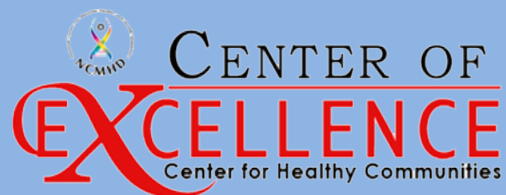


**Disaster Preparation in the Florida Panhandle:
Improving Continuity of Care for Those with Chronic Medical Conditions**

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CHC works closely with churches, community groups, schools and health practitioners to eliminate health disparities, help marginalized communities access health care and support individuals to participate in decision making regarding their health through outreach activities, community economic development and research. CHC also seeks to enhance indigenous capacity around issues of race, class, culture and political links within a social justice frame. A major program of CHC is Project EXPORT (Center for Excellence in Partnerships for Community Outreach, Research on Health Disparities and Training), an initiative of the National Center on Minority Health and Health Disparities at the National Institutes of Health.

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ACKNOWLEDGMENTS

This publication was supported by Award Number P20MD002314 from the National Institute on Minority Health and Health Disparities. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute on Minority Health and Health Disparities or the National Institutes of Health.

The authors extend their gratitude to the individuals, both key informants and facilitators, who so willingly shared their experience and knowledge, and to their organizations, which graciously allowed their employees to participate in the project. The enthusiasm with which they shared the wealth of that experience and knowledge was truly inspirational. Without their generous cooperation, the successful completion of this project would have been impossible.

1/6/2014

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FOREWORD

In the summers of 2004 and 2005, the winds and floods brought by Hurricanes Ivan, Dennis, Katrina and Rita devastated Gulf Coast communities from Florida to Texas. Katrina and Rita indirectly impacted countless other communities in the South and beyond through the displacement of many thousands of people. The displaced victims were not only uprooted from their residences but also from their medical homes. Continuity of health care for residents affected by these disasters is of particular importance considering the high level of poverty and incidence of poor health in the affected areas. This report, the third in a series by the University of South Alabama Center for Healthy Communities' Research Office, brings much needed attention to issues surrounding access to and continuity of health care for victims of hurricanes and other disasters. While the severity of these storms highlighted the weakness of systems to meet basic survival needs, it emphasized even greater problems in the disruption of health care services.

The University of South Alabama Center for Healthy Communities was established in the University of South Alabama College of Medicine in September 2003. Its mission is to coordinate education, research, economic development and public service initiatives to eliminate health disparities and help build sustainable communities. Although located in Mobile County, Alabama, the Center's service area includes the surrounding counties and communities in Alabama, Florida and Mississippi.

A number of the Center's programs have been involved with Katrina disaster relief and recovery activities. The Center's Community Development and Nonprofit Management Program, initiated only a few months prior to Hurricane Katrina, provided small grants to community organizations serving residents in high impact areas. The EXPORT project, funded one year before the disaster, provided training for health advocates serving many severely affected Asian communities. The Research Office, organized several months after that hurricane struck the Gulf Coast, is supporting research for communities and organizations in targeted areas. This report is a product of the on-going Research Office's Continuity of Health Care Study following the devastating '04-'05 hurricane seasons.

This study, funded by the U.S. Department of Health and Human Services, National Center for Minority Health and Health Disparities, presents a unique opportunity for discerning ways to improve health outcomes in the health disparate populations of coastal Alabama, Mississippi and the western Florida Panhandle through the development of locally based networks. By documenting what currently exists, the intent is to facilitate a dialogue among organizations regarding how they can work together in the future with a mind toward more effective disaster response. The health care needs of the Gulf Coast Community in general, and chronic disease management needs in particular, are so extensive and multi-faceted that they cannot be met by singular organizations working alone. A true safety net with a collaborative fabric is necessary. It is, however, impossible for such a network to simultaneously coalesce and function efficiently in the immediate aftermath of a disaster. Collaborations among health care, social service and emergency management organizations must take place in times of normalcy to buffer the blow of inevitable hurricanes and other unforeseen disasters, such as pandemics, bioterrorism and oil spills.

The Center for Healthy Communities is committed to enhancing health and helping to build sustainable communities in the Gulf Coast Region. This includes helping individuals and organizations learn from disaster and become better prepared for future challenges they might face. To act on the lessons learned from the '04-'05 hurricane seasons will require education and communication to improve disaster planning at the patient and provider levels, economic development to improve community resiliency, further research on health disparities and enhanced public service initiatives in each of these areas. The Center for Healthy Communities is prepared to foster programs to meet these objectives in a manner that honors the inimitable spirit of the participants in this project, and improves the health of those it serves.

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EXECUTIVE SUMMARY

INTRODUCTION AND METHODS

The 2004-2005 hurricane seasons damaged much of the health care infrastructure along the northern Gulf Coast. Northwest Florida was pounded by Hurricanes Ivan ('04) and Dennis ('05), while Hurricanes Katrina and Rita ('05) crippled the health care infrastructure further west, along the central Gulf Coast. In addition to the many hospitals and acute care facilities impacted by the storm, the delivery of primary care and chronic disease management were severely affected by the destruction of community health care facilities and the displacement of physicians and other health care professionals. Also displaced were thousands of patients with chronic diseases, forced to seek medical care and social service assistance in new and often distant locales.

Segments of the population in the coastal areas are particularly vulnerable to disaster due to poverty, age, education, and marital status. Researchers at Florida A&M University conducted socio-economic vulnerability assessments of the Gulf Coast states. Most of the parishes along the Louisiana coast, Jefferson and Harrison Counties in Mississippi, Mobile and Baldwin Counties in Alabama, and Escambia County in Florida are all identified as having minority populations that are highly vulnerable to disaster due to poverty, which limits financial resources to adequately prepare for disaster, much less to recover (7). U.S. Census data indicates the third coastal county in Mississippi, Hancock County, also has a high percentage of its population living below the national poverty level. (8) The initial ('06-'07) and follow-up ('09-'11) studies conducted by the Center for Healthy Communities at the University of South Alabama (USA) College of Medicine included Mobile County in Alabama, and Jefferson, Harrison, and Hancock Counties in Mississippi. This study extends the investigation to Escambia County, Florida.

In Wave One ('06-'07), the USA Center for Healthy Communities Project EXPORT, in partnership with the Regional Coordinating Center for Hurricane Response at the Morehouse School of Medicine, sought to delineate mechanisms to limit the worsening of gaps in health care and of health outcomes post-disaster, with an emphasis on the management of chronic conditions. That study identified immediate survival challenges in the aftermath of a disaster, critical chronic diseases and challenges in their management as described by healthcare professionals and patients, and solutions suggested by the Key Informants (KIs).

Wave Two ('09-'11), undertaken by the USA Center for Healthy Communities Project EXPORT, revisited the organizations from Wave One to identify the extent to which health care providers and social service agencies in coastal Mississippi and Alabama had made changes in practices, policies, and procedures to facilitate patient preparation and continued care after disasters (4,5). Results found that participant organizations had implemented a number of changes to ensure continuity of care for the chronically ill in such events. Changes include assisting patients with pre-disaster preparation and training; with evacuation planning and assistance; with support to find resources in evacuation destinations; by equipping patients with information regarding prescriptions, diagnoses, treatment plans, and advance medications when disaster is imminent; with multiple methods for patients to communicate with providers; and with more mandated medical needs shelters.

Wave Three ('12-'13) extended the study into the Florida Panhandle. Again using a qualitative research methodology, we aimed to:

- investigate networks developed there
- describe network characteristics
- relate the Florida networks to those found previously in Coastal Alabama and Mississippi to identify best practices that can inform continued improvements in all three states

Data for Wave Three were collected via interviews, review meetings and electronic communications involving twenty-two health and social service providers, and emergency management personnel (KIs) from five organizations located in Escambia County, Florida. Then specific challenges identified in the 2007 study and subsequent actions taken to address each are described across states.

RESULTS

Lessons learned from the impact of hurricanes along the Gulf Coast in the past 10 years have improved the area's disaster preparation and response capabilities. The current study indicates that Escambia County, FL, has robust, integrated networks for emergency preparation, response and recovery.

Florida Panhandle Networks

Florida has a strong state-wide emergency management network, which includes active communication, training, and preparation for large-scale disasters natural (e.g., hurricanes) and man-made (e.g., the Deepwater Horizon oil spill). Further, its state-wide Department of Health consists of 67 county Health Departments, and specialized teams that can be sent to respond to issues anywhere in the state; and because all Florida Department of Health (FDOH) employees are state, not county, employees, qualified individuals can be shifted as needed in emergencies, expediting response. In addition to these public sector networks, the creation in Escambia County of the Be Ready Alliance Coordinating for Emergencies (BRACE) in 2006, a COAD (Community Organizations Active in Disaster) with approximately 500 partner organizations in 2013, and the advanced, real-time 2-1-1 service of the United Way of Escambia County provide structure and access to available resources in the non-profit, faith-based, public and business sectors. These networks, employed together, have catapulted the western Florida Panhandle to the forefront of disaster preparedness, response and recovery in the state and beyond, as can be seen from significant state and national recognition of their accomplishments.

Florida Panhandle Network Characteristics

Clear Structure – The State of Florida utilizes FEMA's Emergency Support Functions (ESF) structure that allows communities to consolidate and coordinate services of multiple agencies and organizations, and provides disaster preparation and response through local Emergency Operations Centers. This structure, coordinated at the local and state levels, facilitates emergency response using local resources rather than depending primarily on state and federal resources. Specifically relative to health care, the structure is extended throughout Florida with the Florida Department of Health and its local Health Departments as lead agencies for Public Health and Medical (ESF 8), by the American Red Cross as lead

agency for Mass Care (ESF 6), and in Escambia County, BRACE serves as the lead agency for Volunteers and Donations (ESF 15).

Continuous Communication – The Escambia County area is home to many activities designed to prepare the community to respond effectively when threatened by natural or man-made disasters, and to recover from these when they occur. These include, but are not limited to, training volunteers to assist in both medical and non-medical programs, educating residents from students to the elderly on how to prepare for and recover from disasters, and sponsoring a variety of fairs and events to inform the public and to recruit them for the many volunteer opportunities available. Organizations make use of multiple media forms to reach the community and to keep each other informed of upcoming events – this includes traditional media such as radio, television, print media, billboards and posters, as well as electronic/social media and email. In addition, United Way 2-1-1 functions as a community registry, connecting individuals with needs to the organizations with resources that address those needs.

Strong leadership – Key organizations and organizational leaders in Northwest Florida have been recognized for their outstanding performance. In 2011, the Chief of Emergency Management of Escambia County was awarded the State’s highest honor as Emergency Manager of the Year. The Director of the Florida Department of Health Escambia County has served as Co-chair of the Public Health and Medical Committee for the Florida Department of Law Enforcement’s Domestic Security Task Force Northwest Florida since 2001, and Chair of the Council on Public Health of the Florida Medical Association. He is a board member of the Florida Public Health Institute, and a member of the National Health Physics Society, where he serves as Chair of the Homeland Security Committee and is a member of the Medical Response subcommittee. Further, the State of Florida uses the model developed in the mid-1990s by the Escambia County Department of Health for addressing individuals with special needs and staff involvement in disaster preparedness and response. The efforts of BRACE were recognized by FEMA in 2009 with an award for “Preparing the Public.” In 2010, BRACE’s efforts were recognized with a FEMA award for coordinating an “Outstanding Citizen Corps Council.” Most recently, in 2012, BRACE was selected to receive the John D. Solomon Preparedness Award, FEMA’s highest individual and community preparedness award, in recognition of its collaborative, community-based disaster preparedness and response activities; and the Founding Executive Director of BRACE was recognized as a “Champion of Change” in a ceremony at the White House. In July, 2013, United Way of Escambia County received national accreditation for its 2-1-1 service.

CONCLUSION

Disasters, man-made and natural, disrupt the lives of both individual patients/clients and their health care and social service providers. Effective community networks can be significantly more responsive in times of disaster than outside help because the specific needs of community members and the availability of local resources are known. As an Escambia County Department of Public Safety poster advises, “The first 72 are on you!” When significant damage delays the arrival of outside help, those communities with robust local networks are the most responsive and resilient. Alabama and Mississippi Gulf Coast counties have made improvements post-Katrina, as has Escambia County in Northwest Florida. The different approaches to preparedness and response revealed in these studies reflect the

variety of experiences and lessons learned in each geographical area. These include community challenges and responses to issues surrounding: 1) disaster preparation and response; 2) the healthcare delivery system; 3) patient preparation and survival; and 4) continuing challenges, including but not limited to Federal requirements under the Americans with Disabilities Act, as well as a lack of personal responsibility on the part of some residents. These issues are complicated when continuity of care for those with chronic health conditions, particularly the poor, are factored into the equation. Much progress has been made, and more remains to be achieved.

1. Introduction

Natural disasters have a more devastating impact on those with disabilities and chronic medical conditions. One challenge after a disaster is ensuring continuity of care to those with chronic conditions to ensure health status does not deteriorate after a disaster. A study by the Center for Disease Control in 2013 estimated that over 50% of adults in the U.S. have at least one chronic health condition (1, 2), and segments of the population with chronic conditions who are particularly vulnerable to disaster include those with low incomes, those with disabilities, and the elderly, who are more likely to have more than one chronic condition, which creates additional challenges for their ability to prepare for and recover from disasters.

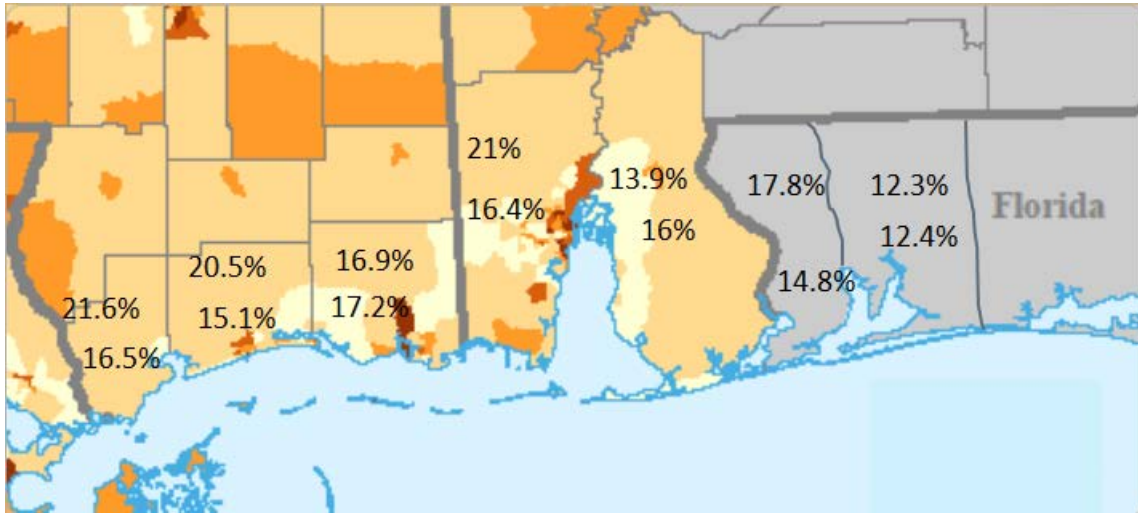
A study published by the Center for Healthy Communities (2007) after Hurricane Katrina, identified ways to improve continuity of health care for chronically ill residents after disaster. The chronic disease conditions reported to require attention post-disaster include: diabetes, hypertension, asthma, chronic obstructive pulmonary disease (COPD), congestive heart failure, end stage renal disease (ESRD)/dialysis, anxiety, depression, and post-traumatic stress disorder (PTSD). Lessons learned suggested a need for better planning and preparation by patients, health care providers, and social service agencies serving those with chronic conditions, evacuation of those with chronic conditions, increasing support for the local health workers, augmenting communication capabilities, improving coordination of volunteers, supply distributions, and relief efforts. The study also illustrated the necessity of building collaborative networks of health care providers and social service agencies to create a safety net to reduce the impact of disasters on those with chronic conditions. It was proposed that overall improvements in these areas of disaster preparation would serve to mitigate many of the challenges encountered before and after Hurricane Katrina. (3)

A follow-up study in '09-'10 investigated changes implemented by health care and social service organizations along the Gulf Coast (Mississippi and Alabama) to improve disaster preparation and response, and investigated changes implemented to assist those with chronic medical conditions in preparing for disaster, including the development of networks. (4, 5, 6) A third study ('11-'13) extended the project to the western Florida Panhandle.

Segments of the population in the coastal areas are particularly vulnerable to disaster due to poverty, age, education, and marital status. Researchers at Florida A&M University conducted socio-economic vulnerability assessments of the Gulf Coast states. Most of the parishes along the Louisiana coast, Jefferson and Harrison Counties in Mississippi, Mobile and Baldwin Counties in Alabama, and Escambia County in Florida are all identified as having minority populations that are highly vulnerable to disaster due to poverty, which limits financial resources to adequately prepare for disaster. (7) U.S. Census data indicates the third coastal county in Mississippi, Hancock County, has a high percentage of its population living below the national poverty level. (8) The initial and follow-up studies conducted by the Center for Healthy Communities at the University of South Alabama included Mobile County in Alabama, and Jefferson, Harrison, and Hancock Counties in Mississippi.

On the map below showing disaster vulnerability, the upper number refers to the poverty rate and the lower number refers to percentage of the population with disabilities for each county:

Figure 1



This report provides an overview of the networks developed in Mississippi, Alabama, and Florida to ensure continuity of care for those with chronic conditions before, during and after a disaster or incident. Then specific challenges identified in the 2007 study and subsequent actions taken to address each are described across states.

2. Methodology

A description of the methodology for the Alabama/Mississippi study may be found in that report, which is available at <http://www.usahealthsystem.com/current-research-pilots>. The methodology for the Florida panhandle study is presented here.

Data were collected via interviews, review meetings and electronic communications involving twenty-two health and social service providers, and emergency management personnel (key informants) from organizations located primarily in Escambia County, Florida. Five organizations (listed in Table 1) were recruited into the study. Each organization identified one to twelve key informants for participation in the project. The study protocol and recruitment materials were approved by the University of South Alabama Institutional Review Board. Written informed consent was obtained from all participants. Data collection proceeded in three phases, summarized in Table 2.

Table 1. Participating Institutions and Positions Held by Key Informants	
Institution (location)	Position
Florida Department of Health in Escambia County (Pensacola, FL)	Director Associate Director Region 1 – Vulnerable Populations Coordinator/Special Needs Shelter Consultant Regional Planner/Manager for the Public Health Preparedness Program Medical Reserve Corps Coordinator
Escambia County Division of Emergency Management	County Emergency Manager Planning Coordinator
Escambia Community Clinics	Medical Director COO Nursing Manager Nurse Practitioner/Clinical Information Technology Electronic Health Records Facilities Grants/Quality/Risk Management Financial Counselor Social Worker/Community Resources Medical Specialist – Referrals Pharmacy Assistance Program
B.R.A.C.E. (Be Ready Alliance Coordinating for Emergencies)	Executive Director and Citizens Corp Coordinator Director, Operations & Readiness, and Citizens Corps Coordinator
United Way	2-1-1 Director

Table 2. Data Collection Phases and Sample Summary			
PHASE	DESCRIPTION	NUMBER OF PARTICIPANTS	TIME FRAME
I	<ul style="list-style-type: none"> Key Informant Interviews 	22	August – December, 2012
II	<ul style="list-style-type: none"> Follow-up Interviews Follow-up E-mails 	9 5	May – June, 2013
III	<ul style="list-style-type: none"> Electronic Review 	9	September - November, 2013

Phase I Data Collection

Twenty-two key informants participated in the study. The majority of the group was female (63.6%) and Caucasian (86.4%). Key informants (KI) were public health administrators/clinical (n = 2); public health

emergency program coordinators (n = 3); emergency manager (n = 1); emergency planner (n = 1); non-profit community services administrators (n = 3); medical director/clinical (n = 1); clinic administrators (n = 5); patient services (n = 4); nursing manager (n = 1); nurse practitioner/clinical (n = 1). These health and social service providers cumulatively have extensive experience in disaster preparation and response. Those with medical and patient services experience identified chronic diseases deserving priority in a post-disaster climate, including disease management issues they had faced. Those with emergency services experience, both public and non-profit, identified lessons from previous disasters as they relate to patients with chronic medical conditions. All provided perspectives on changes that have been made to improve planning and response, and observations on the challenges that remain and/or are anticipated, relevant to the project. Semi-structured interviews, lasting one to two hours were conducted on-site at key informants' places of work. All interviews were conducted by one research team member.

Phase II Data Collection

In Phase II, follow-up e-mails and interviews targeted specific topics for clarification or depth. Nine key informants again met with the analysts to address questions relating to:

- Pre-certifying individuals for admission to the special needs shelter – 1) effectiveness in reaching those eligible, and 2) experience in Hurricane Ivan;
- Progress as to the Escambia Community Clinics' continuity of operations plan and its effect on disaster preparation and response;
- Accessibility of medical records when individuals with chronic health conditions evacuate the area OR when evacuees come into the area (as happened with Hurricane Katrina);
- Recommendations for evacuation and transportation capacity to assist those without personal transportation to evacuate in the face of a category 4 or 5 storm;
- Clarification on changes made in Pensacola/Escambia County since Ivan/Dennis;
- Issues of concern around individual preparedness of those with chronic medical conditions (Who is still "falling through the cracks"?);
- Improvements desired over the current situation;
- Degree and level of inter-organizational interaction/communication;
- Availability of free/low cost medication post-disaster;
- Effectiveness of communication modalities for those without computer access pre- and post-disaster; and,
- Effectiveness of preparedness for the homeless.

Data Analysis and Formulation of Draft Report

All interviews were recorded and transcribed. Two research team members, one who conducted the interviews, and one not associated with Phase I data collection, independently analyzed data from key informant interviews. Each analyst coded Phase I transcripts for emerging concepts using Atlas.ti © software version 6.2 (Atlas.ti Scientific Software Development GmbH, Berlin, Germany). After reaching consensus on theme and topic nomenclature (i.e., creating a common code base), the independent sets

of coded transcripts were merged within Atlas.ti. This merge united the contributions of the analysts and highlighted any differences in coding.

Next, the two analysts jointly decided on the individual codes or groupings of codes (code families) that were associated with the most salient themes. Code families were used to produce queries, which generated lists of participant quotations relevant to each specific theme (See Appendix A for Code List and Code Family Lists). The narrative was then analyzed for content and summarized. The team wrote a comprehensive report compiling Phase I and II findings, incorporating findings from Alabama and Mississippi to describe and contrast lessons learned and changes made since Hurricane Katrina -- described by one KI in Florida as "their [LA, MS & AL] wake-up call," while Hurricane Andrew (1992) did that for Florida, and Hurricanes Ivan (2004) and Dennis (2005) for the Florida panhandle.

Phase III Data Collection

In Phase III, KIs were invited to submit feedback on the report electronically. Eliciting feedback from key informants on the report serves as a member check.

Results

The following section details the information provided by key informants in all phases of the data collection. Results are organized in sub-sections according to the main themes that emerged in the original study and subsequent analysis. Verbatim quotations are included to support some ideas. Quotations include references to data source to preserve the anonymity of informants (e.g., 1:46, Transcript 1: Paragraph number 46).

3. Elements of a Network to Provide Continuity of Care in the Florida Panhandle

3.1 A Top-Down View

It is clear from key informant interviews and relevant literature that Florida has a strong state-wide emergency management network, which includes active communication, training, and preparation for large-scale disasters such as hurricanes. The State of Florida has a disaster preparation and response system that is more structured than those found in Mississippi and Alabama.

In 1994, Florida adopted FEMA's Emergency Support Function (ESF) structure to respond to threats (<http://www.floridadisaster.org/EMTOOLS/esf.htm>):

The State of Florida must be prepared to respond quickly and effectively on a 24-hour basis to developing situations. When an incident or event is first detected, the State Emergency Operations Center is activated to a level appropriate to the magnitude of the threat. The State's response effort is then initiated through the State Emergency Response Team (SERT), which is comprised of Governor-appointed Emergency Coordination Officers (ECO) from State Agencies and volunteer organizations. These Emergency Coordination Officers are authorized to use the resources of their respective

agency or organization to carry out response and recovery missions that are assigned by functions.

All State agencies and volunteer organizations that comprise the State Emergency Response Team are grouped into 18 Emergency Support Functions (ESF) to carry out coordination and completion of assigned missions. These functions represent specific response activities that are common to all disasters. Each Emergency Support Function is comprised of one or more Primary agency(ies) serving as the lead and several other agencies and organizations providing support.

At the county level, when any all-hazards emergency such as a hurricane threatens, the Escambia County Division of Emergency Management activates the county Emergency Operations Center (EOC) and calls in designated representatives for each of the ESFs appropriate to the situation. ESF 8, Public Health and Medical, ESF 6, Mass Care, and ESF 15, Volunteers and Donations, are specifically relevant to continuity of care for individuals with chronic medical conditions, and create the network's basic structure with regard to the focus of this study. Between Ivan and Dennis, Escambia County moved its Emergency Operations Center (EOC) from a flood prone location into a new facility that more effectively incorporates Emergency Support Functions (ESFs) as appropriate for the emergency situation. Co-locating all ESFs expedites communication and problem solving for disaster preparation and response. The strength of the EOC is that key individuals from all relevant sectors of the community are in one room where they remain for the duration of the event. Any issues that arise can be addressed face-to-face, and resources applied where appropriate. When the National Weather Service puts Escambia County in the forecast cone for a hurricane, the Division of Emergency Management activates the Emergency Operations Center (EOC), and the level of activation increases as the threat materializes. Level three is normal operations, level two is limited activation (for example, a wildfire or localized flooding), and level one is full activation with all ESF representatives called in. A hurricane typically is designated level one.

Key organizations for this study are the Escambia County Division of Emergency Management, the Florida Department of Health in Escambia County (DOH-Escambia), Escambia Community Clinics, Be Ready Alliance Coordinating for Emergencies (BRACE; officially, Community Organizations Active in Disaster, Inc.) and the United Way of Escambia County 2-1-1.

Many of the KIs commented on the unusual degree of cooperation and coordination found in their community among organizations involved in emergency preparedness and the care of vulnerable populations. Extensive use of social media keeps members of the many organizations involved in the Pensacola network informed about what's happening, who is doing what, when and where, and how to be involved in the many exercises and activities designed to keep emergency preparedness in the forefront of community members' minds.

3.2 Emergency Support Function 8 – Public Health and Medical

Emergency Support Function 8 (ESF 8), Public Health and Medical, is led by DOH-Escambia, a state agency that answers to Tallahassee, but coordinates activities at the local level for the county. A key difference observed by participants in Florida is that the state has an integrated health department. All

67 counties in Florida are part of a regional domestic security task force led by the Florida Department of Law Enforcement in conjunction with the Florida Division of Emergency Management. Hospitals, nursing homes, all licensed healthcare facilities, dialysis centers, durable medical equipment companies, and other organizations are coordinated within ESF-8.

Pre-Incident/Event:

Medical Reserve Corps – The Medical Reserve Corps is under the umbrella of the Citizen Corps, which is coordinated by BRACE (Be Ready Alliance Coordinating for Emergencies). DOH-Escambia qualifies volunteers for the MRC, whose mission is to augment the local community and state level health and medical services with pre-identified, trained and credentialed volunteers during medical operations and public health activities. To this end, DOH-Escambia conducts background checks, assembles all necessary and legally required paperwork, and provides or coordinates required training. This includes completion of required FEMA training on the National Incident Command System, as well as local exercises conducted annually prior to the beginning of hurricane season on the Gulf. When volunteers have successfully completed all required activities and passed background checks, DOH-Escambia enters their information into a state-wide database, provides barcoded identification badges and Medical Reserve Corps polo shirts that are color-coded to differentiate medical and non-medical volunteers.

When an emergency threatens, DOH-Escambia contacts MRC volunteers to verify their contact information and availability, and alerts them to possible deployment. Part of the preparation to serve includes developing a personal disaster plan for their families.

Additionally, DOH-Escambia staff actively participates in community events to educate on preparedness and to recruit volunteers. These events ramp up in the months prior to the onset of hurricane season. DOH-Escambia coordinates with Escambia Emergency Medical Services the staffing and supplies for the special needs shelter.

Healthcare Facilities – Florida statute requires all licensed healthcare facilities to have disaster plans in place and to submit annually their plans to the health department in their county for review. Further, healthcare agencies are encouraged to assist their clients in pre-registering for admission to the special needs shelter, if that is appropriate for their conditions. Facilities such as hospitals, clinics, nursing homes/long-term care facilities and residential alcohol and drug programs are provided EOC contact information if needs arise relative to a situation. Local hospitals and the Escambia Community Clinics are represented at the EOC as appropriate during incidents and events, and participate in training and drills periodically conducted by the Escambia Division of Emergency Management in conjunction with DOH-Escambia and Region 1 Domestic Security Task Force.

When an event such as a hurricane threatens, hospitals discharge all patients whose conditions are stable to create space for those individuals with chronic conditions necessitating hospital care and for those injured during or after the event. Clinics suspend operations and undertake preparations to safeguard their buildings, records, supplies, and employees. Residential facilities in evacuation zones initiate disaster plans and relocate residents to safer locations. If this means taking them to the special needs shelter, they are required by law to provide one person to assist each patient.

Special Needs Shelter – Health departments in each county in Florida are responsible for staffing and supplying a special needs shelter for individuals with health conditions that require some degree of assistance above that provided by general shelters. This includes the frail elderly and younger disabled individuals who do not require the care level of a hospital, but do require more than a general shelter is equipped to provide. This includes access to electricity, refrigeration, air conditioning, and some basic supplies such as tubing for oxygen concentrators. All special needs clients are instructed to bring their own supplies, medications, and someone to assist them. Individuals are encouraged to apply for admission prior to the beginning of hurricane season each year, with health department staff reviewing those applications. Information regarding whether an individual’s medical condition can be accommodated at the special needs shelter is provided to the Escambia Division of Emergency Management, which then notifies applicants by letter. This process is intended to expedite admission to the special needs shelter when conditions lead to its activation. There is some concern that recent actions by the U.S. Department of Justice relative to the Americans with Disabilities Act may require this level of assistance at general shelters, as well. This is discussed further below, under areas of concern.

When a hurricane threatens, initial preparations are made and staff is on standby to move supplies to the designated location. As the storm moves closer and when the special needs shelter is ready to open, an official announcement is made and the shelter prepares to receive evacuees.

During the all hazards Incident/Event:

Department of Health – The health department in each county is represented at its EOC for the duration of the incident/event.

MRC – Members wait for deployment instructions once assessments are made and conditions allow.

Healthcare Facilities – Staff follow their organizations’ disaster plan, either sheltering at the facility and caring for patients there, or sheltering at home or at a shelter, ready to assist as directed post-incident/event. Hospitals and large clinics are represented at the EOC.

Special Needs Shelter – This shelter is staffed by the DOH-Escambia with a required ratio of one licensed medical professional for each twenty individuals with medical needs sheltering there. Cots are provided and each special needs patient brings medications, medical equipment, bedding, and one person to provide personal assistance. Meals are provided by the Red Cross for the first 24 hours, then, because the special needs shelter is located in a school, the school board provides meals for the second day on, as long as the shelter is open. Individuals on special diets are encouraged to bring their own food.

Post-Incident/Event:

MRC -- Once the extent of an incident/event and its resultant needs are known, the health department activates MRC volunteers, assigns them to specific locations, and monitors their participation through their ID badges. After the health department clinics reopened and staff were no longer available to work at the shelters, MRC professionals were used significantly after Hurricane Katrina in shelters that were housing evacuees.

Additionally, teams from other health departments throughout areas of Florida not affected by the emergency may be deployed to assist until conditions return to a level that the local health department is equipped to handle. This flexibility is a key strength of the current system that locates state employees in local health departments.

Special Needs Shelter – Individuals who have sheltered in the special needs shelter are tracked until they are discharged from the shelter. If their condition has deteriorated, referrals are made and health department staff follow-up until patients have seen their personal physicians. If their homes have been damaged to the extent that the homes are not habitable, they are monitored until they have adequate living arrangements and are back under the care of their primary care physicians.

Healthcare Facilities – Once damage assessments are made, facilities are repaired as necessary and reopened as soon as possible. Electrical grids servicing hospitals receive priority if they sustain damage and loss of service in the emergency.

Department of Health – When its clinical facilities are deemed operable, the health department reopens them and resumes service.

3.3 Emergency Support Function 6 – Mass Care

Emergency Support Function 6 (ESF6) is responsible for coordinating provision of emergency shelter, emergency feeding, and the distribution of relief supplies to victims of disaster. Therefore, ESF6 is responsible for opening and staffing mass care shelters. Mass care and the American Red Cross go hand in hand wherever disaster strikes. According to the Red Cross website:

The Red Cross was chartered by the United States Congress to "carry on a system of national and international relief in time of peace and apply the same in mitigating the sufferings caused by pestilence, famine, fire, floods, and other great national calamities, and to devise and carry on measures for preventing the same." The Charter is unique to the Red Cross because it assigns duties and obligations to the nation, to disaster survivors, and to the people who generously support our work through donations.

Red Cross disaster relief focuses on meeting people's immediate emergency needs caused by disaster. When disaster threatens or strikes, the Red Cross provides shelter, food, and health and emotional health service to address basic human needs and assist individuals and families in resuming their normal daily activities independently.

The Red Cross also feeds emergency workers like fire fighters and police, handles inquiries from concerned family members outside the disaster area, provides blood and blood products to disaster victims, and helps them access other available resources.

<http://www.redcross.org/what-we-do/disaster-relief>

The Red Cross currently leads the functional support service initiatives for ESF 6 in the Escambia County area.

Other organizations involved in mass care in Escambia County are the Salvation Army and various faith-based groups such as Catholic Charities, Lutheran Services of Florida, and others coordinated through BRACE (if not represented at the Emergency Operations Center) – see ESF 15 below.

Pre-Incident/Event:

In Escambia County, Florida, the Red Cross partners with local military bases that provide warehouse space for sheltering supplies, and coordinates directly with other non-profit organizations and through BRACE. The Red Cross participates in training exercises, and cross-trains with the Medical Reserve Corps and the Community Emergency Response Teams (CERT), who are coordinated and trained by BRACE, and prepares for disasters with the Escambia County Department of Health. There are multiple relationships that are nurtured among various organizations so that when an event occurs, staff and volunteers are able to hit the ground running in response.

During the Incident/Event:

The Red Cross operates general shelters, which are open to the public. There is a requirement of one licensed medical professional for every 100 residents, for general first aid. These shelters provide some cots, which are assigned based on need, meals and beverages throughout the event, and remain open until those sheltering return to their homes or find alternate living accommodations if their homes are not habitable. The Red Cross is represented at the Emergency Operations Center for the duration of the situation.

Post-Incident/Event:

The Red Cross coordinates meal preparation and delivery out in the community and in the case of homebound individuals through BRACE, thus avoiding situations where several organizations are all bringing meals to one area while other areas are receiving no assistance, as has happened in the past. Additionally, the Red Cross assists individuals who have lost their homes with temporary shelter and other living requirements. BRACE was created in 2006 to address over 100 “Lessons Learned” by the Escambia County Long Term Recovery Committee and because “Following Hurricanes Ivan, Dennis and Katrina the Red Cross at the national level concluded that Red Cross was a response organization and really not intended to be a recovery organization.” (3:3) Hurricane Sandy recovery efforts have been supported by the American Red Cross in ways similar to those during and following the 2004 and 2005 seasons, although its current mission statement does not indicate a recovery component.

<http://www.redcross.org/about-us/mission>

3.4 Emergency Support Function 15 – Volunteers & Donations

The purpose of the emergency support function 15 (ESF 15) is to coordinate the efforts of volunteers and donated resources to fulfill the needs of residents and evacuees in the areas impacted by a disaster or incident. Responsibilities for specific functions within ESF 15 are divided between the United Way of Escambia County and Be Ready Alliance Coordinating for Emergencies (BRACE), incorporated as Community Organizations Active in Disaster, Inc. BRACE is currently the lead agency. The primary disaster-related activities of both organizations are presented below.

BRACE, Be Ready Alliance Coordinating for Emergencies, was incorporated in 2006, and has 450+ partners according to its 2012 annual report. Further,

- BRACE, since its creation, has been planning ways to address the needs of homebound individuals during emergencies, and to this end has created its Homebound Committee to assist individuals with visual, hearing and mobility impairments, without vehicles, with medical conditions, with intellectual disabilities, and those who are non-English speaking; further, BRACE is working as part of the Florida Division of Emergency Management Functional Needs Support Services Assessment, Analysis and Resource Subcommittee to develop tools to assist emergency management teams throughout Florida in planning for those with functional needs.
- BRACE coordinates Volunteer Reception Center training at a local church
- BRACE is working with chambers of commerce (Escambia and Santa Rosa counties) to enhance business resilience
- BRACE has active Community Emergency Response Team (CERT) training programs that prepare volunteers to assist in disaster preparedness, search and rescue, medical triage, medical treatment and disaster psychology, and other areas
- BRACE, with the aid of a grant from State Farm, has held two Youth Emergency Preparedness Expos to provide opportunities for K-12 youth to learn emergency preparedness skills and to “pre-recruit” them for CERT
- BRACE, in concert with the Fund for Gulf Communities – Florida, is working to enhance disaster readiness and response capabilities of community and faith-based organizations and businesses throughout Florida’s northern Gulf Coast counties by engaging them as participants in Voluntary Organizations Active in Disaster (VOAD) or Community Organizations Active in Disaster (COAD) to strengthen relationships and enhance preparedness, response, recovery and mitigation capabilities through community partner and resource identification, and continuity of operations planning (COOP) exercises and training.
- BRACE is partnered with other organizations in outreach activities designed to better prepare low income and homeless individuals to respond in disasters, including evaluation and inoculation of their pets, and provision of pet carriers, that allowed them to register for the “pet friendly shelter”
- BRACE with several partners established childcare services for first responders that frees them to serve their communities, while knowing their children are safely cared for
- BRACE’s faith-based committee members (60+) have agreed to provide assistance to vulnerable individuals after a disaster to help them return to normal life; this includes everything from debris removal to shelter, food, financial assistance, and mental/behavioral health and spiritual services

United Way handles monetary donations, while its 2-1-1 service is, in the words of United Way of Escambia County’s 2012 annual report, “. . . the community’s resource and referral center.” United Way 2-1-1 became nationally certified in 2013, and is supported by a website that is real-time, allowing for up-to-the-minute information that can be supported remotely, as was necessary when the United Way building was evacuated due to flooding in June 2012. During that incident, again from the 2012 annual

report, “. . . 2-1-1 captured flood victim data and redirected the requests for assistance to disaster teams from the American Red Cross and BRACE.”

Pre-Incident/Event:

As noted above, BRACE is very active in recruiting and training individuals for the Community Emergency Response Teams, and conducts an annual Youth Emergency Preparedness Expo to educate young people (K-12) about disaster preparedness. Experience shows that youth can exercise important influence on their parents to be better prepared for emergencies, and Title I schools are specifically targeted, since these children are part of the most vulnerable populations. Presentations to faith-based groups again are designed to educate members about vulnerable populations for more effective preparation and identification of the homebound, and to provide disaster kits -- sturdy plastic buckets with lids containing a flashlight/radio, a tarp, batteries, water, non-perishable food, and a can opener into which they are encouraged to put important papers, medications, etc. – to the extent BRACE resources allow. The Homebound Program identifies partners who sign a statement of understanding with BRACE allowing them to “. . . draw food, water, other commodities, other disaster relief supplies literally by the truckload from the government points of distribution for distribution to homebound individuals,” who are identified prior to the event as eligible. (3:15) This includes home healthcare organizations as well as faith-based groups.

According to the BRACE 2012 annual report, its strategic vision is “To be the most disaster-resilient community in America.” Its strategic direction, pre-event, is preparedness and mitigation “. . . through education, training, equipping and engagement of the community.”

United Way 2-1-1 works with other local agencies to create and maintain a community registry that connects those in need with organizations and opportunities that are able to fill those needs in the most convenient and expedient manner possible. United Way of Escambia County, in addition to its own personnel and programs, provides office space to BRACE. This proximity promotes communication and coordination opportunities for the organizations as they work to prepare for emergencies that may arise.

During the Incident/Event:

BRACE, United Way 2-1-1, and other relevant organizations are represented at the EOC and representatives remain there for the duration of the event until they are able to relocate either to their offices or, in the case their facilities are damaged, to temporary locations. BRACE seeks to fill gaps and minimize duplication of effort by working with other organizations to coordinate the most effective response possible, such as coordinating childcare for first responders, Citizen Corps, and CERT.

Post-Incident/Event:

During the immediate post-event period, once roads are cleared and downed power lines are removed, CERT teams and members of BRACE’s Homebound Initiative (with approximately fifty-one partners, including many faith-based groups) move into the community to locate individuals needing assistance.

For those who have been identified by the Homebound Initiative, HI partners arrive to provide whatever type of assistance is needed. CERT teams move into damaged areas, seeking individuals in need of help. CERT members are trained to provide basic first aid, and to recognize when more in-depth medical treatment is needed.

4. Community Challenges and Response to Disaster Preparation and Response

4.1 Coordination of Donations and Volunteers

4.1.1 Lessons Learned in Mississippi and Alabama:

The initial 2007 study noted the problems encountered with donated supplies and medications in the aftermath of Hurricane Katrina. Among other things, organizations received supplies which they had not requested and did not need, donated medications arrived unsorted and with no indication of the source, and some beneficiary organizations lacked the physical space needed to store the supplies received from their benefactors. In the 2010 follow-up study, organizations reported improvements in methods for managing the distribution of donated supplies. Respondents reported that the state health departments now coordinate the distribution of medical supplies and medications that come from outside donors. Organizations send information regarding needed supplies via computer network to the state. The pharmacist in a non-profit pharmacy explained that the pharmacy is restricted by state regulations and may only accept supplies and donations from medical manufacturers or bulk pharmaceutical houses. These changes were implemented to improve the distribution of medicines and health supplies and to ensure the safety of the public by controlling the sources of these donated items.

The coordination and management of the many volunteers who came to the Gulf Coast region to offer assistance in the aftermath of Hurricane Katrina presented unique challenges for the areas most affected by the deadly storm. The initial study identified the need for mechanisms to coordinate medical, as well as non-medical, volunteers. Respondents in the follow-up study, from both Alabama and Mississippi, noted developments in the credentialing and registration of volunteers. Respondents in Mississippi explained that the state's Department of Health has a credentialing process for volunteers and at that time maintained the Department's Volunteers in Preparedness Registry (VIPR), an online medical and non-medical volunteer registry. Similarly, in Alabama, the Department of Public Health maintains a volunteer database of credentialed volunteers. Any individual who desires to work as a volunteer for the local or the state health department would register via a state-run computer system and the health department would check the registrant's credentials via the system. Each volunteer submits to a background/criminal history check, has their credentials verified semi-annually, has their training record verified, and is issued an identification badge. The state maintains a list containing the names and locations of volunteers. In Mobile County, the Mobile County Health Department sponsors The Mobile Medical Reserve Corps (MMRC). A health department representative reported working with the Medical Reserve Corps to find volunteers then looking to the state for credentialing and privileging.

4.1.2 Lessons Learned in Florida:

In response to lessons learned in Escambia County, an organization called BRACE (Be Ready Alliance Coordinating for Emergencies) was created to help improve community disaster preparedness, response and recovery. As presented in the previous section on Emergency Support Function 15, BRACE serves as the linking-pin coordinating more than 450 partner organizations to reduce duplication of effort and to address gaps in disaster response and recovery services. BRACE develops agreements with faith-based organizations to provide services and distribute supplies following an event. Closer proximity of the faith based organizations to those in need speeds the assessment process and facilitates distribution of supplies. During disasters BRACE has a seat at the Escambia County Emergency Operations Center and is responsible for coordinating social and service support services utilizing donated and purchased resources to meet the needs in the community.

The United Way of Escambia County is also responsible for addressing response and recovery needs of residents according to ESF 15. The United Way of Escambia County accepts and distributes monetary donations, and through its 2-1-1 service provides referrals to local resources for assistance.

With respect to credentialing volunteers, at the local level BRACE is very active in recruiting and training individuals for the Community Emergency Response Teams (CERT) and Teen CERT, and conducting Youth Emergency Preparedness training in schools. CERT teams locate disabled and elderly residents, and those who are under-resourced economically to help them prepare for disaster or evacuate to shelters. After events, CERT members engage as neighborhood search and community response teams to check on the elderly and disabled to ensure they are safe or to provide assistance. The database available to BRACE has the capability to map the locations of those needing assistance.

The management of the Florida Medical Reserve Corps (MRC) is housed in the Florida Department of Health. Its mission is to augment local and state public health and medical services with credentialed volunteers during medical operations. MRC is composed of volunteer licensed or certified health professionals and health students who volunteer their services during an emergency. Volunteers complete an online application form with the national registry, and the local coordinator verifies the credentials and then accepts the volunteer into the system. The local coordinator can encourage those with partially completed applications to complete the application process to become active. After acceptance, volunteers must complete online or in-person training to be fully certified. Volunteers must go to the MRC-sponsoring agency, which is most frequently the county health department, to complete the HIPAA forms and insurance paperwork. Subsequently, picture ID badges and polo shirts are provided.

The ID badges are barcoded, and volunteers are scanned into and out of facilities so their presence can be tracked and the dollar value of the volunteers' hours can be estimated for particular events. During an incident/event, a mission is created and communicated to all state volunteers using the internal messaging capabilities of the SERVFL system; messages are also sent to external e-mail accounts, cell phones, and pagers in case volunteers do not log into the SERVFL system.

Escambia County, FL, is working to recruit veterinarians and vet technicians to serve on the MRC. The county coordinator is also working to start a Junior Medical Reserve Corps to get students in high schools enrolled, trained, and actively involved in the concept of volunteering when they become adults.

Non-medical volunteers who are affiliated with an agency not represented at the EOC are coordinated through BRACE. The county and a local church created a volunteer reception center, where unaffiliated volunteers report and are directed to the areas of greatest need. BRACE also has rights to the Community Database for Escambia and Santa Rosa Counties, which has a volunteer module that allows BRACE to track volunteers as they enter and exit the area. There is also a component of the system that allows BRACE, with permission from the client, to link into the Coordinated Assistance Network (CAN) to see a client's entire case management to ensure that all needs are met and there is no duplication of benefits. The system also provides accurate records of services delivered. Thus, it is apparent that Escambia County has established an effective network to control and coordinate medical and non-medical volunteers responding in an emergency situation.

4.2 Special Needs Shelters

4.2.1 Lessons Learned in Mississippi and Alabama:

The devastation caused by Hurricane Katrina and the large number of evacuees with chronic conditions highlighted the need for special needs shelters. Immediately after Katrina, Mobile and Baldwin Counties in Alabama set up special needs shelters. A special needs shelter is defined as a "secure facility with generator back-up power, water, sanitation, limited food service and medical oversight to serve as a refuge of last resort during emergency conditions for persons with physical and/or mental conditions requiring limited medical/nursing oversight, who cannot be accommodated in a general population shelter, and who bring their own caregiver, medical supplies, equipment, and special dietary supplies for a 72 hour period" (<http://www.mobilecountyhealth.org/PDF/medicalneeds.pdf>). As a result, in 2006, opening a special needs shelter before a disaster became a state mandate. This mandate requiring special needs shelters is a positive result of lessons learned from Katrina. The Alabama Department of Public Health is responsible for activating special needs shelters in Alabama during times of evacuation. The special needs shelter in Mobile can house 150 medical needs patients and one caregiver for each patient (300 total). The special needs shelters also have nurse practitioners and a physician to provide a higher level of medical care than is found at a mass shelter. At the mass shelters during Katrina, there was only one nurse in each mass shelter and no requirements to open special needs shelters – causing stress on the health care workers staffing the shelters and system overloads. As a result, Alabama state regulations now require two nurses, an environmentalist, a secretary, and a social worker to be provided in every mass shelter.

In 1999, the Mississippi Comprehensive Emergency Management Plan (MCEMP), also known as the 'Hurricane Plan,' placed responsibility for pre and post-landfall sheltering on local governments. In 2004, the Mississippi EMA reportedly asked local emergency managers to designate specific facilities as special needs shelters (<http://www.gpoaccess.gov/serialset/creports/pdf/sr109-322/ch7.pdf>). However, after Katrina, because some hospitals had to be used for special needs patients, state strategy was revised to provide an additional 1,500 beds for the special needs population and to designate the

state's 15 community colleges and their multiple campuses as special needs shelters. The MCEMP was recently revised again. Respondents in Mississippi reported the number of special needs shelters has increased throughout the state since Katrina. One respondent was pleased that before Gustav the agency could even check to determine which clients had reserved space at and secured transportation to the shelters.

Since Katrina, hospitals and health departments in Alabama and Mississippi have developed protocols to determine which patients are qualified for special needs shelters. Special needs shelters accept individuals who are able to do the activities required for daily living, but need some assistance with equipment or electrical power to run ventilators and other types of medical equipment. Patients who require tracheotomy suction, dressing changes, or assistance with medications are also eligible for medical need shelters. Patients who need nursing care are not qualified for special needs shelters and should be admitted to hospitals or nursing homes during an event.

Although non-brittle diabetics are not eligible for special needs shelters, some respondents strongly recommend diabetics should be admitted because diabetics may require several types medications that often require refrigeration, which would be available at a special needs shelter. Further, the stress of a disaster causes blood sugar to increase and eating habits are altered during evacuation, thus medical assistance might be needed.

Respondents disagreed about admitting patients with HIV/AIDS to special needs shelters. One respondent suggested that individuals with HIV/AIDS be admitted to special needs shelters to ensure consistent administration of medications. Another respondent indicated only HIV/AIDS patients in hospice should be admitted since most afflicted with HIV/AIDS responsibly manage their own medications without assistance.

Respondents recognized that special needs shelters have been a huge improvement on the health care system and take a considerable burden off hospitals. However, there are several problems reported by participants with regards to the special needs shelter situation. First, in Alabama the number of special needs shelters is reportedly not adequate to meet the demand. One participant was concerned that the response in a true disaster situation would be problematic as people tend to react on impulse and the space available in the special needs shelters is limited. This problem is being addressed and new ways to "pop-up" special needs shelters are being evaluated. Also, one organization reported that adjacent counties are working together to be able to relocate overflow patients if necessary.

Other issues are that sometimes the caregiver, who must accompany the patient, is as ailing as the special needs patient; or that health care facilities or family members may try to drop off special needs patients without providing a caregiver. One organization reported that the solution to this problem is to strictly adhere to the admittance criteria and recommended police presence at the special needs shelters in case someone objects to the admission criteria. Another respondent from Mississippi reported concern over the number of shelters possibly being reduced due to a lack of resources. Despite the reported concerns, the advantages to both the community and the health care system are significant.

Individuals with special medical needs must realize that special needs shelters are not equipped with hospital beds, do not provide personalized nursing care, and cannot fulfill specific dietary needs of all patients. For these reasons, most organizations and providers in Alabama and Mississippi encourage patients to evacuate the area. Respondents strongly recommend that dialysis patients should be evacuated.

Another weakness in the current system is that organizations serving patients with certain chronic illnesses that do not meet the criteria for admittance into a special needs shelter are realizing their organizations should assist clients with evacuation or finding other types of shelter. They are working to find solutions for the clients they serve.

4.2.2 Lessons Learned in Florida:

The State of Florida is encouraging those in need of special needs shelters to preregister; however, based on experiences in Escambia county during Hurricane Ivan, officials learned that preregistration for special needs shelters is no indicator of how many people will show up when a hurricane threatens. During Ivan, only 3% of those who had been preapproved for admission to the special needs shelters actually went to the shelter, yet the shelter was overcrowded and the majority of those sheltering were walk-ins. Many individuals who came to the special needs shelter either did not have a medical condition that required nursing assistance or exceeded the level of care that can be provided at a special needs shelter. Individuals who exceed the level of care are referred to hospitals, their home healthcare agency and skilled nursing facilities. Those who did not require nursing assistance were referred to general population shelters. These findings support the concerns of many along the coast that the capacity of special needs shelters is inadequate compared to the number who need the services.

Preregistration application forms are available from the Emergency Management offices in all 67 counties in Florida. Expectations are that home health care agencies, the Council on Aging, local social services agencies, physician offices, hospitals, hospices, nurse registries and home medical equipment agencies know about special needs shelters and the registration process and are all expected to assist eligible residents in completing the application. Currently, approximately half of those applying for admission to the special needs shelter come through a home healthcare agency on behalf of their clients. This, however, does not reflect any hard data on how many individuals are expected to seek special needs shelter admission, or indeed, how many could be eligible. One respondent expressed concern that the number of elderly and poor have increased since the last hurricane, so capacity is likely to be inadequate.

4.3 Providing Services for Evacuees

4.3.1 Lessons Learned in Mississippi and Alabama:

In the aftermath of Katrina, health providers in Mississippi struggled to meet the medical needs of local patients and the thousands of displaced individuals, due to seriously limited infrastructure and personnel. In coastal Mississippi, a new homeless population developed as people moved into the area in search of work, without any contacts in the immediate area and very limited resources. Health providers reported post-storm demographic changes, such as losing 50-75% of regular patients but gains

in new clientele, as some counties estimated a 20,000 to 40,000 person influx. Many displaced patients had chronic diseases and did not have medical records, prescribed medications, and no way to contact their regular primary care facility. Many experienced language barriers, as translators and bilingual staff were unavailable. Most of the displaced population was uninsured due to unemployment and lack of Medicaid records. Displaced patients sought care in hospital emergency departments, or poorly equipped mass care shelters, and special needs shelters. Health care personnel including pharmacists, social workers, health care providers, support personnel, and administrators rose to the challenge and put forth tremendous effort to help all in need. Over time they were assisted by medical volunteers and myriad volunteer agencies.

Destruction along the Mississippi coast caused residents to lose their homes and all possessions. Almost two years after the storm many residents were still living in tents or FEMA trailers. The enormity of the housing problem for this low-income population required a complex solution and there is little evidence to suggest that if another disaster of similar magnitude occurs, a solution to housing for low-income individuals and families will be available.

Childcare was also a problem as displaced individuals had no support network of family and friends and could not afford or even find childcare in order to seek employment or return to work.

4.3.2 Lessons Learned in Florida:

Officials in Escambia County learned from Katrina and similar disasters, such as the BP oil spill and the earthquake in Haiti, that the county must be prepared to provide housing, education, food, medical care, medications, and money to evacuees from other areas. If something happens to the east or west of Escambia County, such as with Hurricane Katrina, the county may have a responsibility to assist those evacuees. After Katrina, the county saw an influx of between four and seven thousand individuals or families who were seeking care and relocation assistance. The county resources were overwhelmed with the need even though the area was otherwise unaffected; following the oil spill in the Gulf and the earthquake in Haiti the county had similar experiences. While the community itself did not suffer significant damage, it was still absorbing the impact of those distant disasters.

Providing prescription medications was an issue that is discussed in a later section. Evacuees, who moved to Florida to escape the devastation of Katrina, were treated at federally funded clinics in the Panhandle. These clinics were promised emergency Medicaid funds from the home states, which were never delivered, but the clinics treated the patients anyway through their urgent care facilities.

Escambia County now has plans for providing evacuee assistance from FEMA, BRACE, and the State of Florida. The Emergency Operations Center and ESF-8 know how to direct individuals to find medications and get evacuees into the medical care system. Through BRACE and The United Way of Escambia County, there is knowledge of the social service agencies in the community and local non-profits so that evacuees can be directed to sources that will provide needed goods and services.

5. Healthcare Delivery System

Immediately following Hurricane Katrina, challenges to the healthcare delivery system on the Gulf Coast became evident, which included severely damaged or destroyed facilities, communication failures, staff shortages due to evacuations and relocations, power outages, fuel shortages, and disruptions to supply channels for consumer goods, medical supplies, and medications, as well as shortages of food and clean water. Many organizations have taken preliminary measures and are now equipped to mitigate such post-disaster situations by preparing their facilities and staff in advance. A summary of the health system pre-disaster preparation recommendations from the 2007 report is presented in Table 3.

Table 3. Pre-Disaster Organizational Planning to Improve Health Service Delivery	
Facilities Backup	<ul style="list-style-type: none"> • Every organization that provides healthcare services should have an alternative location, a plan for repair and reconstruction, or mobile units stored out of harm's way
Facilities utilities	<ul style="list-style-type: none"> • Every organization that provides healthcare services should have backup generators and fuel to run the generators for several days • Contracts with fuel providers to ensure adequate fuel replenishment • Additional sources of water for cooling and essential needs
Electronic medical records	<ul style="list-style-type: none"> • Electronic medical records should be backed-up and easily accessible for patients and providers at a distance • A national system of electronic medical records, which all health services providers could congruently access, should be developed
Augment communication capabilities	<ul style="list-style-type: none"> • Update employee contact information annually and test communication links every six months • Obtain redundant systems for emergency contact in addition to landlines and cell phones, obtain satellite phones, 1-800 numbers out of area, and HAM radios • Prepare to communicate with patients using redundant systems for emergency contact
Staff emergency planning	<ul style="list-style-type: none"> • Recommend employee emergency plans include places to meet, who is to evacuate, where to evacuate, and childcare and pet care plans • Send disaster preparation letters to employees annually containing emergency planning instructions and recommending elements for family plans
Supplies	<ul style="list-style-type: none"> • Logistics and financing are primary issues to overcome with stocking of medicines and supplies • Preorder an abundance of supplies, water and food to be store for significant periods of time or pre-stage delivery of necessities outside the area of impact • For in-house patients ensure adequate food, water, and medical supplies for at least five days

5.1 Disaster Plans

5.1.1 Lessons Learned in Mississippi and Alabama:

Before Katrina, few organizations in Mississippi or Alabama had disaster preparation strategies, the lack of which resulted in confusion and ineffectual response. The follow-up study found all participating organizations, in Alabama and Mississippi, had developed formal disaster plans or at least a set of procedures for emergency preparation. One recommendation is for disaster plans to be more efficient and flexible. Participants noted that an organization's disaster plan cannot cover every contingency, and extensive disaster preparation manuals are not useful in disaster situations when time is of the essence and adaptability is key. Therefore, respondents recommended that organizations create simplified plans that cover four elements: 1) staff provisions; 2) facility alternatives if infrastructure is damaged; 3) supply plans; and 4) a list of people to call for back-up assistance. Every participating organization reported feeling better prepared for the hurricane seasons subsequent to Hurricane Katrina. However, the area has only experienced relatively weak storms and participants disclosed a level of concern that

organizations may become complacent as time passes. In an effort to prevent complacency, a recommendation was made to participate in ongoing disaster drills and simulations, as well as revisiting plans periodically.

All participating organizations that provide direct patient healthcare now participate in periodic disaster training sessions and drills. Recommendations were made to also provide more online training opportunities for staff. The two organizations that had not participated in emergency preparedness training provide social services and do not provide direct patient healthcare. Despite increased participation in drills, several participants conveyed that drills may lead to a false sense of security because drills are never like a real event. One organization was concerned that training cannot teach people the right response for all disasters. As such, a recommendation is to participate in numerous drills of various types to ensure overall readiness for any type of disaster situation. While regulatory requirements for disaster preparation must to be covered, one organization is moving to “best practices” streamlined, short protocols that can be consulted quickly in case of disaster.

Vast improvements in disaster preparation along the Mississippi and Alabama Gulf Coast are evident. Many of the recommendations from the original study were met or exceeded. Although the state of disaster preparation has improved, it is not seamless. It is the recognition that each disaster brings with it different problems that the future of disaster response on the Gulf Coast is founded.

5.1.2 Lessons Learned in Florida:

By law, healthcare facilities in Florida are required to have disaster plans in place as a part of the licensing procedures. Each healthcare facility’s disaster plan is reviewed by the local emergency management office for compliance with specific state criteria related to the type of facility. The county emergency management office is required to report the plans to various state agencies for review including the Agency for Health Care Administration, the Department of Elder Affairs, the Department of Health, the Department of Community Affairs, as well as The American Red Cross. The fire plan section of each report must be reviewed by the appropriate local fire department. In addition, plans must be approved by the Department of Public Safety in the Division of Emergency Management. Copies on file with the Department of Public Safety are public records.

The Florida Association of Community Health Centers (FACHC) has developed a web-based software program based on federal, HRSA, and state guidelines. This allows clinics to create their disaster plans by following a template.

The Health Department provides disaster training for its employees. Although the Department is responsible for many types of disaster plans, the general emergency operations plan, the special needs shelter plan, a continuity of operations plan, a mass prophylaxis plan, and the strategic national stockpile assets plan are updated and exercised annually. Health department employees are trained in the Core Competencies for Public Health Preparedness for disaster response. Health department employees conduct annual exercises with hospital emergency management directors. Training and disaster exercises are conducted every year, depending on which plans are updated that year.

The Health Department offers training for home health agencies, nurse registries, hospices, and home medical equipment providers to help them understand how to help their patients and clients prepare for disaster and how to register patients for special needs shelters or other care facilities. The Health Department also provides training in partnership with BRACE to provide an Advanced CERT Academy (Community Emergency Response Teams) that includes classroom training and a full scale drill to help prepare the CERT teams for disaster.

The regulatory requirement for disaster plans prior to licensing or license renewal, and the review process at the local and state level, help ensure that every health care facility in Florida has a realistic disaster plan. Two informants emphasized the value in conducting after-action review sessions and writing after-action reports as a way of truly learning from disaster experiences and from disaster drills. Respondents further clarified that disaster preparation in Florida has improved over the years with increased communication among organizations, greater cooperation and more Memoranda of Understanding (MOUs), contracts, and mutual aid agreements.

5.2 Destruction of Facilities

5.2.1 Lessons Learned in Mississippi and Alabama:

After Katrina, a problem for many health care organizations was the partial or total destruction of their operating facilities. Today, in Alabama and Mississippi, most organizations have identified alternate locations for repositioning their facilities should they be damaged or destroyed by a disaster. Those organizations with wireless capabilities and/or mobile units can now pick up and relocate operations whenever needed. One organization even had an in-house construction crew for immediate repairs during a disaster to ensure continuity of operations.

5.2.2 Lessons Learned in Florida:

As part of its disaster plan, one clinic has a plan that includes assisting at local hospitals if their facility is damaged. An FQHC that is located in a mandatory evacuation area is investigating the possibility of moving to a location less vulnerable to flooding and other natural disasters. This organization has hired a maintenance supervisor with extensive experience dealing with storm damage, cleanup, and prevention. During data collection, the staff was preparing a Continuity of Operation Plan for the facility, with completion planned before the start of the 2013 hurricane season.

5.3 Loss of Utilities: Electrical Power, Water & Sewer

5.3.1 Lessons Learned in Mississippi and Alabama:

Extensive power outages along the Mississippi Gulf Coast after Hurricane Katrina limited the delivery of healthcare services. Without electrical power, providers cannot run essential equipment, access electronic records, or store medications that require refrigeration. Further, the lack of air conditioning and ventilation affects sterilization procedures and, ultimately, patient health. Five years after Katrina, every participating organization that provides healthcare services in Mississippi and Alabama now has a generator. Many have large generators that power their entire facilities and some have additional portable generators that can be used in mobile units or to provide basic power to satellite offices. These

mobile units can be taken away from the area ahead of time to prevent loss and then brought back after the disaster event. However, it was noted that having a generator for back-up power is not enough security as generators can fail to start and need routine maintenance. So, scheduled testing of the generators is recommended to ensure that they are working when needed.

Fuel shortages after the disaster inhibited generator usage. Many permanently installed generators are powered with natural gas, while others are powered with diesel or gasoline. One organization now has contracts with fuel providers to hold 26,000 gallons of diesel during the summer months to power the facility's generators. Another organization has backup tanks with diesel and gasoline and generators to run the pumps. Another organization maintains generator fuel to power the generators for 96 hours.

Further, water supplies and sewer lines were disrupted after Hurricane Katrina, which caused problems with sanitation, sterilization and cooling. Now, hospitals and some clinics have taken precautions, including back-up water lines, to ensure adequate water supplies will continue to run building chillers and provide sanitary flushing. One organization reported having a system whereby water would be pumped from the lake on their property into the building for air conditioning and sanitation. One organization installed a well on the facility property and another organization has invested in a water purification system.

5.3.2 Lessons Learned in Florida:

One Florida clinic is creating rental agreements with companies in the surrounding areas to bring large generators to the clinic's facilities after an event.

In Florida, the dialysis centers all have generators and water purification systems to continue service provision if the infrastructure is damaged. The Health Department checks the facilities to ensure they have the resources needed to serve their patients.

One hospital prepared for interruptions in the water supply by having many barrels of water available for flushing toilets.

5.4 Lack of Gasoline for Staff Transportation

5.4.1 Lessons Learned in Mississippi and Alabama:

Transportation to and from clinics and hospitals in Alabama and Mississippi became difficult for health care workers due to gas shortages after Katrina. Now, hospitals in Mississippi and Alabama have arrangements to provide gasoline directly for employees if gas stations are closed. In certain counties, plans are underway to designate specific gas stations to provide fuel for health care workers after disasters. One hospital has installed a gas tank on premises and maintains contact with a gasoline company to provide gasoline to fill employees' cars. A problem that was reported with storing gasoline is that gas expires. One organization recommended having a plan in place to stage the extra gasoline supplies needed immediately prior to a disaster event, if possible.

5.4.2 Lessons Learned in Florida:

Following Ivan, the area ran out of gasoline and diesel so garbage trucks, school buses, and delivery trucks could not run. Now more gasoline stations, restaurants, and retail stores have generators to speed the recovery process. Emergency Support Function 18 (ESF 18) focuses on businesses, industry, and economic stabilization. The purpose is to get businesses involved in the process before, during, and after a disaster. ESF 18 can identify businesses that are open, which have needed inventory, and assist in getting businesses open again as soon as possible following an event. The Chamber of Commerce is involved in ESF 18.

To help ensure access to gasoline for residents, Florida state law requires gas stations located along evacuation routes or interstate highways to be wired to access an alternative generated power source during a power outage, but does not require installation of generators. Stations built or renovated after 2007 also must comply. If a corporation or entity owns at least 10 stations within a county, the entity must have a least one portable generator for every 10 stations, which is located within 250 miles and can be operational within 24 hours of the power going off. In addition, fuel terminals that supply retailers must be able to operate within 36 hours of a major disaster and are required to operate on alternative power sources for at least 72 hours. (9)

BRACE and the EOC have a list of gasoline stations with generators and that information is available to health providers and the public.

One clinic administrator reported that in another city after a disaster, he had a gasoline company bring a gasoline truck to the site to provide gasoline for employees to travel to and from work. He is working on agreements with companies to provide needed gasoline after an event.

Having more gas stations with backup generator power is expected to reduce gasoline shortages following a disaster, assuming tankers can supply these stations. One problem residents in the Panhandle experienced just before Hurricane Dennis ('05) was a shortage of fuel due to people, remembering their experiences the previous year with Ivan ('04), purchasing gasoline for generators, topping off tanks, and purchasing fuel for evacuation. A major challenge was getting enough fuel into the area before the storm to provide for those who wanted to evacuate and to purchase gasoline for generators.

5.5 Destruction of Medical Records

5.5.1 Lessons Learned in Mississippi and Alabama:

Hurricane Katrina displaced over one million people from the Gulf Coast area, and most of them were separated from their medical records. Both immediately after the storm and in the weeks to follow, medical providers had no way to know about or track patients' pre-existing medical conditions, medications, or allergies, and many times patients themselves were unable to provide accurate medical histories for a variety of reasons.

Although there were some organizations that had versions of electronic medical records (EMR) prior to Katrina, it was apparent that almost all health providers had implemented EMR or were in the process of

implementing them post-Katrina. Despite these advancements, there seemed to be new problems emerging with EMR. These include “turf issues” with EMR content and security issues, as well as compatibility issues among dissimilar systems. As a result, a new recommendation has been posed to continue to work toward developing a national system of electronic medical records; one that all health service providers could congruently access.

5.5.2 Lessons Learned in Florida:

One medical clinic made the decision to move to electronic health records in 2002 after losing medical records due to flooding more than one time. Subsequently, the clinic lost electronic data because data was not backed up in remote locations, so now based on lessons learned, they are using EHRs and backing up the system. At the time of the interviews, the facility was planning to back up its servers in another state that would allow remote access. The EHR allows the clinic to refill prescriptions via the Internet even if the facility is not open. The patient calls the clinic and requests a refill; the nurse practitioner can access the patient’s record online and send the prescription to the pharmacy via the Internet.

The clinic also has contracts with local hospitals that allow providers at the clinic to access patient records, radiologic studies, and lab results in the hospitals’ systems. The clinic is also a member of the Florida Health Information Exchange, which will allow providers to communicate securely with other providers in the exchange. The exchange will make it easier to share patient information and at the same time ensure data security.

5.6 Communication Challenges

5.6.1 Lessons Learned in Mississippi and Alabama:

After Katrina, many health care providers and social service organizations experienced difficulties contacting their staff, other organizations, and patients/clients due to the destruction of landlines and cell towers, and lack of electrical power. As a result, these organizations have increased the number and types of communication devices in their facilities. Organizations reported overall improvement in communication abilities by increasing the types of communication devices available, by adding 800 MHz radios to health care organizations, sheriffs’ offices, police departments, the EMA, shelters, and hospitals to ensure constant communication availability, adding two-way radios and satellite phones. Also, every hospital in Alabama received ham radios for emergency communication back-up.

Providers experienced difficulty communicating with staff following Katrina, so providers have learned the importance of updating employee contact information at least annually to ensure the capability of contacting staff in the event of a disaster. Every organization reported utilizing phone services to contact employees, such as cell phones, landlines, answering machines, voicemail, and phone trees. The organizations using phone trees recommend testing communication links every six months to ensure employee contact information is up to date. Nine organizations also use broadcast television, e-mails, newspapers, networking sites and radio for emergency announcements as redundant emergency information systems. As a result of Katrina, every organization reported that either employees already know the protocol for after a disaster or they are contacted ahead of time with instructions. Providers

are also using social networking sites as a way to update employees and patients. “Fast connect” is another system that is utilized mainly by hospitals that holds contact information for employees and sends out mass information to all communication devices employees have registered. There is also now an alert system through public health that sends out alerts to employees who are on the list.

Providers also experienced difficulty communicating with patients after Katrina; therefore, communication with patients has also been enhanced. Again, every organization reported using the phone to contact patients prior to a disaster. Several organizations reported benefits to using a combination of patient communication methods including phone, radio, television, newspaper, websites, message boards and recorded messages both before and after a disaster. The Emergency Management Agency has a reverse 911 system that transmits messages to the public that organizations can also rely on to reach patients. Unless providers have frequent contact with patients, maintaining accurate evacuation information is problematic. Informants suggest it is more important for providers to give patients multiple organization phone numbers so patients can contact providers after events regardless of physical damage to facilities. One respondent stated, “Your patients can find you if you’re open, but if you’re closed, your obligation is to tell them where to go [to receive services].” In Mississippi, the state has created a 1-800 number for “Community Health Center Mississippi;” this number allows patients to contact all community health centers in the state.

Following Hurricane Katrina, providers in Mississippi and Alabama had increased the number and types of communication devices to communicate with emergency management agencies, other health providers, social service agencies, staff, and patients. Devices include satellite phones, short-wave radios, and ham radios. Providers are also using social media and local media to communicate with patients and the public, and are more proactive in providing 1-800 numbers that patients can use to contact service providers even if patients evacuate are seeking care in another location.

5.6.2 Lessons Learned in Florida:

“The main breach between [a clinic] and our patients after a disaster is communication” (13:24). One communication challenge faced by clinics in Florida is that many of their patients have prepaid cell phones with limited minutes. If patients are placed on hold for long periods of time, the minutes are quickly consumed. Frequently, by the time the clinic or specialists can return calls, the time on the cell phone is used and the patient cannot be reached.

The Health Department and hospitals have landlines, cell phones, satellite phones, ham radios, short-range handheld radios, and email for contacting health providers. All these methods can be used to contact pharmacies and urgent care centers. The Department also maintains contacts for a phone tree, but recognizes that it is not the most effective communication method. (6:19)

After a disaster, the local health department is prepared with pre-developed posters because sometimes after an incident/event, the only available communication method is the written poster. However, if power and the Internet are available, the department can communicate using web-based communication and the news media. The local health department is not authorized to use social media; however, the Florida Department of Health is authorized to use social media, such as Facebook and

Twitter, and to offer a 1-800 line to the public. If the local response call center is overwhelmed with calls, the state agency has a call center that handles the overflow. (6:20)

One clinic provides employees with a phone number for them to call and check in, and to receive updates; this system keeps employees informed in case of an emergency.

One clinic has an electronic health record system that allows patients to register on their Patient Portal. The system can post banners and information for patient access through the Internet. The system also has the capability to send text messages to patients who are registered on the portal system. In case of disaster, the clinic would also post a message on its main telephone line informing patients where to go to receive treatment (11:54). The clinic is also hoping to centralize its phone system so phone operators would field calls for all the clinic's sites to enhance communication among the sites.

For several weeks following Ivan, residents in Escambia County experienced communication difficulties. Communication problems increased anxiety among the elderly population as they could not contact their connectors at the Area Agency on Aging to obtain their medications. Lack of communication was linked to a number of health issues (20:6).

United Way of Escambia County received full national accreditation of its 2-1-1 services in July 2013. The referral service has a resource database that includes ten counties. Over half of referrals to 2-1-1 have come from social service agencies seeking help for their clients, when the agencies were unable to provide needed services. During emergencies United Way's 2-1-1 service relocates to the Escambia County Emergency Operations Center, where its soft phone system allows access to 2-1-1 staff anywhere there is Internet service. This allows staff to evacuate the area, at least as far away as Huntsville, Alabama, and still provide referrals to local services. The system is equipped to refer callers to the closest provider based on the caller's location.

5.7 Staff Family Disaster Plans and Childcare

5.7.1 Lessons Learned in Mississippi and Alabama:

Provider organizations in Alabama and Mississippi specifically stress pre-disaster family planning and recommend employee plans include places to meet, who is going to evacuate, where to evacuate to, childcare and pet care plans. Some organizations send letters to all employees in May of each year that instructs them to make family, childcare and pet care plans, and reminds staff of their obligation to report for duty during disasters. Some organizations actually provide definitive shelter space for staff and family members of employees who are activated. However, there were some organizations that currently do not assist employees with any family emergency planning. Regardless, these organizations did recognize the importance of having such a plan in place and one organization would be including this protocol for discussion.

Improving post-disaster support for staff members is a primary concern for most organizations resulting from experiences following Hurricane Katrina. Prior to a disaster, most hospitals bring in employees one or two shifts ahead of their regular schedule to ensure adequate staffing levels and may even house staff overnight so that they are on hand for their next shift. Organizations that remained open post-

Katrina provided staff with services such as temporary daycare, laundry units, and free or discounted food, all of which have been incorporated into their post-disaster plans. One organization also recommends providing staff members with a letter or credentials to inform first responders of where they work and the need to get through road blocks to return to provider facilities or to staff mobile medical units.

5.7.2 Lessons Learned in Florida:

Escambia County has extensive experience coping with hurricanes through the 1990s and 2000s, including Hurricanes Andrew, Erin, Opal, Dennis, Katrina, and Ivan. The State of Florida adopted the model the DOH-Escambia developed back in '94 - '96 as its model for special needs sheltering, as well as the necessity for all staff to be involved in disaster preparedness by having family disaster plans. Now, all job descriptions at the Florida Department of Health specify that every employee will report for duty in case of a disaster (5:23). All Department staff are allowed to bring their families to the special needs shelter regardless of whether they are on duty at that time.

In Escambia County, BRACE coordinates local and state agencies to provide childcare for first responders in situations where both the husband and wife are first responders employed in one of five local agencies. These include fire, EMS, the utilities authority and the sheriff's office. One Continuity of Operations trainer recommended that following disasters, facilities consider setting up temporary daycare for health care employees that could be staffed by employees who are good with children. Daycare would allow staff to return to work while schools and daycare facilities are closed. Some health care providers are reportedly investigating the possibility of creating childcare facilities for their staff following a disaster.

Volunteers in the Medical Reserve Corps must have a family disaster plan that identifies someone in their family who will care for the family while they are volunteering. The plan must also include preparation for family pets.

5.8 Staff Mental Health Support

5.8.1 Lessons Learned in Mississippi and Alabama:

Mental health support for employees was a strong recommendation from the 2007 study. The follow-up study found seven organizations that are providing mental health support for their employees, either through onsite counseling or arrangements to refer staff to specific counseling centers. However, organizations are seeing mental health being included more in local planning and state planning efforts and another reported a major push to improve mental health services along the Gulf Coast.

5.8.2 Lessons Learned in Florida

The DOH-Escambia has a Memorandum of Understanding with the Lakeview Mental Health Services Center to provide behavioral health services, including temporary emergency placement and other qualified services, for special needs clients exhibiting behavioral health needs exceeding the capability of special needs shelter staff. Staff on duty at the special needs shelter may bring their families to the shelter. Work hours are monitored carefully to ensure workers take breaks and have refreshments. The

Department tries to limit duty time to 72 hours. Between shifts, workers exchange reports and conduct debriefings, which allows for venting. If there are critical incidents, staff can be referred to the State of Florida Employee Assistance Plan for help.

In Florida, the Department of Children and Families has responsibility for civilian mental health issues. This comes under ESF-8. At the time of this study, there are only two behavioral health response teams in the state. In addition, there are mental health counselors, chaplains, ministers, and social workers who are enrolled in the Medical Reserve Corps. If the storm were bad enough and people were experiencing post-traumatic stress disorder, the federal mental health grant would activate.

A priority of BRACE is to provide training for volunteers on disaster psychology, particularly compassion fatigue. BRACE also has a faith-based committee that includes over sixty faith-based organizations committed to providing services after a disaster, including mental health or behavioral health services.

During the Deepwater Horizon event, DOH-Escambia strengthened its relationship with the Lakeview Center to gain clarity on the types of services provided, and how the organization can provide public education through the media. (6:14)

The United Way of Escambia County trains its 2-1-1 staff in crisis counseling every year. After a disaster, the team meets to discuss the types of mental health issues they are seeing, and they are instructed where to redirect a caller with specific questions or mental health issues. The calls for mental health assistance usually increase weeks after the storm, when individuals have been under the stress and strain for many weeks. The service is 24 hours, seven days a week. After 7:00 pm calls are routed through Tallahassee, where trained suicidologists answer calls and redirect callers to appropriate assistance.

6. Patient Preparation and Survival

The disruption of health care services and the immediate survival challenges following Hurricane Katrina, such as the lack of food, water, housing, and utilities, highlighted the special survival challenges presented to those with chronic diseases. Additionally, disruptions to supply channels for consumer goods and medications created challenges for all, especially those with chronic conditions. For weeks following landfall, patients with special dietary needs (e.g., those with diabetes and hypertension) experienced difficulty finding healthy food, and had limited water supplies. Lack of electrical power inhibited refrigeration and cooking, rendered medical equipment inoperable, and prohibited air conditioning. Such harsh conditions endangered the lives of the elderly and the chronically ill. In some locations, Meals Ready to Eat (MRE) were the only food available. Some patients and providers suspected that MREs increased blood glucose levels and hypertension for some patients with chronic disease.

6.1 Patient Disaster Planning

6.1.1 Lessons Learned in Mississippi and Alabama:

Findings show that organizations along the Alabama and Mississippi coast that participated in the follow-up study provide annual disaster training for patients with chronic medical conditions. This covers the safe storing and packing of important personal documents including health documents, stocking survival supplies and prescription medicines, preparing travel bags, and preparing evacuation plans. Most providers distribute flyers or checklists encouraging families to have at least 72 hours of survival and medical supplies.

One social services agency sends pamphlets to local businesses to remind employees with chronic illness to take special precautions, and another distributes the flyers across the community. Two organizations supply public service announcements to local media encouraging personal preparation for disasters.

Participants also emphasized the importance of physicians encouraging patients with chronic diseases to prepare for disaster. To aid in this effort, one hospital developed patient disaster preparation educational materials that are distributed to physicians' offices. One agency reports their home care providers develop individualized patient disaster plans and if necessary assist with registration for special needs shelters and transportation assistance to evacuate the area or go to special needs shelters.

Dialysis centers provide hurricane preparation training beginning in June. A social worker offers training on hurricane preparation, a dietician reviews dietary needs, and nurses ensure patients have information on medications and lab reports. On every TV in the dialysis units, a video on hurricane preparedness is shown to patients.

Although all organizations have increased efforts to train patients in disaster preparation, barriers to such efforts are noted. Organizations with frequent patient contact report greater success with patient preparation. Infrequent contact limits providers' ability to adequately help patients prepare. Some organizations set specific dates within which patient disaster preparation training occurs; if patients are not seen within that period, patients do not receive disaster preparation training.

6.1.2 Lessons Learned in Florida:

Leaders in Escambia County recognize that the most vulnerable populations are residents who are "under-resourced economically" and those who have disabilities or other barriers to emergency services. To address this issue, BRACE is focused on identifying these individuals and families and helping them prepare for disaster, and to respond after disaster to link these people with needed services. The "goal is to make the community the most disaster resilient." (2:19) Emergency management personnel go into the community to civic groups, faith-based groups, and other organizations that are willing to listen to their presentation on preparedness, emphasizing that the "the first 72 are on you."

One respondent noted that patients receive training that includes disaster training, but suggested that a training session that only covers disaster preparation would be beneficial to their patients. The training currently covers what should be included in disaster kits and some items are provided to patients to help them prepare.

DOH-Escambia recommends that home healthcare agencies, nurse registries, medical equipment companies, and hospice provide patients with the application for special needs shelters and help them fill it out. This application process also helps predict the transportation needs of the disabled and those with chronic conditions. If patients prefer to shelter in place, there is a booklet provided explaining what steps to take to achieve that safely.

BRACE has its Program Service and Leadership Team, which works with the health department, Florida Blue, and Blue Cross and Blue Shield. The Homebound Program maintains an accurate database of residents who are homebound to ensure they are receiving the care they need and to make sure they have transportation. Sometimes volunteers use their own vehicles to transport clients to doctor's appointments and to meet other needs. Through a grant from the Corporation for National and Community Service, the organization has provided disaster kits in a watertight bucket, which includes a tarp, flashlight with a radio, batteries, water, nonperishable food and a can opener. Clients are encouraged to add their medical information, medicines, and other important papers to the bucket. BRACE works through many faith-based organizations to be more effective in reaching the homebound African American population, which is vulnerable in disasters, to identify their needs and to provide the disaster kits. As an event approaches, volunteers call those who registered for the Homebound Program with the intent to ensure all are in shelters or prepared to shelter at home. Immediately following a disaster, the Community Emergency Response Teams go into the community to check on those who are registered to ensure they are safe and to provide assistance.

BRACE also utilizes a database of the special needs population (SPIN), which is updated quarterly or semi-annually by CERT teams. Residents are referred through Emergency Management, Escambia Community Clinics, through United Way 2-1-1, and faith-based organizations, and occasionally, CERT teams are trained to go door-to-door to identify those with special needs.

Before a disaster, the DOH-Escambia informs the public of health and medical items that should be contained in a disaster supply kit, and they warn those with prescription medications to have a list of these medicines. In addition, the health department informs the public of the services available in special needs shelters and who can qualify to go to special needs shelters.

Dialysis center are sending postcards informing their patients of where they can travel for dialysis in nearby communities if there is a disaster that interrupts service.

One respondent noted that if people have to relocate, a major problem might be proving identity if IDs are lost or not taken.

One respondent stated, "I think the majority of what this [planning] comes down to is what is the patient going to do for the patient, not what are we [providers] going to do for the patient. Because the

number one thing to avoid all of the post disaster problems is to have a pre-disaster plan that [includes:] Do I have enough of medication? When do I need to leave the area? And, what services are going to be available to me in the area that I am evacuating to?" (15:11) Another respondent suggested that adequate planning and preparation reduce mental stress and strain after an incident/event.

6.2 Patients' Knowledge of Prescriptions and Treatments

6.2.1 Lessons Learned in Mississippi and Alabama:

After Katrina many displaced patients with limited knowledge of their prescription medicines could not contact providers, whose facilities and medical records were destroyed, to obtain or verify prescriptions. These experiences caused providers to realize the importance of providing written documentation of patient diagnoses, medications, and treatment regimens, as well as training patients to be more knowledgeable about their medical conditions and treatment.

All participant organizations in the follow-up study that prescribe medications or fill prescriptions provide a list of prescribed medications to patients upon request and some organizations proactively try to ensure that patients have a list of prescription medications near the start of hurricane season. Organizations providing care for cancer or dialysis patients provide information packets which include medical history, lab reports, diagnoses, and prescribed treatments. The dialysis centers also provide dietary information and a medical alert bracelet in the packet.

6.2.2 Lessons Learned in Florida:

One clinic that uses electronic health records states that it is easy to provide patients with a list of their medical conditions and medications. Due to HIPAA laws, the patient must go to the clinic and sign a form requesting the information and provide proof of identity to receive this information. Electronic medical records facilitate transfer of patient's medical records to another medical facility. If patients are leaving the area, they are given a card with the clinic's fax number and a message stating to fax the request for medical records to this number. If the new clinic has Internet access, the records can be sent electronically or through fax.

6.3 Patient Evacuation Plans and Tips

6.3.1 Lessons Learned in Mississippi and Alabama:

Due to the harsh living conditions resulting from devastation caused by Hurricane Katrina and minimal services available in special needs shelters, due to a lack of hospital beds, lack of personalized nursing care, and limited dietary options, most providers in coastal communities in Mississippi and Alabama now encourage patients with chronic conditions to evacuate the area when a hurricane threatens.

Respondents listed the chronic illnesses recommended for evacuation, which includes: all patients at risk of losing mechanical and electrical support or oxygen therapy are advised to evacuate. Specific chronic conditions are patients on dialysis with end-stage renal disease, COPD patients, HIV/AIDS patients, cancer patients on chemotherapy or radiation, and patients with complications from diabetes, diabetes patients relying on insulin requiring refrigeration, and home care and hospice patients.

Although evacuation is recommended, evacuation presents a host of preparation challenges for the

chronically ill. Several reasons for not evacuating cited in the 2007 study included lack of transportation, limited financial resources, and leaving possessions and pets behind.

Providers participating in the follow-up study were doing more to educate patients on the need to evacuate, encouraging patients to register for public evacuation services, and in some cases are providing gasoline vouchers or financial assistance to facilitate evacuation. All three not-for-profit clinics educate patients on the importance of evacuation and refer to other agencies for evacuation assistance.

In Alabama and Mississippi, local transit companies have buses available to evacuate those without personal transportation, including chronically ill patients and families. In Mobile County, the Mobile Metro Transit Authority and the school board provide buses for evacuation through the Emergency Management Agency. Patients must register annually to reserve space for this service. Patients are collected from their homes, brought to the location where there is a brief intake and assessment, and then patients are routed to designated shelters out of the area. The county uses billboards, radio and TV public service announcements to inform its residents of this service. The Mobile Department of Health educates patients on the necessity of having a personal plan to evacuate and encourages patients to register in advance for this service.

The Coastal Transit Authority in Mississippi also uses public buses, school and hospital buses to evacuate residents from the area. Residents are encouraged to register in advance for evacuation services.

Dialysis centers in Mississippi encourage all patients in the coastal area to evacuate. The organization provides a waterproof packet with the patients' medications and lab reports, a three-day diet plan, a medical alert bracelet, the 1-800 number for the organization, and a list of things to take when evacuating. Staff ensures they record the patients' phone numbers and the phone numbers of family members or friends to keep up with the location to which their patients are evacuating. The centers also refer patients to other agencies, such as the Kidney Foundation, to provide financial assistance or gasoline to evacuate.

Both agencies providing services for HIV/AIDS clients evacuate clients to facilities north of the coast using their own transportation. If clients need medical assistance, they are taken to a special needs shelter outside the immediate area. Both of these agencies provide travel packs with hygiene supplies, food, and water. In addition, one agency provides resources such as gas vouchers to clients who prefer to evacuate on their own. The agency also refers clients to other organizations for transportation and shelter.

Three organizations provide "grab and go" packs with some basic survival supplies such as flashlights, water, and some food products. Patients are encouraged to purchase additional supplies to add to the packs in preparation for evacuation. KI agree that "grab and go" packs are a useful preparation tool, some KI indicated they would like to provide these kits; however, their organizations do not have funds to provide these packs to their patients and clients.

One not-for-profit pharmacy educates its patients annually on the importance of evacuating. They provide names and numbers of agencies that provide evacuation services, inform patients of specialized evacuation facilities, and encourage patients to use these resources.

In summary, more evacuation services are provided to help the chronically ill evacuate the area than before Katrina. Patients without transportation are encouraged to register for public evacuation services well before a hurricane threatens. Although Alabama and Mississippi have increased evacuation services since Katrina, some KI report concern that if a major event threatens, public agency capacity may be inadequate to evacuate all patients with chronic illnesses. KI recommend that patients should identify friends and family who can provide evacuation transportation before relying on public services, as demand for services may exceed capability to deliver. KI from rural areas also report their communities offer no public evacuation services.

6.3.2 Lessons Learned in Florida:

A major difference between coastal communities in Alabama and Mississippi, and Escambia County Florida, is that health care providers in Alabama and Mississippi are focused on patient disaster preparation and encouraging those with chronic conditions to evacuate, whereas health providers in Florida are not as engaged in educating patients in disaster preparation and evacuation. In Florida, the Division of Emergency Management in Escambia County is the agency that educates the public on disaster preparation and recommends which residential areas should evacuate to reduce the risk of injury from flooding and wind. Evacuation recommendations are based on the Sea, Lake and Overland Surges from Hurricane (SLOSH) numerical storm surge prediction model, which was developed by the National Hurricane Center. SLOSH predicts storm surge based on combinations of barometric pressure, storm size, forward speed, direction track, and wind speed. KI with the Division of Emergency Management report evacuation decisions are based on potentially higher surge levels than the predicted storm threat, taking into consideration the worst case scenario to protect the public.

Florida law requires Gulf Power to publish information in their residential power bills on the availability and registration process for special needs shelters. Residents with chronic conditions who are not in a flood zone or in a mobile home, and who are living in homes that can withstand winds and have a generator, are encouraged to shelter-in-place. They are encouraged to have a caregiver in the home during the event and are encouraged to have a contract or agreement that if their status declines or their condition worsens during the incident/event, they can be transported to a facility for care. However, KI acknowledged that it is unrealistic to expect all those with chronic conditions to be able to purchase generators and fuel.

The Escambia County Transportation System transports those who can walk and get on a bus to special needs shelters. For those who need special transportation accommodations, the county has buses with wheelchair capacity and other accommodations. Residents are asked to submit an application annually. The health department determines eligibility and approves/disapproves the applications, then the Emergency Operations Center sends residents a letter informing them if they are eligible to enter the special needs shelter and that the county will provide transportation to and from the shelter. They are also sent a letter informing them of what to bring to the shelter such as medical supplies, medicines,

water and food to meet dietary needs. Those who need a higher level of care are recommended to obtain a doctor's order to enter a nursing home or independent living facility for at least three days. If necessary, EMS transportation is provided and reimbursed.

The Homebound Program operated by BRACE attempts to create an accurate database that identifies the elderly, the disabled, and those who are on fixed incomes, especially those without transportation. Before an incident/event, CERT attempts to make sure these individuals are transported to shelters or other locations for the storm. For those who choose to shelter in place, immediately after the disaster, CERT checks on these individuals to make sure they are safe. Through a grant from the Corporation for National and Community Service, BRACE has distributed disaster kits, which included a tarp, flashlights with a radio, batteries, water, nonperishable food, and a can opener. Recipients are encouraged to keep their medical and other important papers and medicines in the kit. These items are placed in a bucket with a lid that is watertight. BRACE also works through faith-based organizations to reach the elderly and the disabled with the disaster kits.

Individual preparation in Escambia County is facilitated by the Youth Emergency Preparedness Expo, which seeks to create a culture of preparedness that reaches the youth in the community, who are then likely to encourage parents and grandparents to be more prepared. BRACE has a goal of creating a Teen CERT in every high school in the county.

6.4 Patient Access to Prescription Medications

6.4.1 Lessons Learned in Mississippi and Alabama:

Hurricane Katrina struck at the end of the calendar month when monthly medications were mostly consumed. In 2005, most insurance plans and Medicare/Medicaid prohibited early prescription refills, so patients in devastated areas had no access to pharmacies and no resources to purchase prescription medications; as a result, treatment of chronic diseases was disrupted in some cases for weeks. This disaster demonstrated the importance of having an adequate supply of prescription medications on hand if pharmacies are not available. Some community health centers encourage patients to get their prescriptions from a commercial pharmacy chain, so the chain will have the record of the prescription regardless of the patient's evacuation destination.

Fortunately, by the time of the follow-up study, policy makers had improved access to some prescription medications for patients with chronic illnesses. For example, a county health department reported they can provide early refills on maintenance medications that are not controlled substances. The department coordinates with a not-for-profit clinic to help patients get advance medications if a hurricane is threatening. One non-profit clinic can provide from two weeks of advance medications up to six weeks of medications, if the prescription is filled when a hurricane is imminent.

In Alabama and Mississippi policy changes with state health departments allow HIV/AIDS patients to receive prescription medications from the respective health departments even when patients evacuate. In both states, after Katrina, the process for filing for services and obtaining prescriptions for patients

with HIV/AIDS was centralized in the state capitals. If residents who are registered with the state health departments are displaced after a disaster, they can call the Department of Health to obtain medications.

6.4.2 Lessons Learned in Florida:

It is estimated that about 100,000 people in Escambia County are medication dependent such that their health conditions would deteriorate if they did not have access to their medication. From the lessons learned after Ivan and Katrina, people came to the shelters without prescription information. Now on the application form to be admitted to a special needs shelter, patients must report the medicines they are taking and the dosage levels, and this information must be updated regularly. Physicians are more likely to call in prescriptions for those who are almost out of medicines just before a hurricane and pharmacists may be willing to provide patients, who are almost out of life-saving medicines, with a few days' supply when a hurricane threatens the area. If someone with a chronic condition is in a special needs shelter, the health department can provide medicine for a few days. The department has an agreement with Thrif-T Drugs located in Pensacola, which fills the prescription needs of special needs clients; these prescription costs are eventually reimbursed by FEMA. For patients receiving tuberculosis medications, the department makes arrangements to help clients prepare for disaster and makes plans to deliver those medications throughout the disaster. When a community is declared under a state of emergency, patients can get another 30 day supply of medications during the 30-day window; however, respondents in Florida suggest that the majority of individuals without health insurance are likely not aware that when the community is under a declared state of emergency, they can obtain another 30-day supply regardless of when they last filled their prescriptions.

After Ivan, DOH-Escambia improved its planning relative to other health services providers, especially pharmaceuticals. The Department will contact pharmacies to determine which are open to fill prescriptions and to sell regular inventory, and will try to communicate this information to the public (8:20).

One clinic that has implemented EHR reports that as soon as their servers are running after a disaster, the nurse practitioner can access patients' records online and send prescriptions and refills to pharmacies even if the facility is not operational. Before a storm, the clinic tries to contact patients in the compassionate drug program to come to the clinic to pick up medicines or reorder for delivery.

6.5 Patient Access to Post-disaster Treatment

6.5.1 Lessons Learned in Mississippi and Alabama:

A challenge facing the displaced chronically ill after Hurricane Katrina was locating service providers in their new locations. The original study pointed to the need to provide patients with 1-800 numbers to contact current providers and to provide lists of resources in likely evacuation areas. Nine organizations in the follow-up study provide lists of resources and contact information for service agencies and medical providers in the evacuation areas and in the immediate area, if providers' facilities are damaged or destroyed.

In the previous study a recommendation was made to develop a registry of resources available in an area. Some organizations cited the United Way's work with 2-1-1 as a registry of area resources. One AIDS support organization provides, to patients who are evacuating, online and hardcopy listings of agencies and their services that include telephone numbers and email addresses. Another AIDS support organization, in addition to citing United Way's 2-1-1, refers their clients to the consumer guide published by the Alabama Department of Health HIV Division. One organization includes a list of resources and contact people that may be needed after a storm in the organization's emergency preparedness plan. Some organizations are developing "in-house" registries of suppliers or inventories of resources.

6.5.2 Lessons Learned in Florida:

After Ivan, the health department improved its planning relative to other health services providers, including urgent care clinics and its physicians' network. After an incident, the department contacts clinics to find which are open and will communicate that information to the public. The department also tries to contact physicians using email, if an address is available, to determine which are open. (6:15)

If its clinic is damaged and cannot reopen until repaired, one clinic has arrangements with local hospitals for its patients to be seen at the hospitals. These agreements also allow clinic staff to work at the hospitals until the clinic is reopened.

6.6 Patient Access to Food, Water, & Shelter

6.6.1 Lessons Learned in Mississippi and Alabama:

A critical problem after Katrina was the effective distribution of food, water, clothing, and other items to fulfill basic needs. Respondents in the initial study noted that when individuals with chronic conditions are worried about meeting basic needs, they cannot focus on managing their health. Although the Red Cross and other agencies were on-site as soon as 72 hours after landfall, water and meals often did not reach rural areas and the most severely damaged areas. Some areas received an over-abundance of supplies, while others went without. Many organizations came to the Gulf Coast with truckloads of supplies, but there was no infrastructure in place for efficiently distributing the items to those in greatest need. Respondents suggested that collaborative efforts of local faith-based organizations, volunteers, and traditional social service agencies could distribute supplies more efficiently.

6.6.2 Lessons Learned in Florida:

This problem of access to food and water is addressed by BRACE in Escambia County. BRACE is the lead organization in the distribution of relief supplies after a disaster. BRACE surveys faith based organizations to determine their willingness to help distribute supplies after an incident/event. The faith based organizations enter into an agreement with BRACE to distribute supplies in a timely manner to those who need the supplies the most. As of data collection, BRACE had commitments from over 60 faith-based organizations to provide one or more of 12 different services after disasters. In addition, BRACE has 51 partners involved in the Homebound Program. After these agencies sign Statements of Understanding with BRACE and provide the names of recipient clients, if the need is great enough and a federal disaster declaration is issued, these agencies can draw truckloads of disaster relief supplies from

the governmental points of distribution to deliver to homebound individuals. Additionally, agency representatives can go to points of distribution and receive meals or supplies for up to eight people. This system increases the efficiency of distribution of basic necessities to residents who are in greatest need.

7. Continuing Challenges

7.1 Lack of Personal Responsibility:

7.1.1 Lessons Learned in Mississippi and Alabama:

Despite increased patient disaster training, lack of patient compliance with training recommendations inhibits preparation. Key informants report that patient compliance with disaster preparation is affected by limited patient resources, lack of motivation, and complacency. Lack of compliance is believed to be a primary barrier to adequate patient preparation and likely increases as the time from a major event passes.

Additional barriers to patient preparation are limited literacy and patients who have limited skill with the English language. Organizations that provide only written training materials must be sensitive to the limited reading skills of some patients. Frequently, patients will not admit they cannot read, so training information should be presented orally. Translation is also needed for some patients who do not speak or read English, and translators are often unavailable.

7.1.2 Lessons Learned in Florida:

One problem in the Florida Panhandle continues to be complacency. Many residents have moved to the area from other locations that do not experience hurricanes and many residents are young and cannot remember the impact of previous storms. Many of these people do not understand the infrastructure and how everyone cannot wait until the last minute to stock up on supplies because stores will run out of inventory.

Three key informants mentioned there are many individuals, including those with chronic medical conditions, who do not make preparations for natural disasters and expect that the government or aid organizations will come to their rescue, no matter how much they are told that “the first 72 are on you.” Many fail to have their medications on hand or to evacuate their home/go to a shelter before the storm makes landfall.

7.2 Increasing Federal Demands for Accommodations under ADA

The Department of Justice has suggested that mass care shelters be equipped to handle individuals with disabilities and their families, stating that separation from family increases worry and stress for all. Guidelines on mass sheltering state that “*shelter operators need to plan to house people with a variety of disabilities in mainstream mass care shelters, including those with disability related needs for some medical care, medication, equipment, and supportive services.*”⁽¹⁰⁾ Some specific recommendations are to provide access such as ramps and wide doorways, to provide beds rather than cots for the disabled, and offer preferential bed locations to accommodate those with disabilities, to provide assistance with

daily living activities, to provide accessible bathing facilities, to allow service pets, to provide food for those with special dietary needs, and to allow access to kitchen and refrigeration areas for food and medicine. Shelters are also expected to provide alternative forms of communication for those who are deaf or hard of hearing, or are blind or have low vision. According to shelter guidelines, mass shelters must also provide an effective way for individuals to request and receive emergency durable medical equipment, supplies, and medication.

Under the federal ADA guidelines, services provided by mass care shelters and special needs shelters are blurred. Requiring mass shelters to provide the accommodations listed in *the ADA Best Practices Tool Kit* (10) will increase the number of medical staff required to run a mass care shelter. If the recommended best practices are followed, provision of the additional services will increase the costs of providing mass care shelters and limit the number of facilities that can meet the physical guidelines for accommodating the disabled. These additional physical and staffing requirements may reduce the number of facilities that can be used for mass shelters, and may ultimately reduce sheltering capacity in some communities.

7.3 Confusion Regarding Level of Care Provided at Special Needs Shelters

According to the ADA Tool Kit, “*special needs and medical needs shelters house people with disabilities who require the heightened medical care that is ordinarily provided in nursing homes and hospitals.*” (10) This definition implies that special needs shelters should be equipped to provide a level of care similar to nursing facilities and hospitals. This definition is substantially different from the definitions in states along the Gulf Coast. The Mobile County Health Department’s definition of persons qualified for medical needs shelter is, “Persons who require minimal or moderate assistance with daily living activities will be admitted to a medical needs shelter. Persons who are bedridden will not be admitted.” One or more of the following criteria are required for a person to be eligible for admission to a medical needs shelter: portable ventilator, stable oxygen, nebulizer, or sleep apnea treatment, catheter, frequently incontinent (urinary/bowel) or ostomies.
(<http://www.mobilecountyhealth.org/PDF/medicalneeds.pdf>).

The State of Florida guidelines state that “A Special Needs Shelter (SpNS) is a place to go when there is no other sheltering option. Shelters may be activated during an emergency event to provide mass care for people who cannot safely remain in their home. Special needs shelters are designed to meet the needs of persons who require assistance that exceeds services provided at a general population shelter. Special needs shelters are intended to provide, to the extent possible under emergency conditions, an environment that can sustain an individual's level of health.”
(<http://www.floridahealth.gov/preparedness-and-response/healthcare-system-preparedness/spns-healthcare/index.html>).

7.4 All Disaster Services May Require Accommodations for the Disabled

According to guidelines and court cases initiated by the U.S. Department of Justice, any and all disaster services provided by the state and local governments may require accommodations to provide the same level of service to those with disabilities. An example offered illustrates the challenge. If a local government provides sand and bags for residents to fill and take to their properties to protect from flooding, the government may be required to fill and place the bags to protect the property of those

with disabilities. Such a requirement will likely exceed the resources of the local community to provide this level of service. Federal regulatory agencies are expecting communities to identify these needs before a disaster threatens and to have “plans, processes, procedures, answers, identifying the resources and applying them.” (1:16) This level of service exceeds the capabilities of local government even working with not-for-profit organizations.

7.5 Meeting the Needs of Persons Not Qualified for Special Needs Shelters

A major challenge noted in Escambia County, which is also prevalent in other areas, is that some individuals require care that exceeds the services provided in a special needs shelter, but they are stable at home before an incident/event. However, if power, water or other utility services are interrupted, their conditions are likely to deteriorate and they are likely to need care in a nursing home or hospital. Although such a decline in conditions can be foreseen, admission criteria and reimbursement rules of Medicare and Medicaid do not allow admission before the incident/event. This problem indicates a gap in preparation and treatment. After the incident/event, they can be admitted to the emergency room, but they cannot be admitted beforehand to stabilize their conditions, due to admission and reimbursement guidelines.

7.6 Gaps in Service Due to Agency Evacuations or Closure

According to Florida Statutes, the Agency for Healthcare Administration requires all healthcare facilities to have a disaster plan that meets state criteria before licenses are renewed. These disaster plans likely include closure and evacuation of staff before an incident/event. Additionally, most for-profit and non-profit organizations providing services to those with chronic conditions are likely to evacuate staff before a hurricane, which suspends services and leaves clients vulnerable immediately before, during, and after the incident/event. For example, sign language interpreters and home health providers may be unavailable. Under these circumstances, the county is responsible for providing some services.

8. Study Limitations

This study provides a wealth of information regarding the strategies devised by agencies and organizations in the Florida Panhandle to meet the challenges of providing continuous care for persons with chronic conditions during and in the aftermath of a disaster. However, the limitations of the study must be noted. First, the twenty-two key informants represented only five institutions in Escambia County, Florida. Federal and state agencies charged with managing the state’s overall disaster response were not represented in the study. Similarly, volunteer organizations such as the American Red Cross and the Salvation Army were not included. Another limitation is the omission of patients in the study and their perceptions of preparation and response capability. By design, data collection focused on collecting information to address key issues identified in previous studies in Mississippi and Alabama to describe and identify different approaches to common challenges. To this end, the study was a success.

9. Conclusions

Lessons learned from the impact of hurricanes along the Gulf Coast in the past 20 years have improved the area's disaster preparation and response capabilities. The study shows that Escambia County has an integrated network for emergency response and recovery. Florida's utilization of the Emergency Support Functions (ESF) structure allows communities to consolidate and coordinate services of multiple agencies to provide disaster preparation and response. This structure, coordinated at the local and state levels, facilitates emergency response using local resources, rather than depending on state and federal resources. The creation of the Be Ready Alliance Coordinating for Emergencies, BRACE, with over 500 partner organizations today, and the advanced 2-1-1 service of the United Way of Escambia County have catapulted the western Florida Panhandle to the forefront of disaster preparedness and response. A KI noted, "So I think we're quite resilient and I think we've learned to be very flexible as well." (18:21)

Despite the intricate ESF network, a few weaknesses and challenges are noted. A major difference in preparations in Escambia County, Florida, relative to the central Gulf Coast including Mississippi and Alabama is the preparation and warnings to those with chronic conditions to evacuate the coastal area before a hurricane strikes. In Mississippi and Alabama, healthcare providers agree the safest approach for ensuring continuity of care is to leave the target area and seek shelter away from the coast. Based on the devastation caused by Hurricanes Katrina and Rita, providers make a concerted effort to warn those with chronic conditions to evacuate to safe locations away from the storm. Many providers offer annual patient disaster training. Some social service agencies provide disaster kits, and some agencies provide financial assistance and/or transportation to move patients out of harm's way. In Mississippi, a 1-800 number allows patients to contact all community health centers in the state. In both Alabama and Mississippi, health care providers identify providers in evacuation areas and offer contact information to provide patient access to these remote providers.

In Florida, researchers did not find providers offering the same level of training and warnings for those with chronic conditions to evacuate. Warnings to evacuate are issued by the Division of Emergency Management. Evacuation recommendations are based on location for storm surge and inland flooding and wind resistance of the residence. All residents living in flood zones, mobile homes, or homes assumed to be susceptible to wind damage are encouraged to seek shelter in local mass shelters or special needs shelters. Experience with numerous hurricanes over the past twenty years in Florida, especially in 2004 and 2005 for the Panhandle, more stringent building codes adopted since Hurricane Andrew (1992), improved infrastructure, and simulation data based on the Sea, Lake and Overland Surges from Hurricane (SLOSH) storm surge prediction model that predicts storm surge based on combinations of barometric pressure, storm size, forward speed, direction track, and wind speed, help determine which residents should evacuate. KI report that evacuation decisions anticipate higher than predicted storm surge to err on the side of safety. However, researchers suggest if a hurricane or other incident/event causes catastrophic destruction similar to conditions in Mississippi and southern Mobile County following Hurricane Katrina, the most vulnerable populations, especially those with chronic conditions, will be at higher risk to experience harsh living conditions that may cause deterioration in health conditions. As one respondent noted, "Unfortunately, disasters will happen and then it's going to

come down to the creativity of yourself and your staff of what do we do from this point to take care of our patients . . . I don't think we're ever going to truly be ready . . . Because [if] you get a category 5 hurricane come through here, there's going to be a disaster." (15:23)

Recognizing the vast devastation caused by Hurricane Ivan and other storms that have affected the area and concerns raised by climate change research (11), it is possible that an even more powerful hurricane may hit the area. Researchers suggest that disaster plans along the Florida Panhandle anticipate and prepare for a more catastrophic incident/event and anticipate the transportation, financial, and other resources required to move a large segment of the population out of the immediate area.

One of the greatest challenges facing coastal communities is patient noncompliance in preparing for disaster and the general population's lack of personal responsibility for disaster preparation. Despite training, reminders, and constant urging, as the time from the last major incident/event passes, memories fade and people become more complacent about preparing for disaster.

Other challenges identified with respect to those with chronic conditions are the dilemma of patients whose severe conditions require more care than special needs shelters can offer, but admission criteria and Medicaid and Medicare reimbursement rules prohibit admission to a nursing home or hospital. Adequately protecting this population requires policy changes at federal and state levels. It is also recognized that vulnerable populations with chronic conditions are most at risk just prior to and immediately after an incident/event, while social service agencies are closed and staff are evacuated, thus limiting services available to those most in need. While BRACE provides an excellent beginning in Escambia County, this important issue affects all communities and will require creative solutions.

The U.S. Department of Justice has published its expectations for mass and special needs shelters, and court decisions have suggested guidelines for providing disaster services to all residents by accommodating those with disabilities. These additional requirements, if implemented, will increase the cost of operating mass and special needs shelters. The requirement to provide all disaster services to the disabled may result in local government decisions not to offer disaster services to the community due to the additional costs that would be incurred in providing these services to the disabled. The result may be reduced services for all.

In summary, the residents, local governments, agencies, healthcare providers, and social service organizations in the western Florida Panhandle are to be commended for developing and implementing a comprehensive system for disaster preparation and recovery. This system appears to be more comprehensive than the systems in Alabama and Mississippi at the time of that study. The utilization of the ESF system provides a structure that helps align organizations and those with certain interests and capabilities to prepare for and respond to disaster from the grassroots level. Research shows that such efforts provide more timely and effective disaster response than reliance on external assistance.

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Appendix -- Code Families and Codes

Code List Key Informant Transcripts (N = 20)

Code-Filter: All

HU: FLANetworkBundle4_16
File: [C:\Documents\Research\FLANetworkBundle\FLANetworkBundle4_16.hpr6]
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1-800 number	CERT	County Emergency Manager
211	CERT training	Criteria checklist
450	Certification	Cross training
50	Chain of command	Database
72 hours	Challenge	Deaf or hard of hearing
Access	Chamber of Commerce	Deep Water Horizon
Accountability	Chapter 110	Dental care
Admission criteria	Child care	Department of Children and Families
African American	Children's Medical Services	Department of Defense
After action reports	Chronic Conditions	Department of Justice
Agency for Healthcare	Citizen Corps Program	Diabetes
Administration	Citizens	Dialysis centers
Agency resources	Civic group	Dialysis
Alabama	Clinics	Direct partnerships
Alternative medical sites	COAD	Director
Americans with Disabilities Act	COCP - Continuity of Care Plan	Director of Operations & Readiness
Annual meeting	Collaboration	Disabilities agency
Annual survey	Commitment	Disability
Application	Communication	Disability Resource Center
Area Agency on Aging	Community Database	Disabled
Assessment	Community Database System	Disaster Client Data Standards Form
Assistant Director	Community Organizations Active in Disaster, Inc.	Disaster duty
Asthma	Compassion fatigue	Disaster kit
Awareness	Compassionate Drug Program	Disaster plan
Background checks	Competition	Disaster psychology
Backup	Complacent	Disaster training
Baldwin County	Comprehensive Emergency Management Plan	Discharge
Baptist Hospital	Computerized records	Distribution
blood bank	Contact information	DMAT - Disaster Med Asst Team
Blue Cross and Blue Shield	Continuity of Care	Domestic Security Task Forces
Boundaries	COOP - Continuity of Operations Plan	Donations
BRACE	Coordinated Assistance Network	Door-to-door
Bucket	Coordination	Drills
Carescope	COPD	Duplication
Catholic Charities	Core Competencies for Disaster	Durable medical equipment
CDC Center for Disease Control	Council on Aging	During-event
Cell phone	County	Early Learning Coalition
Center for Independent Living		
Centralized		
Century		

Economy
Educate
Education
Effectiveness
EHR
Elderly
Electric power
Email
Emergency management
Emergency response teams
Emergency Support Function -
ESF
Employee Assistance Program
Employees
EMS
EOC (Emergency Operations
Center)
Escambia Community Clinics
(ECC)
Escambia County Emergency
Management
Florida Department of Health in
Escambia County
Escambia County Transportation
System
Escambia County, AL
Escambia County, FL
ESF 1 - Transportation
ESF 13 - Military
ESF 15 - Volunteers & donations
ESF 18 - Business, Industry, &
Economic Stabilization
ESF 3 - Public works
ESF 6 - Mass care
ESF 8 - Health & medical
ESRD
Evacuate
Evacuees
Evaluate
Exercises
Expectations
Facebook
Faith-based
Family preparation
Fax press
Federal level
Feeding
FEMA
Fire department
Fire services
First 72 on you
First aid kits
First responders
Flooding

Florida Association of
Community Health Centers
Florida Blue
Florida Health Information
Exchange
FNSS - Fnl Needs Support Srvcs
Food
For-profit
Formal
FQHC
Free clinics
Functional need
Functional needs shelters
Gap
Gasoline
General public
General shelters
Generators
Georgia
GIS geographic information
system mapping
Goals
Government
Government agencies
Grants
Greatest need
HAM radio operators
harden structures
Health & Hope
Health Department
Health Occupation Student
Association
Healthcare Administration
HealthEZ
Hillcrest Baptist Church
Home health agencies
Homebound
Homebound Program
Homeless
Homeless coalition
Hospice
Hospitals
Housing
HRSA Guidelines
Human Services
Hurricane Andrew
Hurricane Dennis
Hurricane Erin
Hurricane Ivan
Hurricane Katrina
Hurricane mitigation
Hurricane Opal
Hypertension
ID Badges

Identification
Implementation
Improvements
Incident command
Indirect partnerships
Infectious disease
Influx of evacuees
Informal
Internal
Isolation procedures
IT
Job responsibilities
Job title
KidCare
Lack of
Lakeview Center
Landline
Language barrier
Laptops
Lessons learned
Level one emergency
Levels of sheltering
License
Licensing
Loaves and Fishes
Local level
Long-term care facility
Lutheran Services
Map Your Neighborhood
Mass care
Match
Medicaid
Medical conditions
Medical equipment
Medical need
Medical personnel
Medical records
Medical supplies
Medicare
Medications
Meeting
Mental health
Model
Monthly meetings
MOU
MRC - Medical Reserve Corps
MRC Medical Reserve Corps Jr.
Mutual aid agreement
National database
National Disaster Medical
Response Team NDMS
National Guard
National Incident Command
System

National Institute Management System
Navy hospital
Needs assessments
Networking
New building
Newsletter
Newspaper
Non-profits
Nurse registries
Nurses
Nursing carts
Nursing homes
Open door policy
Organization
Orientation
Out-of-area
Outsource
Oxygen
Paper records
Paralysis
Partners
Patient Portal
PatientLink
Patients
Pensacola
Pensacola NAS
Personal responsibility
Pet shelter
Pharmacies
Pharmacists
Phone system
Phone tree
Physicians
PIO person
Planning
Planning Coordinator
Planning in process
Police department
Political resolve
Populations served
Post-event
Post-event response
Post-storm tracking
Posters
Poverty
Proactive
Pre-contracting
Pre-event
Pre-event planning
Pre-qualify
Pre-screened
Pre-storm activation
Preparation

Prepared - better
Prepared - well
Prepared poorly
Preparedness
Prescription assistance
Prescriptions
Private funds
Private insurance
Private practice
Private sector business
Proactive
Programs
Programs - youth
Programs and Services
Leadership Team
Propane grill
Proper channels
PSLT - Program Service and Leadership Team
PTSD-posttraumatic stress disorder
Public health preparedness
Public health warning
Pulmonary
Purchase transactions
Quarterly updates
Radio
Reasonable accommodation
Reciprocity
Recognition
Recommendations
Record Keeping
Recovery
Red Cross
Redundancy
Referrals
Refrigeration
Region One
Regional response system
Regional response teams
Registry
Reimbursement
Reimbursement issues
Relationship nurturing
Relationships
Remote
Resource shortages
Resources
Responsibility
Restricted areas
Reverse 911
Reviewer
Sacred Heart Hospital
Safety

Salvation Army
Sandbags
Santa Rosa County
Santa Rosa Health Department
Satellite phone
School board
Semi-annual survey
Semi-annual updates
Servers
Services
Shelter in place
Shelters
Social Media
Social services
Social worker
Software system
Southern Baptist
Special diets
Special needs population
Special needs shelters
Specialty care
SPIN
Spiritual services
St. Josephs
Staff families
Staff involvement
State Emergency Responder
Volunteers of Florida
State law
State level
State level call center 1-800
State of emergency
Statement of Agreement/Understanding
Strategic planning
Strike teams
Stroke
Supplemental funding
Supplies
Support services
Tabletop exercise
TB
Teen CERT
Tennessee
Text message
Thrifty Drugs
Title 1 schools
Tools safety
Topaz signatures
Training
Transportation
Triage
TV
Twitter

Unaffiliated volunteers
Unduplicated services
United Cerebral Palsy
United Way
University of West Florida
Urgent care facilities
Vet techs
Veterinarians
VOAD - Voluntary Organizations
Active in Disaster

Volunteer reception center
Volunteer tracking
Volunteers
Volunteers in Service to America
Vulnerable populations
Warnings
Water
We Care
Weakness
WebEOC

Website
Wheelchairs
Wishlist
Women's health
Young people
Youth Emergency Preparedness
training

Code Families

HU: FLANetworkBundle4_16
File: [C:\Documents\Research\FLANetworkBundle\FLANetworkBundle4_16.hpr6]
Edited by: Icenogle
Date/Time: 08/29/13 01:43:37 PM

HU: FLANetworkBundle4_16
File: [C:\Users\Craig Cortright\Documents\Research\Martha\FLANetworkBundle\FLANetworkBundle4_16.hpr6]
Edited by: Super
Date/Time: 08/24/13 04:16:27 PM

Code Family: Chronic Conditions

Created: 08/24/13 02:00:04 PM (Super)

Codes (10): [Asthma] [Chronic Conditions] [COPD] [Diabetes] [ESRD] [Hypertension] [PTSD-posttraumatic stress disorder] [Pulmonary] [Stroke] [TB]

Quotation(s): 20

Code Family: Communication Devices

Created: 08/24/13 02:06:38 PM (Super)

Codes (18): [1-800 number] [211] [Cell phone] [Communication] [Email] [Facebook] [HAM radio operators] [Landline] [Newsletter] [Newspaper] [Phone tree] [Posters] [Radio] [Satellite phone] [Text message] [TV] [Twitter] [Website]

Quotation(s): 63

Code Family: Faith-based Organizations

Created: 08/24/13 01:50:19 PM (Super)

Codes (13): [Baptist Hospital] [BRACE] [Catholic Charities] [Faith-based] [Hillcrest Baptist Church] [Loaves and Fishes] [Lutheran Services] [Sacred Heart Hospital] [Salvation Army] [Southern Baptist] [Spiritual services] [St. Josephs] [Volunteer reception center]

Quotation(s): 58

Code Family: Information Technology

Created: 08/24/13 03:10:53 PM (Super)

Codes (10): [Backup] [Computerized records] [EHR_1] [IT_1] [Laptops] [Record keeping_1] [Redundancy_1] [Servers] [Software system_1] [Topaz signatures]

Quotation(s): 49

Code Family: Medical Volunteers

Created: 08/24/13 01:34:27 PM (Super)

Codes (20): [Background checks] [BRACE] [Database_1] [DMAT - Disaster Med Asst Team] [ESF 15 - Volunteers & donations] [ESF 8 - Health & medical] [Health Department] [Mental health] [MRC - Medical Reserve Corps] [MRC Medical Reserve Corps Jr.] [National Disaster Medical Response Team NDMS] [Nurses] [Physicians] [Regional response teams] [Registry] [State Emergency Responder Volunteers of Florida] [State level] [Vet techs] [Veterinarians] [Volunteer tracking]

Quotation(s): 170

Code Family: Mental Health

Created: 08/24/13 03:03:51 PM (Super)

Codes (8): [Compassion fatigue] [Employee Assistance Program] [FNSS - Fnl Needs Support Srvcs_1] [Human Services] [Mental

health_1] [PTSD-posttraumatic stress disorder] [Social worker] [Spiritual services]
Quotation(s): 67

Code Family: Networking Codes

Created: 08/24/13 03:53:59 PM (Super)

Codes (14): [Collaboration] [Communication_1] [Coordinated Assistance Network] [Coordination_1] [Direct partnerships_1] [Formal] [Informal_1] [Monthly meetings] [MOU] [Networking] [Partners_1] [Relationship nurturing_1] [Relationships_1] [Statement of Agreement/Understanding_1]

Quotation(s): 286

Code Family: Non-medical Volunteers

Created: 08/24/13 02:29:11 PM (Super)

Codes (28): [BRACE] [Catholic Charities] [Centralized] [CERT] [Citizen Corps Program] [Community Organizations Active in Disaster, Inc.] [Coordination_1] [Duplication] [ESF 15 - Volunteers & donations] [ESF 18 - Business, Industry, & Economic Stabilization] [Faith-based_1] [Hillcrest Baptist Church] [Homebound Program] [Homeless coalition] [Luthern Services] [Map Your Neighborhood] [Private sector business] [Redundancy] [Salvation Army] [Southern Baptist] [Spiritual services] [Unaffiliated volunteers] [United Way] [Volunteer reception center] [Volunteer tracking] [Volunteers] [Volunteers in Service to America] [Youth Emergency Preparedness training]

Quotation(s): 136

Code Family: Organizations Participating in Network

Created: 08/24/13 03:33:59 PM (Super)

Codes (45): [211] [Agency for Healthcare Administration] [Area Agency on Aging] [BRACE] [Carescope] [Catholic Charities] [Center for Independent Living] [Chamber of Commerce] [Children's Medical Services] [Citizen Corps Program] [Department of Children and Families] [Disability Resource Center] [EOC (Emergency Operations Center)] [Escambia Community Clinics (ECC)] [Escambia County Emergency Management] [Escambia County Health Department] [Escambia County, FL] [Fire department] [Florida Blue] [Florida Health Information Exchange] [FNSS - Fnl Needs Support Srvcs] [Hillcrest Baptist Church] [Lakeview Center] [Loaves and Fishes] [Luthern Services] [MRC - Medical Reserve Corps] [Navy hospital] [Pensacola NAS] [Pharmacies_1] [Police department] [Private sector business] [Red Cross] [Sacred Heart Hospital] [Salvation Army] [Santa Rosa County] [Santa Rosa Health Department] [School board] [St. Josephs] [State Emergency Responder Volunteers of Florida] [Thrifty Drugs] [United Cerebral Palsy] [United Way] [University of West Florida] [Volunteers in Service to America] [We Care]

Quotation(s): 191

Code Family: Patient Challenges Post-disaster

Created: 08/24/13 03:16:52 PM (Super)

Codes (18): [Access] [Challenge] [Child care_1] [Communication] [Continuity of Care_1] [Dental care] [Electric power_1] [Food] [Gasoline_1] [Generators_1] [Lack of_1] [Oxygen] [Post-event] [Prescriptions] [Propane grill] [Refrigeration_1] [Special diets_1] [Water]

Quotation(s): 190

Code Family: Patient Preparation

Created: 08/24/13 04:00:41 PM (Super)

Codes (26): [accountability] [Admission criteria] [Awareness_1] [CERT] [Challenge] [Complacent] [Disaster kits] [Disaster plan] [Disaster training] [Durable medical equipment] [Education] [Family preparation] [First 72 on you] [Food] [Gasoline_1] [Generators_1] [Medications_1] [Pre-qualify] [Prescriptions] [Propane grill] [Refrigeration] [Registry] [Shelter in place] [Special needs shelters_1] [Transportation_1] [Water]

Quotation(s): 278

Code Family: Prescription Medications

Created: 08/24/13 04:10:27 PM (Super)

Codes (6): [Compassionate Drug Program] [Medications_1] [Pharmacies_1] [Prescription assistance] [Prescriptions] [Thrifty Drugs]

Quotation(s): 77

Code Family: Previous Learning Events

Created: 08/24/13 02:39:28 PM (Super)

Codes (12): [Deep Water Horizon] [Flooding] [Hurricane Andrew] [Hurricane Dennis] [Hurricane Erin] [Hurricane Ivan] [Hurricane Katrina_1] [Hurricane Opal_1] [Influx of evacuees_1] [Lessons learned] [Post-event] [Post-event response_1]

Quotation(s): 122

Code Family: Provider Challenges Post-disaster

Created: 08/24/13 03:44:10 PM (Super)

Codes (18): [Alternative medical sites] [Challenge] [Child care_1] [Communication] [Compassion fatigue] [Disaster duty_1] [EHR] [Electric power_1] [Gasoline_1] [Generators_1] [harden structures] [Influx of evacuees_1] [Lack of_1] [Landline] [Language barrier] [Reimbursement] [Staff families_1] [Transportation]

Quotation(s): 176

Code Family: Provider Disaster Preparation

Created: 08/24/13 03:24:27 PM (Super)

Codes (20): [211] [After action reports_1] [Chain of command] [Child care_1] [Contact information] [COOP - Continuity of Operations Plan] [Disaster plan] [Disaster training] [Employees] [Exercises] [Family preparation] [Generators_1] [Job responsibilities_1] [Lessons learned] [MOU] [Planning_1] [Pre-event planning_1] [Proactive] [Tabletop exercise_1] [Training]

Quotation(s): 208

Code Family: Special Needs Shelter

Created: 08/24/13 02:16:50 PM (Super)

Codes (20): [Access] [Admission criteria] [Durable medical equipment] [Electric power] [Feeding] [Health Department] [Influx of evacuees_1] [Oxygen] [Physicians] [Pre-qualify_1] [Pre-storm activation_1] [Reasonable accommodation_1] [Refrigeration] [Social worker] [Special diets] [Special needs population] [Special needs shelters] [State law] [Thrifty Drugs] [Triage]

Quotation(s): 148

Code Family: Vulnerable Population

Created: 08/24/13 01:42:25 PM (Super)

Codes (18): [African American] [Area Agency on Aging] [BRACE] [CERT] [Deaf or hard of hearing] [Department of Children and Families] [Disabled] [Door-to-door] [Elderly] [Faith-based] [Homebound_1] [Homeless] [Hospice] [Human Services] [Influx of evacuees] [Language barrier] [Special needs population] [Vulnerable populations_1]

Quotation(s): 105

Our sincere gratitude is due to the following institutions for their support of this project and their commitment to the people of the Gulf Coast.

*BRACE – Be Ready Alliance Coordinating for Emergencies
Escambia Community Clinics, Inc.
Escambia County Office of Emergency Management
Florida Department of Health in Escambia County
United Way of Escambia County*

We recognize each of our key informants and facilitators for their individual contributions to this report. Without their expertise and willingness to share their experiences and knowledge, this report would not exist. We commend each for their service to the communities in which they reside and extend our gratitude for their ongoing support of this project.

Connie Bednar
John Carnes
Colleen Betz
John Dosh
Mary Ehrhardt
Brad Hattaway
Martha Hicks
Carol Hill
Bobbie Huffman
Rita Icenogle
John Lanza
Danniel Mines
Catherine O'Sullivan
Molly Payne-Hardin
DeAnna Poland-Stemock
Luis Real
Shannon Reid
Deirdre Sidney
George Smith
Greg Strader
Susan Turner
Jerry Williams
Ange Williamson