the respondent while allowing the respondent to remain anonymous. The purpose of this was to increase the potential number of responses to the local survey.

Local survey question two directly reflected research question one, “what vulnerable

populations exist in the Town of Ridgefield.” Response choices for this question were a matrix. Vulnerable populations derived from the literature review (Appendix A) according to demographic and condition were listed vertically. For each of these vulnerable populations the respondent was asked to estimate the size of the population in the Town of Ridgefield as nonexistent, very small, small, moderate, large, or very large listed horizontally. This question had an “other” option for respondents to add any vulnerable population that they felt was present in the Town of Ridgefield but not reflected in the literature review. This was done for all questions in the local survey.

Local survey question three directly reflected research question two, what disasters are most likely to impact members of the Town of Ridgefield community.” Response choices for this question were a matrix. Disaster events derived from the literature review summary (Appendix A) were listed vertically. For each of these disaster events the respondent was asked to estimate the chance of the disaster to impact the Town of Ridgefield as none existent, very small, small, moderate, large, or very large listed horizontally.

Local survey question four directly reflected research question three, “what factors increase disaster-related risk for vulnerable populations in the Town of Ridgefield.” Response choices for this question were a matrix. Disaster related risks derived from the literature review summary (Appendix A) were listed vertically. For each of these disaster events the respondent was asked to estimate the impact of the disaster related risks to move vulnerable persons in the Town of Ridgefield to the category of at-risk as none existent, very small, small, moderate, large, or very large listed horizontally.

Local survey questions five through twenty-two directly reflected research question four, “what strategies should be considered for adoption into the Local Emergency Operations Plan to

reduce disaster-related risk for at-risk populations.” In order to obtain data that would be useful in answering research question six, questions five through twenty-two followed the format of the Local Emergency Operations Plan, focusing the same question on each Emergency support functions (ESF) one through nineteen (Richard & Marconi, 2019). The hope was this would yield results that would be more directly relevant to the Local Emergency Operations. Questions five through twenty-two each asked what strategies should be considered for adoption to reduce disaster related risk for at risk populations as they pertained to each ESF. At least two options were presented for each question derived by taking the general responsibilities listed for each ESF and customizing them for at-risk populations as per the recommendations derived from the literature review summary (Appendix A). As with all other questions in the local survey, these questions had an “other” option for respondents to add any consideration that they felt would be useful but not reflected in the listed choices.

Local survey question 23 directly reflected research question five, “what disaster-related community risk reduction practices specifically for vulnerable and at-risk populations are already in place in the Town of Ridgefield.” This question was open-ended and was intended to allow respondents to freely identify any local disaster-related risk-reduction practices already in place either officially or unofficially.

The source for respondents for the global survey was derived from communication channels known to be used by fire service executive officers and executive officer candidates including Facebook (<https://www.facebook.com/>), Twitter (<https://twitter.com/>), Instagram (<https://www.instagram.com/>), and the International Association of Fire Chiefs (IAFC) KnowledgeNet Forums (<https://knowledge.iafc.org/home>). An introductory message was sent to all potential respondents containing the direct link was sent along with information for

respondents to request clarification or assistance with the survey (Appendix E).

The global survey was developed on the Survey Monkey web platform (www.surveymonkey.com) consisting of 26 questions with a Survey Monkey estimated completion time of 20 minutes and an ease of use rating of good. Global survey questions one-four asked the respondent to identify, in order, the name of their organization, the geographic location of their organization's coverage area, their current job function, and how their current position is related to disaster services. The purpose of these questions was to identify the applicability of the responses to the following questions to community risk reduction in the Town of Ridgefield.

Global survey question five indirectly reflected research question one, "what vulnerable populations exist in the Town of Ridgefield." Response choices for this question were a matrix. Vulnerable populations derived from the literature review (Appendix A) according to demographic and condition were listed vertically. For each of these vulnerable populations the respondent was asked to estimate the size of the population in their area of responsibility as none existent, very small, small, moderate, large, or very large listed horizontally.

Global survey question six indirectly reflected research question two, "what disasters are most likely to impact members of the Town of Ridgefield community." Response choices for this question were a matrix. Disaster events derived from the literature review (Appendix A) were listed vertically. For each of these disaster events the respondent was asked to estimate the chance of the disaster to impact their area of responsibility as none existent, very small, small, moderate, large, or very large listed horizontally.

Global survey question seven indirectly reflected research question three, "what factors increase disaster-related risk for vulnerable populations in the Town of Ridgefield." Response

choices for this question were a matrix. Disaster related risks derived from the literature review summary (Appendix A) were listed vertically. For each of these disaster events the respondent was asked to estimate the impact of the disaster related risks to move vulnerable persons in their area of responsibility to the category of at-risk as none existent, very small, small, moderate, large, or very large listed horizontally.

Global survey questions eight through twenty-five directly reflected research question four, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations.” In order to obtain data that would be useful in answering research question six, questions eight through twenty-five followed the format of the *Town of Ridgefield Local Emergency Operations Plan*, focusing the same question on each Emergency support functions (ESF) one through nineteen (Richard & Marconi, 2019). The hope was this would yield results that would more directly relevant to the Town of Ridgefield Local Emergency Operations. Questions eight through twenty-five each asked what strategies should be considered for adoption to reduce disaster related risk for at risk populations as they pertained to each ESF. At least two options were presented for each question derived by taking the general responsibilities listed for each ESF and customizing them for at-risk populations as per the recommendations derived from the literature review summary (Appendix A). As with all other questions in the local survey, these questions had an “other” option for respondents to add any consideration that they felt would be useful but not reflected in listed choices. Global survey question 26 indirectly reflected research question five, “what disaster-related community risk reduction practices specifically for vulnerable and at-risk populations are already in place in the Town of Ridgefield.” This question was open-ended and was intended to allow respondents to freely identify any other disaster-related risk-reduction practices that they

believed should be put in place in their area of responsibility that might be relevant to vulnerable or at-risk populations in the Town of Ridgefield.

The purpose of obtaining data with both local and global expertise and perspectives was to balance local insight with an open mindset. There were certain assumptions and limitations made by the author of this research paper. The assumption was made that all participants in the surveys and interviews were honest in their answers and understood the questions as presented. The author did not attach any qualifiers to any of the questions thereby influencing the answers. A further assumption was that each respondent would submit only one survey response. While the Survey Monkey platform (www.surveymonkey.com) has certain controls in place to avoid this, it is possible for individuals to bypass these controls, although it is uncertain what benefit would be accomplished by doing so. The limitations included the lack of response to the both the local and global surveys conducted via the internet. These surveys did not meet the 95% confidence level ideally desired for surveys and would question the significance of any information gathered from the survey. Further limitations include the complexity of the surveys may have discouraged complete and honest responses and that the exclusive use of the internet and the Survey Monkey platform (www.surveymonkey.com) may have limited response from potential participants either unable or unwilling to access the internet. A significant limitation of survey questions asking respondents to quantify vulnerable populations and the impact of disasters by type is that not all respondents will have access to reliable data to do so and may respond with their perception and opinion. Due to the lack of publicly available literature to directly address these questions, this was deemed an acceptable practice despite these limitations.

Results

The global survey garnered a total of 38 responses from executive fire officers

representing a wide variety of fire and emergency services organizations responding to urban, to rural, to frontier response districts all across the United States. No international responses were received. The full results of the global survey can be found in Appendix I.

The local survey obtained only 11 responses despite at least two contacts to each potential respondent, with two follow up reminders for respondents who had not completed the survey by July 1, 2019. Of these, eight responses were from LEOP stakeholders while only three were from advocates and caregivers. The full results of the local survey can be found in Appendix H.

The first research question sought to identify what vulnerable populations exist in the Town of Ridgefield. The local survey was designed to provide expert insight into local conditions from perspectives of all facets of disaster-related community risk reduction and vulnerable population care and advocacy. The global survey was designed to return results to help provide context for disaster-related risk reduction considerations of vulnerable populations in the Town of Ridgefield.

As shown in Figure 2 the global survey respondents' aggregated responses identified the elderly (>65 y/o) as by far their largest vulnerable population with children under five years old coming in second. Within the global survey a close third, fourth, and fifth respectively were single-parent families, patients reliant on medications and people with limited financial resources. Aggregated responses from the global survey identified ethnic minorities and people with limited English proficiency as small to very small. The smallest vulnerable populations were identified in this survey as homeless and socially isolated persons which they rated as very small to non-existent. While no global respondents added any categories of vulnerable populations outside of the fifteen listed, many respondents provided answers of "I don't know"

which, due to a technical limitation of the survey platform, was not an option available for the local survey.

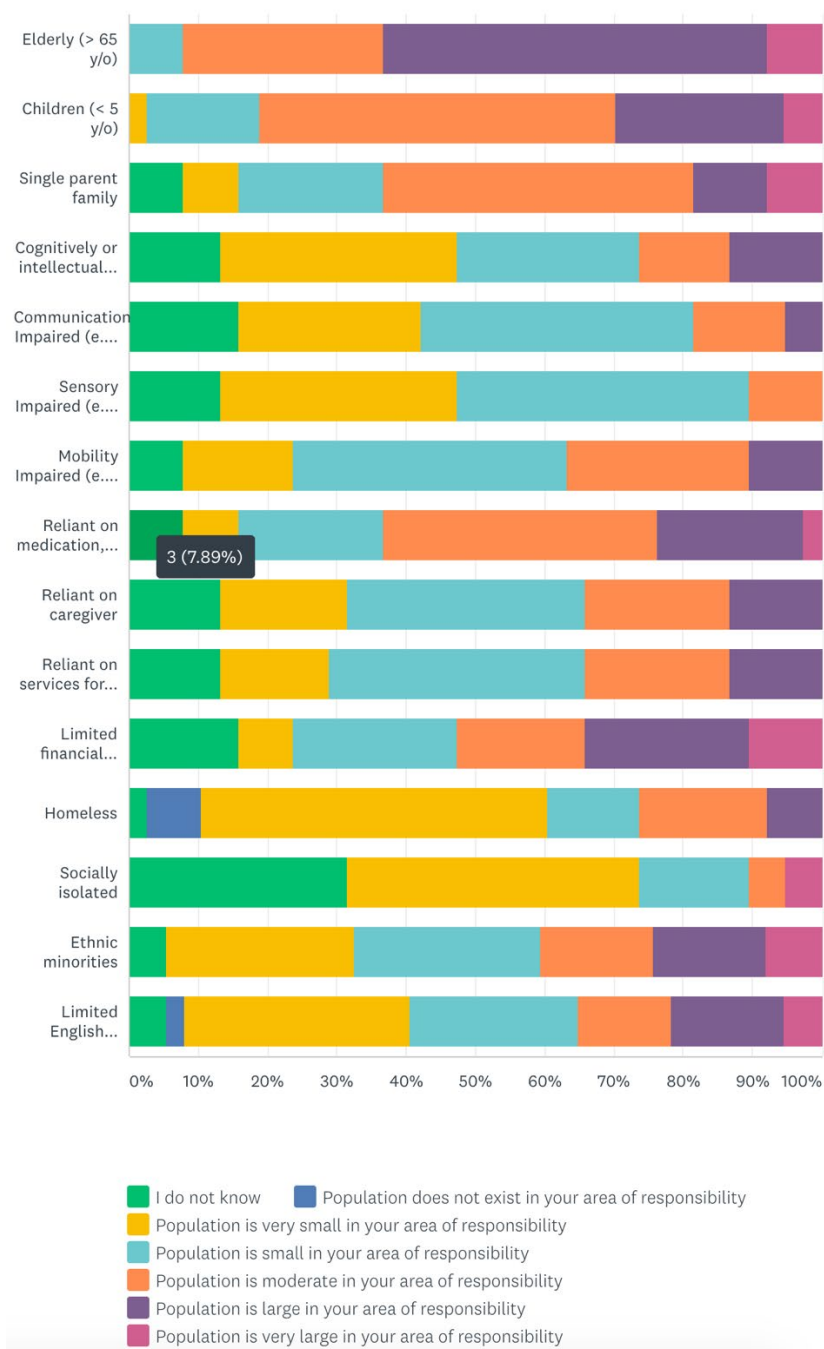


Figure 2. Responses to Global Survey Question Five: What Vulnerable Populations Exist in Your Area of Responsibility?

As shown in Figure 3 local survey respondents also identified the elderly (>65 y/o) as by

far the largest vulnerable population in Ridgefield with a weighted average of 3.50. Children under five years old coming in second with a weighted average of 3.40. Respondents identified people reliant on medications, medical supplies or equipment as the third most prominent vulnerable population in Ridgefield with people reliant on caregivers and services as fourth and fifth with weighted averages of 2.90, 2.55 and 2.55 respectively. Local respondents identified ethnic minorities and people with limited English proficiency as small to very small in Ridgefield with weighted averages of 1.27 and 1.18 respectively. The smallest vulnerable population was identified in this survey as homeless persons which they rated as very small to non-existent in Ridgefield with a weighted average of 0.60. No local respondents added any categories of vulnerable populations outside of the fifteen listed.

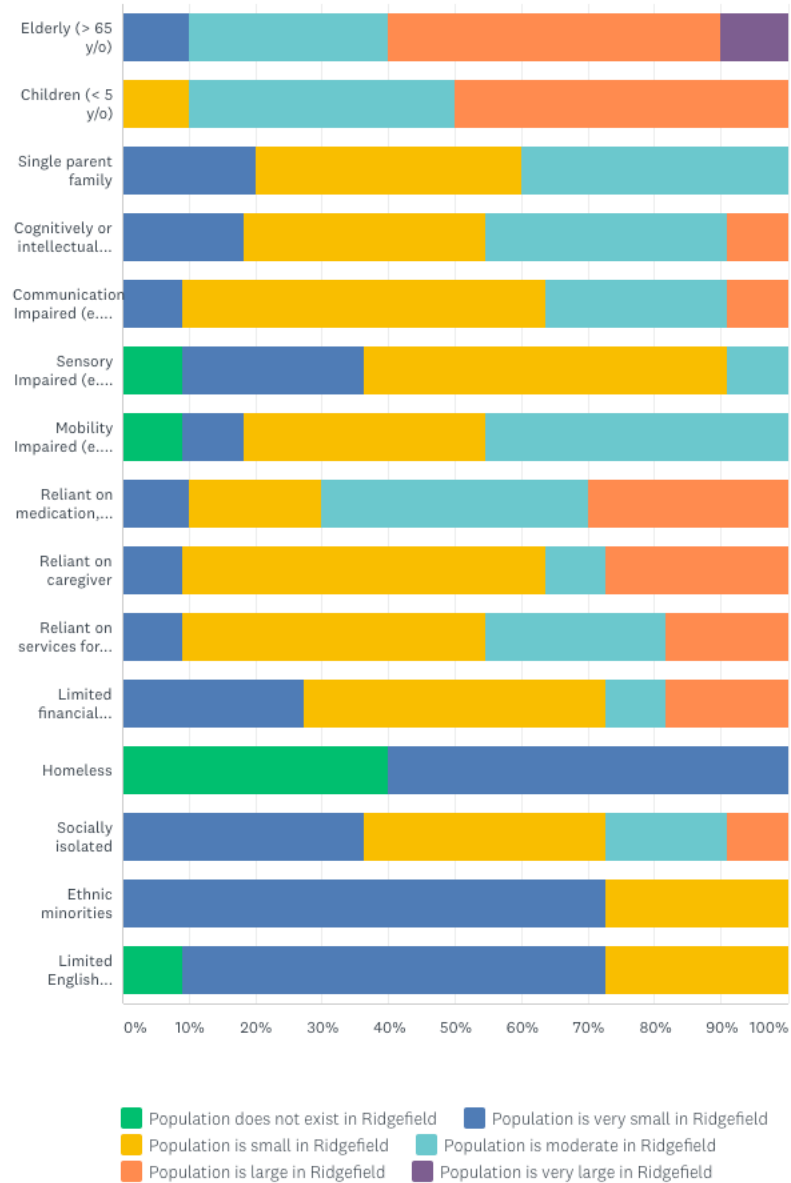
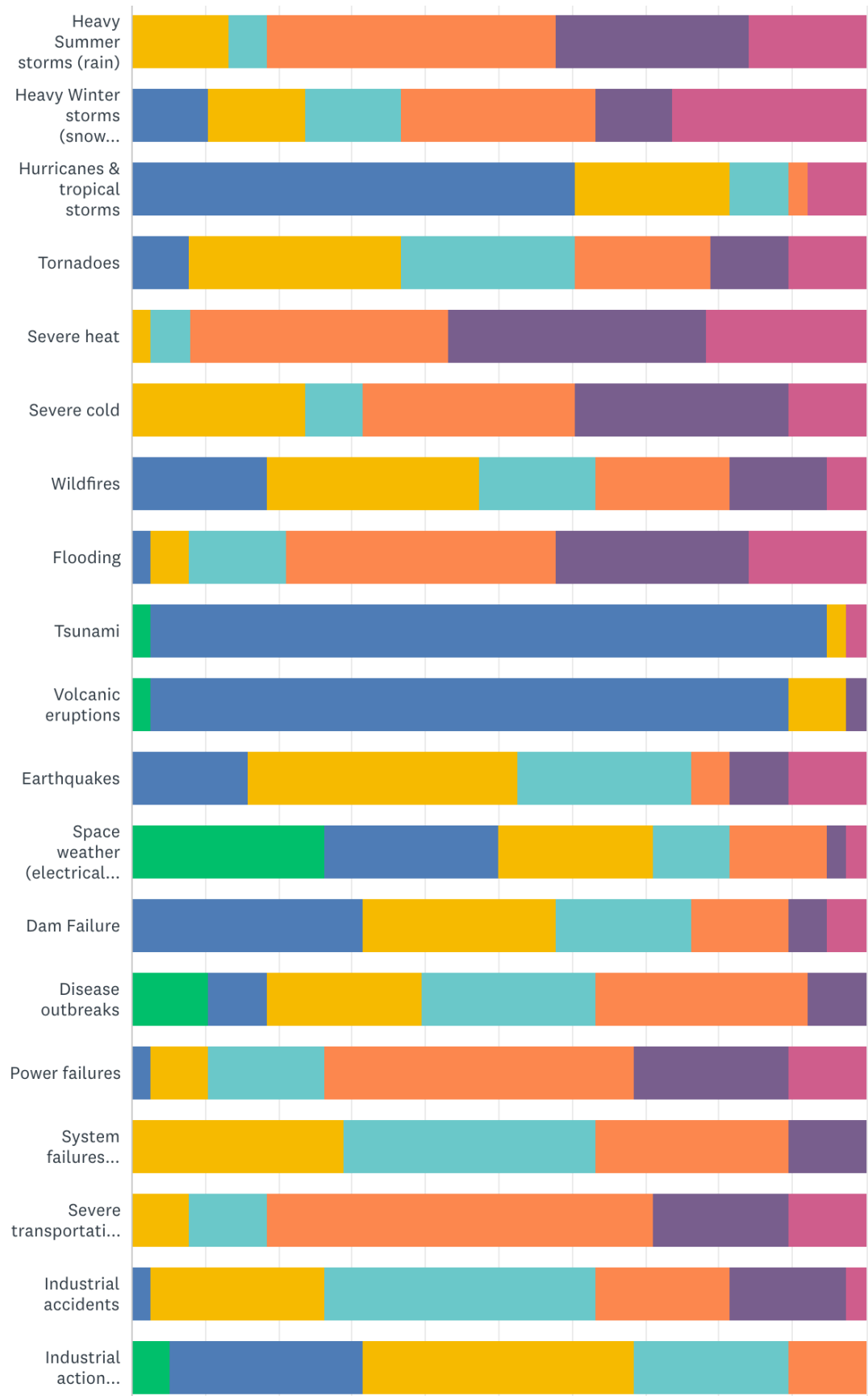


Figure 3. Responses To Local Survey Question Two: What Vulnerable Populations Exist In The Town Of Ridgefield?

The second research question sought to identify what disasters were most likely to impact members of the Town of Ridgefield. Again, here the local survey was designed to provide expert insight into local impact from perspectives of all facets of disaster-related community risk reduction and vulnerable population care and advocacy. The global survey was designed to return results to help provide context for disaster-related risk reduction considerations of

vulnerable populations in the Town of Ridgefield.

As shown in Figure 4 the global survey respondents' aggregated results identified heavy Summer storms and severe heat as the disasters first and second most likely to impact their areas of responsibility. Within the global survey a close third, fourth, and fifth respectively were heavy Winter storms, severe cold, and flooding. These were closely followed by the impact of power failures, severe transportation incidents, and active shooter scenarios as the sixth, seventh, and eighth highest impacts on their areas of responsibility respectively. Responses from the global survey identified volcanic the impact of eruptions and tsunami as very small to non-existent. While no global respondents added any categories of disasters outside of those listed, some respondents provided answers of "I don't know" which, due to a technical limitation of the survey platform, was not an option available for the local survey.



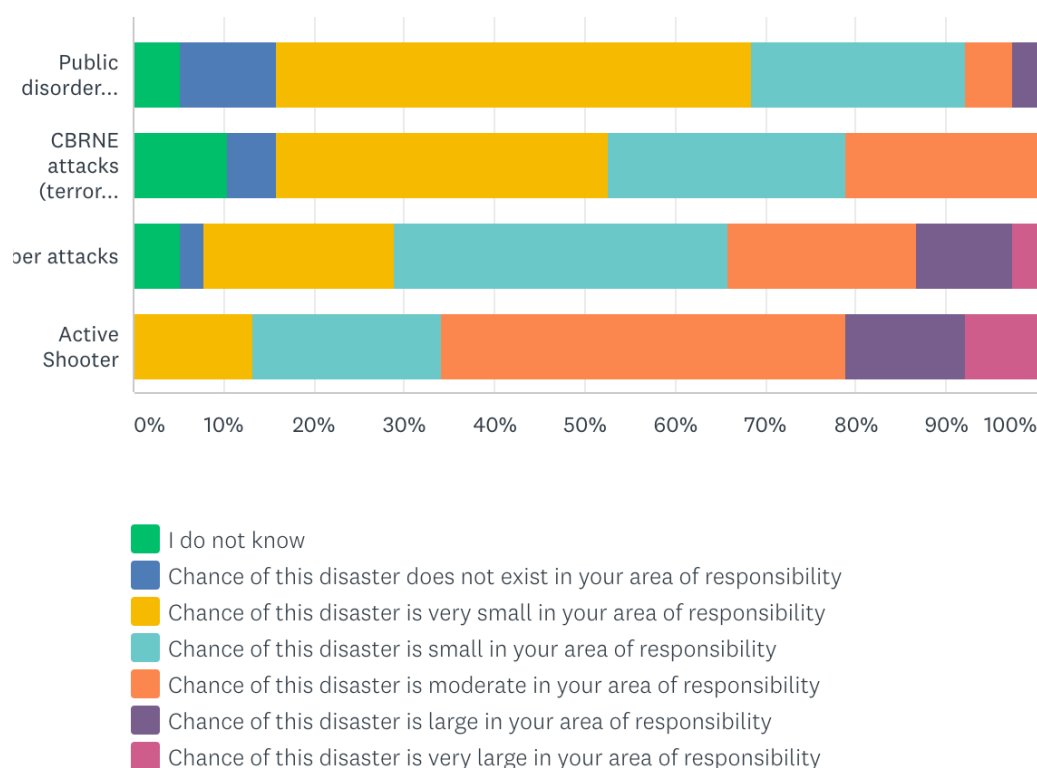
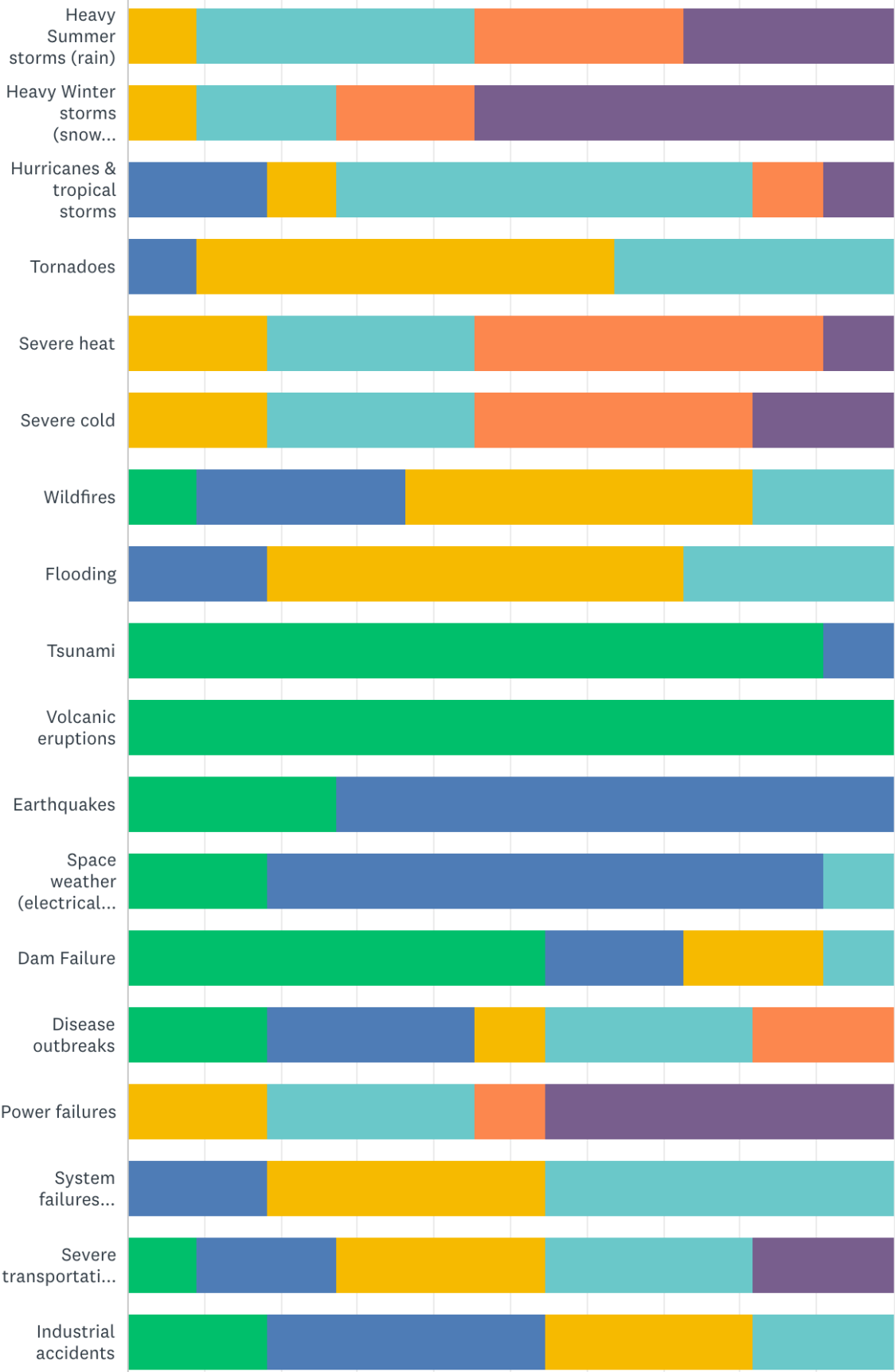


Figure 4. Responses To Global Survey Question Six: What Disasters Are Most Likely To Impact Members Of Your Area Of Responsibility?

As shown in Figure 5 local survey respondents identified heavy Winter storms as having by far the greatest impact on members of the Town of Ridgefield community with a weighted average of 4.18. Power failures and heavy Summer storms were identified as having the second and third greatest impact with weighted averages of 3.82 and 3.73 respectively. Severe cold and severe heat were identified as having the fourth and fifth greatest impact with weighted averages of 3.55 and 3.45 respectively. Local respondents identified the impact of volcanic eruptions and tsunamis as very small to non-existent in Ridgefield with weighted averages of 0.00 and 0.09 respectively. No local respondents added any categories of disasters outside of those listed.



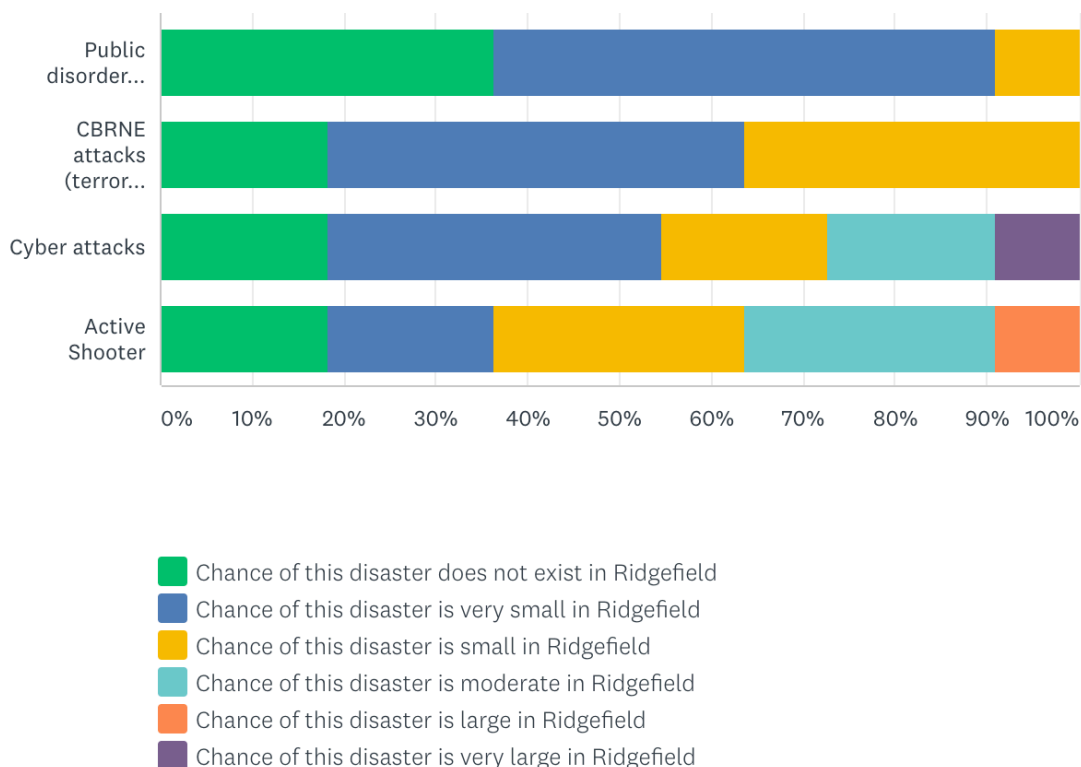


Figure 5. Responses To Local Survey Question Three: What Disasters Are Most Likely To Impact Members Of The Town Of Ridgefield?

The third research question sought to identify what factors increase disaster-related risk for vulnerable populations in the Town of Ridgefield. Again, the local survey was designed to provide expert insight into local factors from perspectives of all facets of disaster-related community risk reduction and vulnerable population care and advocacy. The global survey was designed to return results to help provide context for disaster-related risk reduction considerations of vulnerable populations in the Town of Ridgefield as well as to identify significant factors that may affect vulnerable populations in Ridgefield but may not have been previously considered.

As shown in Figure 6 the global survey respondents' aggregated results identified a near even split among reliance on consumable medical supplies, reliance on durable medical equipment, and reliance on personal assistance services, in order, the top three factors that may

increase disaster-related risk for vulnerable populations. Within the global survey the third, and fourth factors respectively were poor financial resilience and poor access to disaster recovery services. Aggregated responses from the global survey identified poor access to disaster emergency response as by far the factor with the least impact on disaster-related risk for vulnerable populations in respondents' areas of responsibility. While no global respondents added any factors outside of those listed, some respondents provided answers of "not applicable" (N/A) which, due to a technical limitation of the survey platform, was not an option available for the local survey.

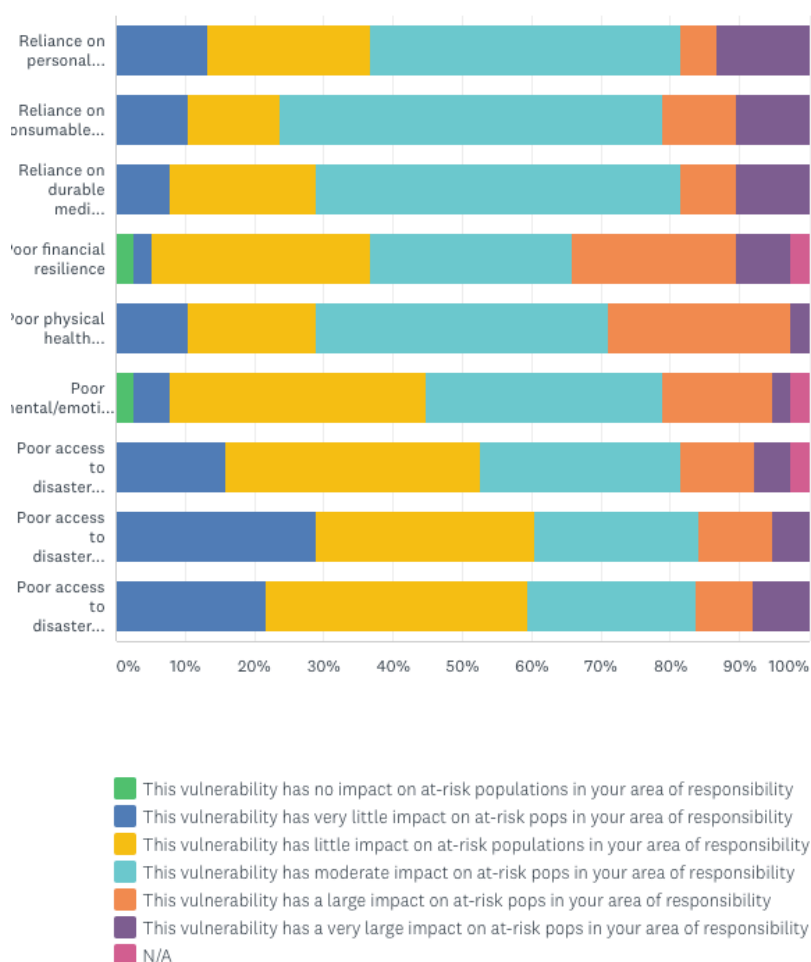


Figure 6. Responses To Global Survey Question Seven: What Factors Increase Disaster-Related Risk For Vulnerable Populations In Your Area Of Responsibility?

As shown in Figure 7 the local survey results identified reliance on consumable medical supplies as the most important factor increasing disaster-related risk for vulnerable populations with a weighted average of 3.45. This is followed closely by a near even split between reliance on durable medical equipment, and reliance on personal assistance services with weighted averages of 3.18 and 3.09 respectively. In stark contrast to the global survey, the local survey identified poor access to disaster recovery services as by far the factor with the least impact on disaster-related risk for vulnerable populations in the Town of Ridgefield with a weighted average of 1.82. No local respondents added any factors outside of those listed.

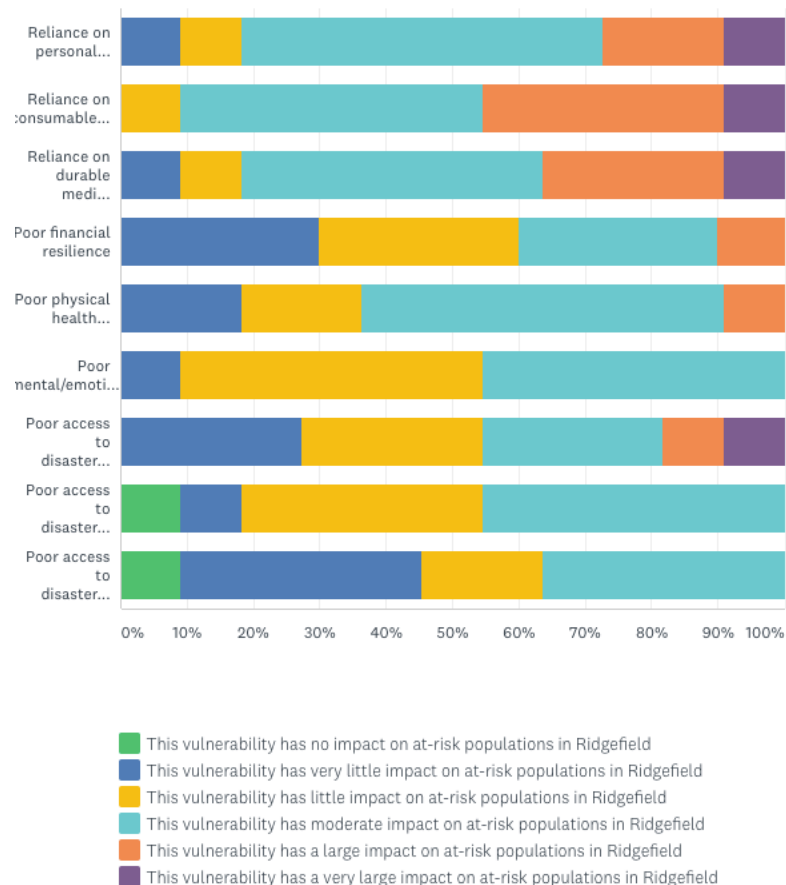


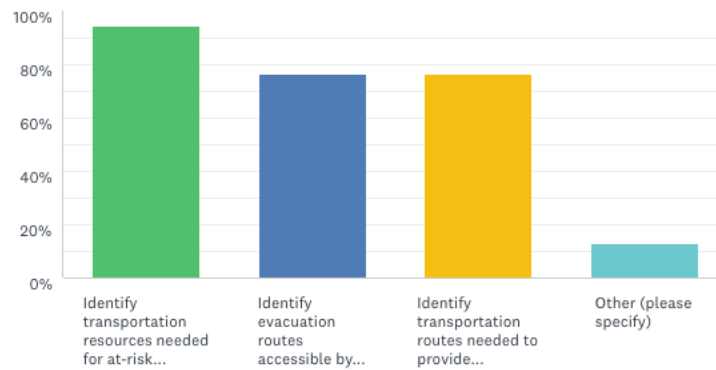
Figure 7. Responses To Local Survey Question Seven: What Factors Increase Disaster-Related Risk For Vulnerable Populations In The Town Of Ridgefield?

The fourth research question sought to identify what strategies should be considered for

adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations. Both global and local surveys collected data to answer this question by asking the question as it pertained to each of the eighteen emergency support function (ESF) divisions found in the *Town of Ridgefield Local Emergency Operations Plan (LEOP)* (Richard & Marconi, 2019, pp. 36-37). This effectively repeated the question eighteen times for each survey as questions eight through twenty-five on the global survey and questions five through twenty-two on the local survey. The complete data collected from these questions on the global survey is available in appendix I. The complete data collected from these questions on the local survey is available in appendix H. Again, the local survey was designed to provide expert insight into local disaster-related risk reduction recommendations from all facets of disaster-related community risk reduction and vulnerable population care and advocacy. The global survey was designed to provide context and return recommendations for disaster-related risk reduction that may not have been otherwise considered.

The survey question, “What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-1 Transportation:” received “Identify transportation resources needed for at-risk populations” as the top response with 94.7% of respondents making this recommendation on the global survey and 90.91% making this recommendation on the local survey. Full responses as well as additional recommendations from the global survey are shown in Figure 8. Full responses as well as additional recommendations from the local survey are shown in Figure 9.

Answered: 38 Skipped: 0



ANSWER CHOICES	RESPONSES	
▼ Identify transportation resources needed for at-risk populations with functional needs	94.74%	36
▼ Identify evacuation routes accessible by at-risk populations	76.32%	29
▼ Identify transportation routes needed to provide functional needs support to at-risk populations	76.32%	29
▼ Other (please specify) Responses	13.16%	5

☐ Unsure

6/27/2019 12:18 PM

[View respondent's answers](#)

[Add tags ▼](#)

☐ Identifying reception and sheltering needs

6/25/2019 4:56 PM

[View respondent's answers](#)

[Add tags ▼](#)

☐ Identify other alternatives with regard to transportation (mass transit, school bus, etc.)

6/25/2019 4:34 PM

[View respondent's answers](#)

[Add tags ▼](#)

☐ Identification of at risk populations, resources and access points.

6/25/2019 1:17 PM

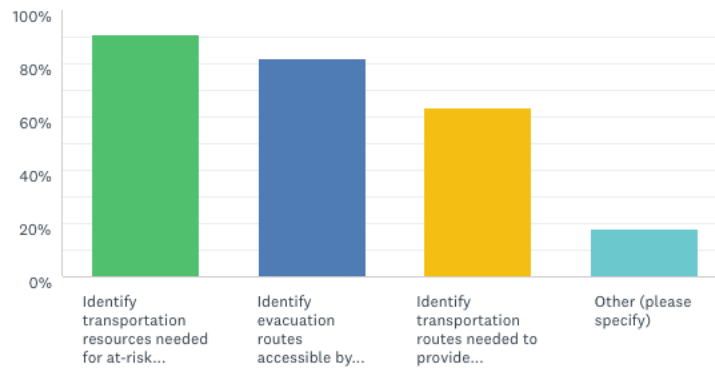
[View respondent's answers](#)

[Add tags ▼](#)

☐ Smart Traffic Technology

Figure 8. Responses To Global Survey Question Eight: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-1 Transportation.

Answered: 11 Skipped: 0



ANSWER CHOICES	RESPONSES	
▼ Identify transportation resources needed for at-risk populations with functional needs	90.91%	10
▼ Identify evacuation routes accessible by at-risk populations	81.82%	9
▼ Identify transportation routes needed to provide functional needs support to at-risk populations	63.64%	7
▼ Other (please specify) Responses	18.18%	2

Greater emphasis needs to be placed on getting these at risk populations to a safe place BEFORE the event where possible

6/18/2019 5:53 PM

[View respondent's answers](#) [Add tags](#) ▼

Pre-sheltering planning

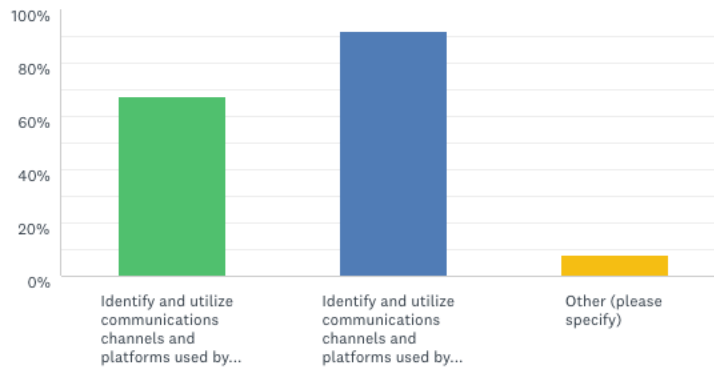
6/14/2019 2:18 PM

[View respondent's answers](#) [Add tags](#) ▼

Figure 9. Responses To Local Survey Question Five: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-1 Transportation.

The survey question, “What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-2 Communications:” received “identify and utilize communications channels and platforms used by at-risk population care-givers, advocates, and representatives ahead of disaster” as the top response with 91.8% of respondents making this recommendation on the global survey and 100% making this recommendation on the local survey. Full responses as well as additional recommendations from the global survey are shown in Figure 10. Full responses from the local survey are shown in Figure 11.

Answered: 37 Skipped: 1



ANSWER CHOICES	RESPONSES
▼ Identify and utilize communications channels and platforms used by at-risk populations ahead of disasters	67.57% 25
▼ Identify and utilize communications channels and platforms used by at-risk population care-givers, advocates and representatives ahead of disasters	91.89% 34
▼ Other (please specify) Responses	8.11% 3

We use reverse 9-1-1

6/25/2019 12:34 PM

[View respondent's answers](#)

[Add tags](#) ▼

Implement Everbridge or similar

6/24/2019 2:06 PM

[View respondent's answers](#)

[Add tags](#) ▼

proactively discuss limitations and expectations (ex-lack of warning sirens, reliance on cell phone/weather radio updates etc)

6/24/2019 2:02 PM

[View respondent's answers](#)

[Add tags](#) ▼

Figure 10. Responses To Global Survey Question Nine: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-2 Communications.

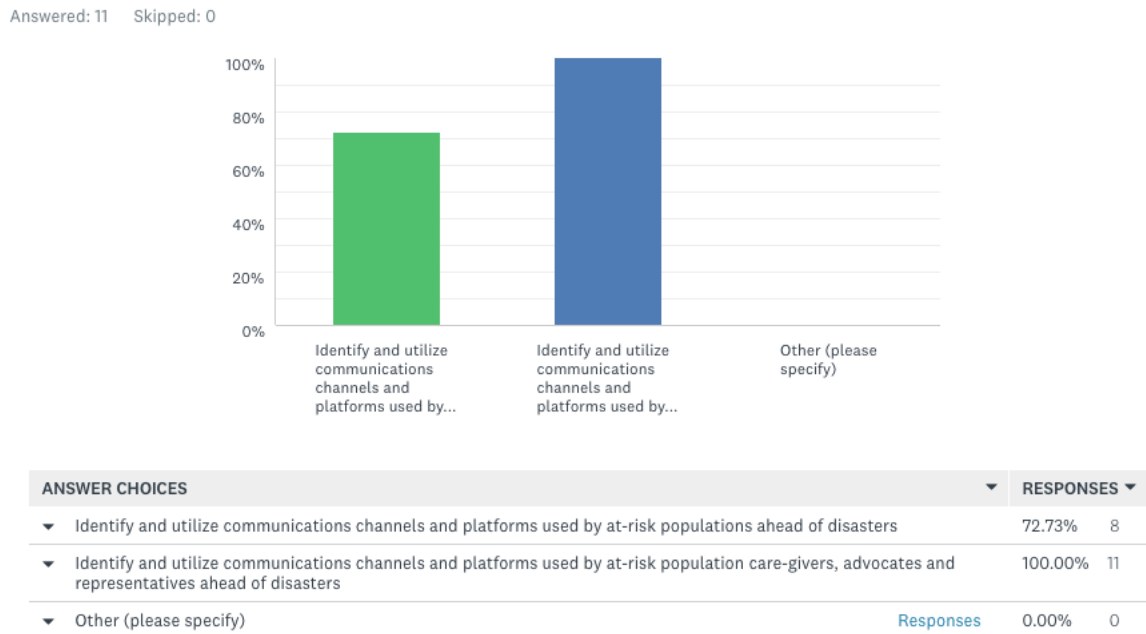
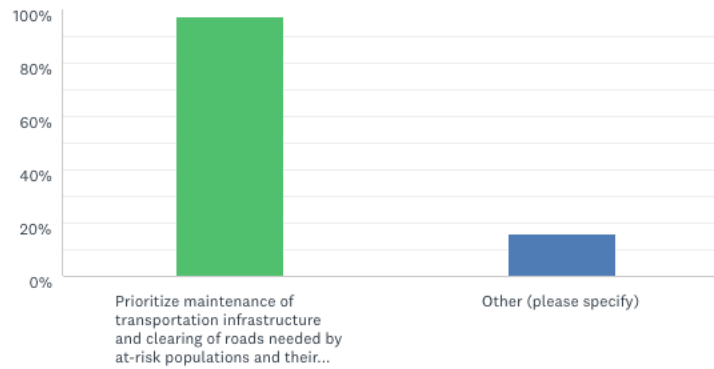


Figure 11. Responses To Local Survey Question Six: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-2 Communications.

The survey question, “What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-3 Public Works & Engineering:” received “prioritize maintenance of transportation infrastructure and clearing of roads needed by at-risk populations and their functional needs support” as the top response with 97.3% of respondents making this recommendation on the global survey and 100% making this recommendation on the local survey. While this was the only default answer to this section, numerous other recommendations were submitted. Full responses as well as additional recommendations from the global survey are shown in Figure 12. Full responses as well as additional recommendations from the local survey are shown in Figure 13.

Answered: 37 Skipped: 1



ANSWER CHOICES	RESPONSES
▼ Prioritize maintenance of transportation infrastructure and clearing of roads needed by at-risk populations and their functional needs support	97.30% 36
▼ Other (please specify)	Responses 16.22% 6

Unsure

6/27/2019 12:18 PM

[View respondent's answers](#)

[Add tags ▼](#)

Inventory of at risk transportation assets available in the isolated community that can be utilized

6/26/2019 6:27 PM

[View respondent's answers](#)

[Add tags ▼](#)

all local infrastructure is in need of maintenance

6/26/2019 2:43 PM

[View respondent's answers](#)

[Add tags ▼](#)

Make sure there is a working relationship with public works prior to needed them. Lesson learned the hard way.

6/25/2019 4:34 PM

[View respondent's answers](#)

[Add tags ▼](#)

Prioritize ability to shelter in place to reduce disruptions

6/25/2019 1:03 PM

[View respondent's answers](#)

[Add tags ▼](#)

Maps-Have a lot them available (and in multiple format including GIS/layering as a recent tornado exposed our lack of planning

6/24/2019 2:02 PM

[View respondent's answers](#)

[Add tags ▼](#)

Figure 12. Responses To Global Survey Question 10: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-3 Public Works & Engineering.

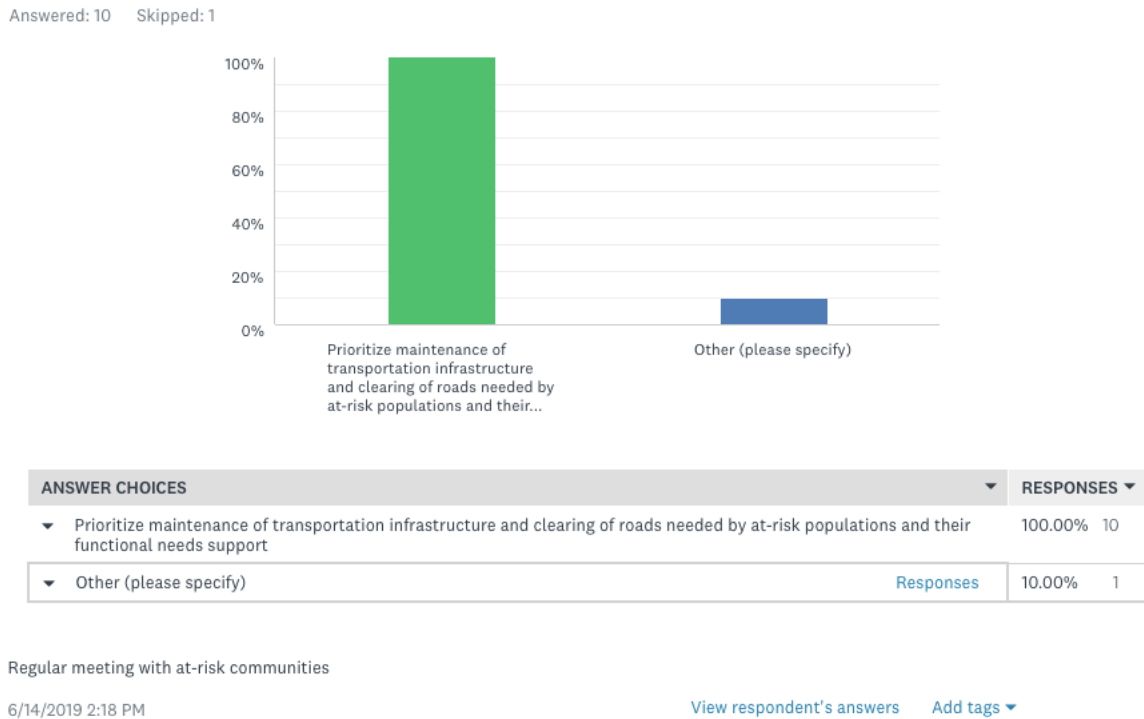
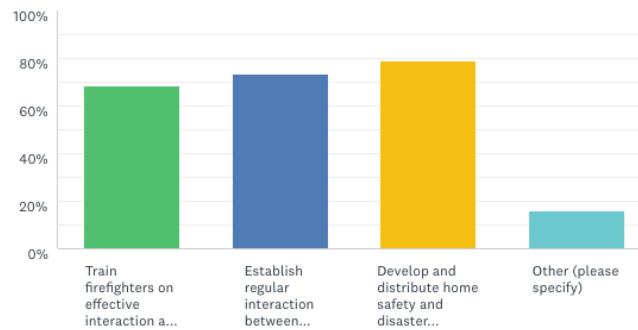


Figure 13. Responses To Local Survey Question seven: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-3 Public Works & Engineering.

The survey question, “What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-4 Firefighting:” received “prioritize maintenance of transportation infrastructure and clearing of roads needed by at-risk populations and their functional needs support” as the top response with 97.3% of respondents making this recommendation on the global survey and 100% making this recommendation on the local survey. Full responses as well as additional recommendations from the global survey are shown in Figure 14. Full responses from the local survey are shown in Figure 15.

Answered: 38 Skipped: 0



ANSWER CHOICES	RESPONSES
▼ Train firefighters on effective interaction and assistance to at-risk populations	68.42% 26
▼ Establish regular interaction between firefighters and at-risk populations, their care-givers, advocates and representatives	73.68% 28
▼ Develop and distribute home safety and disaster resiliency recommendations specific to at-risk populations	78.95% 30
▼ Other (please specify) Responses	15.79% 6

I have found that expanding the Ready, Set, Go program to include a communities total risk factor profile provides a better baseline family or individual planning tool to gather information rather than wait for a PSA that may never come. The RSG provides the perfect uniform planning tool that can add sections with specific actions and do so in a single notebook that can be easily updated and added to with personal worksheets and target information for the individual or the family unit.

6/26/2019 6:27 PM

[View respondent's answers](#) [Add tags ▼](#)

Identifying locations of this demographic and training pertaining to planning for them

6/25/2019 2:51 PM

[View respondent's answers](#) [Add tags ▼](#)

Encourage development of neighborhood relationships so there is someone to support at-risk populations if emergency services are delayed.

6/25/2019 1:03 PM

[View respondent's answers](#) [Add tags ▼](#)

Encourage development of neighborhood relationships so there is someone to support at-risk populations if emergency services are delayed.

6/25/2019 1:03 PM

[View respondent's answers](#) [Add tags ▼](#)

Implement defensible space and ignition-resistant construction

6/24/2019 2:06 PM

[View respondent's answers](#) [Add tags ▼](#)

Educate paramedics on in home medical equipment being utilized. How do we keep those functioning during disaster or power failure

6/24/2019 2:02 PM

[View respondent's answers](#) [Add tags ▼](#)

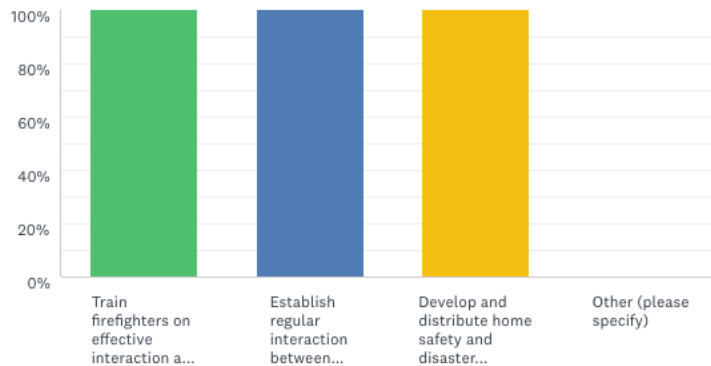
Special attention to water operations-tankers and dump tanks may be needed (training and drafting equipment may be needed for communities with a heavy reliance on hydrant use

6/24/2019 2:02 PM

[View respondent's answers](#) [Add tags ▼](#)

Figure 14. Responses To Global Survey Question 11: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-4 Firefighting.

Answered: 11 Skipped: 0

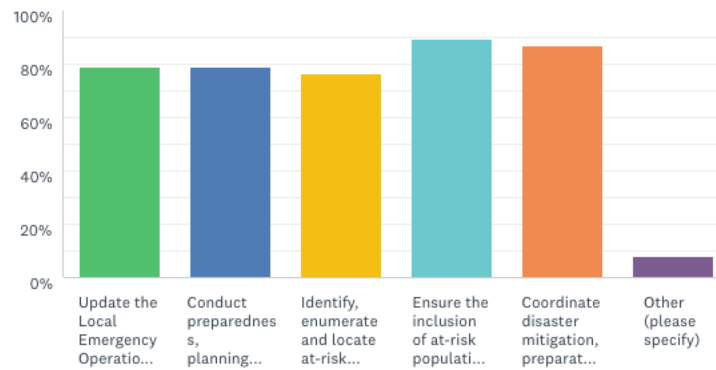


ANSWER CHOICES	RESPONSES
▼ Train firefighters on effective interaction and assistance to at-risk populations	100.00% 11
▼ Establish regular interaction between firefighters and at-risk populations, their care-givers, advocates and representatives	100.00% 11
▼ Develop and distribute home safety and disaster resiliency recommendations specific to at-risk populations	100.00% 11
▼ Other (please specify)	Responses 0.00% 0

Figure 15. Responses To Local Survey Question Eight: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-4 Firefighting.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-5 Emergency Management:” received “ensure the inclusion of at-risk populations as well as their advocates, representatives, and members of their support networks in mitigation, preparation, risk reduction and resiliency efforts” as the top response with 89.47% of respondents making this recommendation on the global survey and 100% making this recommendation on the local survey. Full responses as well as additional recommendations from the global survey are shown in Figure 16. Full responses from the local survey are shown in Figure 17.

Answered: 38 Skipped: 0



ANSWER CHOICES	RESPONSES
▼ Update the Local Emergency Operations Plan and other emergency plans, procedures, and agreements to specifically support the needs of at-risk populations	78.95% 30
▼ Conduct preparedness, planning, training and exercise activities in coordination with at-risk populations and their advocates and representatives	78.95% 30
▼ Identify, enumerate and locate at-risk populations	76.32% 29
▼ Ensure the inclusion of at-risk populations as well as their advocates, representatives, and members of their support networks in mitigation, preparation, risk reduction and resiliency efforts	89.47% 34
▼ Coordinate disaster mitigation, preparation, risk reduction and resiliency efforts with housing facilities and areas with high concentrations of at-risk populations	86.84% 33
▼ Other (please specify) Responses	7.89% 3

There seems to be some confusion as to who should have before event information for at risk populations due to "protection of individual rights and privacy" this is an archaic approach in that if the response agencies that are entrusted with HIPA protected information on a routine basis that cannot have this information before an event cannot plan for an adequate response during or after an event, making the classified information of little value except in post incident identification of victims, the information must be provided before the event, updated and used as a planning tool for staff size, focused response and determining the level of outside agency assistance that may be needed, otherwise agencies must plan in the blind and may under calculate or over calculate resources needed.

6/26/2019 6:27 PM

[View respondent's answers](#) [Add tags](#) ▼

Work with other groups with expertise in sheltering and mass care of vulnerable populations

6/25/2019 2:15 PM

[View respondent's answers](#) [Add tags](#) ▼

Update the Local Emergency Operations Plan and other emergency plans, procedures, and agreements to specifically eliminate the exclusion of this population- or provide inclusion.

6/25/2019 1:17 PM

[View respondent's answers](#) [Add tags](#) ▼

Figure 16. Responses To Global Survey Question 12: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-5 Emergency Management.

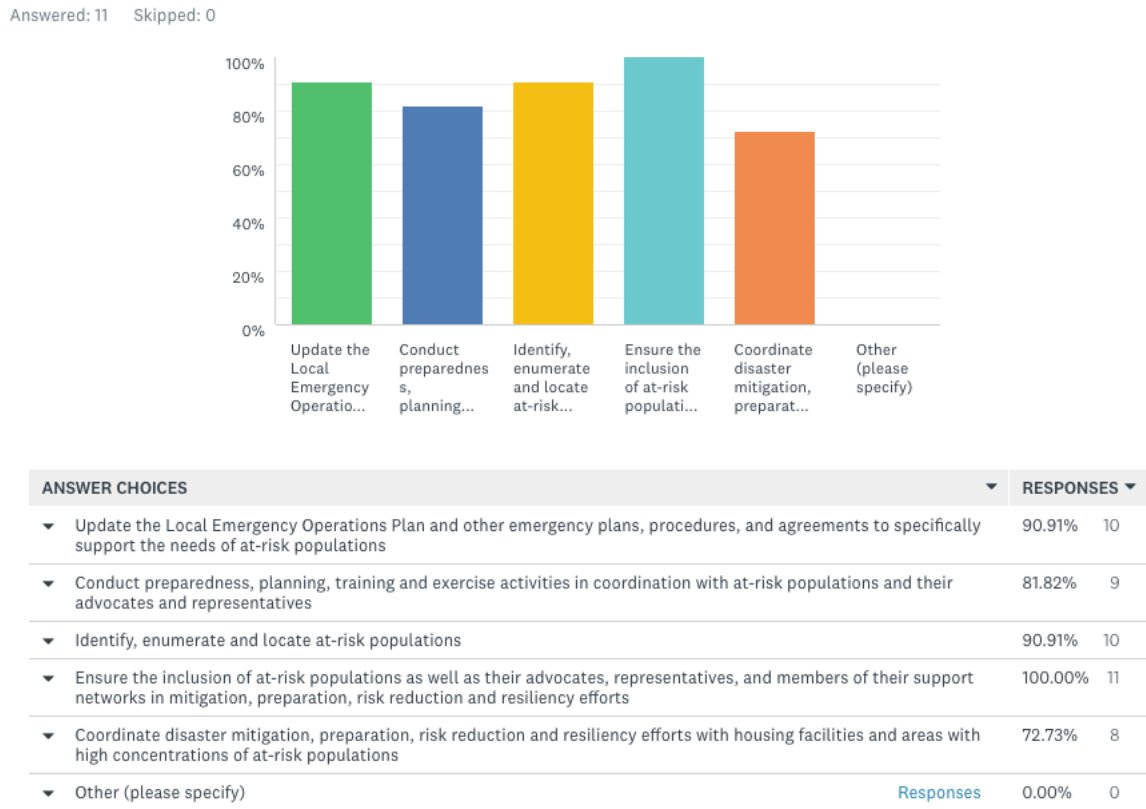
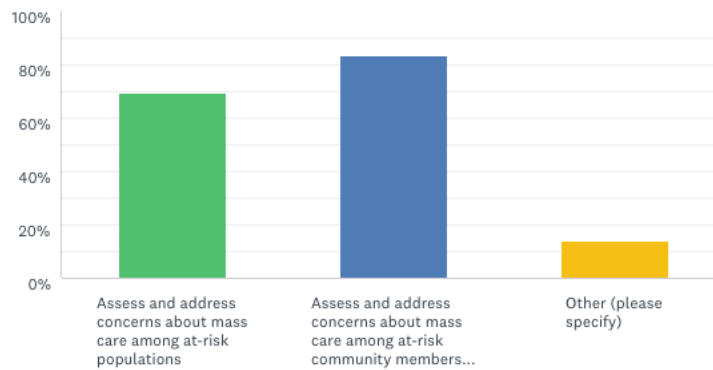


Figure 17. Responses To Local Survey Question Nine: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-5 Emergency Management.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-6 Mass Care:” received “assess and address concerns about mass care among at-risk community members care-givers, advocates, and representatives” as the top response with 83.33% of respondents making this recommendation on the global survey and 100% making this recommendation on the local survey. Full responses as well as additional recommendations from the global survey are shown in Figure 18. Full responses from the local survey are shown in Figure 19.

Answered: 36 Skipped: 2



ANSWER CHOICES	RESPONSES
Assess and address concerns about mass care among at-risk populations	69.44% 25
Assess and address concerns about mass care among at-risk community members care-givers, advocates, and representatives	83.33% 30
Other (please specify)	13.89% 5

Unsure

6/27/2019 12:18 PM

[View respondent's answers](#)

[Add tags](#)

Points of treatment and care must be identified before a disaster or impact event occurs and surge events must consider alternatives

6/26/2019 6:27 PM

[View respondent's answers](#)

[Add tags](#)

N/A

6/25/2019 3:54 PM

[View respondent's answers](#)

[Add tags](#)

Identify alternate locations to house this population

6/25/2019 2:51 PM

[View respondent's answers](#)

[Add tags](#)

Special coordination with care providers that will come out in mass after an event.

6/24/2019 2:02 PM

[View respondent's answers](#)

[Add tags](#)

Figure 18. Responses To Global Survey Question 13: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-6 Mass Care.

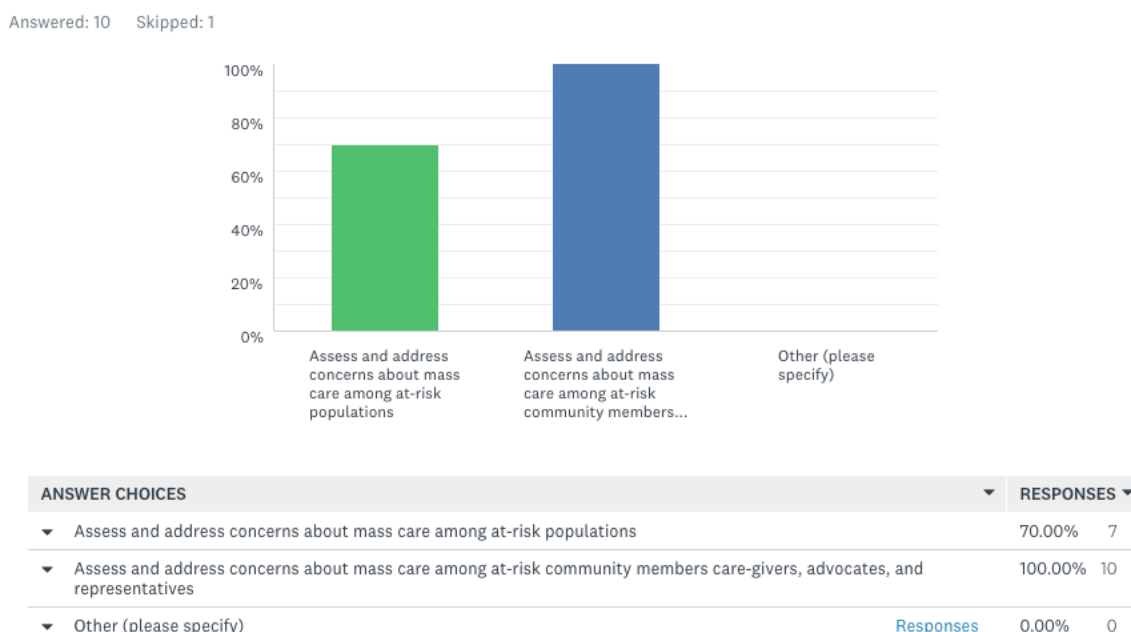
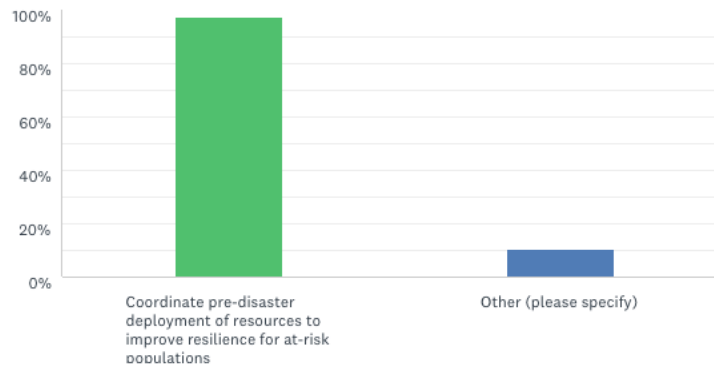


Figure 19. Responses To Local Survey Question 10: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-6 Mass Care.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-7 Logistics:” received “coordinate pre-disaster deployment of resources to improve resilience for at-risk populations” as the top response with 97.37% of respondents making this recommendation on the global survey and 100% making this recommendation on the local survey. While this was the only default answer to this section, numerous other recommendations were submitted in the global survey. Full responses as well as additional recommendations from the global survey are shown in Figure 20. Full responses from the local survey are shown in Figure 21.

Answered: 38 Skipped: 0



ANSWER CHOICES	RESPONSES
Coordinate pre-disaster deployment of resources to improve resilience for at-risk populations	97.37% 37
Other (please specify)	Responses 10.53% 4

Unsure

6/27/2019 12:18 PM

[View respondent's answers](#) [Add tags](#)

Utilize messaging to organizations (CERT) to respond to providing emergency aid to at risk populations within their operational area.

6/26/2019 6:27 PM

[View respondent's answers](#) [Add tags](#)

Site specific plans need to be in place to address the individual needs of the patients. Like will a site have a generator that will allow oxygen concentrators to function and mitigate the need for additional oxygen being brought to the site.

6/24/2019 2:03 PM

[View respondent's answers](#) [Add tags](#)

Identify local, county, state, and federal resources and know the procurement processes

6/24/2019 2:02 PM

[View respondent's answers](#) [Add tags](#)

Figure 20. Responses To Global Survey Question 14: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-7 Logistics.

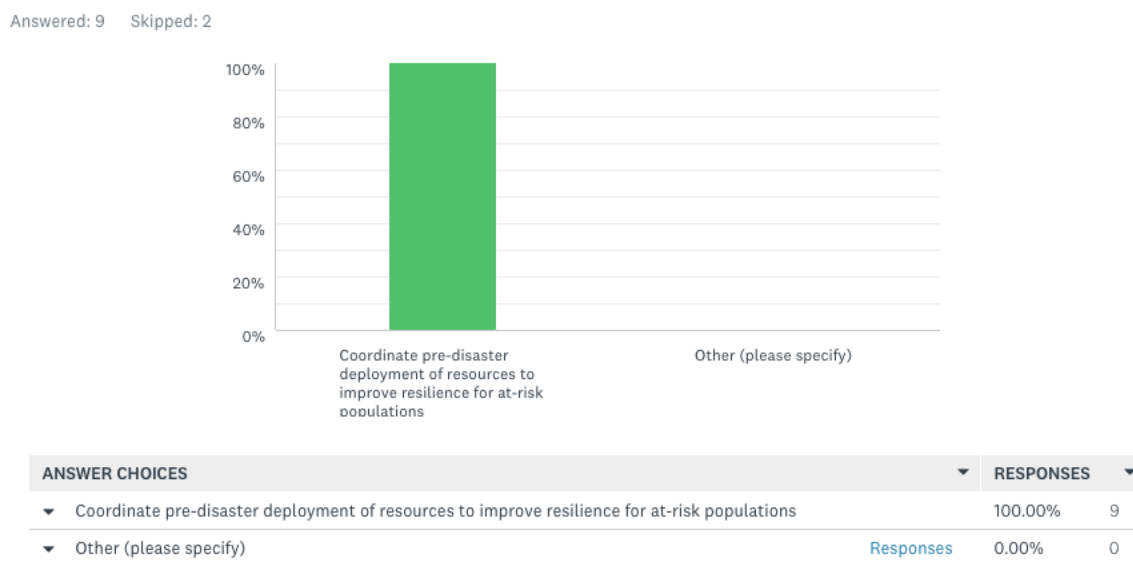
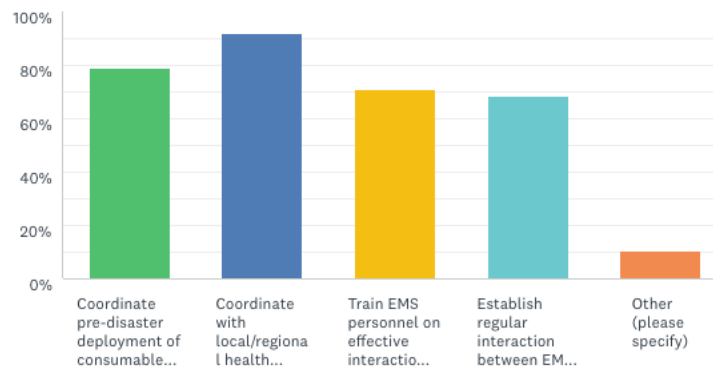


Figure 21. Responses To Local Survey Question 11: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-7 Logistics.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-8 Public Health and Medical Services:” received “coordinate with local/regional health districts and the State Department of Health for public messaging specific to at-risk populations” as the top response on the global survey with 92.11% of respondents making this recommendation. Numerous other recommendations were submitted in the global survey. However, on the local survey, 100% of respondents made the recommendations of “Train EMS personnel on effective interaction and provision of assistance to at-risk populations” and “Establish regular interaction between EMS personnel and at-risk populations, their care-givers, advocates and representatives”. Full responses as well as additional recommendations from the global survey are shown in Figure 22. Full responses from the local survey are shown in Figure 23.

Answered: 38 Skipped: 0



ANSWER CHOICES	RESPONSES
Coordinate pre-disaster deployment of consumable medical supplies and durable medical equipment to support functional needs and improve resilience for at-risk populations	78.95% 30
Coordinate with local/regional health districts and the State Department of Health for public messaging specific to at-risk populations	92.11% 35
Train EMS personnel on effective interaction and provision of assistance to at-risk populations	71.05% 27
Establish regular interaction between EMS personnel and at-risk populations, their care-givers, advocates and representatives	68.42% 26
Other (please specify)	10.53% 4

Unsure

6/27/2019 12:18 PM

[View respondent's answers](#) [Add tags](#)

Utilize NGO capabilities to facilitate immediate assistance within their area of capabilities to help identify and evaluate situation for the coordination center for appropriate response need and time frame

6/26/2019 6:27 PM

[View respondent's answers](#) [Add tags](#)

Train neighborhood watch programs, CERT, HOAs, and other community groups on effective interactions and provision of assistance to at-risk populations.

6/25/2019 1:03 PM

[View respondent's answers](#) [Add tags](#)

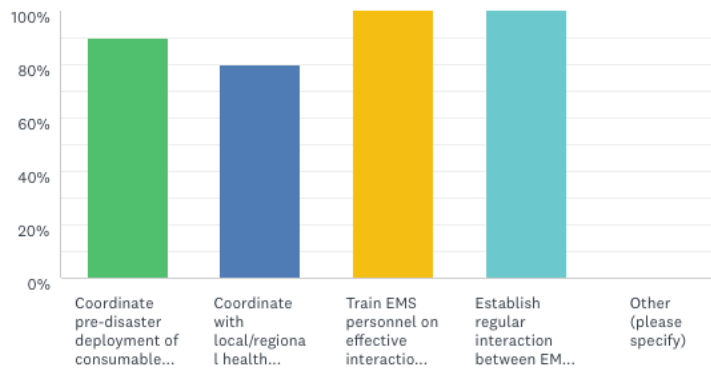
Utilize our community paramedicine programs for preparedness measures.

6/24/2019 2:02 PM

[View respondent's answers](#) [Add tags](#)

Figure 22. Responses To Global Survey Question 15: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-8 Public Health And Medical Services.

Answered: 10 Skipped: 1

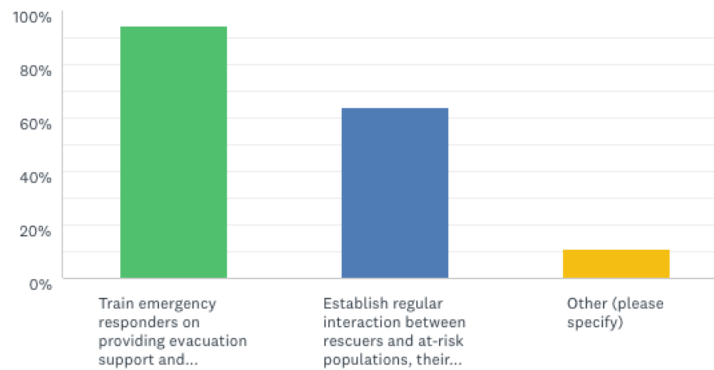


ANSWER CHOICES	RESPONSES
Coordinate pre-disaster deployment of consumable medical supplies and durable medical equipment to support functional needs and improve resilience for at-risk populations	90.00% 9
Coordinate with local/regional health districts and the State Department of Health for public messaging specific to at-risk populations	80.00% 8
Train EMS personnel on effective interaction and provision of assistance to at-risk populations	100.00% 10
Establish regular interaction between EMS personnel and at-risk populations, their care-givers, advocates and representatives	100.00% 10
Other (please specify)	Responses 0.00% 0

Figure 23. Responses To Local Survey Question 12: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-8 Public Health And Medical Services.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-9 Search and Rescue:” received “train emergency responders on providing evacuation support and assistance to at-risk populations” as the top response with 94.44% of respondents making this recommendation on the global survey and 100% making this recommendation on the local survey. Numerous other recommendations were submitted in the global survey. Full responses as well as additional recommendations from the global survey are shown in Figure 24. Full responses from the local survey are shown in Figure 25.

Answered: 36 Skipped: 2



ANSWER CHOICES	RESPONSES
▼ Train emergency responders on providing evacuation support and assistance to at-risk populations	94.44% 34
▼ Establish regular interaction between rescuers and at-risk populations, their care-givers, advocates and representatives	63.89% 23
▼ Other (please specify) Responses	11.11% 4

Provide CERT type organizations on conducting victim location and protection before arrival of local response agencies and to report to coordinators exactly what numbers, needs and requirements are.

6/26/2019 6:27 PM

[View respondent's answers](#) [Add tags](#) ▼

Pre-planning and identification of any needs

6/25/2019 2:51 PM

[View respondent's answers](#) [Add tags](#) ▼

Train neighborhood watch programs, CERT, HOAs, and other community groups providint evacuation support to at-risk populations

6/25/2019 1:03 PM

[View respondent's answers](#) [Add tags](#) ▼

Understand FEMA rules PRIOR to an event. They may reimburse for search and rescue differently than for structure integrity searches

6/24/2019 2:02 PM

[View respondent's answers](#) [Add tags](#) ▼

Figure 24. Responses To Global Survey Question 16: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-9 Search And Rescue.

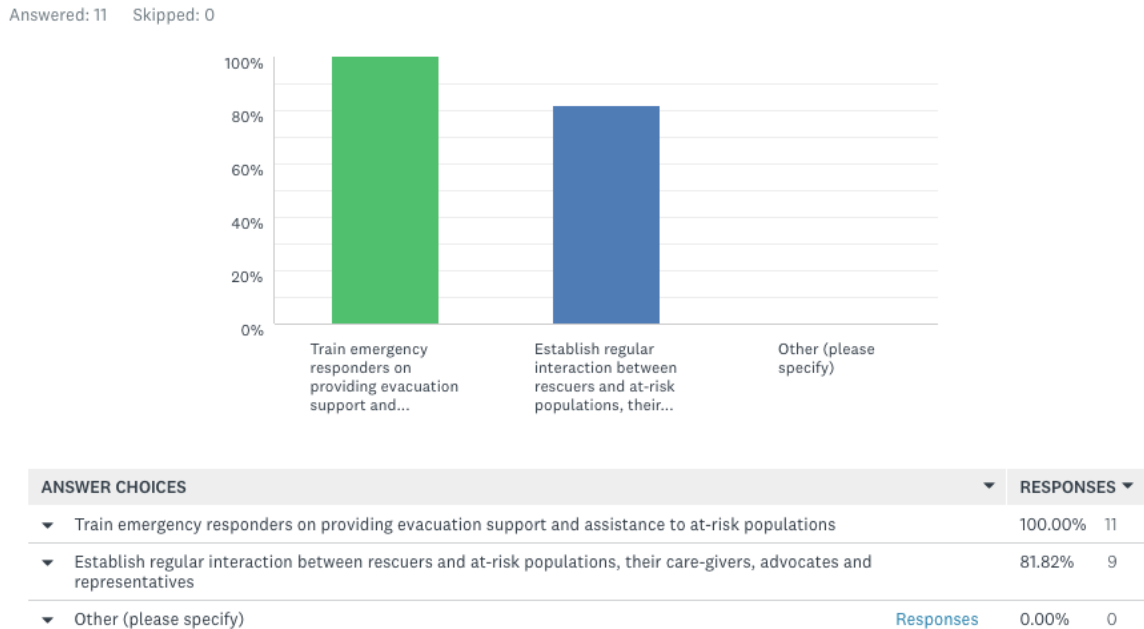
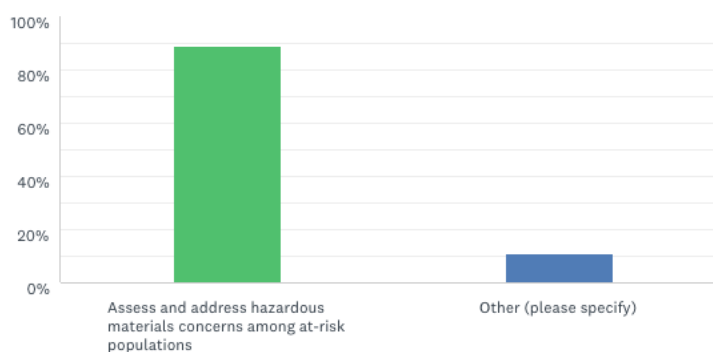


Figure 25. Responses To Local Survey Question 13: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-9 Search And Rescue.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-10 Hazardous Materials:” received “assess and address hazardous materials concerns among at-risk populations” as the top response with 88.89% of respondents making this recommendation on the global survey and 100% making this recommendation on the local survey. While this was the only default answer to this section, numerous other recommendations were submitted in the global survey. Full responses as well as additional recommendations from the global survey are shown in Figure 26. Full responses from the local survey are shown in Figure 27.

Answered: 36 Skipped: 2



ANSWER CHOICES	RESPONSES	
Assess and address hazardous materials concerns among at-risk populations	88.89%	32
Other (please specify)	11.11%	4

Unsure

6/27/2019 12:18 PM

[View respondent's answers](#)[Add tags](#)

N/A

6/25/2019 3:54 PM

[View respondent's answers](#)[Add tags](#)

Identification of the population with a location

6/25/2019 2:51 PM

[View respondent's answers](#)[Add tags](#)

Too minor in my opinion

6/25/2019 1:17 PM

[View respondent's answers](#)[Add tags](#)

Figure 26. Responses To Global Survey Question 17: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-10 Hazardous Materials.

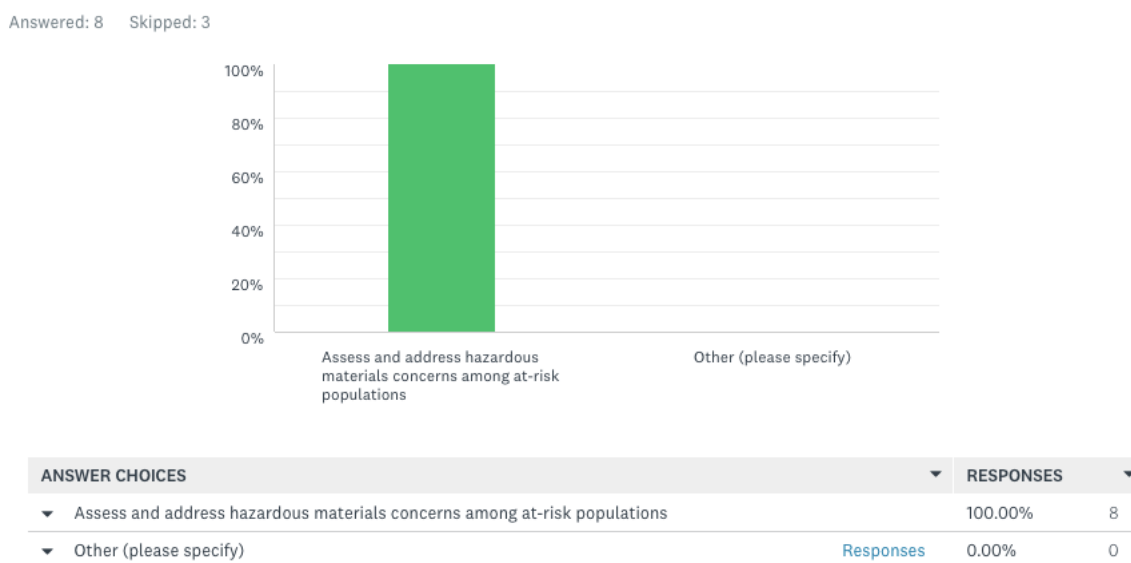
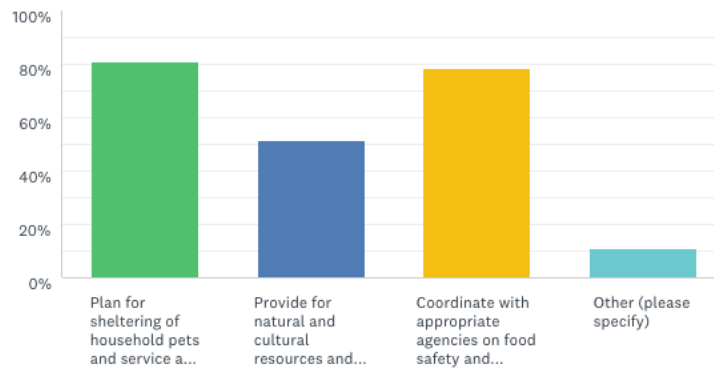


Figure 27. Responses To Local Survey Question 14: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-10 Hazardous Materials.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-11 Animal Protection, Agriculture, and Natural Resources:” received “plan for sheltering of household pets and service and support animals for at-risk populations” as the top response with 81.08% of respondents making this recommendation on the global survey and 90.91% making this recommendation on the local survey. Numerous other recommendations were submitted in the global survey. Full responses as well as additional recommendations from the global survey are shown in Figure 28. Full responses from the local survey are shown in Figure 29.

Answered: 37 Skipped: 1



ANSWER CHOICES	RESPONSES
Plan for sheltering of household pets and service and support animals for at-risk populations	81.08% 30
Provide for natural and cultural resources and historic properties protection for at-risk populations living in such properties	51.35% 19
Coordinate with appropriate agencies on food safety and security for at-risk populations with dietary restrictions	78.38% 29
Other (please specify)	Responses 10.81% 4

Unsure

6/27/2019 12:18 PM

[View respondent's answers](#)

[Add tags](#)

The historic and cultural concerns about a structure or facility have low relevance during an event other than evaluation of the life threat, no resources should be assigned for building stabilization unless lives within the structure are in danger.

6/26/2019 6:27 PM

[View respondent's answers](#)

[Add tags](#)

Doesn't apply

6/24/2019 5:00 PM

[View respondent's answers](#)

[Add tags](#)

Plan for sheltering of large or exotic animals.

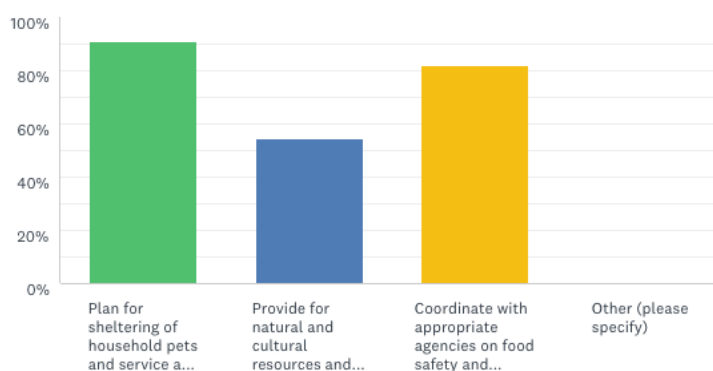
6/24/2019 2:06 PM

[View respondent's answers](#)

[Add tags](#)

Figure 28. Responses To Global Survey Question 18: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-11 Animal Protection, Agriculture, And Natural Resources.

Answered: 11 Skipped: 0

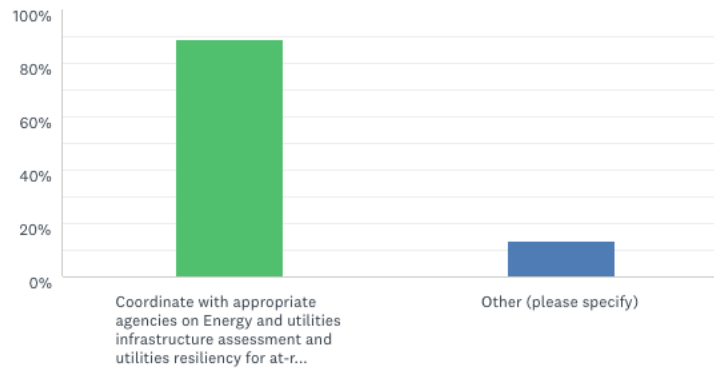


ANSWER CHOICES	RESPONSES
Plan for sheltering of household pets and service and support animals for at-risk populations	90.91% 10
Provide for natural and cultural resources and historic properties protection for at-risk populations living in such properties	54.55% 6
Coordinate with appropriate agencies on food safety and security for at-risk populations with dietary restrictions	81.82% 9
Other (please specify)	Responses 0.00% 0

Figure 29. Responses To Local Survey Question 15: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-11 Animal Protection, Agriculture, And Natural Resources.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-12 Energy and Utilities:” received “coordinate with appropriate agencies on Energy and utilities infrastructure assessment and utilities resiliency for at-risk populations” as the top response with 88.89% of respondents making this recommendation on the global survey and 88.89% making this recommendation on the local survey. While this was the only default answer to this section, numerous other recommendations were submitted on both the global and local surveys. Full responses as well as additional recommendations from the global survey are shown in Figure 30. Full responses as well as additional recommendations from the local survey are shown in Figure 31.

Answered: 37 Skipped: 1



ANSWER CHOICES	RESPONSES
▼ Coordinate with appropriate agencies on Energy and utilities infrastructure assessment and utilities resiliency for at-risk populations	89.19% 33
▼ Other (please specify) Responses	13.51% 5

Unsure

6/27/2019 12:18 PM

[View respondent's answers](#) [Add tags ▼](#)

.

6/26/2019 2:43 PM

[View respondent's answers](#) [Add tags ▼](#)

NA

6/25/2019 3:54 PM

[View respondent's answers](#) [Add tags ▼](#)

unk.

6/25/2019 2:51 PM

[View respondent's answers](#) [Add tags ▼](#)

Plan for backup power for required medical equipment (Oxygen machines, etc.)

6/24/2019 2:06 PM

[View respondent's answers](#) [Add tags ▼](#)

Figure 30. Responses To Global Survey Question 19: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-12 Energy And Utilities.

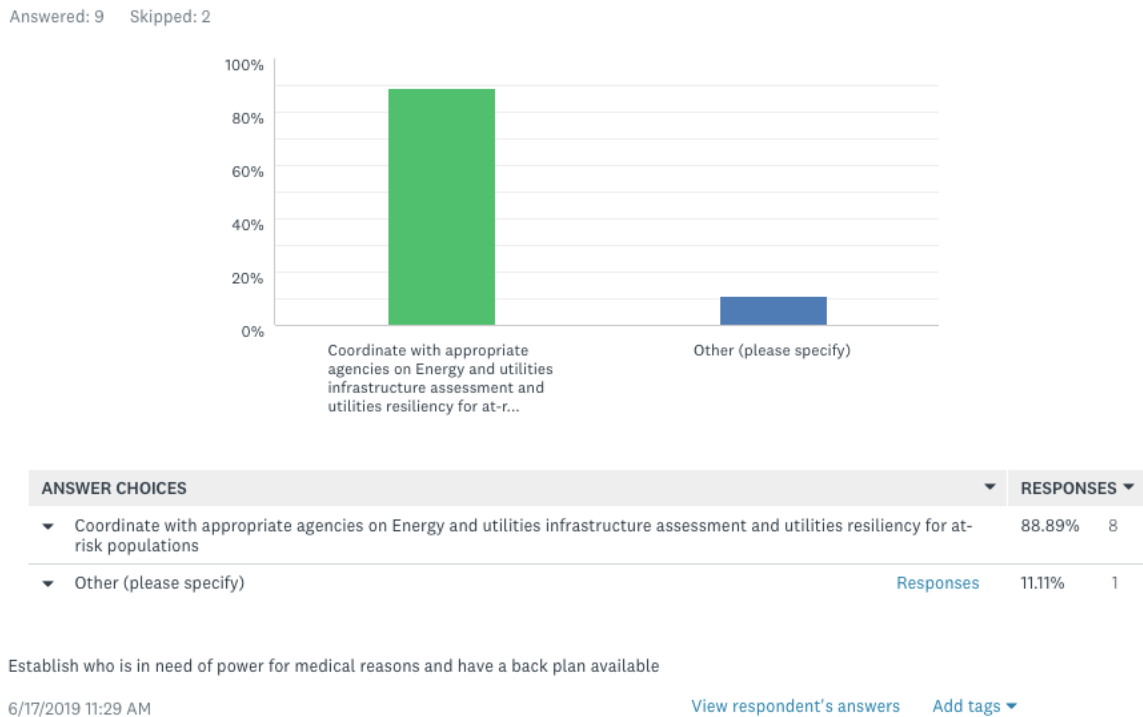
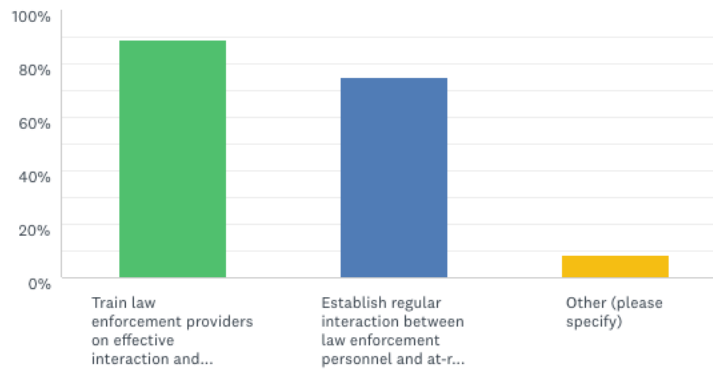


Figure 31. Responses To Local Survey Question 16: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-12 Energy And Utilities.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-13 Public Safety & Security:” received “train law enforcement providers on effective interaction and assistance to at-risk populations” as the top response with 88.89% of respondents making this recommendation on the global survey and 100% making this recommendation on the local survey. Numerous other recommendations were submitted in the global survey. Full responses as well as additional recommendations from the global survey are shown in Figure 32. Full responses from the local survey are shown in Figure 33.

Answered: 36 Skipped: 2



ANSWER CHOICES	RESPONSES
▼ Train law enforcement providers on effective interaction and assistance to at-risk populations	88.89% 32
▼ Establish regular interaction between law enforcement personnel and at-risk populations, their care-givers, advocates and representatives	75.00% 27
▼ Other (please specify) Responses	8.33% 3

Explore options using the project lifesaver for at risk population

6/27/2019 12:18 PM

[View respondent's answers](#)

[Add tags ▼](#)

Identification of populous and their location

6/25/2019 2:51 PM

[View respondent's answers](#)

[Add tags ▼](#)

Mission creep will be a problem between all organizations, especially police and fire. Create a plan that addresses the need for each to stay in their respective lanes

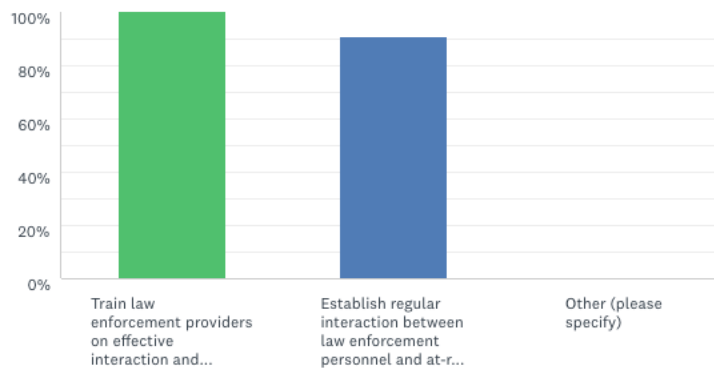
6/24/2019 2:02 PM

[View respondent's answers](#)

[Add tags ▼](#)

Figure 32. Responses To Global Survey Question 20: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-13 Public Safety & Security.

Answered: 11 Skipped: 0

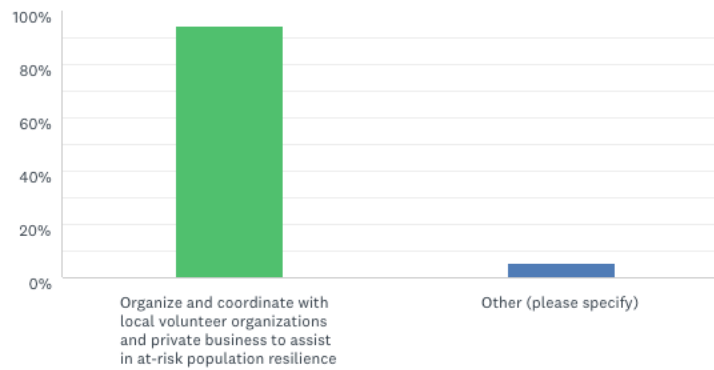


ANSWER CHOICES	RESPONSES
▼ Train law enforcement providers on effective interaction and assistance to at-risk populations	100.00% 11
▼ Establish regular interaction between law enforcement personnel and at-risk populations, their care-givers, advocates and representatives	90.91% 10
▼ Other (please specify)	Responses 0.00% 0

Figure 33. Responses To Local Survey Question 17: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-13 Public Safety & Security.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-14 Disaster Recovery:” received “organize and coordinate with local volunteer organizations and private business to assist in at-risk population resilience” as the top response with 88.89% of respondents making this recommendation on the global survey and 88.89% making this recommendation on the local survey. While this was the only default answer to this section, other recommendations were submitted on both the global and local surveys. Full responses as well as additional recommendations from the global survey are shown in Figure 34. Full responses as well as additional recommendations from the local survey are shown in Figure 35.

Answered: 37 Skipped: 1



ANSWER CHOICES	RESPONSES
Organize and coordinate with local volunteer organizations and private business to assist in at-risk population resilience	94.59% 35
Other (please specify)	Responses 5.41% 2

Unsure

6/27/2019 12:18 PM

[View respondent's answers](#)[Add tags](#)

Establish Continuity of business plans for immediately after and disaster and then a long term plan

6/25/2019 3:54 PM

[View respondent's answers](#)[Add tags](#)

Figure 34. Responses To Global Survey Question 21: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-14 Disaster Recovery.



Figure 35. Responses To Local Survey Question 18: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-14 Disaster Recovery.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-15 Public Information and External Affairs:” received “encourage at-risk populations to be resilient by assessing and preparing for their own needs prior to disaster” as the top response with 89.47% of respondents making this recommendation on the global survey. However, on the local survey “provide emergency public information and protective action guidance specific to at-risk populations and their support networks” was the top response with 100% making this

recommendation. Numerous other recommendations were submitted in both the global and local surveys. Full responses as well as additional recommendations from the global survey are shown in Figure 36. Full responses as well as additional recommendations from the local survey are shown in Figure 37.



Figure 36. Responses To Global Survey Question 22: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-15 Public Information And External Affairs.

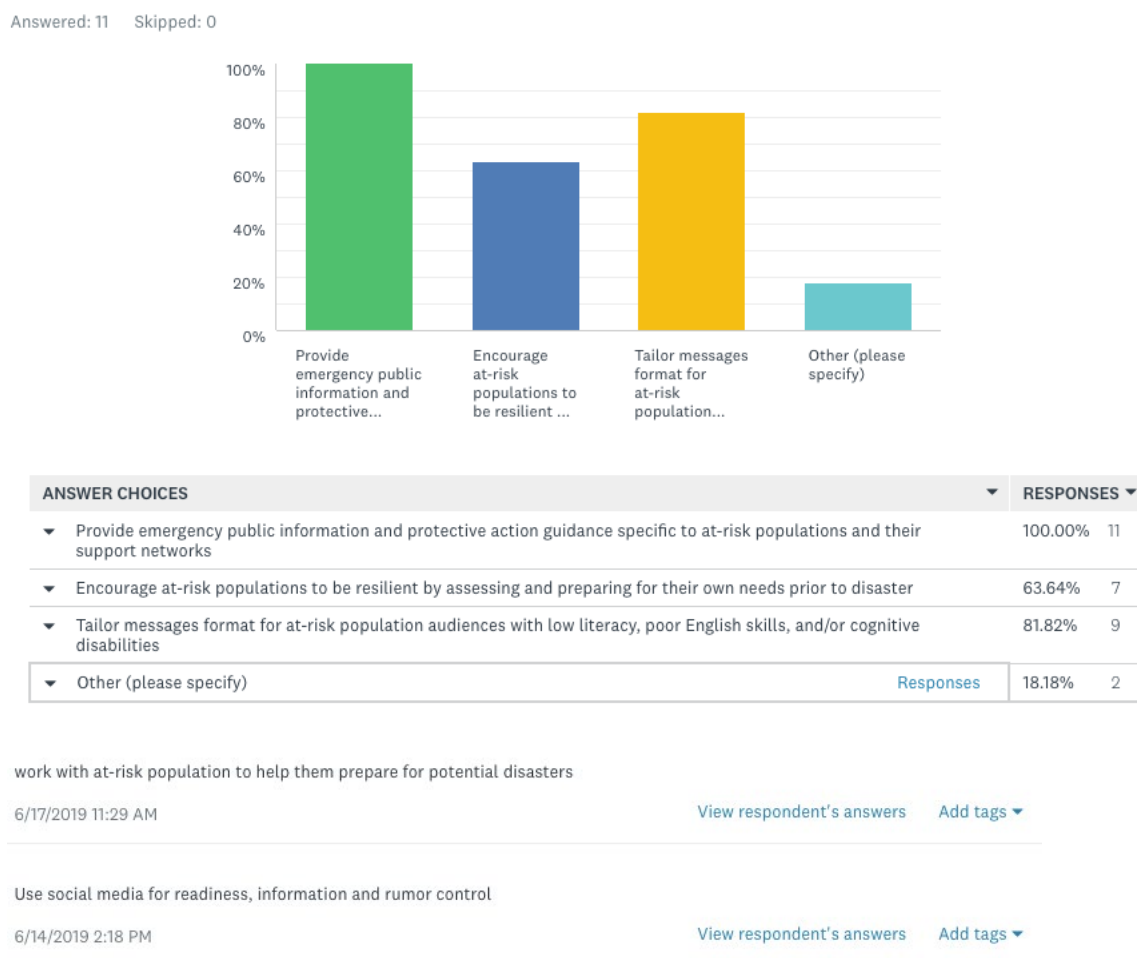


Figure 37. Responses To Local Survey Question 19: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-15 Public Information And External Affairs.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-16 Volunteer Management:” received “train CERT members on effective interaction and assistance to at-risk populations” as the top response with 85.71% of respondents making this recommendation on the global survey. However, on the local survey “train CERT members to help ensure risk reduction and resilience for at-risk populations” was the top response with

81.82% making this recommendation. Numerous other recommendations were submitted in both the global and local surveys. Full responses as well as additional recommendations from the global survey are shown in Figure 38. Full responses as well as additional recommendations from the local survey are shown in Figure 39.

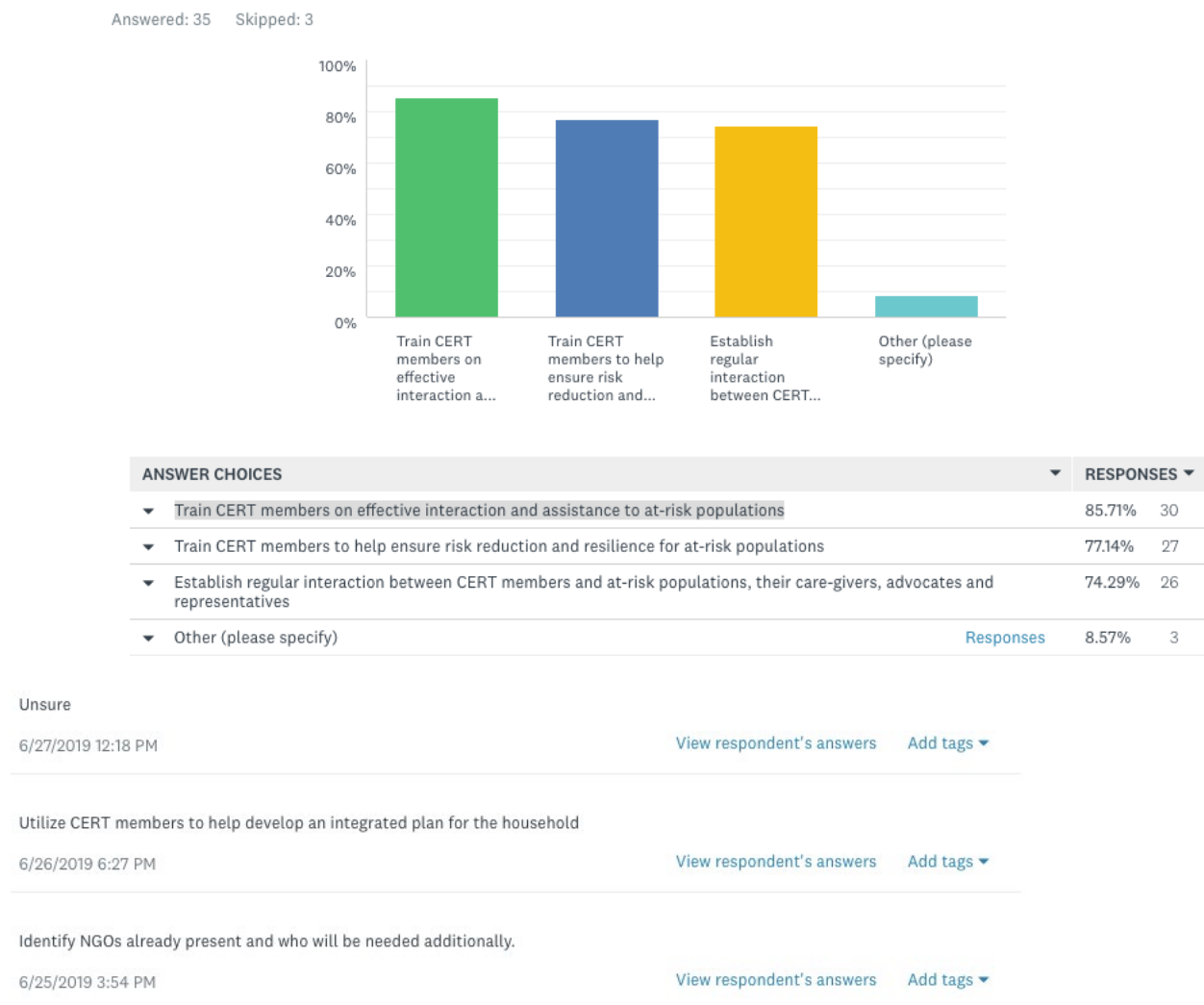


Figure 38. Responses To Global Survey Question 23: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-16 Volunteer Management.

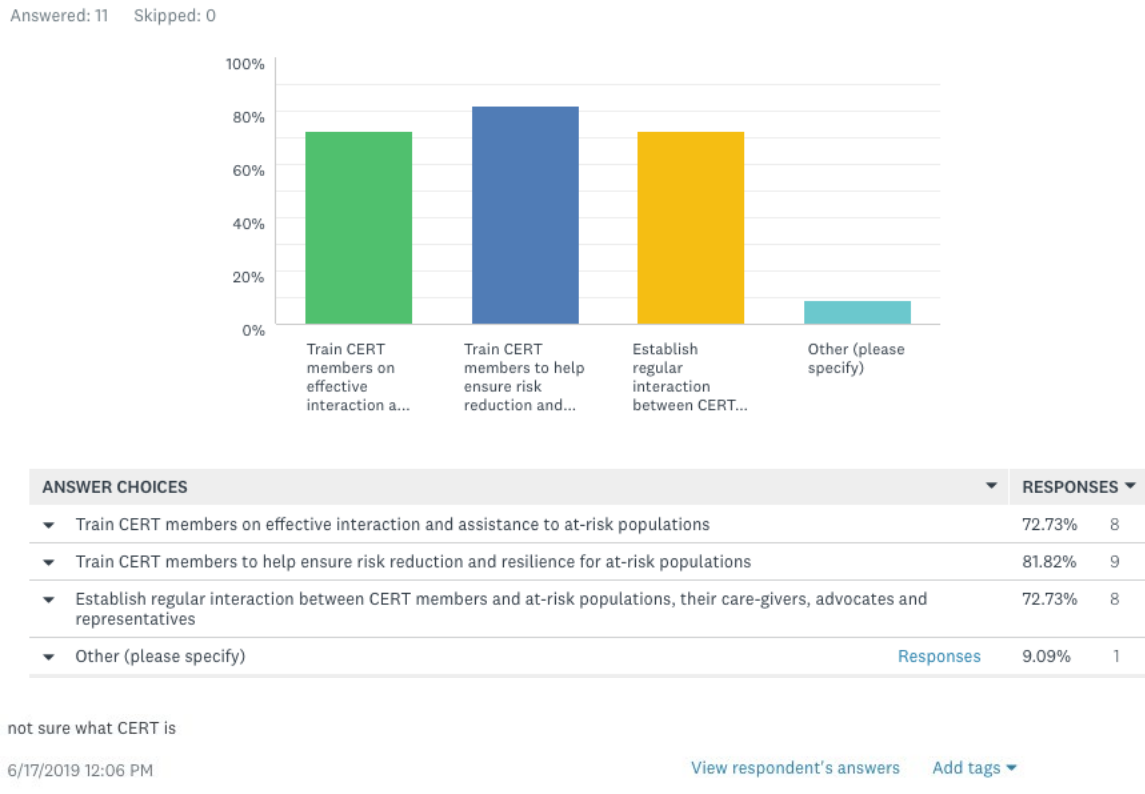


Figure 39. Responses To Local Survey Question 20: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-16 Volunteer Management.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-17 Private Sector:” received “enlist private sector partners to help build risk reduction and resilience for at-risk populations” as the top response with 80.56% of respondents making this recommendation on the global survey. On the local survey “enlist private sector partners to help build risk reduction and resilience for at-risk populations” and “provide philanthropic funding for disaster mitigation, risk reduction, and resiliency for at-risk populations” tied as the top two responses with 80% of respondents making each of these recommendations. One other recommendation was submitted in the global survey. Full responses as well as the additional

recommendation from the global survey are shown in Figure 40. Full responses from the local survey are shown in Figure 41.

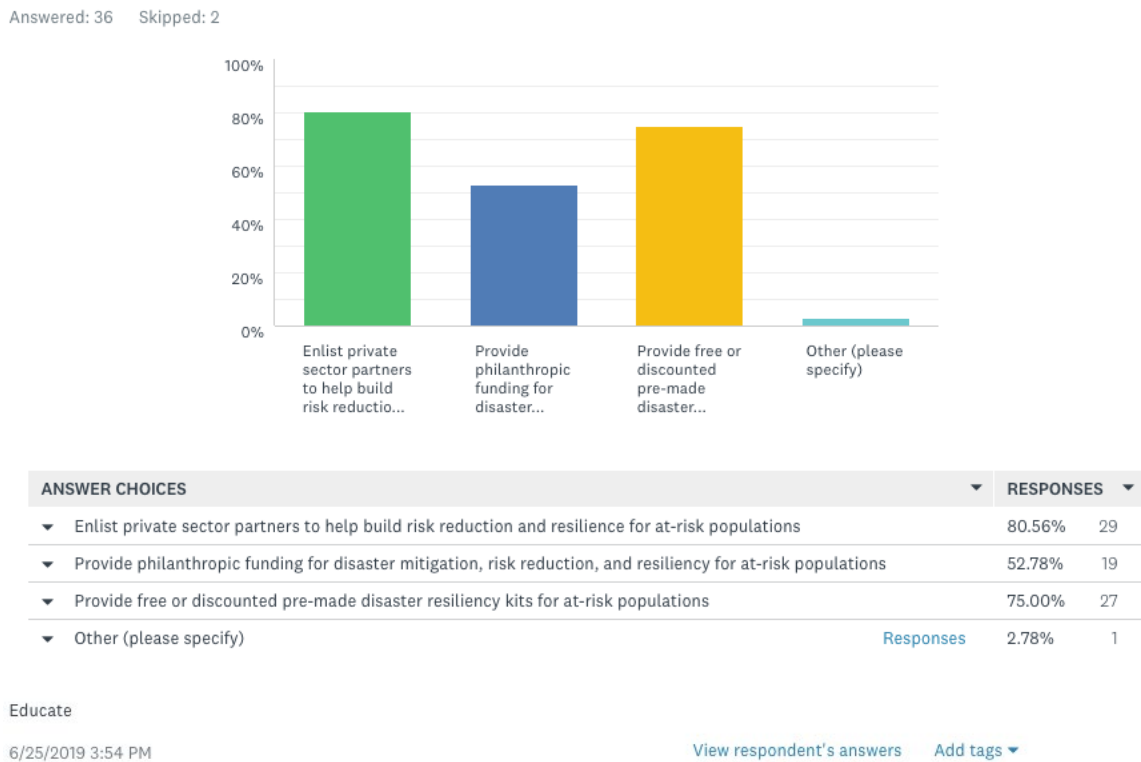


Figure 40. Responses To Global Survey Question 24: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-17 Private Sector.

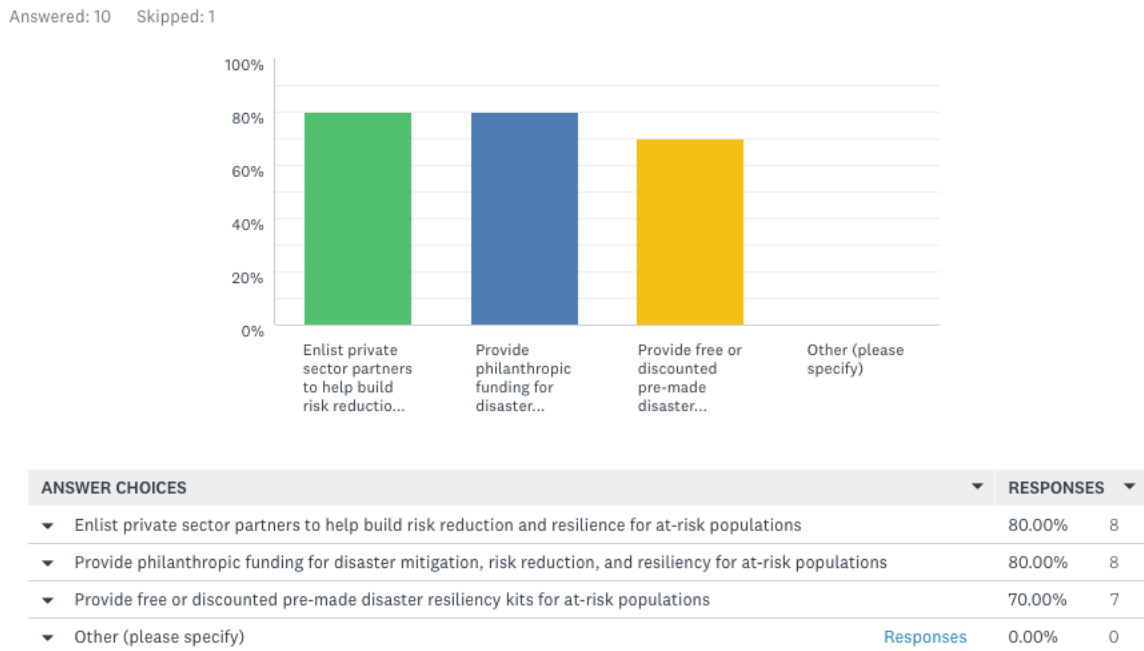


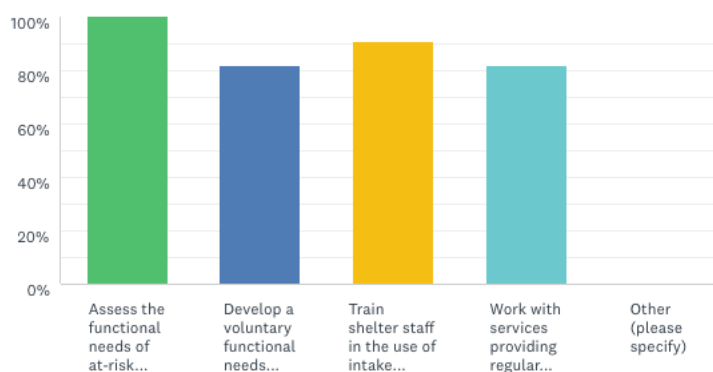
Figure 41. Responses To Local Survey Question 21: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-17 Private Sector.

The survey question, “what strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-19 Functional Needs Management:” received “assess the functional needs of at-risk populations” and “train shelter staff in the use of intake assessments such as the SWIFT evaluation to identify at-risk populations likely to be at risk” tied as the top two responses with 73.68% of respondents making each of these recommendations on the global survey. On the local survey “assess the functional needs of at-risk populations” was the top response with 100% of respondents making this recommendation. One other recommendation was submitted in the global survey. Full responses as well as the additional recommendation from the global survey are shown in Figure 42. Full responses from the local survey are shown in Figure 43.



Figure 42. Responses To Global Survey Question 25: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-19 Functional Needs Management.

Answered: 11 Skipped: 0



ANSWER CHOICES	RESPONSES
Assess the functional needs of at-risk populations	100.00% 11
Develop a voluntary functional needs registry for at-risk populations	81.82% 9
Train shelter staff in the use of intake assessments such as the SWIFT evaluation to identify at-risk populations likely to be at risk	90.91% 10
Work with services providing regular functional needs support for at-risk populations to ensure their ability to continue support through disasters	81.82% 9
Other (please specify)	Responses 0.00% 0

Figure 43. Responses To Local Survey Question 22: What Strategies Should Be Considered For Adoption Into The Local Emergency Operations Plan To Reduce Disaster-Related Risk For At-Risk Populations? ESF-19 Functional Needs Management.

The fifth research question sought to identify what disaster-related community risk reduction practices specifically for vulnerable and at-risk populations are already in place in the Town of Ridgefield. While each respondent to question 23 on the local survey answered this question, several responses mentioned still more recommendations they would like to see implemented rather than identified practices currently in place. Similarly, for those who responded to the same question, question 26 on the global survey, they mostly noted additional needs to be addressed rather than identified currently successful practices. The full results of the local survey can be found in Appendix H. The full results of the global survey can be found in Appendix I.

The local survey identified the following disaster-related risk-reduction practices for

vulnerable populations currently in place.

- R U O K (Are You Ok?) program administered by the fire department to check daily on elderly residents with self-identified risks.
- Most at-risk residents currently identified between all disaster services stakeholders, however no central database or ability for departments to access each other's data.
- An active and trained Community Emergency Response Team (CERT) is in place.
- Fire Department and Emergency Manager do at home visits with seniors.
- Community disaster preparedness is promoted at public events.
- The Emergency Operations Center (EOC) has protocols in place to include pets and service animals during evacuations.
- The local power company (Eversource) has a record of active customers who require electrical service protection.
- Some stakeholders have internal policies to deal with disaster response to vulnerable populations which they practice regularly.
- Social service provides medical, psychiatric, and financial support and resources for at-risk households for known disaster events, albeit only for such residents connected to a social support system in town.
- Warming and cooling centers are run in extreme heat and cold events voluntarily useable by at-risk residents.

Several of the responses to this survey question on the local survey emphasized that they believed that many of the practice recommendations identified in questions five through twenty-

two were already in place. Of note, while many of these recommendations were derived from the LEOP (Richard & Marconi, 2019) phrasing was changed to explicitly address vulnerable and at-risk populations, something that was not specifically mentioned in the LEOP.

Of the 38 respondents global survey (Appendix I), only five functional responses were received for question twenty-six, “are there any other disaster related community risk reduction practices specifically for at risk and vulnerable populations that you believe should be put in place in your area of responsibility?” One response identified conditions in their area that need to be addressed where a rockslide may close a major evacuation route in town. Another respondent identified the need to, “get the word out” in both English and Spanish in their area. A third identified the need to ensure that vulnerable patients taking medications should have such a list with dosages readily available when moved to an evacuation center or shelter. A fourth respondent identified need to include elopement hazards in their emergency operations plan for some at-risk patients. This respondent noted multiple autism and adult foster care facilities in their response area and that simply attempting to evacuate as per normal emergency operations would not keep these at-risk populations safe. The final respondent identified the need to address concerns specific to a large retirement mobile home park as a concentration for vulnerable and potentially at-risk elderly patients.

The sixth research question sought to identify what disaster-related community risk reduction strategies specific to vulnerable and at-risk populations should be included in the *Town of Ridgefield Local Emergency Operations Plan* (LEOP)(Richard & Marconi, 2019). The data to address this question was derived from a complex interaction of the data obtained from the previous questions presented on Table 4. In this table the answers from research question one, the most prevalent vulnerable populations in the Town of Ridgefield are those over sixty-five

and under five years old, are highlighted in yellow. The answers from research question two, the disaster types most likely to impact the Town of Ridgefield, severe Winter storms and cold, severe Summer storms and heat, and power failures, are highlighted in orange. The answers from research question three, the factors most likely to increase disaster-related risk for vulnerable populations in the Town of Ridgefield, reliance on medical supplies, medical equipment, and services to maintain activities of daily living, are highlighted in red. The top answers for all ESF categories for research question four, what strategies should be considered for adoption into the local emergency operations plan are presented in the column labelled “Strategies Recommended”. An X was placed in each column where a recommended strategy was applicable to a specific population, disaster, or risk. Research question five identified what strategies were already in place in the Town of Ridgefield. In each block where a recommended strategy was already in place, the highlight was removed. Thus, the risk-reduction strategies specific to vulnerable and at-risk populations in the Town of Ridgefield that should be included in the LEOP (Richard & Marconi, 2019) are those on the matrix with the greatest number of highlighted X marks.

Table 4

Interaction of data from research questions one through five

Strategies Recommended	Q 1		Q 2			Q 3		
	Over 65 y/o	Under 5 y/o	Winter Storms & Cold	Summer Storms & Heat	Power Failures	Reliant on Medical Supplies	Reliant on Medical Equipment	Reliant on Services
Identify transport resources for at-risk	X	X	X	X	X	X	X	X
Identify and use communication channels for at-risk	X		X	X	X	X	X	X
Prioritize maintenance of transport infrastructure needed by at-risk	X		X	X	X	X	X	X
Train firefighters on interaction with at-risk	X	X				X	X	X
Establish regular interaction between firefighters and at-risk	X	X				X	X	X
Develop and distribute disaster resiliency recommendations specific to at-risk	X		X	X	X	X	X	X
Ensure inclusion of at-risk and advocates in resiliency	X	X	X	X	X	X	X	X
Address concerns about mass-care for at-risk	X	X	X	X		X	X	X
Coordinate predisaster deployment to improve at risk resilience			X	X	X	X	X	X
Train EMS personnel on interactions with at-risk	X	X				X	X	X
Establish regular interactions between EMS personnel and at-risk	X	X				X	X	X
Train responders to provide evacuation support for at-risk	X	X	X	X	X	X	X	X
Assess hazardous materials concern among at-risk	X					X	X	X
Plan for sheltering pets and service animals	X	X	X	X	X			X
Coordinate with utility infrastructure for at-risk					X		X	
Train law enforcement on interaction with at-risk	X	X				X	X	X
Coordinate with volunteer organizations & businesses	X	X	X	X	X	X	X	X
Encourage at risk populations to assess own needs	X	X				X	X	X
Provide public information guidance specific to at-risk	X	X				X	X	X
Train CERT members on resilience for at-risk	X	X				X	X	X
Enlist private sector partners in risk reduction for at-risk	X	X				X	X	X
Provide philanthropic funding for risk reduction for at-risk	X	X						
Assess the functional needs of at-risk	X	X				X	X	X

Discussion

The results of this research showed that, according to local subject matter experts and advocates (Appendix H), the key vulnerable populations in the Town of Ridgefield are those over 65 and under five years of age. According to publicly available data from the United States Census Bureau QuickFacts pages (2018), vulnerable populations in the Town of Ridgefield include approximately 4,050 residents over 65, 1,125 children under 5, 2,750 non-English speaking residents, and 675 residents under 65 who have a permanent disability (p. 1). While this snapshot shows that nearly 35% of the residents of the Town of Ridgefield are potentially vulnerable, it does not show numbers for other vulnerable subgroups, nor does it identify who

are especially at-risk within vulnerable groups. For example, the owner-occupied housing rate, family living arrangements, median household income in excess of \$150,000, and poverty rate of 2.3% make it highly unlikely that every person in the Town of Ridgefield over 65 and under five years of age are especially vulnerable because of lack of resources (United States Census Bureau, 2018, p. 1). However, with the global and US proportions of elderly continuing to increase through 2050 (United Nations Department of Economic and Social Affairs, 2017, p. 44; US Census Bureau, 2017, p. 1) and the Town of Ridgefield population increase of those over 65 and under five years of age over the past ten years (United States Census Bureau, 2018, p. 1) it is reasonable to consider that the at-risk sub groups will also increase in number over the coming years.

The disasters found by this research to be most likely to impact the Town of Ridgefield included: (a) severe seasonal storms, (b) temperature extremes, and (c) power failures. These findings align with both the State of Connecticut's most recent Statewide Healthcare and Public Hazard Vulnerability Analysis of Region V of which Ridgefield is a part (Yale New Haven Health et al., 2018, p. 16) and the Town of Ridgefield's most recent Hazard Mitigation Plan of Ridgefield and the surrounding area (Milone & MacBroom Inc., 2015, pp. 5-5 - 6-5). These types of events present particularly difficult risk-reduction challenges for vulnerable populations. This is especially true for those identified by this research as at-risk due to their reliance on medications and medical supplies, medical equipment, and provided services to maintain activities of daily living. During the types of disasters identified as most likely in the Town of Ridgefield general populations may be able to move to shelters and aid, those with these risk factors may be better off if aided in-place than moved with great effort to shelters with specialty capabilities (Shih et al., 2018). This is neither specifically addressed in the current Local

Emergency Operations Plan (LEOP) (Richard & Marconi, 2019) nor was it one of the recommendations proposed by local stakeholders through this research. According to Shih et al. (2018) this is not uncommon. A 2018 report found that most public health departments were engaged in preparedness and resilience activities, but not specifically tailored to vulnerable populations (Shih et al., 2018). Furthermore, they found that most national policies and requirements do not specifically address risk reduction for vulnerable or at-risk populations (Shih et al., 2018). But Shih et al. found that this may be changing. The Pandemic and All-Hazards Preparedness Act and the complimentary Older Americans Act require state and local agencies to engage in preparedness planning with vulnerable populations, specifically older Americans, in order to secure federal grant funding (Shih et al., 2018). This may present additional value for the results of this research.

A large number of the community risk-reduction strategies recommended in this research focus on self-identification of those who are at-risk and self-assessment and preparation. In short, the results suggest that risk reduction begins with the fire service and its partners helping vulnerable populations to help themselves. The literature suggests that, despite the lessons learned from Katrina and subsequent disaster events, members of vulnerable populations may not be likely to do so. A 2014 survey found that despite available recommendations and resources two-thirds of adults age 50 or older had no emergency plan, had never participated in any disaster resilience education program, and were not aware of the availability of such resources (Al-rousan et al., 2014) Of these older Americans more than one-third reported one activity of daily living (ADL) limitation (Al-rousan et al., 2014).

A 2016 report from the University of Connecticut found that individuals from and advocates for vulnerable populations conveyed a shocking and widespread level of ignorance of

disability issues as well as, “a tragic lack of preparedness on the part of people with disabilities and the human service infrastructure” (The University Center for Excellence in Developmental Disabilities, 2016, p. 5). Fernandez et al. (2002) proposes that members of vulnerable populations, their friends, families, and care-givers certainly have responsibility to plan and prepare for emergencies and disasters, but emergency managers, health-care providers, public health officials, and emergency responders share in this responsibility. An early report from HelpAge International (2000) agrees, saying, “if invisibility, exclusion and powerlessness are common themes emerging from the experience of older people, then consultation, inclusion and empowerment through partnership have emerged as the primary indicators for best practice” (p. 2).

Results from this research showed that subject matter experts for reducing disaster-related risk among vulnerable and at-risk populations in the Town of Ridgefield consider much of their work done. Consideration of these recent reports puts the results in a different light. While a number of practices are in place in the Town of Ridgefield that reduce risk for vulnerable populations, it remains to be seen how effectively they are connecting with the actual community members at-risk. It appeared that for the Town of Ridgefield, as was found in prior research (Al-rousan et al., 2014; Banks, 2013; Center for Disease Control and Prevention, 2010, 2012; Daniel R. Levinson, 2012; Fernandez et al., 2002; Frieden, 2006; Hoffman, 2009; Hutton, 2008; Joanne G. Schwartzberg, MD et al., 2009; Liz Szabo et al., 2018; Mahapatra, 2014; Renne & Mayorga, 2018; Rooney, White, & Fox, 2007; Shih et al., 2018; The University Center for Excellence in Developmental Disabilities, 2016; Wingate, Perry, Campbell, David, & Weist, 2007), gaps may exist between the excellent ideas and recommendations on paper and actual risk-reduction in the real-world. For example, responses to local survey (Appendix H) question

five, among others, focus on the importance and ability of moving at-risk persons to shelters. While it is laudable as a goal, especially with shelter resources available to meet the needs of vulnerable persons, it raises what may be uncomfortable questions. Are the organizations who have identified at-risk persons in coordination with the organization who will be meeting any specialized transport needs? Is the transporting organization in coordination with the agency in charge of prioritizing the clearing of transportation pathways to the shelters, especially during the severe Winter and Summer storms that have been identified as the most prevalent in the Town of Ridgefield? Is transporting at-risk persons to a specially equipped shelter a better option than increasing their resilience and ability to remain in their home as recommended by Shih et al. (2018, p. 4)

While the recommendations prioritized by this research may have contribute to reduced disaster-related risk among vulnerable and at-risk populations in the community, the recommendations by themselves do not reduce the risk. This is highlighted in a 2014 report titled *“The need for evidence-based practice public health response in disasters:”*

“Knowledge: (i) must reach people in operational positions with minimal time lag, (ii) must be used operationally, and (iii) when used, should be applied effectively. Better appraisal is needed of the results at community and other levels of applying the best available knowledge in the best possible way.” (Mahapatra, 2014, p. 242)

Recommendations

The Town of Ridgefield is committed to improving the quality of life for all residents and visitors. To this end, the fire department of the Town of Ridgefield is wholly committed to the proactive reduction of risk in the community, including disaster-related risks among vulnerable and at-risk populations. Based on the data from the surveys, the following recommendations are

presented:

The first recommendation was that the following recommendations from Table 4 with six or more highlighted checkmarks be considered for prioritized adoption into the LEOP.

- Identify transportation resources needed for at risk populations with functional needs
- Identify and utilize communications channels and platforms used by the at risk population caregivers, advocates, and representatives ahead of disasters
- Prioritize maintenance of transportation infrastructure and clearing of roads needed by at-risk populations and their functional needs support
- Develop and distribute home safety and disaster resiliency recommendations specific to at-risk populations
- Ensure the inclusion of at-risk populations as well as their advocates, representatives, and members of their support networks in mitigation, preparation, risk reduction and resiliency efforts
- Assess and address concerns about mass care among at-risk community members care-givers, advocates, and representatives
- Coordinate pre-disaster deployment of consumable medical supplies and durable medical equipment to support functional needs and improve resilience for at-risk populations
- Train emergency responders on providing evacuation support and assistance to at-risk populations
- Organize and coordinate with local volunteer organizations and private business to assist in at-risk population resilience

The second recommendation was that the strategies proposed for adoption into the LEOP by this research be further evaluated by the Social, Technical, Administrative, Political, Legal, Economic, and Environmental (STAPLEE) analysis method in order to ensure the most efficient adoption and effective implementation. The STAPLEE method was developed by the Federal Emergency Management Agency (FEMA) to prioritize and provide insight into the opportunities and constraints of potential mitigation strategies (Federal Emergency Management Agency, 2008, p. 23) and has been used previously by officials of the Town of Ridgefield in their most recent Hazard Mitigation Plan (Milone & MacBroom Inc., 2015, p. 1-8).

The STAPLEE method has been designed specifically for the purpose of optimizing decision making in the adoption of hazard mitigation policies and practices. With its recent use in the Town of Ridgefield Hazard Mitigation Plan it is also one with which Town government, emergency management, and related stakeholders are familiar. However, this STAPLEE evaluation should be completed by the aforementioned stakeholders in conjunction with the caregivers and advocates for, and representative of, the Town's vulnerable populations. This would help ensure improved communication, integration, and affective implementation of properly prioritized risk reduction strategies (Al-rousan et al., 2014; Banks, 2013; Center for Disease Control and Prevention, 2012; Daniel R. Levinson, 2012; Davis & Styron, 2009; Fernandez et al., 2002; Frieden, 2006; Hoffman, 2009; Hutton, 2008; Shih et al., 2018; The University Center for Excellence in Developmental Disabilities, 2016). This is most clearly presented in the University of Connecticut report's relaying of the motto adopted by disability rights activists, "Nothing about us, without us!" (The University Center for Excellence in Developmental Disabilities, 2016, p. 8)

The third recommendation was that future readers are advised that just as a "one size fits

all” model of disaster risk reduction practices for the general population does not work for at-risk populations, likewise the strategies recommended as a result of this research may not be appropriate in all other communities. It is recommended for future readers that evaluations similar to this research be performed locally by communities in order to produce effective working lists of recommended strategies appropriate for their own areas of responsibility. While this, like all community risk-reduction efforts, requires significant up-front investment, the dividend realized in the reduction of disaster impact on the community in and reduced costs of emergency operations during disaster are significant (Long, 2018). Despite nationally projected increases in both disasters and vulnerable populations, community risk reduction in this field remains both worthwhile and achievable (Al-rousan et al., 2014, p. 506).

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Appendix A - Literature Review Summary With Key Elements

<u>TITLE</u>	<u>LEAD AUTHOR</u>	<u>PUBLICATION</u>	<u>YEAR</u>	<u>GEOGRAPHY</u>	<u>POPULATION</u>	<u>PERSPECTIVE</u>	<u>VULNERABILITIES</u>	<u>DISASTERS</u>	<u>SOLUTIONS</u>
2018-2022 FEMA Strategic Plan	Long	FEMA	2018	US	All	Emergency management	Not specifically addressed	Not specifically addressed	Strategic Goal 1: Build a Culture of Preparedne ss, Strategic Goal 2: Ready the Nation for Catastroph ic Disasters, Strategic Goal 3: Reduce the Complexity of FEMA

A Guide for Including People with Disabilities in Disaster Preparedness Planning	The University Center for Excellence in Developmental Disabilities	University of Connecticut	2016	Local	People with disabilities	Emergency management	Not specifically addressed	Not specifically addressed	1) Outreach: identification and education, 2) planning with the disability community, 3) communication strategies, 4) evacuation, 5) shelter
A spate of deadly disasters for the elderly	Michael Nedelman	CNN	2017	US	Elderly	Emergency Response	Can't evacuate, health conditions, care dependence, financial scams	Wildfires, hurricanes	Pre-planning

ADA Tool Kit: Appendices 1 and 2, ADA Accessibility Survey Forms and Instructions	US Department of Justice	Americans with Disabilities Act	2016	US	Americans with disabilities	Emergency management	Not specifically addressed	Not specifically addressed	Advanced Planning, ensuring accessibility of shelters, respect the rights of people with disabilities to choose shelter options, consider options for care givers, consider options for pets,
Addressing Gaps in Nursing Home Emergency Preparedness	Laura Banks	University of New Mexico	2014	US	Elderly	Public health	Not specifically addressed	Not specifically addressed	More than half of surveyed nursing homes identified specific activities with a local emergency management that could improve nursing home emergency preparedness including staff training collaboration during an exercise and critique of the response plan.

Assessing the Extent to Which the UK's National Risk Register Supports Local Risk Management	Katie Hiscock and Aled Jones	Sustainability	2017	Global	All	Emergency management	Not specifically addressed	Natural hazards (flooding, severe weather, space weather, volcanic eruptions, poor air quality, earthquakes, wildfires), diseases (human, animal), major accidents (power failure, system failures, transport accidents, industrial and urban accidents), societal risks (industrial action, public disorder), malicious attacks (crowded places, transport systems, infrastructure, cyber-attacks, CBRN)	Increase engagement with knowledge and resources
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At-Risk and Vulnerable Populations and Unmet Need	Connecticut Department of Public Health	Connecticut Department of Public Health	2014	Local	At risk and vulnerable populations	Public health	At-risk or vulnerable populations include the elderly; residents with incomes below 200% of the federal poverty level; residents in urban core areas, defined as towns with the highest poverty and most dense population; racial or ethnic minorities such as Black non-Hispanics, Hispanics, American Indians, Asians and other non-White groups; residents of rural areas; persons who do not have insurance; homeless populations; non-English speakers; lesbian, gay, bisexual and transgender (LGBTQ) residents and immigrants.	Not specifically addressed	Not specifically addressed
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Be Informed Ready.gov	Department of Homeland Security	Department of Homeland Security	2019	US	All	Emergency management	Not specifically addressed	Active shooter, attacks in public places, avalanche, bioterrorism, chemical emergencies, cybersecurity, drought, earthquakes, emergency alerts, explosions, extreme heat, floods, hazardous materials incidents, home fires, household chemical emergencies, hurricanes, landslides and debris flow, nuclear explosion, nuclear power plants, pandemic, power outages, radiological dispersion device, severe weather, snow storms and extreme cold, space weather, thunderstorms and lightning, tornadoes, tsunamis, volcanoes, wildfires	Disaster specific via links
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Caring for Elderly Adults During Disasters: Improving Health Outcomes and Recovery	Laura Banks	Southern Medical Journal	2013	US	Elderly	Public health	Cognitive impairment, visual or hearing impairments, dependence on medications and medical supplies and equipment, limited financial reserves, social isolation, unwillingness to evacuate due to attachment to their location and distrust of government and officials, emotional attachment to pets, exacerbation of medical conditions.	Not specifically addressed	Not specifically addressed
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CDC's Disaster Planning Goal: Protect Vulnerable Older Adults	William F Benson	Center for Disease Control and Prevention	2007	US	Elderly	Emergency management	Sensory, physiological, and cognitive changes, chronic conditions, risk of trauma, loss of pets, transportation, limited resources, reluctance to seek assistance, nutrition, fraud and abuse	Not specifically addressed	Follow model programs for disaster planning and response such as Florida
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COMMUNITY RISK REDUCTION: DOING MORE WITH MORE	THE NFPA URBAN FIRE AND LIFE SAFETY TASK FORCE	NFPA	2016	US	All	Emergency Response	Not specifically addressed	Not specifically addressed	Not specifically addressed
Disaster declarations by State / Tribal Government and by Year	Federal Emergency Management Agency	Federal Emergency Management Agency	2019	Local	Not specifically addressed	Emergency management	Not specifically addressed	All	Not specifically addressed

Disaster management cycle-A theoretical approach	Khan et al	Journal of Management and Marketing	2008	Global	All	Emergency management	Not specifically addressed	Any situation where a hazard such as a natural or technological accident meets vulnerability such as limited resources or unsafe conditions to produce impact.	Not specifically addressed
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DISASTER PREPAREDNESS For Seniors by Seniors	American Red Cross	American Red Cross	2009	US	Elderly	Emergency management	Questionnaire: do you live alone? Do you drive or own a car? How good is your sense of smell? Do you have any physical, medical, thinking, or learning limitations? Has your sense of hearing or vision decreased? Are you reliant upon any medical equipment? Are you reliant upon a caregiver?	Extended loss of electrical power, fire, others	Get a kit, make a plan, be informed
Disasters, Older Adults and Philanthropy	Jennifer W. Campbell	Grantmakers In Aging	2014	US	Elderly	Interest group	Unable to evac, unwilling to evac, assuming it will be ok, exacerbated medical conditions, isolation	Tsunami, earthquake , hurricane,	philanthropic funding of mitigation, preparedness, response, recovery

Emergency Preparation & Resources Ridgefield CT	Town of Ridgefield , Connecticut	Town of Ridgefield, Connecticut	2019	Local	Not specifically addressed	Emergency management	Not specifically addressed	All	Emergency alerting systems
Enhancing Public Health Emergency Preparedness for Special Needs Populations: A Toolkit for State and Local Planning and Response	Ringel et al	Rand Corporation	2009	US	Visually impaired, hearing-impaired, cognitively impaired, physically limited, elderly, dependent on medical care equipment or medications, minorities, poor and limited English proficiency.	Emergency management	Not specifically addressed	Not specifically addressed	Prevention , protection, mitigation, response, recovery

FEMA's Functional Needs Support Services Guidance	Federal Emergency Management Agency	Public Health Emergency	2017	US	Individuals with access and functional needs	Public health	Individuals needing durable medical equipment (DME), consumable medical supplies (CMS), and personal assistance services (PAS).	Not specifically addressed	Communication assistance and services, DME, CMS, and/or PAS to assist with activities of daily living, Availability of food and beverages appropriate for individuals with dietary restrictions .
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Frail Elderly as Disaster Victims: Emergency Management Strategies	Lauren S. Fernandez, MS;1,2 Deana Byard, BA;1 Chien-Chih Lin, BA;1 Samuel Benson, AEMT-P;3 Joseph A. Barbera, MD	Prehospital and Disaster Medicine	2002	Global	Elderly	Emergency management	impaired physical mobility diminished sensory awareness, chronic health conditions, and social and economic limitations that prevent adequate preparation for disasters and hinder their adaptability during disasters. Frail elderly, those with serious physical, cognitive, economic, and psycho-social problems. Individuals reliant upon regular medication, medical treatments, or nursing care, and the provision of care and food from service or volunteer agencies also may be vulnerable.	hurricanes, floods, tornados, earthquakes, and heat and cold waves	a. AGENCY: Early warning, preparedness education, use existing resources, assist existing agencies in building disaster capabilities COMMUNITY: Incorporate specifics into EM Plan, healthcare access & assistance, aid distribution, warning design, recovery needs.
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Functional Needs of People With Disabilities: Emergency Preparedness Initiative	Davis	National Organization on Disability	2009	US	All	Special Interest	Not specifically addressed	Not specifically addressed	The Emergency Preparedness Initiative has two main objectives. The second objective is to ensure that people with disabilities are included in the emergency-planning process at all levels of government and the private sector so they can offer their insights, knowledge, and resourcefulness. The first is to make sure that the functional needs of people with disabilities are adequately addressed prior to an emergency in order to minimize the adverse impact on people with disabilities and their communities.
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Gaps Continue To Exist in Nursing Home Emergency Preparedness and Response During Disasters: 2007-2010	Daniel R. Levinson	Department of Health And Human Services	2012	US	Elderly	Public health	Not specifically addressed	Not specifically addressed	Federal level Center for Medicare Services requirements to specifically include specific elements of emergency plans including checklists and training as well as assessment of compliance
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Guidance on Integrating People with Access and Functional Needs into Disaster Preparedness Planning for States and Local Governments	Assistant Secretary for Preparedness and Response	US Department Of Health And Human Services	2016	US	All	Emergency management	People with access or functional needs	Not specifically addressed	Website contains numerous specific resources To Integrate People with Access and Functional Needs into Local Disaster Preparedness Planning
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Hurricane Florence: Understandin g why the elderly are vulnerable	Szabo, Aleccia, Pardue	ABC News	2018	US	Elderly	Interest group	Unable to evacuate	Hurricanes	Not specifically addressed
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Identifying Vulnerable Older Adults and Legal Options for Increasing Their Protection During All-Hazards Emergencies: A Cross-Sector Guide for States and Communities	Center for Disease Control and Prevention	U.S. Department of Health & Human Services	2012	US	Elderly	Emergency management	impaired mobility, diminished sensory awareness, multiple chronic health conditions, and social and economic limitations, disruption of support systems	pandemic, natural disaster and severe weather, mass casualty events, radiation emergency, chemical emergency, bioterrorism	Include older adult issues and needs when developing preparedness plans, identify and review relevant legal authorities, define the different categories of emergencies and hazards to better understand how specific emergencies may affect older adults in the community, use operational models of emergency management to identify the specific needs of older adults during each phase of an emergency.
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Improving Disaster Resilience Among Older Adults	Regina A. Shih, Joie D. Acosta, Emily K. Chen, Eric G. Carbone, Lea Xenakis, David M. Adamson, Anita Chandra	Rand Corporation	2018	US	Elderly	Public health	Multiple chronic conditions, limitations in daily activities, declining vision and hearing, and physical and cognitive disabilities that hamper their ability to communicate about, prepare for, and respond to a natural disaster. (Levac, Toal-Sullivan, and O'Sullivan, 2012; Aldrich and Benson, 2008).	Not specifically addressed	Information-sharing and outreach, which included providing brochures on preparedness, calling members during and after disasters, and reminding members about changing smoke detector batteries, • improving communication with first responders, including help enrolling in smart 911 registries to make responders aware of members' needs, hosting information sessions from local emergency responders, and medical alert systems, • assessment and planning, including home safety inspections (e.g., for fire safety), support for emergency planning, and support for advance care planning conversations
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										ns— that is, wishes in case of death or an incapacitating health event.
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Mission Areas FEMA.gov	Federal Emergenc y Managem ent Agency	Federal Emergency Management Agency	2018	US	Not specifically addressed	Emergency management	Not specifically addressed	Not specifically addressed	Prevention , protection, mitigation, response, recovery
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National Response Framework	Department of Homeland Security	Department of Homeland Security	2016	US	All	Emergency management	Not specifically addressed	Not specifically addressed	<div>▪ ☐ Mobilize resources to meet the requirements of individuals with disabilities and others with access and functional needs in compliance with Federal civil rights laws.</div>
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National Risk Register of Civil Emergencies 2017 ed.	Cabinet Office, UK	Cabinet Office, UK	2017	Global	All	Emergency management	Not specifically addressed	Natural hazards (flooding, severe weather, space weather, volcanic eruptions, poor air quality, earthquakes, wildfires), diseases (human, animal), major accidents (power failure, system failures, transport accidents, industrial and urban accidents), societal risks (industrial action, public disorder), malicious attacks (crowded places, transport systems, infrastructure, cyber-attacks, CBRN)	Be aware, prepare, respond
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Nobody Left Behind	Rooney	University of Kansas	2007	US	All	Emergency management	Mobility impairments	Not specifically addressed	Guidelines assist persons with mobility impairment s, surveillance identificati on, consumer outreach, consumer service delivery in transportat ion, sheltering, problem-solving, etc., education and training about the disability community and their needs in disaster preparedne ss and response, inclusion of persons with disabilities in the planning process and training of responders
Older people and power loss, floods and storms	Age UK	Age UK	2016	Global	Elderly	Interest group	Illness, frailty, poverty, living alone, mobility, dementia, digital exclusion	Flooding, power loss	First aid kit, blankets, socks, hat, thermos and soup packets, batteries and radio, flashlight, CO detector, camera, emergency contact numbers

Older people's associations in community disaster risk reduction	HelpAge	HelpAge	2007	Global	Elderly	Public health	Lack of support system, caring for children, chronic illness, hearing or vision problems, communication problems, mental health problems, mobility problems.	Not specifically addressed	Leverage the capabilities and benefits of older people during disasters
Older persons in emergencies: Considerations for action and policy development	David Hutton	WHO	2008	Global	Elderly	Public health	Not specifically addressed	Not specifically addressed	Not specifically addressed
Older Persons in Emergency Situations: A case study of the Great Hanshin-Awaji Earthquake	Tomoe Watanabe	WHO	2013	Global	Elderly	Public health	Not specifically addressed	Not specifically addressed	Not specifically addressed

Preparedness for Natural Disasters Among Older US Adults: A Nationwide Survey	Al-rousan, T. M., Rubenstein, L. M., & Wallace, R. B.	American Journal of Public Health	2014	US	Elderly	Public health	Participated in disaster prep = 34.3%, Has an emergency evacuation plan 23.6%, Knows the location of a shelter in the community 43.2%, Registered for disaster help 10%. 28.5% reported their health to be fair or poor. About 37.6% reported 1 or more ADL limitations and 14.3% reported 1 or more IADL limitations.	Not specifically addressed	This situation suggests the need for a comprehensive emergency preparedness plan through cross-sector collaboration to identify and meet the specific needs of vulnerable older adults during each phase of an emergency.
Preparing for Disaster for People with Disabilities and other Special Needs	FEMA	FEMA	2009	US	All	Emergency management	Physical, medical, sensory or cognitive disabilities	fires, floods, and acts of terrorism	Get informed, make a plan, assemble a kit, maintain your plan and get ready

Preparing for Disaster: Protecting the Most Vulnerable in Emergencies	Sharona Hoffman	UC Davis Law Review	2009	US	Individuals with disabilities, pregnant women, children, elderly persons, prisoners, ethnic minorities, people with language barriers, and the impoverished	Emergency management	Individuals with disabilities, pregnant women, children, elderly persons, prisoners, ethnic minorities, people with language barriers, and the impoverished	Not specifically addressed	Not specifically addressed
PUBLIC HEALTH WORKBOOK To Define, Locate, and Reach Special, Vulnerable, and At-risk Populations in an Emergency	Center for Disease Control and Prevention	US Department Of Health And Human Services	2010	US	This workbook uses the term "at-risk populations" to describe individuals or groups whose needs are not fully addressed by traditional service providers or who feel they cannot comfortably or safely use the standard resources offered during preparedness, response, and recovery efforts. people who are physically or mentally disabled (e g., blind, deaf, hard-of-hearing, have learning disabilities, mental illness or mobility limitations), people with limited English language skills, geographically or culturally isolated people, homeless	Public health	People at economic disadvantage, language and literacy problems, medical issues and disability (physical, mental, cognitive, or sensory), isolation (cultural, geographic, or social) and age (very old or very young)	Not specifically addressed	Not specifically addressed

					people, senior citizens, and children.				
Recommendations for Best Practices in the Management of Elderly Disaster Victims	Joanne G. Schwartzberg, et al	American Medical Association	2009	US	Elderly	Public health	Physical impairments, cognitive impairments, need for assistive devices	Hurricanes, tornadoes, floods, earthquakes, train collisions and plane crashes	Use of SWiFT Tool

RIDGEFIELD IS READY! ARE YOU? MAKE EMERGENCY PREPAREDNESS A PRIORITY	Town of Ridgefield , Connecticut	Town of Ridgefield, Connecticut	2019	Local	Not specifically addressed	Emergency management	Not specifically addressed	All	Preparedness checklist
Risk Management Overview	World Health Organization	World Health Organization	2013	Global	Low income, low socioeconomic status, homeless, single-parent family, over sixty-five years old, younger than five years, female, chronic illness, disability, social isolation or exclusion	Public health	At risk	Natural, biological, technological and societal hazards put the health of vulnerable populations at risk and bear the potential to cause significant harm to public health.	Build capabilities and resilience of individuals and communities to risks
State of Connecticut State Response Framework (SRF)	Department of Emergency Services and Public Protection	State of Connecticut	2014	Local	Not specifically addressed	Emergency management	Not specifically addressed	Not specifically addressed	Prevention, protection, mitigation, response, recovery

Statewide Healthcare and Public Health Hazard Vulnerability Analysis	Yale New Haven Health	Center for Emergency Preparedness and Disaster Response	2018	Local	Not specifically addressed	Public health	Elderly, disability, poverty, health status, young, and mobility issues	<ul style="list-style-type: none"> - National Planning Scenarios - Naturally Occurring Events - Human Related Events - Hazardous Materials Events - Technological Events - Utility Events - Geographic Events - Other Events 	<ul style="list-style-type: none"> - most probable hazards - hazards with the potential to have the highest impact on the regional public health and healthcare capabilities - hazards with the potential to have the highest impact on the residents - hazards with the lowest level of mitigation and preparedness.
The Impact of Hurricanes Katrina and Rita on People with Disabilities: A Look Back and Remaining Challenges	Frieden	National Council on Disability	2006	US	All	Special Interest	Not specifically addressed	Not specifically addressed	Include people with disabilities in planning and preparation for disasters

The need for evidence-based public health response in disasters	Mahapatra	Journal of Evidence-Based Medicine	2014	Global	Not specifically addressed	Public health	Not specifically addressed	Not specifically addressed	Improved data acquisition and analysis
Town of Ridgefield, Connecticut: Emergency Operations Plan	Marconi & Aarons	Town of Ridgefield, Connecticut	2019	Local	All	Emergency management	Not specifically addressed	Not specifically addressed	Not specifically addressed

Town of Ridgefield, Connecticut: Hazard Mitigation Plan	Milone & MacBroom Inc.	Town of Ridgefield, Connecticut	2015	Local	Elderly	Emergency management	Not specifically addressed	flooding, hurricanes and tropical storms, summer storms, winter storms, earthquakes, dam failure, wildfires	The purpose of the hazard mitigation plan is to 1 increase access to an awareness of funding sources for hazard mitigation projects, 2 identify mitigation initiatives to be implemented if and when funding becomes available, 3 connect hazard mitigation planning to other community planning efforts, 4 improve the mechanisms for pre- and post-disaster decision-making efforts, 5 improve the ability to implement post-disaster recovery projects, 6 enhance and preserve natural resource systems, educate residents and policymakers about hazard risk and vulnerability, complement future
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Town of Wethersfield Special-Needs Registry Application	Karen Tomczyk, Tom Mitney	Town of Wethersfield	2017	CT	1) A resident with mobility or cognitive / intellectual disabilities. 2) The individual has a condition that should be brought to the attention of first responders who are responding to the resident's home . 3) Condition which makes an individual at-risk for wandering from their residence / school / other, becoming disoriented, and / or being unable to adequately communicate with others in order to get back to their place of safety.	Emergency Response	Blind, visual impairment, autism, nonregulatory, mobility assistance required, verbal impairment, prescriptions, cognitive disability, intellectual disability, behavioral concerns, deaf or hard of hearing, Alzheimer's, bedridden, oxygen required, service animal, lives alone, may become disoriented, may roam, may be unable to communicate under stress, likely unable to cope with three or more days of power outage, unable to evacuate from home and summon proper assistance, possesses a medical condition to hamper communication or mimic hostility, intoxication, etc.	major storm	Not specifically addressed
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Using standard clinical assessments for home care to identify vulnerable populations before, during, and after disasters	Alexandra I. T. van Solm, P., John P. Hirdes, P., Leslie A. Eckel, P., George A. Heckman, M. D., & Philip L. Bigelow, P.	Journal of Emergency Management	2017	Global	All	Emergency management	Frailty combined with social isolation	Not specifically addressed	The algorithm uses data from interRAI's home care assessment to generate an up-to-date list of vulnerable adults using home care services. It takes into account disability, health status, social isolation and the amount of support an individual may receive from informal caregivers.
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Vulnerability of Older Adults in Disasters: Emergency Department Utilization by Geriatric Patients After Hurricane Sandy	Malik et al.	Disaster Medicine and Public Health Preparedness	2018	Local	Elderly	Public health	Not specifically addressed	Hurricanes	Dedicated resources and planning specific to elderly
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What Has America Learned Since Hurricane Katrina?	Renee, Mayorga	National Academies of Science, Engineering and Medicine	2018	US	Elderly	Emergency management	Not specifically addressed	Hurricanes	1. Special needs registries, 2. Specialized transportation plans for individuals with specific needs, 3. Pick-up location plan, 4. Multimodal evacuation plan, and 5. Pedestrian evacuation plan.
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What is a Vulnerable Population in Healthcare?	CareCentrix	CareCentrix	2017	Global	Children, elderly, chronically ill, non-English speakers	Public health	Poor health outcomes	Not specifically addressed	Not specifically addressed
World Population Ageing Report	United Nations Department of Economic and Social Affairs	United Nations	2017	Global	Elderly	Public health	Not specifically addressed	Not specifically addressed	Not specifically addressed

Appendix B - Risk Reduction in Vulnerable Populations Local Survey

* 1. What is your current position related to disaster services?

* 2. What vulnerable populations exist in the Town of Ridgefield?

Please rate each 0 - 5 (0 = population does not exist in Ridgefield, 1 = population is very small in Ridgefield, 5= population is very large in Ridgefield)

	Population does not exist in Ridgefield	Population is very small in Ridgefield	Population is small in Ridgefield	Population is moderate in Ridgefield	Population is large in Ridgefield	Population is very large in Ridgefield
Elderly (> 65 y/o)	☐	☐	☐	☐	☐	☐
Children (< 5 y/o)	☐	☐	☐	☐	☐	☐
Single parent family	☐	☐	☐	☐	☐	☐
Cognitively or intellectually impaired	☐	☐	☐	☐	☐	☐
Communication Impaired (e.g. autistic, hard of hearing)	☐	☐	☐	☐	☐	☐
Sensory Impaired (e.g. blind, deaf)	☐	☐	☐	☐	☐	☐
Mobility Impaired (e.g. bedridden, cannot walk, cannot drive)	☐	☐	☐	☐	☐	☐
Reliant on medication, medical supply or equipment	☐	☐	☐	☐	☐	☐
Reliant on caregiver	☐	☐	☐	☐	☐	☐
Reliant on services for daily living	☐	☐	☐	☐	☐	☐
Limited financial reserves	☐	☐	☐	☐	☐	☐
Homeless	☐	☐	☐	☐	☐	☐
Socially isolated	☐	☐	☐	☐	☐	☐
Ethnic minorities	☐	☐	☐	☐	☐	☐
Limited English proficiency (English as a second language)	☐	☐	☐	☐	☐	☐

Other (please specify and rank)

*** 3. What disasters are most likely to impact members of the Town of Ridgefield community?**

Please rate each 0 - 5 (0 = Chance of this disaster does not exist in Ridgefield, 1 = Chance of this disaster is very small in Ridgefield, 5= Chance of this disaster is very large in Ridgefield)

	Chance of this disaster does not exist in Ridgefield	Chance of this disaster is very small in Ridgefield	Chance of this disaster is small in Ridgefield	Chance of this disaster is moderate in Ridgefield	Chance of this disaster is large in Ridgefield	Chance of this disaster is very large in Ridgefield
Heavy Summer storms (rain)	☐	☐	☐	☐	☐	☐
Heavy Winter storms (snow and ice)	☐	☐	☐	☐	☐	☐
Hurricanes & tropical storms	☐	☐	☐	☐	☐	☐
Tornadoes	☐	☐	☐	☐	☐	☐
Severe heat	☐	☐	☐	☐	☐	☐
Severe cold	☐	☐	☐	☐	☐	☐
Wildfires	☐	☐	☐	☐	☐	☐
Flooding	☐	☐	☐	☐	☐	☐
Tsunami	☐	☐	☐	☐	☐	☐
Volcanic eruptions	☐	☐	☐	☐	☐	☐
Earthquakes	☐	☐	☐	☐	☐	☐
Space weather (electrical disturbances)	☐	☐	☐	☐	☐	☐
Dam Failure	☐	☐	☐	☐	☐	☐
Disease outbreaks	☐	☐	☐	☐	☐	☐
Power failures	☐	☐	☐	☐	☐	☐
System failures (water, sewage, etc.)	☐	☐	☐	☐	☐	☐
Severe transportation accidents (roads and highways)	☐	☐	☐	☐	☐	☐
Industrial accidents	☐	☐	☐	☐	☐	☐
Industrial action (strikes)	☐	☐	☐	☐	☐	☐
Public disorder (rioting)	☐	☐	☐	☐	☐	☐
CBRNE attacks (terror attacks)	☐	☐	☐	☐	☐	☐
Cyber attacks	☐	☐	☐	☐	☐	☐
Active Shooter	☐	☐	☐	☐	☐	☐

Other (please specify and rank)

*** 4. What factors increase disaster-related risk for vulnerable populations in the Town of Ridgefield?**

Please rate each 0 - 5 (0 = This vulnerability has no impact on at-risk populations in Ridgefield, 1 = This vulnerability has very little impact on at-risk populations in Ridgefield, 5= This vulnerability has very large impact on at-risk populations in Ridgefield)

	This vulnerability has no impact on at-risk populations in Ridgefield	This vulnerability has very little impact on at-risk populations in Ridgefield	This vulnerability has little impact on at-risk populations in Ridgefield	This vulnerability has moderate impact on at-risk populations in Ridgefield	This vulnerability has a large impact on at-risk populations in Ridgefield	This vulnerability has a very large impact on at-risk populations in Ridgefield
Reliance on personal assistance services such as home health aid or visiting nurse to assist with functional needs for daily living	☐	☐	☐	☐	☐	☐
Reliance on consumable medical supplies (including medications) for daily living	☐	☐	☐	☐	☐	☐
Reliance on durable medical equipment (including oxygen concentrators) for daily living	☐	☐	☐	☐	☐	☐
Poor financial resilience	☐	☐	☐	☐	☐	☐
Poor physical health resilience	☐	☐	☐	☐	☐	☐
Poor mental/emotional health resilience	☐	☐	☐	☐	☐	☐
Poor access to disaster preparatory resources	☐	☐	☐	☐	☐	☐
Poor access to disaster emergency response	☐	☐	☐	☐	☐	☐
Poor access to disaster recovery resources	☐	☐	☐	☐	☐	☐

Other (please specify and rank)

9. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-5 Emergency Management

- ☐ Update the Local Emergency Operations Plan and other emergency plans, procedures, and agreements to specifically support the needs of at-risk populations
- ☐ Conduct preparedness, planning, training and exercise activities in coordination with at-risk populations and their advocates and representatives
- ☐ Identify, enumerate and locate at-risk populations
- ☐ Ensure the inclusion of at-risk populations as well as their advocates, representatives, and members of their support networks in mitigation, preparation, risk reduction and resiliency efforts
- ☐ Coordinate disaster mitigation, preparation, risk reduction and resiliency efforts with housing facilities and areas with high concentrations of at-risk populations
- ☐ Other (please specify)

10. PLEASE CHECK ALL THAT APPLY - What strategies may be adopted into a local emergency operations plan to reduce disaster-related risk for at-risk populations? ESF-6 Mass Care [Emergency Assistance, Housing and Human Services]

- ☐ Assess and address concerns about mass care among at-risk populations
- ☐ Assess and address concerns about mass care among at-risk community members care-givers, advocates, and representatives
- ☐ Other (please specify)

11. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-7 Logistics [Management] and Resource Support

- ☐ Coordinate pre-disaster deployment of resources to improve resilience for at-risk populations
- ☐ Other (please specify)

5. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-1
Transportation:

- ☐ Identify transportation resources needed for at-risk populations with functional needs
- ☐ Identify evacuation routes accessible by at-risk populations
- ☐ Identify transportation routes needed to provide functional needs support to at-risk populations
- ☐ Other (please specify)

6. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-2
Communications:

- ☐ Identify and utilize communications channels and platforms used by at-risk populations ahead of disasters
- ☐ Identify and utilize communications channels and platforms used by at-risk population care-givers, advocates and representatives ahead of disasters
- ☐ Other (please specify)

7. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-3
Public Works and Engineering:

- ☐ Prioritize maintenance of transportation infrastructure and clearing of roads needed by at-risk populations and their functional needs support
- ☐ Other (please specify)

8. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-4 Fire [Firefighting]

- ☐ Train firefighters on effective interaction and assistance to at-risk populations
- ☐ Establish regular interaction between firefighters and at-risk populations, their care-givers, advocates and representatives
- ☐ Develop and distribute home safety and disaster resiliency recommendations specific to at-risk populations
- ☐ Other (please specify)

12. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-8 Public Health and Medical Services

- ☐ Coordinate pre-disaster deployment of consumable medical supplies and durable medical equipment to support functional needs and improve resilience for at-risk populations
- ☐ Coordinate with local/regional health districts and the State Department of Health for public messaging specific to at-risk populations
- ☐ Train EMS personnel on effective interaction and provision of assistance to at-risk populations
- ☐ Establish regular interaction between EMS personnel and at-risk populations, their care-givers, advocates and representatives
- ☐ Other (please specify)

13. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-9 Search and Rescue

- ☐ Train emergency responders on providing evacuation support and assistance to at-risk populations
- ☐ Establish regular interaction between rescuers and at-risk populations, their care-givers, advocates and representatives
- ☐ Other (please specify)

14. PLEASE CHECK ALL THAT APPLY - What strategies may be adopted into a local emergency operations plan to reduce disaster-related risk for at-risk populations? ESF-10 [Oil and] Hazardous Materials Response

- ☐ Assess and address hazardous materials concerns among at-risk populations
- ☐ Other (please specify)

15. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-11 [Animal Protection,] Agriculture and Natural Resources

- ☐ Plan for sheltering of household pets and service and support animals for at-risk populations
- ☐ Provide for natural and cultural resources and historic properties protection for at-risk populations living in such properties
- ☐ Coordinate with appropriate agencies on food safety and security for at-risk populations with dietary restrictions
- ☐ Other (please specify)

16. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-12 Energy and Utilities

- ☐ Coordinate with appropriate agencies on Energy and utilities infrastructure assessment and utilities resiliency for at-risk populations
- ☐ Other (please specify)

17. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-13 Public Safety and Security/[Law Enforcement and Homeland Security]

- ☐ Train law enforcement providers on effective interaction and assistance to at-risk populations
- ☐ Establish regular interaction between law enforcement personnel and at-risk populations, their care-givers, advocates and representatives
- ☐ Other (please specify)

18. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-14 Disaster Recovery [Long-Term Community Recovery and Mitigation]

- ☐ Organize and coordinate with local volunteer organizations and private business to assist in at-risk population resilience
- ☐ Other (please specify)

19. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-15 Emergency Public Information and External Affairs [Media]

- ☐ Provide emergency public information and protective action guidance specific to at-risk populations and their support networks
- ☐ Encourage at-risk populations to be resilient by assessing and preparing for their own needs prior to disaster
- ☐ Tailor messages format for at-risk population audiences with low literacy, poor English skills, and/or cognitive disabilities
- ☐ Other (please specify)

20. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? [ESF-16 Volunteer Management/ Citizen Corps/MRC/VOAD]

- ☐ Train CERT members on effective interaction and assistance to at-risk populations
- ☐ Train CERT members to help ensure risk reduction and resilience for at-risk populations
- ☐ Establish regular interaction between CERT members and at-risk populations, their care-givers, advocates and representatives
- ☐ Other (please specify)

21. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? [ESF-17 Private Sector Work Group]

- ☐ Enlist private sector partners to help build risk reduction and resilience for at-risk populations
- ☐ Provide philanthropic funding for disaster mitigation, risk reduction, and resiliency for at-risk populations
- ☐ Provide free or discounted pre-made disaster resiliency kits for at-risk populations
- ☐ Other (please specify)

22. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? [ESF-19 Functional Needs Management]

- ☐ Assess the functional needs of at-risk populations
- ☐ Develop a voluntary functional needs registry for at-risk populations
- ☐ Train shelter staff in the use of intake assessments such as the SWIFT evaluation to identify at-risk populations likely to be at risk
- ☐ Work with services providing regular functional needs support for at-risk populations to ensure their ability to continue support through disasters
- ☐ Other (please specify)

*** 23. What disaster-related community risk reduction practices SPECIFICALLY FOR AT-RISK AND VULNERABLE POPULATIONS are ALREADY IN PLACE in the Town of Ridgefield?**

Appendix C - Risk Reduction in Vulnerable Populations Global Survey**Disaster Risk Reduction for Vulnerable Populations Global Survey**

1. What is the name of your organization?

2. What is the geographic location of your organization's coverage area?(City, [State, Province, County] Country)

3. What is your position or job function within your organization?

* 4. How is your current position primarily related to disaster services?

- ☐ Emergency Response
- ☐ Emergency Management
- ☐ Public Health
- ☐ Vulnerable Populations Care-Giver and or Advocate
- ☐ Other (please specify)

*** 5. What vulnerable populations exist in your area of responsibility?**

Please rate each 0 - 5 (0 = population does not exist in your area of responsibility, 1 = population is very small in your area of responsibility, 5 = population is very large in your area of responsibility)

	I do not know	Population does not exist in your area of responsibility	Population is very small in your area of responsibility	Population is small in your area of responsibility	Population is moderate in your area of responsibility	Population is large in your area of responsibility	Population is very large in your area of responsibility
Elderly (> 65 y/o)	☐	☐	☐	☐	☐	☐	☐
Children (< 5 y/o)	☐	☐	☐	☐	☐	☐	☐
Single parent family	☐	☐	☐	☐	☐	☐	☐
Cognitively or intellectually impaired	☐	☐	☐	☐	☐	☐	☐
Communication Impaired (e.g. autistic, hard of hearing)	☐	☐	☐	☐	☐	☐	☐
Sensory Impaired (e.g. blind, deaf)	☐	☐	☐	☐	☐	☐	☐
Mobility Impaired (e.g. bedridden, cannot walk, cannot drive)	☐	☐	☐	☐	☐	☐	☐
Reliant on medication, medical supply or equipment	☐	☐	☐	☐	☐	☐	☐
Reliant on caregiver	☐	☐	☐	☐	☐	☐	☐
Reliant on services for daily living	☐	☐	☐	☐	☐	☐	☐
Limited financial reserves	☐	☐	☐	☐	☐	☐	☐
Homeless	☐	☐	☐	☐	☐	☐	☐
Socially isolated	☐	☐	☐	☐	☐	☐	☐
Ethnic minorities	☐	☐	☐	☐	☐	☐	☐
Limited English proficiency (English as a second language)	☐	☐	☐	☐	☐	☐	☐

Other (please specify and rank)

Please rate each 0 - 5 (0 = Chance of this disaster does not exist in your area of responsibility, 1 = Chance of this disaster is very small in your area of responsibility, 5 = Chance of this disaster is very large in your area of responsibility)

[illegible]

[illegible]

	This vulnerability has no impact on at-risk populations in your area of responsibility	This vulnerability has very little impact on at-risk pops in your area of responsibility	This vulnerability has little impact on at-risk populations in your area of responsibility	This vulnerability has moderate impact on at-risk pops in your area of responsibility	This vulnerability has a large impact on at-risk pops in your area of responsibility	This vulnerability has a very large impact on at-risk pops in your area of responsibility	N/A
Poor access to disaster recovery resources	☐	☐	☐	☐	☐	☐	☐
Other (please specify and rank)							
<input type="text"/>							
<p>8. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations ? ESF-1 Transportation:</p> <p>☐ Identify transportation resources needed for at-risk populations with functional needs</p> <p>☐ Identify evacuation routes accessible by at-risk populations</p> <p>☐ Identify transportation routes needed to provide functional needs support to at-risk populations</p> <p>☐ Other (please specify)</p> <p><input type="text"/></p>							
<p>9. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations ? ESF-2 Communications:</p> <p>☐ Identify and utilize communications channels and platforms used by at-risk populations ahead of disasters</p> <p>☐ Identify and utilize communications channels and platforms used by at-risk population care-givers, advocates and representatives ahead of disasters</p> <p>☐ Other (please specify)</p> <p><input type="text"/></p>							
<p>10. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations ? ESF-3 Public Works and Engineering:</p> <p>☐ Prioritize maintenance of transportation infrastructure and clearing of roads needed by at-risk populations and their functional needs support</p> <p>☐ Other (please specify)</p> <p><input type="text"/></p>							

11. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-4 Fire [Firefighting]

- ☐ Train firefighters on effective interaction and assistance to at-risk populations
- ☐ Establish regular interaction between firefighters and at-risk populations, their care-givers, advocates and representatives
- ☐ Develop and distribute home safety and disaster resiliency recommendations specific to at-risk populations
- ☐ Other (please specify)

12. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-5 Emergency Management

- ☐ Update the Local Emergency Operations Plan and other emergency plans, procedures, and agreements to specifically support the needs of at-risk populations
- ☐ Conduct preparedness, planning, training and exercise activities in coordination with at-risk populations and their advocates and representatives
- ☐ Identify, enumerate and locate at-risk populations
- ☐ Ensure the inclusion of at-risk populations as well as their advocates, representatives, and members of their support networks in mitigation, preparation, risk reduction and resiliency efforts
- ☐ Coordinate disaster mitigation, preparation, risk reduction and resiliency efforts with housing facilities and areas with high concentrations of at-risk populations
- ☐ Other (please specify)

13. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-6 Mass Care [Emergency Assistance, Housing and Human Services]

- ☐ Assess and address concerns about mass care among at-risk populations
- ☐ Assess and address concerns about mass care among at-risk community members care-givers, advocates, and representatives
- ☐ Other (please specify)

14. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-7 Logistics [Management] and Resource Support

- ☐ Coordinate pre-disaster deployment of resources to improve resilience for at-risk populations
- ☐ Other (please specify)

15. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-8 Public Health and Medical Services

- ☐ Coordinate pre-disaster deployment of consumable medical supplies and durable medical equipment to support functional needs and improve resilience for at-risk populations
- ☐ Coordinate with local/regional health districts and the State Department of Health for public messaging specific to at-risk populations
- ☐ Train EMS personnel on effective interaction and provision of assistance to at-risk populations
- ☐ Establish regular interaction between EMS personnel and at-risk populations, their care-givers, advocates and representatives
- ☐ Other (please specify)

16. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-9 Search and Rescue

- ☐ Train emergency responders on providing evacuation support and assistance to at-risk populations
- ☐ Establish regular interaction between rescuers and at-risk populations, their care-givers, advocates and representatives
- ☐ Other (please specify)

17. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-10 [Oil and] Hazardous Materials Response

- ☐ Assess and address hazardous materials concerns among at-risk populations
- ☐ Other (please specify)

18. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-11 [Animal Protection,] Agriculture and Natural Resources

- ☐ Plan for sheltering of household pets and service and support animals for at-risk populations
- ☐ Provide for natural and cultural resources and historic properties protection for at-risk populations living in such properties
- ☐ Coordinate with appropriate agencies on food safety and security for at-risk populations with dietary restrictions
- ☐ Other (please specify)

19. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-12 Energy and Utilities

- ☐ Coordinate with appropriate agencies on Energy and utilities infrastructure assessment and utilities resiliency for at-risk populations
- ☐ Other (please specify)

20. PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-13 Public Safety and Security/[Law Enforcement and Homeland Security]

- ☐ Train law enforcement providers on effective interaction and assistance to at-risk populations
- ☐ Establish regular interaction between law enforcement personnel and at-risk populations, their care-givers, advocates and representatives
- ☐ Other (please specify)

21. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-14 Disaster Recovery [Long-Term Community Recovery and Mitigation]

- ☐ Organize and coordinate with local volunteer organizations and private business to assist in at-risk population resilience
- ☐ Other (please specify)

22. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-15 Emergency Public Information and External Affairs [Media]

- ☐ Provide emergency public information and protective action guidance specific to at-risk populations and their support networks
- ☐ Encourage at-risk populations to be resilient by assessing and preparing for their own needs prior to disaster
- ☐ Tailor messages format for at-risk population audiences with low literacy, poor English skills, and/or cognitive disabilities
- ☐ Other (please specify)

23. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? [ESF-16 Volunteer Management/ Citizen Corps/MRC/VOAD]

- ☐ Train CERT members on effective interaction and assistance to at-risk populations
- ☐ Train CERT members to help ensure risk reduction and resilience for at-risk populations
- ☐ Establish regular interaction between CERT members and at-risk populations, their care-givers, advocates and representatives
- ☐ Other (please specify)

24. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? [ESF-17 [Private Sector Work Group]

- ☐ Enlist private sector partners to help build risk reduction and resilience for at-risk populations
- ☐ Provide philanthropic funding for disaster mitigation, risk reduction, and resiliency for at-risk populations
- ☐ Provide free or discounted pre-made disaster resiliency kits for at-risk populations
- ☐ Other (please specify)

25. PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? [ESF-19 Functional Needs Management]

- ☐ Assess the functional needs of at-risk populations
- ☐ Develop a voluntary functional needs registry for at-risk populations
- ☐ Train shelter staff in the use of intake assessments such as the SWIFT evaluation to identify at-risk populations likely to be at risk
- ☐ Work with services providing regular functional needs support for at-risk populations to ensure their ability to continue support through disasters
- ☐ Other (please specify)

26. Are there any other disaster-related community risk reduction practices SPECIFICALLY FOR AT-RISK AND VULNERABLE POPULATIONS that you believe should be put in place in your area of responsibility?

Appendix D - Local Survey Introductory, Reply, and Survey Emails

Subject: Town of Ridgefield Risk Reduction Survey

I'm Rom Duckworth, Fire Department Captain for D-shift and Ridgefield's co-EMS coordinator.

I would like to send you an interview questionnaire about the reduction of disaster-related risk to vulnerable populations in Ridgefield. This is a 25-question survey that should take about 20 minutes in total to complete. This will help us identify the best ways to increase resiliency and reduce disaster-related risk for our most vulnerable residents and guests.

This is part of an applied research project for the National Fire Academy designed to facilitate a multidisciplinary approach to risk management and emergency services. I am seeking your perspective on this issue in order to gain a broader understanding of this problem.

I would like to send this to you later this week. Should you have any questions about this questionnaire, please reach out to me either by email at rfdrduckworth@ridgefieldct.org or feel free to contact me directly through the fire department or on my personal cell phone at [203-994-4583](tel:203-994-4583).

I thank you in advance for your assistance in helping us work together to make Ridgefield an even better, safer community in which families can live and grow.

--

Capt. Rommie L. Duckworth
EMS Coordinator
Ridgefield Fire Department
6 Catoonah St.
Ridgefield, CT 06877
[\(203\) 431-2725](tel:203-431-2725)
rfdrduckworth@ridgefieldct.org

Subject: re: Town of Ridgefield Risk Reduction Survey

Thank you so much for your rapid response! I hope to send out the questionnaire later today. I am asking for questionnaires to be completed no later than July 1st in order to have time to compile and analyze the data by project deadline of 7/15/19.

Thank you again.

--

Capt. Rommie L. Duckworth
EMS Coordinator
Ridgefield Fire Department
6 Catoonah St.
Ridgefield, CT 06877

[\(203\) 431-2725](tel:(203)431-2725)

rfdrduckworth@ridgefieldct.org

Subject: re: re: Town of Ridgefield Risk Reduction Survey

Thank you again for assisting with this applied research project to reduce risk among vulnerable populations in the Town of Ridgefield

Please click on the link below and you will be asked 23 questions which should take approximately 20 minutes.

<https://www.surveymonkey.com/r/ReducingRiskRidgefield>

If you have any problems with the link or the questionnaire, please let me know.

--

Capt. Rommie L. Duckworth

EMS Coordinator

Ridgefield Fire Department

6 Catoonah St.

Ridgefield, CT 06877

[\(203\) 431-2725](tel:(203)431-2725)

rfdrduckworth@ridgefieldct.org

Appendix E - Global Survey Social Media Post

Please take a few moments to help reduce disaster-related risk for vulnerable populations! #firefighter #EMS #PublicHealth#EmergencyManagement #EFO <https://www.surveymonkey.com/r/VulnPops>

Appendix F – Personal Communication with Ridgefield Fire Chief Jerry Myers

June 14, 2019

Capt. Rommie L. Duckworth: When did the position of Emergency Manager in the Town of Ridgefield become an independent position separate from the fire department?

Chief Jerry Myers: That happened in 2016.

Capt. Rommie L. Duckworth: What were the circumstances involved?

Chief Jerry Myers: I was promoted to Chief. I was doing the jobs of both chief positions for almost a year so we looked to move Dick Aarons who was the Deputy Emergency Manager to the position of Emergency Manager of the Town so that I should focus more directly on fire department business.

**Appendix G – Personal Communication with Town of Wethersfield (CT) Lead Dispatcher
Karen Tomczyk**

April 15, 2019

Capt. Rommie L. Duckworth: How effective has your vulnerable populations registry been?

Dispatcher Tomczyk: We learned a lot from the process of putting it together, but the registry itself has probably only about twelve people on it. We actually found it easier and more effective to simply make notes on the 911 screen about people's disabilities to let the responders know.

Capt. Rommie L. Duckworth: Does that help at all in reaching out to people before disasters?

Dispatcher Tomczyk: No. Not really. No.

Capt. Rommie L. Duckworth: Have you been in contact with any other towns in Connecticut doing similar projects?

Dispatcher Tomczyk: Yes. A number of towns all across Connecticut.

Capt. Rommie L. Duckworth: The only vulnerable populations registry that I could find that was still functional online was yours. Do you know if any others are functional or if any others met with greater success?

Dispatcher Tomczyk: I'm not aware of any others currently working. I get the idea that everyone else ran into pretty much the same problem that we did. It's very difficult to get the right people to sign up. In fact, many of the people proactive enough to sign up voluntarily are proactive enough to take other steps to use their risk.

Appendix H - Local Survey Full Results

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q1 What is your current position related to disaster services?

Answered: 11 Skipped: 0

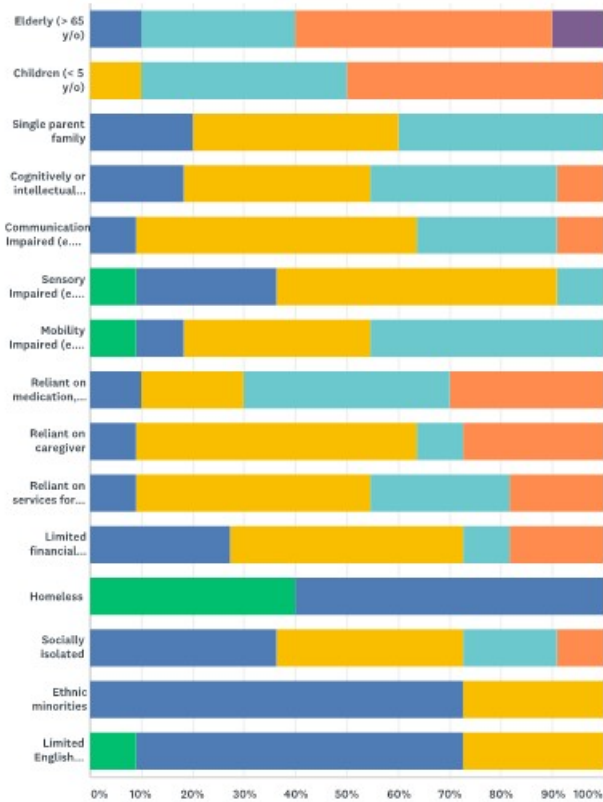
#	RE SPON SES	DATE
1	Advocate for Elderly Citizens	7/10/2019 2:15 PM
2	Volunteer firefighter, Cert Leadership Team	6/18/2019 5:53 PM
3	Hospital Emergency Management Officer	6/17/2019 4:43 PM
4	Director of Social Services	6/17/2019 12:41 PM
5	Asst Director overseeing 2 group homes in Ridgefield	6/17/2019 12:06 PM
6	Department of Social Services Town of Ridgefield	6/17/2019 11:29 AM
7	Fire Marshal	6/17/2019 8:53 AM
8	None	6/15/2019 9:27 AM
9	Director of Health/ DEMD	6/14/2019 2:32 PM
10	Emergency Manager	6/14/2019 2:18 PM
11	Ridgefield Fire Department EMS Coordinator	6/14/2019 1:48 PM

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q2 What vulnerable populations exist in the Town of Ridgefield? Please rate each 0 - 5 (0 = population does not exist in Ridgefield, 1 = population is very small in Ridgefield, 5= population is very large in Ridgefield)

Answered: 11 Skipped: 0



■ Population does not exist in Ridgefield
 ■ Population is very small in Ridgefield
 ■ Population is small in Ridgefield
 ■ Population is moderate in Ridgefield
 ■ Population is large in Ridgefield
 ■ Population is very large in Ridgefield

	POPULATION DOES NOT EXIST IN RIDGEFIELD	POPULATION IS VERY SMALL IN RIDGEFIELD	POPULATION IS SMALL IN RIDGEFIELD	POPULATION IS MODERATE IN RIDGEFIELD	POPULATION IS LARGE IN RIDGEFIELD	POPULATION IS VERY LARGE IN RIDGEFIELD	TOTAL	WEIGHTED AVERAGE
Elderly (> 65 y/o)	0.00% 0	10.00% 1	0.00% 0	30.00% 3	50.00% 5	10.00% 1	10	3.50
Children (< 5 y/o)	0.00% 0	0.00% 0	10.00% 1	40.00% 4	50.00% 5	0.00% 0	10	3.40
Single parent family	0.00% 0	20.00% 2	40.00% 4	40.00% 4	0.00% 0	0.00% 0	10	2.20

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

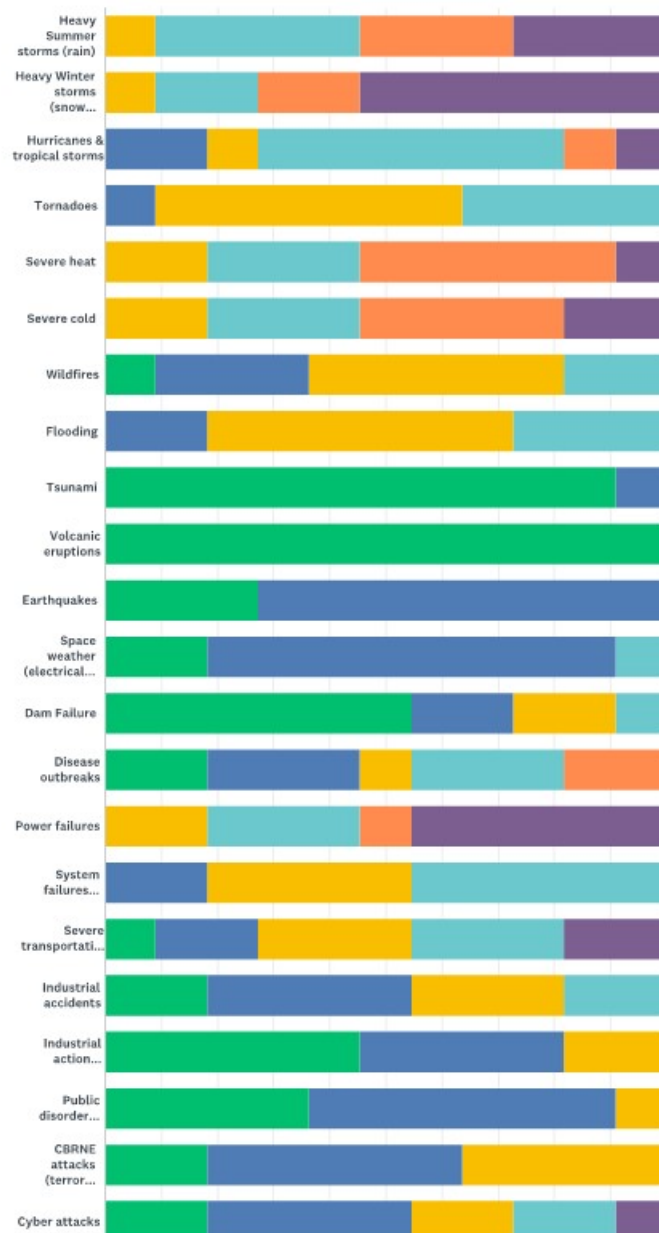
Cognitively or intellectually impaired	0.00% 0	18.18% 2	36.36% 4	36.36% 4	9.09% 1	0.00% 0	11	2.38
Communication Impaired (e.g. autistic, hard of hearing)	0.00% 0	9.09% 1	54.55% 6	27.27% 3	9.09% 1	0.00% 0	11	2.38
Sensory Impaired (e.g. blind, deaf)	9.09% 1	27.27% 3	54.55% 6	9.09% 1	0.00% 0	0.00% 0	11	1.84
Mobility Impaired (e.g. bedridden, cannot walk, cannot drive)	9.09% 1	9.09% 1	36.36% 4	45.45% 5	0.00% 0	0.00% 0	11	2.18
Reliant on medication, medical supply or equipment	0.00% 0	10.00% 1	20.00% 2	40.00% 4	30.00% 3	0.00% 0	10	2.90
Reliant on caregiver	0.00% 0	9.09% 1	54.55% 6	9.09% 1	27.27% 3	0.00% 0	11	2.55
Reliant on services for daily living	0.00% 0	9.09% 1	45.45% 5	27.27% 3	18.18% 2	0.00% 0	11	2.55
Limited financial reserves	0.00% 0	27.27% 3	45.45% 5	9.09% 1	18.18% 2	0.00% 0	11	2.18
Homeless	40.00% 4	60.00% 6	0.00% 0	0.00% 0	0.00% 0	0.00% 0	10	0.80
Socially isolated	0.00% 0	36.36% 4	36.36% 4	18.18% 2	9.09% 1	0.00% 0	11	2.00
Ethnic minorities	0.00% 0	72.73% 8	27.27% 3	0.00% 0	0.00% 0	0.00% 0	11	1.27
Limited English proficiency (English as a second language)	9.09% 1	63.64% 7	27.27% 3	0.00% 0	0.00% 0	0.00% 0	11	1.18

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q3 What disasters are most likely to impact members of the Town of Ridgefield community? Please rate each 0 - 5 (0 = Chance of this disaster does not exist in Ridgefield, 1 = Chance of this disaster is very small in Ridgefield, 5= Chance of this disaster is very large in Ridgefield)

Answered: 11 Skipped: 0



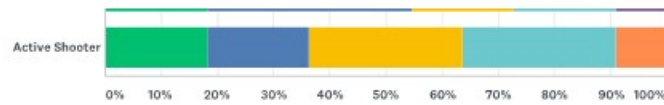
Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Industrial accidents	18.18% 2	36.36% 4	27.27% 3	18.18% 2	0.00% 0	0.00% 0	11	1.45
Industrial action (strikes)	45.45% 5	36.36% 4	18.18% 2	0.00% 0	0.00% 0	0.00% 0	11	0.73
Public disorder (rioting)	36.36% 4	54.55% 6	9.09% 1	0.00% 0	0.00% 0	0.00% 0	11	0.73
CBRNE attacks (terror attacks)	18.18% 2	45.45% 5	36.36% 4	0.00% 0	0.00% 0	0.00% 0	11	1.18
Cyber attacks	18.18% 2	36.36% 4	18.18% 2	18.18% 2	0.00% 0	9.09% 1	11	1.73
Active Shooter	18.18% 2	18.18% 2	27.27% 3	27.27% 3	9.09% 1	0.00% 0	11	1.91

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey



- Chance of this disaster does not exist in Ridgefield
- Chance of this disaster is very small in Ridgefield
- Chance of this disaster is small in Ridgefield
- Chance of this disaster is moderate in Ridgefield
- Chance of this disaster is large in Ridgefield
- Chance of this disaster is very large in Ridgefield

	CHANCE OF THIS DISASTER DOES NOT EXIST IN RIDGEFIELD	CHANCE OF THIS DISASTER IS VERY SMALL IN RIDGEFIELD	CHANCE OF THIS DISASTER IS SMALL IN RIDGEFIELD	CHANCE OF THIS DISASTER IS MODERATE IN RIDGEFIELD	CHANCE OF THIS DISASTER IS LARGE IN RIDGEFIELD	CHANCE OF THIS DISASTER IS VERY LARGE IN RIDGEFIELD	TOTAL	WEIGHTED AVERAGE
Heavy Summer storms (rain)	0.00% 0	0.00% 0	9.09% 1	36.36% 4	27.27% 3	27.27% 3	11	3.73
Heavy Winter storms (snow and ice)	0.00% 0	0.00% 0	9.09% 1	18.18% 2	18.18% 2	54.55% 6	11	4.18
Hurricanes & tropical storms	0.00% 0	18.18% 2	9.09% 1	54.55% 6	9.09% 1	9.09% 1	11	2.82
Tornadoes	0.00% 0	9.09% 1	54.55% 6	36.36% 4	0.00% 0	0.00% 0	11	2.27
Severe heat	0.00% 0	0.00% 0	18.18% 2	27.27% 3	45.45% 5	9.09% 1	11	3.45
Severe cold	0.00% 0	0.00% 0	18.18% 2	27.27% 3	36.36% 4	18.18% 2	11	3.55
Wildfires	9.09% 1	27.27% 3	45.45% 5	18.18% 2	0.00% 0	0.00% 0	11	1.73
Flooding	0.00% 0	18.18% 2	54.55% 6	27.27% 3	0.00% 0	0.00% 0	11	2.09
Tsunamis	90.91% 10	9.09% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	11	0.09
Volcanic eruptions	100.00% 11	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	11	0.00
Earthquakes	27.27% 3	72.73% 8	0.00% 0	0.00% 0	0.00% 0	0.00% 0	11	0.73
Space weather (electrical disturbances)	18.18% 2	72.73% 8	0.00% 0	9.09% 1	0.00% 0	0.00% 0	11	1.00
Dam Failure	54.55% 6	18.18% 2	18.18% 2	9.09% 1	0.00% 0	0.00% 0	11	0.82
Disease outbreaks	18.18% 2	27.27% 3	9.09% 1	27.27% 3	18.18% 2	0.00% 0	11	2.00
Power failures	0.00% 0	0.00% 0	18.18% 2	27.27% 3	9.09% 1	45.45% 5	11	3.82
System failures (water, sewage, etc.)	0.00% 0	18.18% 2	36.36% 4	45.45% 5	0.00% 0	0.00% 0	11	2.27
Severe transportation accidents (roads and highways)	9.09% 1	18.18% 2	27.27% 3	27.27% 3	0.00% 0	18.18% 2	11	2.45

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

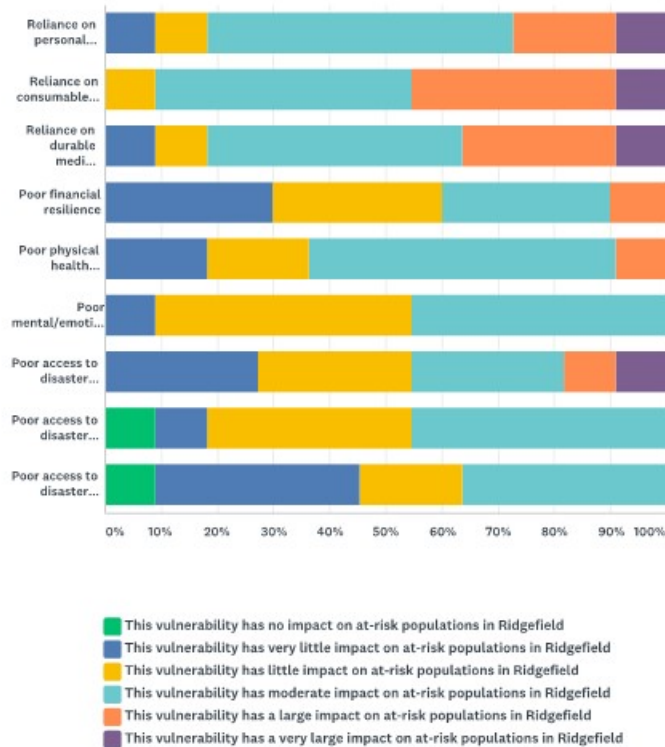
Industrial accidents	18.18% 2	36.36% 4	27.27% 3	18.18% 2	0.00% 0	0.00% 0	11	1.45
Industrial action (strikes)	45.45% 5	36.36% 4	18.18% 2	0.00% 0	0.00% 0	0.00% 0	11	0.73
Public disorder (rioting)	36.36% 4	54.55% 6	9.09% 1	0.00% 0	0.00% 0	0.00% 0	11	0.73
CBRNE attacks (terror attacks)	18.18% 2	45.45% 5	36.36% 4	0.00% 0	0.00% 0	0.00% 0	11	1.18
Cyber attacks	18.18% 2	36.36% 4	18.18% 2	18.18% 2	0.00% 0	9.09% 1	11	1.73
Active Shooter	18.18% 2	18.18% 2	27.27% 3	27.27% 3	9.09% 1	0.00% 0	11	1.91

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q4 What factors increase disaster-related risk for vulnerable populations in the Town of Ridgefield? Please rate each 0 - 5 (0 = This vulnerability has no impact on at-risk populations in Ridgefield, 1 = This vulnerability has very little impact on at-risk populations in Ridgefield, 5= This vulnerability has very large impact on at-risk populations in Ridgefield)

Answered: 11 Skipped: 0



	THIS VULNERABILITY HAS NO IMPACT ON AT-RISK POPULATIONS IN RIDGEFIELD	THIS VULNERABILITY HAS VERY LITTLE IMPACT ON AT-RISK POPULATIONS IN RIDGEFIELD	THIS VULNERABILITY HAS LITTLE IMPACT ON AT-RISK POPULATIONS IN RIDGEFIELD	THIS VULNERABILITY HAS MODERATE IMPACT ON AT-RISK POPULATIONS IN RIDGEFIELD	THIS VULNERABILITY HAS A LARGE IMPACT ON AT-RISK POPULATIONS IN RIDGEFIELD	THIS VULNERABILITY HAS A VERY LARGE IMPACT ON AT-RISK POPULATIONS IN RIDGEFIELD	TOTAL
Reliance on personal assistance services such as home health aid or visiting nurse to assist with functional needs for daily living	0.00% 0	9.09% 1	9.09% 1	54.55% 6	18.18% 2	9.09% 1	11
Reliance on consumable medical supplies (including medications) for daily living	0.00% 0	0.00% 0	9.09% 1	45.45% 5	36.36% 4	9.09% 1	11

Disaster Risk Reduction for Vulnerable Populations

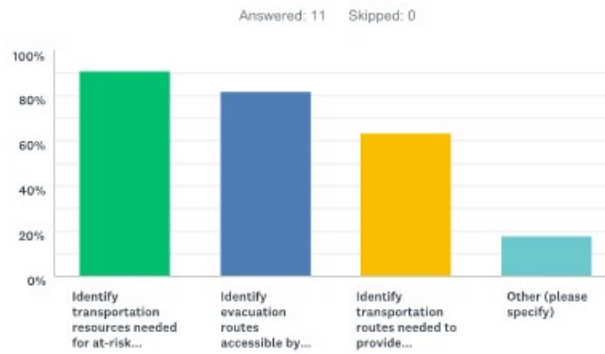
SurveyMonkey

Reliance on durable medical equipment (including oxygen concentrators) for daily living	0.00% 0	9.09% 1	9.09% 1	45.45% 5	27.27% 3	9.09% 1	11
Poor financial resilience	0.00% 0	30.00% 3	30.00% 3	30.00% 3	10.00% 1	0.00% 0	10
Poor physical health resilience	0.00% 0	18.18% 2	18.18% 2	54.55% 6	9.09% 1	0.00% 0	11
Poor mental/emotional health resilience	0.00% 0	9.09% 1	45.45% 5	45.45% 5	0.00% 0	0.00% 0	11
Poor access to disaster preparatory resources	0.00% 0	27.27% 3	27.27% 3	27.27% 3	9.09% 1	9.09% 1	11
Poor access to disaster emergency response	9.09% 1	9.09% 1	36.36% 4	45.45% 5	0.00% 0	0.00% 0	11
Poor access to disaster recovery resources	9.09% 1	36.36% 4	18.18% 2	36.36% 4	0.00% 0	0.00% 0	11

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q5 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-1 Transportation:



ANSWER CHOICES	RESPONSES	
Identify transportation resources needed for at-risk populations with functional needs	90.91%	10
Identify evacuation routes accessible by at-risk populations	81.82%	9
Identify transportation routes needed to provide functional needs support to at-risk populations	63.64%	7
Other (please specify)	18.18%	2
Total Respondents: 11		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q6 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-2 Communications:

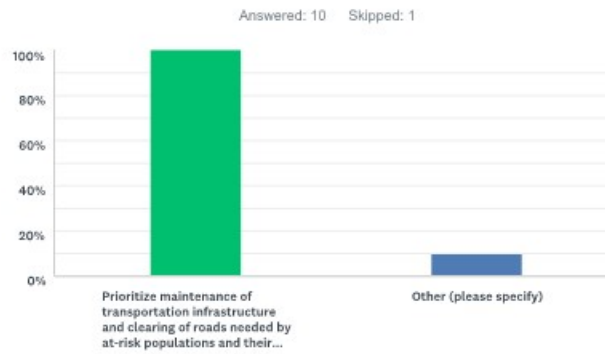


ANSWER CHOICES	RESPONSES	
Identify and utilize communications channels and platforms used by at-risk populations ahead of disasters	72.73%	8
Identify and utilize communications channels and platforms used by at-risk population care-givers, advocates and representatives ahead of disasters	100.00%	11
Other (please specify)	0.00%	0
Total Respondents: 11		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q7 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-3 Public Works and Engineering:



ANSWER CHOICES	RESPONSES	
Prioritize maintenance of transportation infrastructure and clearing of roads needed by at-risk populations and their functional needs support	100.00%	10
Other (please specify)	10.00%	1
Total Respondents: 10		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q8 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-4 Fire [Firefighting]

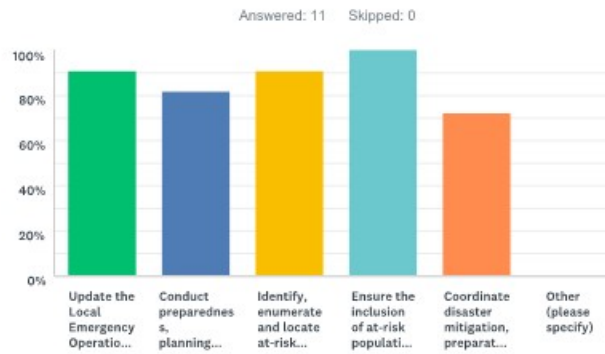


ANSWER CHOICES	RESPONSES	
Train firefighters on effective interaction and assistance to at-risk populations	100.00%	11
Establish regular interaction between firefighters and at-risk populations, their care-givers, advocates and representatives	100.00%	11
Develop and distribute home safety and disaster resiliency recommendations specific to at-risk populations	100.00%	11
Other (please specify)	0.00%	0
Total Respondents: 11		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q9 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-5 Emergency Management

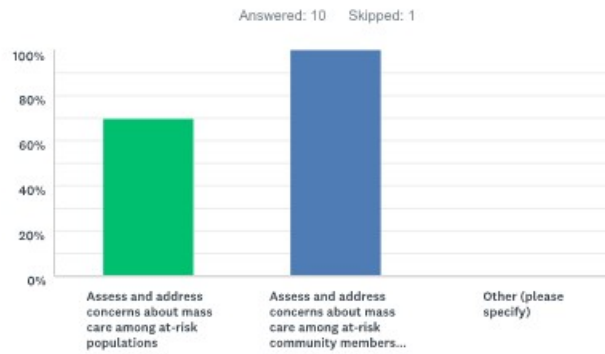


ANSWER CHOICES	RESPONSES	
Update the Local Emergency Operations Plan and other emergency plans, procedures, and agreements to specifically support the needs of at-risk populations	90.91%	10
Conduct preparedness, planning, training and exercise activities in coordination with at-risk populations and their advocates and representatives	81.82%	9
Identify, enumerate and locate at-risk populations	90.91%	10
Ensure the inclusion of at-risk populations as well as their advocates, representatives, and members of their support networks in mitigation, preparation, risk reduction and resiliency efforts	100.00%	11
Coordinate disaster mitigation, preparation, risk reduction and resiliency efforts with housing facilities and areas with high concentrations of at-risk populations	72.73%	8
Other (please specify)	0.00%	0
Total Respondents: 11		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q10 PLEASE CHECK ALL THAT APPLY - What strategies may be adopted into a local emergency operations plan to reduce disaster-related risk for at-risk populations? ESF-6 Mass Care [Emergency Assistance, Housing and Human Services]



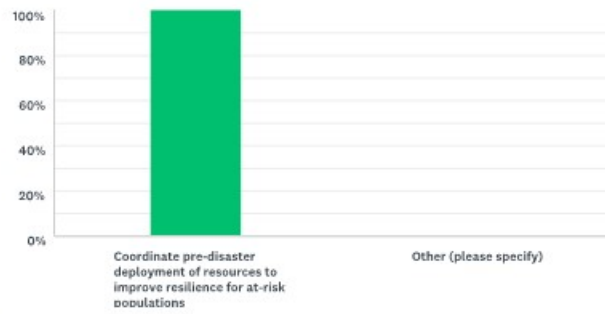
ANSWER CHOICES	RESPONSES	
Assess and address concerns about mass care among at-risk populations	70.00%	7
Assess and address concerns about mass care among at-risk community members care-givers, advocates, and representatives	100.00%	10
Other (please specify)	0.00%	0
Total Respondents: 10		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q11 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-7 Logistics [Management] and Resource Support

Answered: 9 Skipped: 2



ANSWER CHOICES	RESPONSES	
Coordinate pre-disaster deployment of resources to improve resilience for at-risk populations	100.00%	9
Other (please specify)	0.00%	0
Total Respondents: 9		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q12 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-8 Public Health and Medical Services

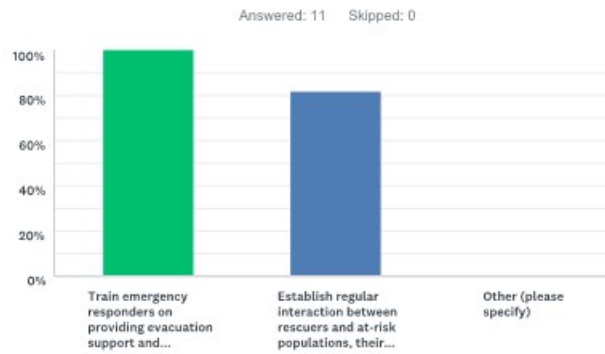


ANSWER CHOICES	RESPONSES	
Coordinate pre-disaster deployment of consumable medical supplies and durable medical equipment to support functional needs and improve resilience for at-risk populations	90.00%	9
Coordinate with local/regional health districts and the State Department of Health for public messaging specific to at-risk populations	80.00%	8
Train EMS personnel on effective interaction and provision of assistance to at-risk populations	100.00%	10
Establish regular interaction between EMS personnel and at-risk populations, their care-givers, advocates and representatives	100.00%	10
Other (please specify)	0.00%	0
Total Respondents: 10		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q13 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-9 Search and Rescue



ANSWER CHOICES	RESPONSES	
Train emergency responders on providing evacuation support and assistance to at-risk populations	100.00%	11
Establish regular interaction between rescuers and at-risk populations, their care-givers, advocates and representatives	81.82%	9
Other (please specify)	0.00%	0
Total Respondents: 11		

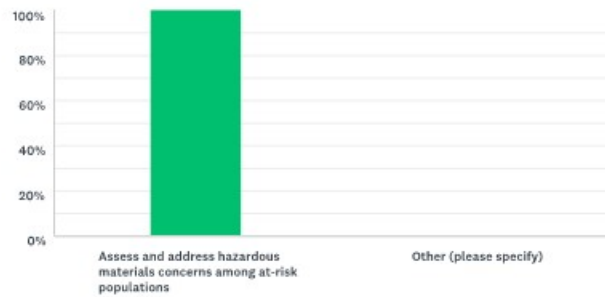
Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q14 PLEASE CHECK ALL THAT APPLY - What strategies may be adopted into a local emergency operations plan to reduce disaster-related risk for at-risk populations? ESF-10 [Oil and] Hazardous Materials

Response

Answered: 8 Skipped: 3



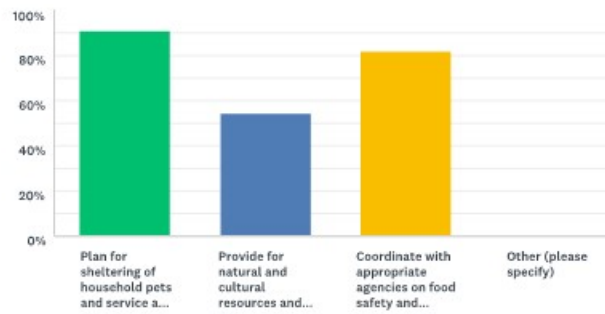
ANSWER CHOICES	RESPONSES	
Assess and address hazardous materials concerns among at-risk populations	100.00%	8
Other (please specify)	0.00%	0
Total Respondents: 8		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q15 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-11 [Animal Protection,] Agriculture and Natural Resources

Answered: 11 Skipped: 0



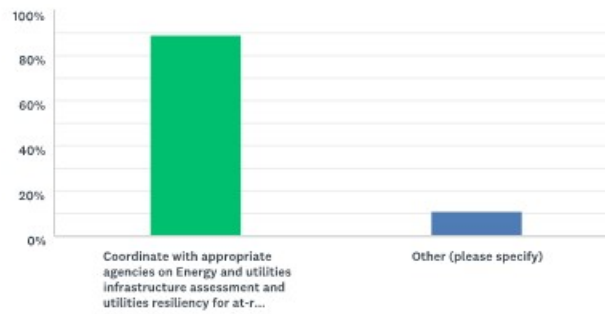
ANSWER CHOICES	RESPONSES	
Plan for sheltering of household pets and service and support animals for at-risk populations	90.91%	10
Provide for natural and cultural resources and historic properties protection for at-risk populations living in such properties	54.55%	6
Coordinate with appropriate agencies on food safety and security for at-risk populations with dietary restrictions	81.82%	9
Other (please specify)	0.00%	0
Total Respondents: 11		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q16 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-12 Energy and Utilities

Answered: 9 Skipped: 2



ANSWER CHOICES	RESPONSES	
Coordinate with appropriate agencies on Energy and utilities infrastructure assessment and utilities resiliency for at-risk populations	88.89%	8
Other (please specify)	11.11%	1
Total Respondents: 9		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q17 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-13 Public Safety and Security/[Law Enforcement and Homeland Security]



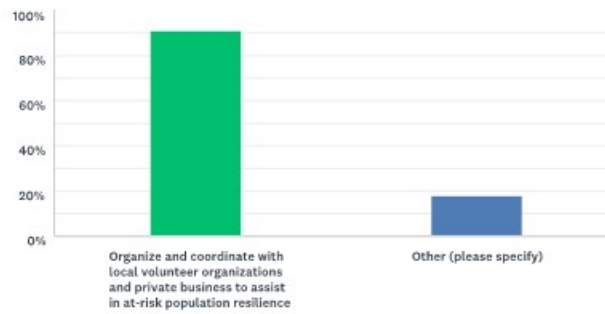
ANSWER CHOICES	RESPONSES	
Train law enforcement providers on effective interaction and assistance to at-risk populations	100.00%	11
Establish regular interaction between law enforcement personnel and at-risk populations, their care-givers, advocates and representatives	90.91%	10
Other (please specify)	0.00%	0
Total Respondents: 11		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q18 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-14 Disaster Recovery [Long-Term Community Recovery and Mitigation]

Answered: 11 Skipped: 0

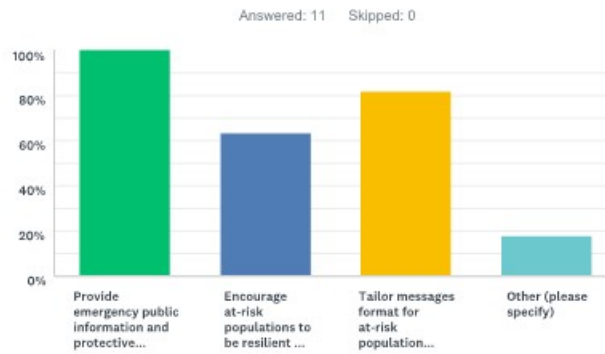


ANSWER CHOICES	RESPONSES	
Organize and coordinate with local volunteer organizations and private business to assist in at-risk population resilience	90.91%	10
Other (please specify)	18.18%	2
Total Respondents: 11		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q19 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-15 Emergency Public Information and External Affairs [Media]

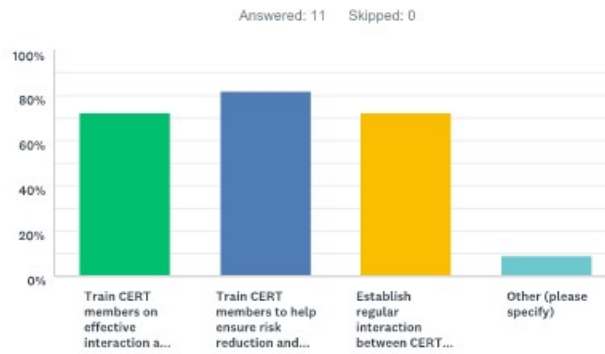


ANSWER CHOICES	RESPONSES
Provide emergency public information and protective action guidance specific to at-risk populations and their support networks	100.00% 11
Encourage at-risk populations to be resilient by assessing and preparing for their own needs prior to disaster	63.64% 7
Tailor messages format for at-risk population audiences with low literacy, poor English skills, and/or cognitive disabilities	81.82% 9
Other (please specify)	18.18% 2
Total Respondents: 11	

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q20 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? [ESF-16 Volunteer Management/ Citizen Corps/MRC/VOAD]



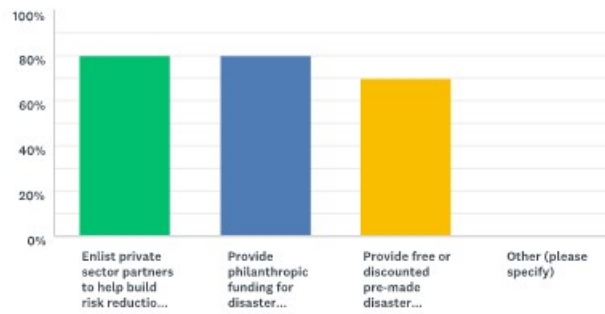
ANSWER CHOICES	RESPONSES	
Train CERT members on effective interaction and assistance to at-risk populations	72.73%	8
Train CERT members to help ensure risk reduction and resilience for at-risk populations	81.82%	9
Establish regular interaction between CERT members and at-risk populations, their care-givers, advocates and representatives	72.73%	8
Other (please specify)	9.09%	1
Total Respondents: 11		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q21 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? [ESF-17 [Private Sector Work Group]

Answered: 10 Skipped: 1



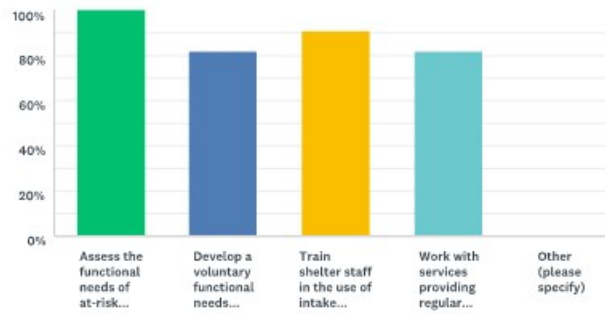
ANSWER CHOICES	RESPONSES	
Enlist private sector partners to help build risk reduction and resilience for at-risk populations	80.00%	8
Provide philanthropic funding for disaster mitigation, risk reduction, and resiliency for at-risk populations	80.00%	8
Provide free or discounted pre-made disaster resiliency kits for at-risk populations	70.00%	7
Other (please specify)	0.00%	0
Total Respondents: 10		

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q22 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? [ESF-19 Functional Needs Management]

Answered: 11 Skipped: 0



ANSWER CHOICES	RESPONSES
Assess the functional needs of at-risk populations	100.00% 11
Develop a voluntary functional needs registry for at-risk populations	81.82% 9
Train shelter staff in the use of intake assessments such as the SWIFT evaluation to identify at-risk populations likely to be at risk	90.91% 10
Work with services providing regular functional needs support for at-risk populations to ensure their ability to continue support through disasters	81.82% 9
Other (please specify)	0.00% 0
Total Respondents: 11	

Disaster Risk Reduction for Vulnerable Populations

SurveyMonkey

Q23 What disaster-related community risk reduction practices
SPECIFICALLY FOR AT-RISK AND VULNERABLE POPULATIONS are
ALREADY IN PLACE in the Town of Ridgefield?

Answered: 11 Skipped: 0

Appendix I - Global Survey Full Results

Disaster Risk Reduction for Vulnerable Populations Global Survey

SurveyMonkey

Q1 What is the name of your organization?

Answered: 38 Skipped: 0

#	RE SPONSES	DATE
1	Gwinnett County Fire and Emergency Services	7/4/2019 10:04 AM
2	Squantz Engine Company	6/27/2019 12:18 PM
3	Nashville Fire Department	6/26/2019 10:36 PM
4	newport fire department, oregon	6/26/2019 6:27 PM
5	Columbus Division of Fire	6/26/2019 4:19 PM
6	Oneida Fire Department	6/26/2019 2:43 PM
7	Tucson Fire Department	6/26/2019 12:33 PM
8	Spring Fire Department	6/26/2019 12:24 PM
9	Tempe Fire Medical Rescue	6/26/2019 12:18 PM
10	Hiawatha Iowa Fire Department	6/25/2019 4:56 PM
11	South Ogden Fire Department	6/25/2019 4:34 PM
12	Marquette City Fire Dept	6/25/2019 3:56 PM
13	Peoria Fire Dept	6/25/2019 3:54 PM
14	Mid-County FPD	6/25/2019 3:11 PM
15	Salisbury Fire Department Inc.	6/25/2019 3:08 PM
16	Helena Fire Department	6/25/2019 2:51 PM
17	Duvall King County Fire District 45	6/25/2019 2:15 PM
18	Colorado City Fire Department	6/25/2019 2:09 PM
19	Wright City Fire Protection District	6/25/2019 1:58 PM
20	Olivet Fire Department	6/25/2019 1:52 PM
21	Dona Ana County Fire and Emergency Services	6/25/2019 1:17 PM
22	Anchorage Fire Department	6/25/2019 1:03 PM
23	Goodyear FD	6/25/2019 12:38 PM
24	El Paso Fire Department	6/25/2019 12:34 PM
25	Visalia Fire Department	6/25/2019 12:27 PM
26	Wilmington Fire Dept.	6/25/2019 12:20 PM
27	North Little Rock Fire Department	6/25/2019 12:19 PM
28	South Area Fire and Emergency Response (SAFER) District	6/25/2019 12:16 PM
29	Hartsdale Fire District	6/25/2019 12:15 PM
30	Smithfield Fire Department	6/25/2019 12:14 PM
31	Manchester Fire-Rescue	6/25/2019 12:14 PM
32	Prospect Heights Fire District	6/25/2019 12:11 PM
33	Lynn Fire Department	6/24/2019 5:00 PM
34	City of Sierra Vista Fire & Medical Services	6/24/2019 2:10 PM
35	Folsom City Fire Department	6/24/2019 2:06 PM

Disaster Risk Reduction for Vulnerable Populations Global Survey		SurveyMonkey
36	Portage Department of Public Safety, Fire Division	6/24/2019 2:03 PM
37	Lisbon Fire Dept	6/24/2019 2:02 PM
38	Dayton Fire Department (Ohio)	6/24/2019 2:02 PM

Disaster Risk Reduction for Vulnerable Populations Global Survey

SurveyMonkey

Q2 What is the geographic location of your organization's coverage area? (City, [State, Province, County] Country)

Answered: 38 Skipped: 0

#	RE SPONSES	DATE
1	Lawrenceville, GA USA	7/4/2019 10:04 AM
2	Highly residential, large bodies of water, large amount of state forest/ woods.	6/27/2019 12:18 PM
3	City/County Metropolitan area	6/26/2019 10:36 PM
4	Oregon, Lincoln county, coast	6/26/2019 6:27 PM
5	City	6/26/2019 4:19 PM
6	City	6/26/2019 2:43 PM
7	Tucson, Arizona, Pima County	6/26/2019 12:33 PM
8	Spring Texas, Harris County	6/26/2019 12:24 PM
9	Tempe, Maricopa County, AZ	6/26/2019 12:18 PM
10	City	6/25/2019 4:56 PM
11	South Ogden, Utah	6/25/2019 4:34 PM
12	Marquette Michigan	6/25/2019 3:56 PM
13	Peoria Illinois USA	6/25/2019 3:54 PM
14	Camdenton, MO . USA	6/25/2019 3:11 PM
15	Salisbury Maryland	6/25/2019 3:08 PM
16	City in Montana	6/25/2019 2:51 PM
17	King County, WA	6/25/2019 2:15 PM
18	Hildale, UT and Colorado City, AZ	6/25/2019 2:09 PM
19	Wright City, Missouri	6/25/2019 1:58 PM
20	City	6/25/2019 1:52 PM
21	Dona Ana County New Mexico	6/25/2019 1:17 PM
22	Anchorage Alaska, USA	6/25/2019 1:03 PM
23	Goodyear, AZ	6/25/2019 12:38 PM
24	El Paso, Texas - El Paso County - USA	6/25/2019 12:34 PM
25	Visalia, CA	6/25/2019 12:27 PM
26	Wilmington, NC, New Hanover County	6/25/2019 12:20 PM
27	Pulaski County Arkansas	6/25/2019 12:19 PM
28	Villages and Townships covering 300+ square miles	6/25/2019 12:16 PM
29	Hartsdale Fire District, Westchester County, New York	6/25/2019 12:15 PM
30	Town	6/25/2019 12:14 PM
31	Manchester, TN, USA	6/25/2019 12:14 PM
32	Prospect Heights, IL	6/25/2019 12:11 PM
33	Lynn, MA USA	6/24/2019 5:00 PM
34	Arizona	6/24/2019 2:10 PM

Disaster Risk Reduction for Vulnerable Populations Global Survey		SurveyMonkey
35	City	6/24/2019 2:06 PM
36	Portage, Michigan, US	6/24/2019 2:03 PM
37	Lisbon, WI	6/24/2019 2:02 PM
38	City	6/24/2019 2:02 PM

Disaster Risk Reduction for Vulnerable Populations Global Survey

SurveyMonkey

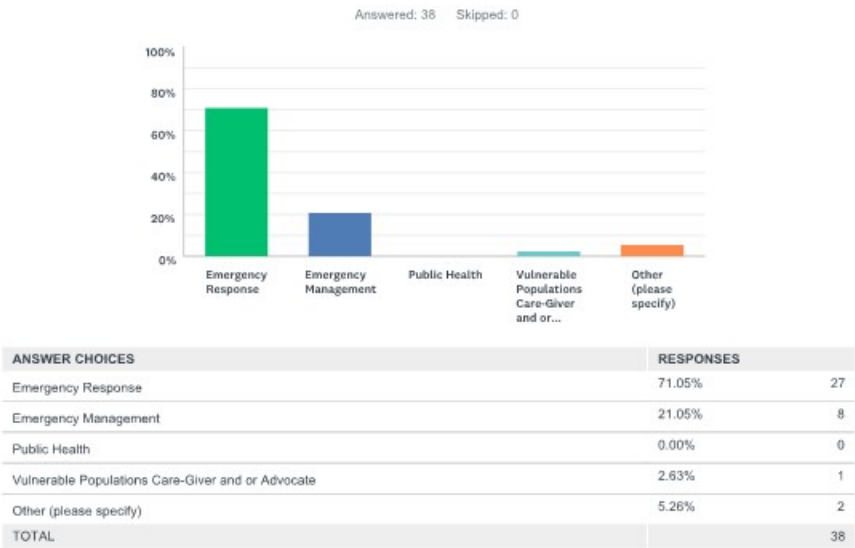
Q3 What is your position or job function within your organization?

Answered: 38 Skipped: 0

#	RE SPONSES	DATE
1	Battalion Chief	7/4/2019 10:04 AM
2	Firefighter, Vice President	6/27/2019 12:18 PM
3	District Chief, EMS	6/26/2019 10:36 PM
4	Fire Marshal	6/26/2019 6:27 PM
5	Assistant Chief	6/26/2019 4:19 PM
6	Fire Chief	6/26/2019 2:43 PM
7	Assistant Chief	6/26/2019 12:33 PM
8	Deputy Chief over Training Division	6/26/2019 12:24 PM
9	Deputy Fire Chief	6/26/2019 12:18 PM
10	Chief of Department	6/25/2019 4:56 PM
11	Fire Chief	6/25/2019 4:34 PM
12	Fire Chief	6/25/2019 3:56 PM
13	Division Chief of Fire Prevention	6/25/2019 3:54 PM
14	Division Chief of Training	6/25/2019 3:11 PM
15	Assistant Fire Chief	6/25/2019 3:08 PM
16	AC of Training	6/25/2019 2:51 PM
17	BC for trainign and emergency management	6/25/2019 2:15 PM
18	Fire Chief	6/25/2019 2:09 PM
19	Fire Chief	6/25/2019 1:58 PM
20	Lieutenant. Director of Community Risk Reduction	6/25/2019 1:52 PM
21	Fire Chief	6/25/2019 1:17 PM
22	Fire Chief	6/25/2019 1:03 PM
23	Fire Chief	6/25/2019 12:38 PM
24	Assistant Chief	6/25/2019 12:34 PM
25	Fire Chief	6/25/2019 12:27 PM
26	Asst. Chief	6/25/2019 12:20 PM
27	Fire Chief	6/25/2019 12:19 PM
28	Battalion Chief	6/25/2019 12:16 PM
29	Fire Chief	6/25/2019 12:15 PM
30	Fire Chief	6/25/2019 12:14 PM
31	Chief	6/25/2019 12:14 PM
32	Fire Chief	6/25/2019 12:11 PM
33	Division Chief	6/24/2019 5:00 PM
34	Deputy Fire Chief	6/24/2019 2:10 PM
35	Fire Chief	6/24/2019 2:06 PM

Disaster Risk Reduction for Vulnerable Populations Global Survey		SurveyMonkey
36	Fire Marshal	6/24/2019 2:03 PM
37	Deputy Fire Chief	6/24/2019 2:02 PM
38	Deputy Director and Chief	6/24/2019 2:02 PM

Q4 How is your current position primarily related to disaster services?

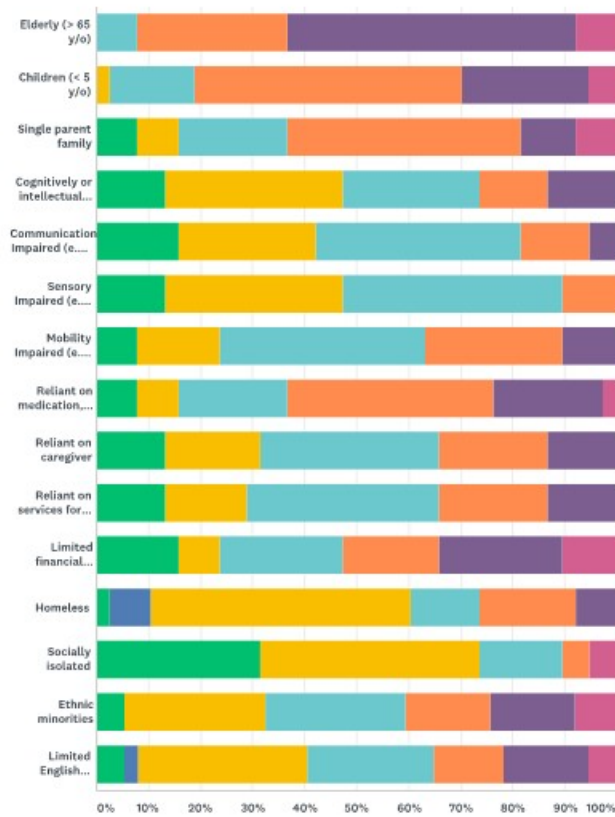


Disaster Risk Reduction for Vulnerable Populations Global Survey

SurveyMonkey

Q5 What vulnerable populations exist in your area of responsibility?
Please rate each 0 - 5 (0 = population does not exist in your area of responsibility, 1 = population is very small in your area of responsibility, 5= population is very large in your area of responsibility)

Answered: 38 Skipped: 0



I do not know
 Population does not exist in your area of responsibility
 Population is very small in your area of responsibility
 Population is small in your area of responsibility
 Population is moderate in your area of responsibility
 Population is large in your area of responsibility
 Population is very large in your area of responsibility

	I DO NOT KNOW	POPULATION DOES NOT EXIST IN YOUR AREA OF RESPONSIBILITY	POPULATION IS VERY SMALL IN YOUR AREA OF RESPONSIBILITY	POPULATION IS SMALL IN YOUR AREA OF RESPONSIBILITY	POPULATION IS MODERATE IN YOUR AREA OF RESPONSIBILITY	POPULATION IS LARGE IN YOUR AREA OF RESPONSIBILITY	POPULATION IS VERY LARGE IN YOUR AREA OF RESPONSIBILITY	TO
Elderly (> 65 y/o)	0.00% 0	0.00% 0	0.00% 0	7.89% 3	28.95% 11	55.26% 21	7.89% 3	
Children (< 5 y/o)	0.00% 0	0.00% 0	2.70% 1	16.22% 6	51.35% 19	24.32% 9	5.41% 2	
Single parent family	7.89% 3	0.00% 0	7.89% 3	21.05% 8	44.74% 17	10.53% 4	7.89% 3	

Disaster Risk Reduction for Vulnerable Populations Global Survey

SurveyMonkey

Cognitively or intellectually impaired	13.16% 5	0.00% 0	34.21% 13	26.32% 10	13.16% 5	13.16% 5	0.00% 0
Communication Impaired (e.g. autistic, hard of hearing)	15.79% 6	0.00% 0	26.32% 10	39.47% 15	13.16% 5	5.26% 2	0.00% 0
Sensory Impaired (e.g. blind, deaf)	13.16% 5	0.00% 0	34.21% 13	42.11% 16	10.53% 4	0.00% 0	0.00% 0
Mobility Impaired (e.g. bedridden, cannot walk, cannot drive)	7.89% 3	0.00% 0	15.79% 6	39.47% 15	26.32% 10	10.53% 4	0.00% 0
Reliant on medication, medical supply or equipment	7.89% 3	0.00% 0	7.89% 3	21.05% 8	39.47% 15	21.05% 8	2.63% 1
Reliant on caregiver	13.16% 5	0.00% 0	18.42% 7	34.21% 13	21.05% 8	13.16% 5	0.00% 0
Reliant on services for daily living	13.16% 5	0.00% 0	15.79% 6	36.84% 14	21.05% 8	13.16% 5	0.00% 0
Limited financial reserves	15.79% 6	0.00% 0	7.89% 3	23.68% 9	18.42% 7	23.68% 9	10.53% 4
Homeless	2.63% 1	7.89% 3	50.00% 19	13.16% 5	18.42% 7	7.89% 3	0.00% 0
Socially isolated	31.58% 12	0.00% 0	42.11% 16	15.79% 6	5.26% 2	0.00% 0	5.26% 2
Ethnic minorities	5.41% 2	0.00% 0	27.03% 10	27.03% 10	16.22% 6	16.22% 6	8.11% 3
Limited English proficiency (English as a second language)	5.41% 2	2.70% 1	32.43% 12	24.32% 9	13.51% 5	16.22% 6	5.41% 2

Disaster Risk Reduction for Vulnerable Populations Global Survey

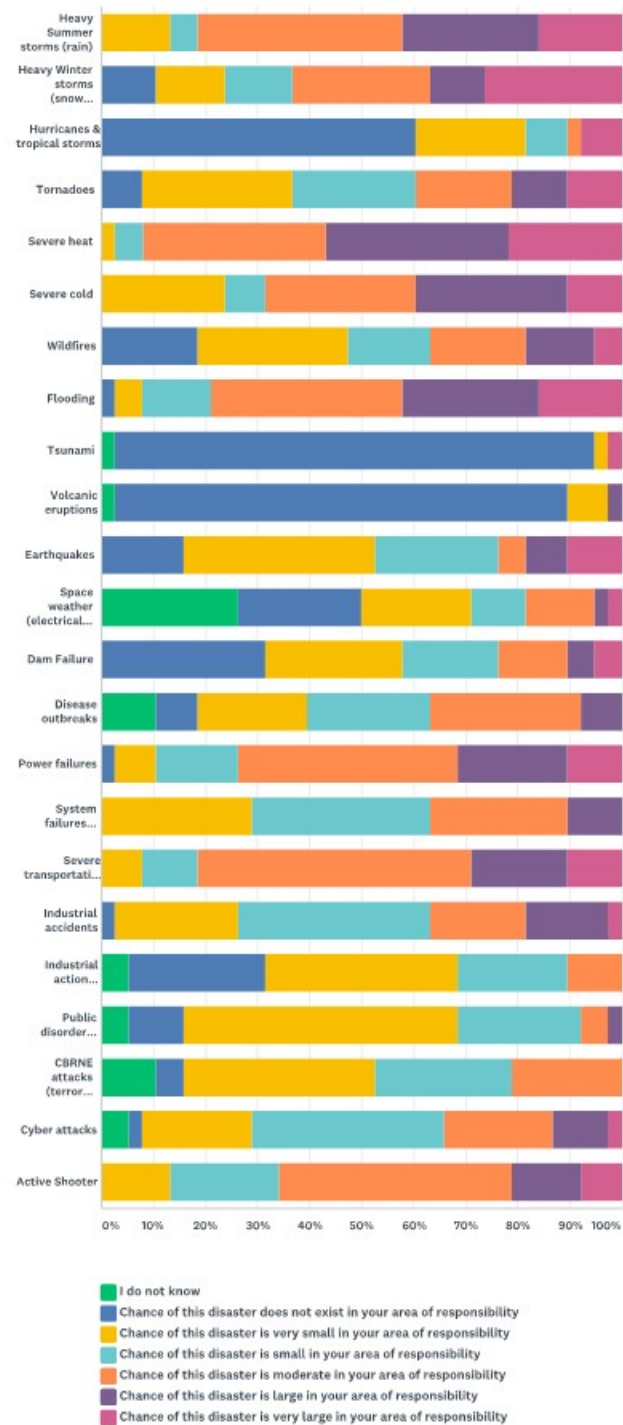
SurveyMonkey

Q6 What disasters are most likely to impact members of your area of responsibility? Please rate each 0 - 5 (0 = Chance of this disaster does not exist in your area of responsibility, 1 = Chance of this disaster is very small in your area of responsibility, 5= Chance of this disaster is very large in your area of responsibility)

Answered: 38 Skipped: 0

Disaster Risk Reduction for Vulnerable Populations Global Survey

SurveyMonkey



Disaster Risk Reduction for Vulnerable Populations Global Survey

SurveyMonkey

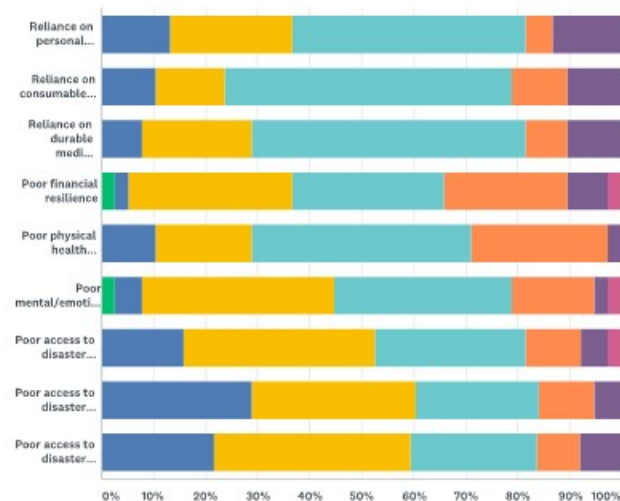
	I DO NOT KNOW	CHANCE OF THIS DISASTER DOES NOT EXIST IN YOUR AREA OF RESPONSIBILITY	CHANCE OF THIS DISASTER IS VERY SMALL IN YOUR AREA OF RESPONSIBILITY	CHANCE OF THIS DISASTER IS SMALL IN YOUR AREA OF RESPONSIBILITY	CHANCE OF THIS DISASTER IS MODERATE IN YOUR AREA OF RESPONSIBILITY	CHANCE OF THIS DISASTER IS LARGE IN YOUR AREA OF RESPONSIBILITY	CHANCE OF THIS DISASTER IS VERY LARGE IN YOUR AREA OF RESPONSIBILITY	TOTAL
Heavy Summer storms (rain)	0.00% 0	0.00% 0	13.16% 5	5.26% 2	39.47% 15	26.32% 10	15.79% 6	
Heavy Winter storms (snow and ice)	0.00% 0	10.53% 4	13.16% 5	13.16% 5	26.32% 10	10.53% 4	26.32% 10	
Hurricanes & tropical storms	0.00% 0	60.53% 23	21.05% 8	7.89% 3	2.63% 1	0.00% 0	7.89% 3	
Tornadoes	0.00% 0	7.89% 3	28.95% 11	23.68% 9	18.42% 7	10.53% 4	10.53% 4	
Severe heat	0.00% 0	0.00% 0	2.70% 1	5.41% 2	35.14% 13	35.14% 13	21.62% 8	
Severe cold	0.00% 0	0.00% 0	23.68% 9	7.89% 3	28.95% 11	28.95% 11	10.53% 4	
Wildfires	0.00% 0	18.42% 7	28.95% 11	15.79% 6	18.42% 7	13.16% 5	5.26% 2	
Flooding	0.00% 0	2.63% 1	5.26% 2	13.16% 5	36.84% 14	26.32% 10	15.79% 6	
Tsunami	2.63% 1	92.11% 35	2.63% 1	0.00% 0	0.00% 0	0.00% 0	2.63% 1	
Volcanic eruptions	2.63% 1	86.84% 33	7.89% 3	0.00% 0	0.00% 0	2.63% 1	0.00% 0	
Earthquakes	0.00% 0	15.79% 6	36.84% 14	23.68% 9	5.26% 2	7.89% 3	10.53% 4	
Space weather (electrical disturbances)	26.32% 10	23.68% 9	21.05% 8	10.53% 4	13.16% 5	2.63% 1	2.63% 1	
Dam Failure	0.00% 0	31.58% 12	26.32% 10	18.42% 7	13.16% 5	5.26% 2	5.26% 2	
Disease outbreaks	10.53% 4	7.89% 3	21.05% 8	23.68% 9	28.95% 11	7.89% 3	0.00% 0	
Power failures	0.00% 0	2.63% 1	7.89% 3	15.79% 6	42.11% 16	21.05% 8	10.53% 4	
System failures (water, sewage, etc.)	0.00% 0	0.00% 0	28.95% 11	34.21% 13	26.32% 10	10.53% 4	0.00% 0	
Severe transportation accidents (roads and highways)	0.00% 0	0.00% 0	7.89% 3	10.53% 4	52.63% 20	18.42% 7	10.53% 4	
Industrial accidents	0.00% 0	2.63% 1	23.68% 9	36.84% 14	18.42% 7	15.79% 6	2.63% 1	
Industrial action (strikes)	5.26% 2	26.32% 10	36.84% 14	21.05% 8	10.53% 4	0.00% 0	0.00% 0	
Public disorder (rioting)	5.26% 2	10.53% 4	52.63% 20	23.68% 9	5.26% 2	2.63% 1	0.00% 0	
CBRNE attacks (terror attacks)	10.53% 4	5.26% 2	36.84% 14	26.32% 10	21.05% 8	0.00% 0	0.00% 0	
Cyber attacks	5.26% 2	2.63% 1	21.05% 8	36.84% 14	21.05% 8	10.53% 4	2.63% 1	
Active Shooter	0.00% 0	0.00% 0	13.16% 5	21.05% 8	44.74% 17	13.16% 5	7.89% 3	

Disaster Risk Reduction for Vulnerable Populations Global Survey

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Q7 What factors increase disaster-related risk for vulnerable populations in your area of responsibility? Please rate each 0 - 5 (0 = This vulnerability has no impact on at-risk populations in your area of responsibility, 1 = This vulnerability has very little impact on at-risk populations in your area of responsibility, 5= This vulnerability has very large impact on at-risk populations in your area of responsibility)

Answered: 38 Skipped: 0



This vulnerability has no impact on at-risk populations in your area of responsibility
 This vulnerability has very little impact on at-risk pops in your area of responsibility
 This vulnerability has little impact on at-risk populations in your area of responsibility
 This vulnerability has moderate impact on at-risk pops in your area of responsibility
 This vulnerability has a large impact on at-risk pops in your area of responsibility
 This vulnerability has a very large impact on at-risk pops in your area of responsibility
 N/A

	THIS VULNERABILITY HAS NO IMPACT ON AT-RISK POPULATIONS IN YOUR AREA OF RESPONSIBILITY	THIS VULNERABILITY HAS VERY LITTLE IMPACT ON AT-RISK POPS IN YOUR AREA OF RESPONSIBILITY	THIS VULNERABILITY HAS LITTLE IMPACT ON AT-RISK POPULATIONS IN YOUR AREA OF RESPONSIBILITY	THIS VULNERABILITY HAS MODERATE IMPACT ON AT-RISK POPS IN YOUR AREA OF RESPONSIBILITY	THIS VULNERABILITY HAS A LARGE IMPACT ON AT-RISK POPS IN YOUR AREA OF RESPONSIBILITY	THIS VULNERABILITY HAS A VERY LARGE IMPACT ON AT-RISK POPS IN YOUR AREA OF RESPONSIBILITY	N/A	1
Reliance on personal assistance services such as home health aid or visiting nurse to assist with functional needs for daily living	0.00% 0	13.16% 5	23.68% 9	44.74% 17	5.26% 2	13.16% 5	0.00% 0	
Reliance on consumable medical supplies (including medications) for daily living	0.00% 0	10.53% 4	13.16% 5	55.26% 21	10.53% 4	10.53% 4	0.00% 0	

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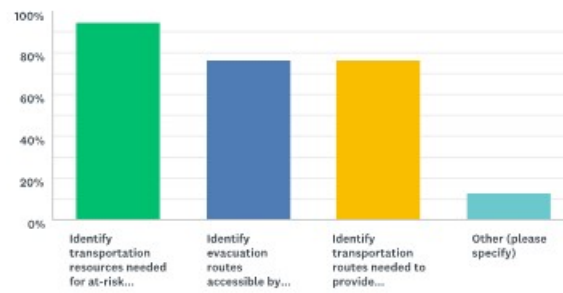
Reliance on durable medical equipment (including oxygen concentrators) for daily living	0.00% 0	7.89% 3	21.05% 8	52.63% 20	7.89% 3	10.53% 4	0.00% 0
Poor financial resilience	2.63% 1	2.63% 1	31.58% 12	28.95% 11	23.68% 9	7.89% 3	2.63% 1
Poor physical health resilience	0.00% 0	10.53% 4	18.42% 7	42.11% 16	26.32% 10	2.63% 1	0.00% 0
Poor mental/emotional health resilience	2.63% 1	5.26% 2	36.84% 14	34.21% 13	15.79% 6	2.63% 1	2.63% 1
Poor access to disaster preparatory resources	0.00% 0	15.79% 6	36.84% 14	28.95% 11	10.53% 4	5.26% 2	2.63% 1
Poor access to disaster emergency response	0.00% 0	28.95% 11	31.58% 12	23.68% 9	10.53% 4	5.26% 2	0.00% 0
Poor access to disaster recovery resources	0.00% 0	21.62% 8	37.84% 14	24.32% 9	8.11% 3	8.11% 3	0.00% 0

Disaster Risk Reduction for Vulnerable Populations Global Survey

SurveyMonkey

Q8 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-1 Transportation:

Answered: 38 Skipped: 0



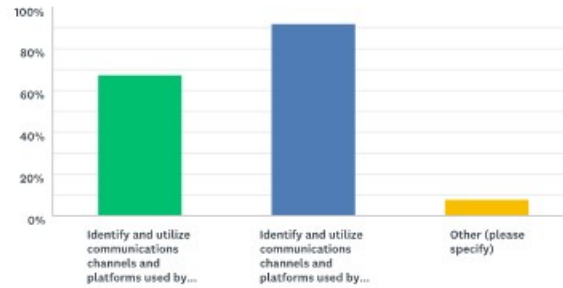
ANSWER CHOICES	RESPONSES	
Identify transportation resources needed for at-risk populations with functional needs	94.74%	36
Identify evacuation routes accessible by at-risk populations	76.32%	29
Identify transportation routes needed to provide functional needs support to at-risk populations	76.32%	29
Other (please specify)	13.16%	5
Total Respondents: 38		

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Q9 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-2 Communications:

Answered: 37 Skipped: 1

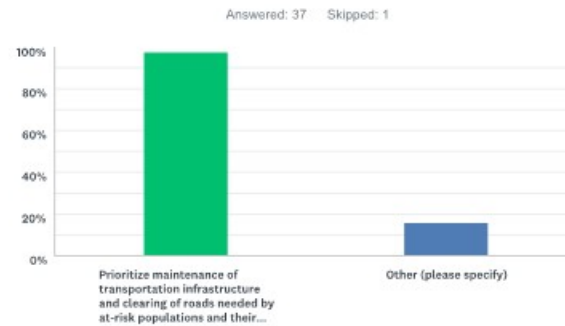


ANSWER CHOICES	RESPONSES	
Identify and utilize communications channels and platforms used by at-risk populations ahead of disasters	67.57%	25
Identify and utilize communications channels and platforms used by at-risk population care-givers, advocates and representatives ahead of disasters	91.89%	34
Other (please specify)	8.11%	3
Total Respondents: 37		

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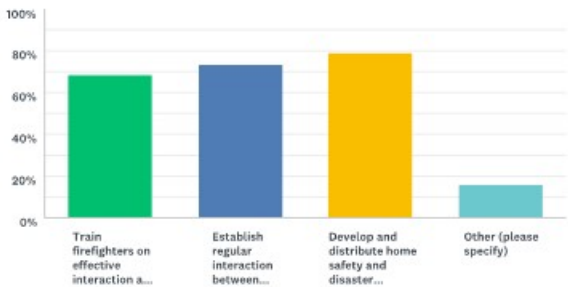
Q10 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-3 Public Works and Engineering:



ANSWER CHOICES	RESPONSES	
Prioritize maintenance of transportation infrastructure and clearing of roads needed by at-risk populations and their functional needs support	97.30%	36
Other (please specify)	16.22%	6
Total Respondents: 37		

Q11 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-4 Fire [Firefighting]

Answered: 38 Skipped: 0



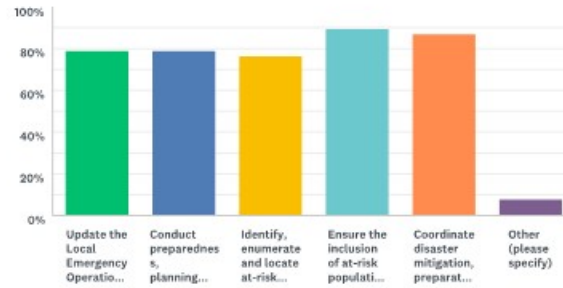
ANSWER CHOICES	RESPONSES	
Train firefighters on effective interaction and assistance to at-risk populations	68.42%	26
Establish regular interaction between firefighters and at-risk populations, their care-givers, advocates and representatives	73.68%	28
Develop and distribute home safety and disaster resiliency recommendations specific to at-risk populations	78.95%	30
Other (please specify)	15.79%	6
Total Respondents: 38		

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Q12 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-5 Emergency Management

Answered: 38 Skipped: 0



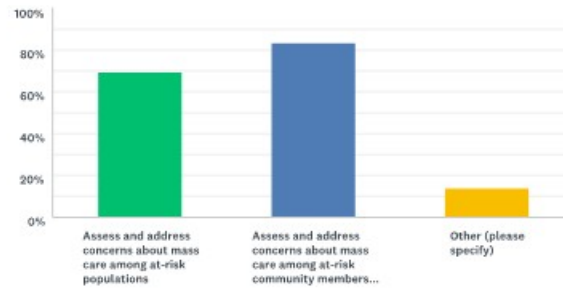
ANSWER CHOICES	RESPONSES	
Update the Local Emergency Operations Plan and other emergency plans, procedures, and agreements to specifically support the needs of at-risk populations	78.95%	30
Conduct preparedness, planning, training and exercise activities in coordination with at-risk populations and their advocates and representatives	78.95%	30
Identify, enumerate and locate at-risk populations	76.32%	29
Ensure the inclusion of at-risk populations as well as their advocates, representatives, and members of their support networks in mitigation, preparation, risk reduction and resiliency efforts	89.47%	34
Coordinate disaster mitigation, preparation, risk reduction and resiliency efforts with housing facilities and areas with high concentrations of at-risk populations	86.84%	33
Other (please specify)	7.89%	3
Total Respondents: 38		

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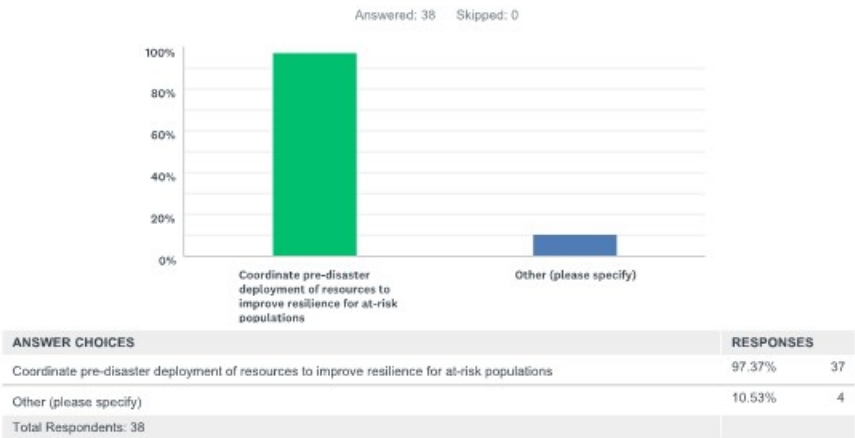
Q13 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-6 Mass Care [Emergency Assistance, Housing and Human Services]

Answered: 36 Skipped: 2



ANSWER CHOICES	RESPONSES	
Assess and address concerns about mass care among at-risk populations	69.44%	25
Assess and address concerns about mass care among at-risk community members care-givers, advocates, and representatives	83.33%	30
Other (please specify)	13.89%	5
Total Respondents: 36		

Q14 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-7 Logistics [Management] and Resource Support

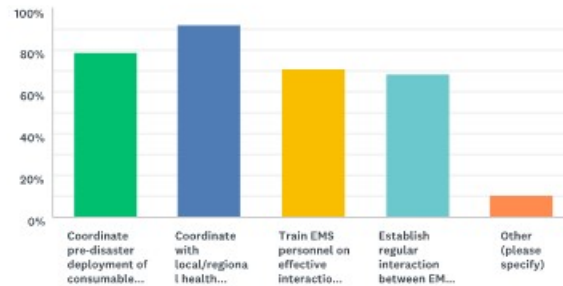


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Q15 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-8 Public Health and Medical Services

Answered: 38 Skipped: 0



ANSWER CHOICES	RESPONSES	
Coordinate pre-disaster deployment of consumable medical supplies and durable medical equipment to support functional needs and improve resilience for at-risk populations	78.95%	30
Coordinate with local/regional health districts and the State Department of Health for public messaging specific to at-risk populations	92.11%	35
Train EMS personnel on effective interaction and provision of assistance to at-risk populations	71.05%	27
Establish regular interaction between EMS personnel and at-risk populations, their care-givers, advocates and representatives	68.42%	26
Other (please specify)	10.53%	4
Total Respondents: 38		

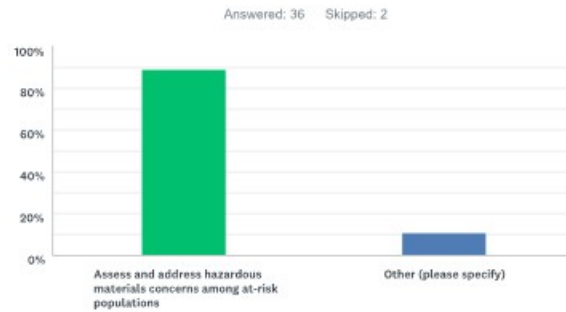
Q16 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-9 Search and Rescue



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Q17 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-10 [Oil and] Hazardous Materials
Response



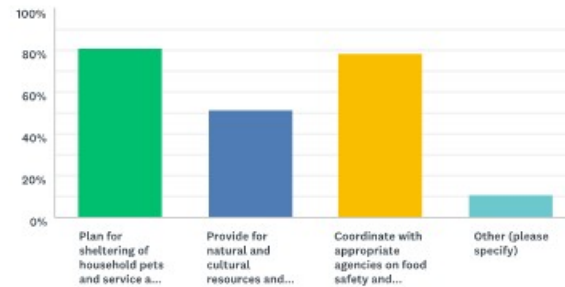
ANSWER CHOICES	RESPONSES	
Assess and address hazardous materials concerns among at-risk populations	88.89%	32
Other (please specify)	11.11%	4
Total Respondents: 36		

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Q18 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-11 [Animal Protection,] Agriculture and Natural Resources

Answered: 37 Skipped: 1



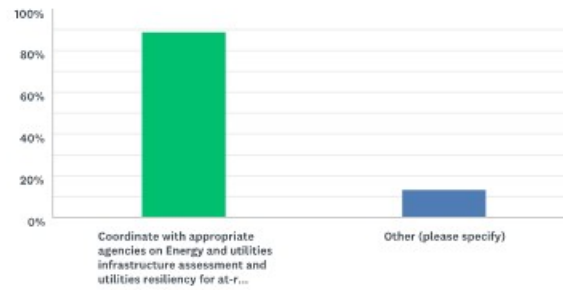
ANSWER CHOICES	RESPONSES	
Plan for sheltering of household pets and service and support animals for at-risk populations	81.08%	30
Provide for natural and cultural resources and historic properties protection for at-risk populations living in such properties	51.35%	19
Coordinate with appropriate agencies on food safety and security for at-risk populations with dietary restrictions	78.38%	29
Other (please specify)	10.81%	4
Total Respondents: 37		

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Q19 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-12 Energy and Utilities

Answered: 37 Skipped: 1



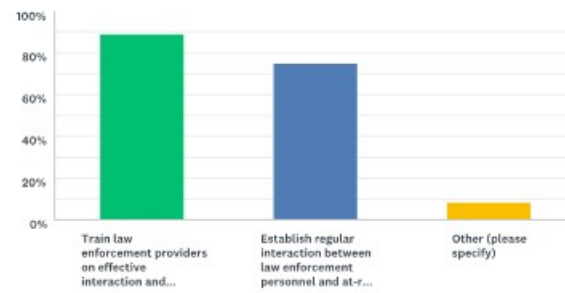
ANSWER CHOICES	RESPONSES	
Coordinate with appropriate agencies on Energy and utilities infrastructure assessment and utilities resiliency for at-risk populations	89.19%	33
Other (please specify)	13.51%	5
Total Respondents: 37		

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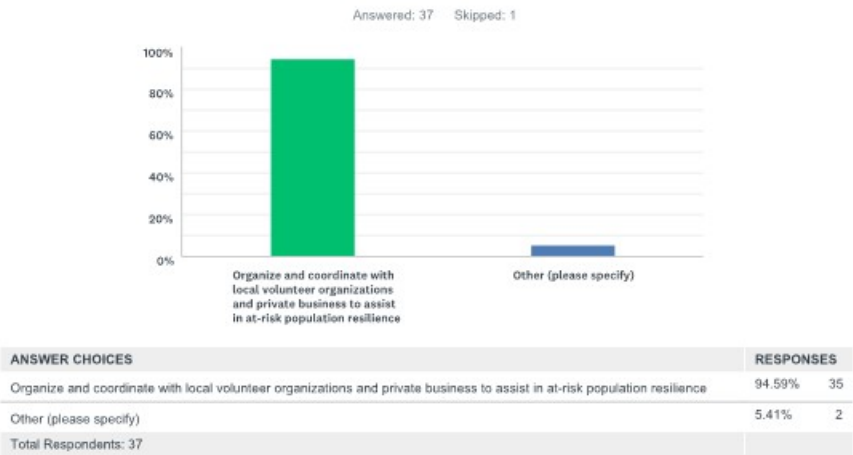
Q20 PLEASE CHECK ALL THAT APPLY - What strategies should be considered for adoption into the Local Emergency Operations Plan to reduce disaster-related risk for at-risk populations? ESF-13 Public Safety and Security/[Law Enforcement and Homeland Security]

Answered: 36 Skipped: 2



ANSWER CHOICES	RESPONSES	
Train law enforcement providers on effective interaction and assistance to at-risk populations	88.89%	32
Establish regular interaction between law enforcement personnel and at-risk populations, their care-givers, advocates and representatives	75.00%	27
Other (please specify)	8.33%	3
Total Respondents: 36		

Q21 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-14 Disaster Recovery [Long-Term Community Recovery and Mitigation]

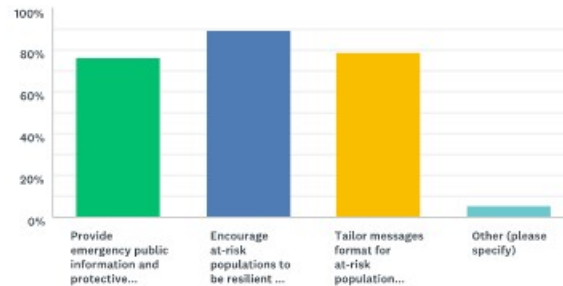


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Q22 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? ESF-15 Emergency Public Information and External Affairs [Media]

Answered: 38 Skipped: 0



ANSWER CHOICES	RESPONSES	
Provide emergency public information and protective action guidance specific to at-risk populations and their support networks	76.32%	29
Encourage at-risk populations to be resilient by assessing and preparing for their own needs prior to disaster	89.47%	34
Tailor messages format for at-risk population audiences with low literacy, poor English skills, and/or cognitive disabilities	78.95%	30
Other (please specify)	5.26%	2
Total Respondents: 38		

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Q23 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? [ESF-16 Volunteer Management/ Citizen Corps/MRC/VOAD]

Answered: 35 Skipped: 3



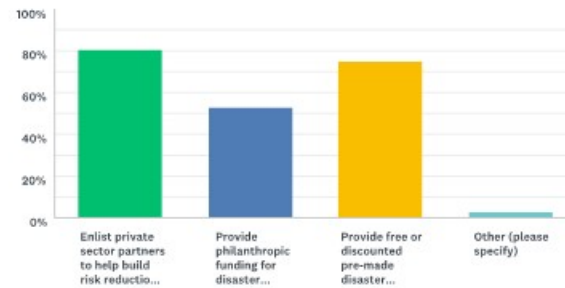
ANSWER CHOICES	RESPONSES	
Train CERT members on effective interaction and assistance to at-risk populations	85.71%	30
Train CERT members to help ensure risk reduction and resilience for at-risk populations	77.14%	27
Establish regular interaction between CERT members and at-risk populations, their care-givers, advocates and representatives	74.29%	26
Other (please specify)	8.57%	3
Total Respondents: 35		

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Q24 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? [ESF-17 [Private Sector Work Group]

Answered: 36 Skipped: 2



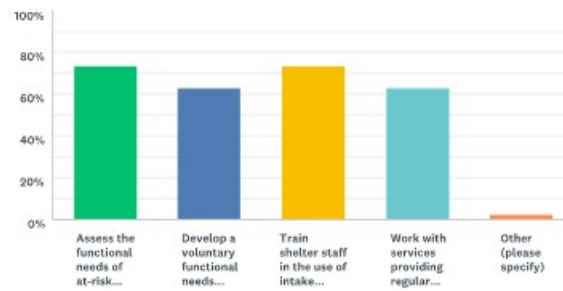
ANSWER CHOICES	RESPONSES	
Enlist private sector partners to help build risk reduction and resilience for at-risk populations	80.56%	29
Provide philanthropic funding for disaster mitigation, risk reduction, and resiliency for at-risk populations	52.78%	19
Provide free or discounted pre-made disaster resiliency kits for at-risk populations	75.00%	27
Other (please specify)	2.78%	1
Total Respondents: 36		

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Q25 PLEASE CHECK ALL THAT APPLY AND ADD ADDITIONAL RECOMMENDATIONS - What strategies do you recommend for adoption into the Local Emergency Operations Plan to reduce disaster-related risk specifically for at-risk populations? [ESF-19 Functional Needs Management]

Answered: 38 Skipped: 0



ANSWER CHOICES	RESPONSES	
Assess the functional needs of at-risk populations	73.68%	28
Develop a voluntary functional needs registry for at-risk populations	63.16%	24
Train shelter staff in the use of intake assessments such as the SWIFT evaluation to identify at-risk populations likely to be at risk	73.68%	28
Work with services providing regular functional needs support for at-risk populations to ensure their ability to continue support through disasters	63.16%	24
Other (please specify)	2.63%	1
Total Respondents: 38		

Q26 Are there any other disaster-related community risk reduction practices SPECIFICALLY FOR AT-RISK AND VULNERABLE POPULATIONS that you believe should be put in place in your area of responsibility?

Answered: 10 Skipped: 28

#	RE SPONSES	DATE
1	The only thing I can think of is The stretch of Rt. 39 near the Town Park in new Fairfield. There is a lot of rocks, boulders some of which come loose at times from erosion, snow/ice, shifting. I wonder if this could be looked at and maybe some sort of ideas explored in regards to the safety of the roadway especially since Rt. 39 is a major route. I have concerns about falling rock, partial landslides	6/27/2019 12:18 PM
2	No	6/26/2019 12:24 PM
3	No	6/25/2019 1:52 PM
4	Our main issue is getting the word out in both English and Spanish for our population	6/25/2019 12:34 PM
5	No	6/25/2019 12:19 PM
6	No	6/24/2019 5:00 PM
7	NA	6/24/2019 2:10 PM
8	Ensuring "Vial of Life" or "File of Life" is used to have a list of medications (with dosages) readily available when moved to an evacuation center or shelter.	6/24/2019 2:06 PM
9	My particular area has multiple autism facilities and adult foster care facilities. Our emergency operations plans include a significant portion on reducing elopement hazard from these patients. Just evacuating them from a building, or moving them to an unsecure facility, is not enough to keep them safe, and in some cases, is unsafe.	6/24/2019 2:03 PM
10	We have specific areas that need to be addressed. There is a significant size retirement mobile home park. This includes hundreds of home, with all residents 63+ years of age.	6/24/2019 2:02 PM