

**THE VALUE OF PREPAREDNESS:
ORGANIZATIONAL CULTURE AND PREPAREDNESS IN
DELAWARE NURSING HOMES**

by

Samantha Penta

A thesis submitted to the Faculty of the University of Delaware in partial
fulfillment of the requirements for the degree of Master of Arts in Sociology

Fall 2013

© 2013 Samantha Penta
All Rights Reserved

**THE VALUE OF PREPAREDNESS:
ORGANIZATIONAL CULTURE AND PREPAREDNESS IN
DELAWARE NURSING HOMES**

by

Samantha Penta

Approved: _____
Tricia Wachtendorf, Ph.D.
Professor in charge of thesis on behalf of the Advisory Committee

Approved: _____
Kirk Williams, Ph.D.
Chair of the Department of Sociology and Criminal Justice

Approved: _____
George H. Watson, Ph.D.
Dean of the College of Arts and Sciences

Approved: _____
James G. Richards, Ph.D.
Vice Provost for Graduate and Professional Education

ACKNOWLEDGMENTS

I must first thank my entire thesis committee for their work and advisement over the course of this research. From the beginning of data collection to finalizing analysis, your guidance and support has been integral to the development of my thesis and my growth as a researcher. I am particularly indebted to my thesis chair and advisor Dr. Tricia Wachtendorf. Thank you for constantly pushing me professionally and intellectually, and for continually presenting me with opportunities to grow and learn. Since I took that first class with you in my sophomore year of college, I can honestly say that I would not be the researcher I am today if it were not for your direction and encouragement.

Thank you to my friends and family who have supported me in my academic and professional pursuits from the beginning. You all are the support system that has kept me afloat during the anxiety-ridden times of self-doubt, and you are relentless in your love, patience, friendship, and encouragement. Words can hardly do justice to my gratitude and appreciation for all you do.

TABLE OF CONTENTS

LIST OF TABLES	v
ABSTRACT	vi

Chapter

1	INTRODUCTION	1
2	LITERATURE REVIEW	3
3	METHODS	10
4	RESULTS	20
	Flexibility	20
	Basic Minimum Level of Preparedness	27
	The Value of Emergency Preparedness	30
	Familiarity with Emergency Management	33
	Value Experience	34
	Risk Perception	39
5	DISCUSSION	48
6	CONCLUSION	54
	REFERENCES	57

Appendix

A	TABLE OF FACILITIES INCLUDED IN THE STUDY	62
B	TABLE OF NETWORKS INCLUDED IN THE STUDY	64
C	INTERVIEW GUIDE	65
D	FOCUS GROUP GUIDE	70
E	IRB APPROVAL LETTER	76

LIST OF TABLES

Table 1	Flexible Facility Activity.....	21
Table 2	Facility Preparedness Activity.....	28
Table 3	Ways of Learning	36

ABSTRACT

In August of 2011, Hurricane Irene made landfall on the coast of North Carolina and made its way up the east coast of the United States. In anticipation of potential flooding because of this storm, one Delaware nursing home evacuated its facility. As a result the Delaware Department of Health and Social Services Division of Long Term Care Residents Protection sponsored a study to examine the challenges congregate care facilities face regarding disaster preparedness, emergency evacuation, and sheltering. Interviews and focus groups were conducted with administrators and senior level personnel from 17 skilled facilities in Delaware regarding experiences during Hurricane Irene, and preparedness activity more generally. Taking an inductive approach, this study uses organizational culture theory to explore disaster preparedness in skilled facilities. The study seeks to determine if skilled facilities have a culture of preparedness, and if they do, what that culture looks like, if this culture is industry-wide, or if it varies by facility type. Several themes emerged in the analysis, including a capacity for flexibility when necessary, valuing their own experience and the experiences of others in the healthcare setting, and a grounding of risk perception in familiar experiences. Data suggests that the characteristics of their culture are not universal industry-wide, but rather that differences emerge for reasons beyond network involvement.

Chapter 1

INTRODUCTION

Hurricane Katrina raised a magnifying glass over the experiences of nursing homes in disasters, specifically hurricanes. Since 2005, there has been a growing, but still limited body of research examining the experiences of nursing home staff and residents during disaster events. Research finds nursing home facilities prefer to shelter in place whenever possible (Government Accountability Office 2006). Evidence suggests that evacuated residents are more likely to experience negative physical health conditions than their non-evacuated counterparts, and Hurricane Katrina showed that more nursing home resident deaths occur during evacuation than when sheltering in place (Castle and Engberg 2011). Both evacuation and sheltering in place require nursing home facilities to be prepared to continue to provide care during the emergency or disaster time frame, while simultaneously meeting the challenges the new conditions can bring, such as power outages, loss of other utilities, and limited access to vendors due to road conditions, forcing facilities to rely on existing stockpiles of supplies. The extent to which congregate care facilities plan for the challenges and demands disasters place on providing care to residents can have major consequences for facilities' ability to continue operations. Important in understanding mitigation and preparedness efforts are the attitudes among nursing home staff towards these activities.

Congregate care facilities in Delaware experienced the trials of evacuation and sheltering in August of 2011 when Hurricane Irene made landfall and traveled along

the east coast. One nursing home in southern Delaware evacuated prior to the hurricane for fear that the facility was going to experience substantial flooding. This experience, though generally successful, prompted a Delaware Department of Health and Social Services Division of Long Term Care Residents Protection sponsored study¹ looking at nursing home and congregate care challenges to emergency evacuation and sheltering. The research presented here moves beyond the experiences of a single facility. Instead, this research seeks to understand the organizational culture related to disaster preparedness responsibilities in these nursing homes, and determine if this culture varies between congregate care facilities. Applying organizational culture theory to an analysis of interviews and focus groups with nursing home administrators and upper level personnel, the present study examines participants' discussion of preparedness and response activity to gain insight into the organizational culture behind these efforts. Particular attention is paid to formal and informal practices, values, and assumptions and knowledge, in order to discern how nursing home administrators value and perceive emergency preparedness as it pertains to their facilities.

¹The project was funded by a contract from the Delaware Department of Health and Social Services, Division of Long Term Care Residents Protection Award No. 12A00320. The views presented here are those of the author and do not necessarily reflect the views of the funding agency or collaborating researchers.

Chapter 2

LITERATURE REVIEW

Nursing homes and congregate care facilities can face a variety of preparedness-related challenges during an emergency or disaster. Support from other facilities and the ability to rely on mutual aid agreements with nursing homes or vendors may be limited if other facilities shut down as well (Bovender Jr. & Carey 2006). There may be competition for limited resources in the days leading up to and following a disaster. Transportation providers, for example, could prove unable to honor their contracts with nursing homes if multiple facilities require their services, pushing the demand beyond their capabilities (Government Accountability Office Limitations 2006; Giaccone 2008). Staff can face mobility challenges in moving obese patients and those reliant on some types of equipment (Bovender Jr. & Carey 2006). Once in transit, facilities in the process of evacuation can encounter additional unanticipated challenges. For instance, even in the generally successful bus evacuation of a pediatric burn hospital for Hurricane Rita in 2005, the travel by bus took twice as long as expected (Gallagher, Jaco, Marvin, & Herndon 2006).

State and federal resources might not be available to help nursing homes and similar facilities to meet these challenges. The National Disaster Medical System (NDMS), for example, targets its support at patients requiring hospitalization and patients from mobilization centers, not on nursing home residents, and not on transporting them from individual facilities (Government Accountability Office Limitations 2006). Efforts to alleviate one problem may lead to other challenges that

need to be met. Providing for the wellbeing of family members during a disaster can prevent role abandonment (Trainor and Barsky 2011), but doing so can place additional demands that facilities must also accommodate. Tulane Hospital's experience in New Orleans during Katrina illustrates this point. In this instance, staff family members who stayed at these facilities placed additional demands on food and water resources and transport capabilities to evacuate (Bovender J. & Carey 2006).

Planning is an important part of being able to meet these challenges. The success of the pediatric burn hospital evacuation was partially attributed to successful planning efforts (Gallagher, Jaco, Marvin, & Herndon 2006). Based on their study of the Texas evacuation for Hurricane Rita in which 90 deaths were attributed to the evacuation, 23 of whom were nursing home residents killed en route by a bus fire and another 10 were patients evacuating from chronic health facilities, Zacharia and Patel (2006) recommend improved evacuation planning to prevent deaths in future evacuations. That said, simply having a plan is not enough to ensure a successful evacuation or sheltering experience. Plans that are out of date or do not consider a variety of potential scenarios can lead to a number of challenges in the disaster event (Department of Health and Human Services 2006). Unfortunately, more often than not, plans only exist in a limited state. Castle (2008) found that, though 86% of plans had a hazard analysis and 96% included information regarding emergency water supplies, planning beyond these considerations was much less common. In addition, only 63% of the plans considered serving as a receiving facility, and only 37% identified a specific evacuation route if evacuation became necessary (Castle 2008).

There are several factors that shape whether or not organizations plan and what they plan for. Planning efforts tend to be directed at what the organization perceives

to be the most likely events to occur (Wang et al. 2009: 26). Not only can the cultural beliefs of senior level personnel influence the kind and extent of crisis management activity an organization takes on, but, as Wang et al. state, “A contributing factor to a crisis-prone culture is the false assumption that senior executives often carry, that is, the organization’s size, location, trust in employees, and connections with external stakeholders, will somehow protect them from a crisis” (Wang et al. 2009: 26-27). None of those factors on their own will suffice as a replacement to crisis management activity. Crisis management includes planning, identifying signs of crisis, and response coordination, all of which are heavily influenced by organizational culture. These aspects of culture are visible through phenomena like organizational practices (Wang et al 2009: 35). An organization’s culture plays an important role in both perpetuating crises, and in planning and managing those crises (Hutchins and Wang 2008: 313; Wang et al. 2009: 24).

Organizational culture affects performance by shaping decisions and actions within an organization. Denison’s and Mishra’s 1995 study on organizational culture found support in their findings that organizational culture affects the organization’s effectiveness. Companies communicate their values, but corporate actions also influence workers ability to adopt, internalize, and act on those values. Chong (2009) examined employee participation in corporate social responsibility through a study of DHL—the express shipping company—employees. Facilitating disaster relief is one of DHL’s central components of its corporate social responsibility. Several corporation practices allow employees to engage this element of corporate responsibility, including considering participation in such activity in employee of the year award evaluations, allowing employees to take paid leave to fulfill those

activities, and permitting country offices to make these decisions (Chong 2009: 110-115). Said differently, the company's policies and practices facilitate employee adoption of corporate values.

The influence of culture is true specifically in the health care and nursing home industry settings. Eaton reveals that management philosophy shapes the delivery of nursing home (2000: 16). Sufficient staffing, specifically the number of nurses, and whether staff work together in teams to help each other, influenced nursing home care. In the same vein, decisions not directly pertaining to the residents' care influenced the care they received. Staff pay, benefits, sick leave, and educational reimbursement programs all influence staff turn-over rates, which in turn affect the care provided to residents (Eaton 2000: 17). Actions directly and indirectly related to service provision can shape the quality of that service.

The effects of culture are also evidenced by the different ways organizations handle error reporting. Handler et al. (2006) found that nursing homes in their study had punitive environments or processes, and had a more punitive response to error reporting than did hospitals. They add that, unlike other parts of healthcare system, nursing homes are typically regulated rather than accredited. Regulation is associated with a more punitive culture than is accreditation. The researchers connected this punitive environment to the methods of overseeing nursing homes as compared to hospitals (Handler et al. 2006: 403).

Another example illustrates how values—a part of culture—shape practices that have direct consequences for patients. In a study examining the use of feeding tubes in nursing homes, the researchers found that values shaped the frequency of feeding tube usage. Nursing homes that relied heavily on the use of feeding tubes

viewed them as a way to meet regulations and avoid having to hand feed residents, while the facilities with much lower usage of feeding tubes valued hand feeding. These values work their way down from the administrators of the facilities to the people providing care for the nursing home residents (Lopez 2010: 87). Lopez explains “A culture that promotes hand feeding over tube feeding is facilitated by an organizational mission that strives to create a homelike atmosphere in which food, mealtimes, and family are central and has the necessary clinical resources and expertise to help staff solve feeding problems” (2010: 87). It was the culture much more than the physical condition of the patient that was informing the use of the feeding tube.

Sheridan et al. (1992) concur. In their study of 25 Texas and Florida nursing homes, they identify policies and practices associated with human resource management as connected with and influencing the quality of care provided in nursing homes. The authors clarify that it was not the quality or extent of nursing supervision, which was approximately the same in high and low quality care facilities, but rather, the organizational climate that influenced the quality of care. Regardless of for-profit or non-profit structure, the organizational cultures differed between what the researchers considered failed versus successful homes (Sheridan et al. 1992: 336, 340). In sum, the research connected facility organizational climate to care quality in nursing homes.

Organizational cultures, and thus the kind of care provided, can vary between different kinds of institutions. In one study examining the quality of nursing home care, the nursing homes they ranked as high quality were frequently non-profit and religious associated facilities. Both the number of nursing hours and the type of

facility were demonstrated to at least influence the kind of care residents receive. Eaton references another study connecting the kind of resident care to the type of nursing home. The study found that nursing homes that were for-profit and chain-owned had a higher percentage of low quality facilities, while there were a greater percentage of high quality homes in not-for profit facilities, true even when controlling for other factors such as the size of the facility (Eaton 2000: 16). Discussing an earlier work, Forbes-Thompson et al. report that nursing homes with poor communication and poor teamwork and leadership had a large number of deficiencies in the care provided to nursing home residents (2006: 951).

Organizational culture also affects disaster-related efforts. Mileti, Cress, and Darlington, in a 2002 study, looked at how organizational culture, as reflected through values, knowledge, and institutional practices, influenced earthquake “preparedness and mitigation activity before and after the Loma Prieta Earthquake of 1989” (161). To examine the effect of different culture contexts, this study examined culture’s effect on corporate action in routine and earthquake-jolted environments (Mileti et al. 2002: 166). Specifically, the researchers studied the effect of culture on mitigation and preparedness activity separately, based on the understanding that culture does not shape all corporate actions in the same way. In routine events, the researchers found that knowledge, practices, and values all had a direct effect on both corporate mitigation and preparedness activities. In jolted environments, however, they found that the three aspects of earthquake culture had a weaker or less direct effect than they did in the routine environments (Mileti et al. 2002: 172-173). They explain that values explained mitigation more than either practices or knowledge explained such action. Further, the researchers found that values constitute a central cultural element.

In the jolted context, the only significant effect on mitigation was the value, readiness (Mileti et al. 2002: 175-176). Overall, the researchers concluded that culture is important in explaining corporate action, but that the three components of corporate earthquake culture had different consequences depending on the context and action. Their research provides support for the importance of knowledge and practices in routine environments while values appear to be more important in jolted ones (Mileti et al. 2002: 176).

The literature illustrates the myriad challenges long term care facilities can face in a disaster. Research shows the importance of organizational culture in shaping management and practices in nursing homes, as well as its role in influencing disaster preparedness and planning in businesses. What is lacking is work located where these bodies of research intersect: the organizational culture of preparedness in long term care facilities. This research begins to fill this gap.

Chapter 3

METHODS

The importance of organizational culture in disaster preparedness and in making decisions has been demonstrated, as has the need for nursing homes to prepare for emergencies and disasters given the severe challenges in and consequences facing congregate care facilities in these circumstances. In response to this background, this study asks:

What is the organizational culture of disaster preparedness in Delaware nursing homes? Does this culture vary between facilities? How, and to what consequence?

These questions are answered using data gathered in focus groups and interviews from a study sponsored by the Delaware Division of Long Term Care Residents Protection (DLTCRP). The original study examined issues associated with evacuation and sheltering in place for nursing homes and congregate care facilities in the state of Delaware. These interviews and focus groups asked administrators and other senior level personnel from participating facilities to reflect on their experiences during Hurricane Irene and consider future scenarios as well as their current state(s) of preparedness. Questions were open ended and targeted issues concerning long term preparations (mitigation), preparedness, resources and decision-making, staff issues, structural characteristics, challenges surrounding evacuating, long and short term relocation, and Medicare/Medicaid reimbursement arrangements with other financial issues.

Much like Mileti et al.'s (2002: 67) study in which all of the participants had experienced the 1989 Loma Prieta earthquake, all of the nursing homes included in this study had experienced Hurricane Irene, though to varying degrees of severity. Experiences ranged from complete evacuation of a facility, to hosting displaced residents, to sheltering in place. See Appendix A for a table of the facilities and their experiences during Irene. The study focused on skilled facilities in Delaware. According to the federal government's website for Medicare, a skilled nursing facility is "A nursing facility with the staff and equipment to give skilled nursing care and, in most cases, skilled rehabilitative services and other related health services" (Centers for Medicare & Medicaid Services 2013). Including multiple nursing homes makes this study unique, as most studies examining organizational culture typically focus on one institution rather than multiple ones (Denison 1995: 637). This inclusion of multiple facilities with a variety of experiences allows for an assessment of attitudes within the broader industry in Delaware, rather than just a single nursing home.

The research engaged purposive sampling techniques for nursing homes, and some snowball sampling within the facilities to identify participants. The study was more concerned with reflecting the whole range of nursing home experiences than generating a representative sample and generalizability (Martin 2002). Focus groups were conducted with four facilities selected based on their experiences during Hurricane Irene and position within the nursing home system. Participation varied with the ability to reach an administrator, the administrator's willingness to participate, and for nursing homes in a larger network, the network's willingness for the facility to be included in the study. Nursing home administrators selected other participants for the focus groups, and identified additional or substitute personnel for

the interviews. They also coordinated the times of the interviews and focus groups. Though the administrator initially contacted usually participated in the interview, these individuals sometimes referred the researchers to another person who better suited the interview based on position or perceived knowledge, among the other potential factors. Researchers asked administrators contacted for focus groups to identify five to six other senior personnel who would be knowledgeable about evacuation or sheltering in place activities and/or were/would be involved in making decisions related to those activities. Fields or departments participants represented included maintenance, nursing (director of nursing, for example), food service, physical therapy, rehabilitation, manager of dementia unit, and disaster planning and implementation. A study of the Northridge Earthquake took a similar approach, including medical, administrative, and maintenance personnel from hospitals to understand hospital evacuation (Schultz, Koenig, Heide, & Olson 2005). Doing so helps to provide information on a variety of experiences and components of emergency preparedness associated with these facilities.

The present research interviewed nursing home administrators “high-up enough in each organization to be aware of policies, yet not so high as to be unfamiliar with operations” (Mileti et al. 2002: 168) to understand the decision-making process as well as preparedness activity and perceptions of responsibility as a whole across the nursing home. Many of the administrators spoke frequently with directors of maintenance, nursing, and others, and consequently were familiar with activities associated with all the responsibilities of the nursing home. While Krueger cautions that people who are familiar with each other in a focus group may “inhibit disclosure” and may be responding to situations outside of the focus group (1994: 18), it is

unclear to what degree that affected the group dynamic in this case. The behavior in the focus groups and some interviews more closely reflected the dynamics described by Mileti et al., who write that “In the case of multiple respondents, informants each answered questions and then worked out the differences for a corporate response. Typically, only one respondent answered questions since they often only fit into one respondent’s domain of responsibility” (2002: 168). There were three researchers present during the focus groups: a moderator and two note takers. The interviews and focus groups were recorded and transcribed. Focus groups were conducted in person. Interviews were conducted by one researcher over the telephone with the exception of interviews with representatives from two facilities. Those two representatives were interviewed together in person. There was an additional researcher present serving as note taker. Focus groups for this study ranged in size from four to seven participants, within Krueger’s (1994) four to twelve person recommended range. Interviews had one to four participants.

Focus groups allowed for discussion between participants, but the questions were more directed than typical focus group questions. For instance, instead of asking about staffing in general, the focus group leader asked participants about staff’s willingness to report to work. The focus group guide used several questions of the interview guide. Participants were allowed to expand on answers and elaborate, go on tangents, and feed off of each other’s comments. The moderator took an indirect role during the focus group, guiding the participants to remain on topic, but allowing the conversation to flow comfortably and explore relevant topics (Frey and Fontana 1993: 27; Krueger 1994: 101). Given the public nature of the study, that many aspects of the Hurricane Irene experience were already well known, and many of the participants

known to each other, confidentiality was not promised. In order to maintain the comfortable, permissive environment for respondents to speak that is key for successful focus groups (Krueger 1994: 13), the moderator encouraged participation with eye contact and other verbal and non-verbal cues, but the moderator did not call people out by name or require them to speak.

Data collection was completed approximately seven to eight months after Hurricane Irene struck the east coast, comparable in timing to other research (Lalonde 2010: 364; Mileti et al. 2002: 168). Other organizational research in disasters has interviewed participants years after the event(s) (Corbacioglu and Kapucu 2006: 216-218) without detrimental effects on the data. Focus groups were conducted with four facilities. These four were: the facility that evacuated because of Hurricane Irene, one of its sister facilities that received some of the evacuated facility's residents, an independent all-male facility not a part of a larger network that received the vast majority of the evacuated facility's residents and staff, and a state-run facility that neither evacuated, nor received residents during Hurricane Irene. This sample captures the variety of experiences during the hurricane, includes representatives of both private and public facilities, and independent facilities versus facilities located as a part of a larger network. The first two focus groups afforded a great deal of information about the evacuation and sheltering experience during Hurricane Irene, but the last two yielded less new information, indicating, as Krueger (1994: 88) suggests, that four groups was sufficient. Further, when combined with the interviews, a third of the 49 skilled facilities in the state of Delaware were included in this study. There were four focus groups and 12 interviews (11 by telephone and one in-person with two facilities) for a total of 17 participating facilities. Though a small

sample, research has shown that saturation can be achieved with as few as 12 interviews (Guest, Bunce, and Johnson 2006: 76). Indeed, given the overall small size of the state and limited number of facilities when compared to larger states in the U.S., there is confidence that saturation was achieved.

As indicated by the definition of culture provided, this study examines nursing homes' organizational culture of disaster preparedness by exploring the three identified components that comprise organizational culture: values, practices, and perceptions. This breaks from past studies of organizational culture (Mileti et al. 2002: 162). To understand these three components, the research examines rules and procedures, formal and informal practices, tasks, structure, jargon, and humor.

Organizational culture research has studied both formal and informal practices (Martin 2002: 86). Generally speaking, formal practices are "...what employees are required to do to produce whatever goods or services the organization offers" (2002: 86). Martin lists four categories of formal practices—"structure, tasks and technology, rules and procedures, and financial controls"—all of which appear to some extent in this research, though rules, procedures, and tasks are dominant practices that emerge in the interviews and focus groups (2002: 86). Whereas formal practices are often reflected in rules and procedures documented within the company, informal practices are usually not written down, often show up as social rules (Martin 2002: 87).

Culture studies often investigate cultural forms, informal practices, and content themes as well as formal practices (Martin 2002: 64-65). The use of administrators and upper level personnel combined with the focus on actions, planning, and procedures given the purpose for which the interviews and focus groups were originally conducted, this study is ideally structured to focus on formal practices. The study included attitudes,

jargon, and themes as they appear in the discussions, but are not the center of the study.

Along with formal practices, values are a core (and even dominant) component of organizational culture research (Martin 2002: 65). This study's definition of values aligns with Mileti et al.'s definition in which they define values as "abstract ideas shared by most members of a culture about what is desirable, correct, and good, but values do not specify acceptable and unacceptable behaviors," (2002: 163) which provide justifications or reasons for choices (164). In other words, values are adopted by most of the members of a group, in this case, the nursing home or nursing home network, shaping what is considered good and bad in a general sense. This study merges other scholars' remaining components of culture, combining knowledge (Mileti et al. 2002), beliefs, and assumptions (Martin 2002), to form the third aspect of culture: perceptions. Perceptions can be understood as encompassing knowledge as defined by Mileti et al. in which knowledge is how values appear in policies and actions, or more explicitly the "ability to recall information pertaining to corporate policy and appropriate action regarding particular issues (2002: 164), but expanded to include assumptions and beliefs based on the expectation that assumptions and beliefs will have similar effects on shaping people's decisions and actions. Perceptions also include disaster-related information. This not only includes information on procedures, for instance, who to contact when evacuating, which would fall under recalling corporate policy information and appropriate action, but also knowledge such as the categories of hurricanes. Such information would likely inform decisions and actions, but also shed light on interviewees' priorities through the areas they are knowledgeable about.

The study takes an inductive approach to coding. The data was coded using Atlas.ti software version 6.2. Transcripts of the interview and focus group transcripts were coded. Once the first round of coding was completed, the coded transcripts were reviewed while listening to the audio recordings. The purpose of this was two-fold. First, listening to the audio served as a quality control mechanism by making sure that items were not misinterpreted, for example, that a sarcastic statement was not coded as serious commentary, as well as transcription errors (DiCicco-Bloom and Crabtree 2006: 318). Second, reviewing the transcripts a second time after coding was completed ensured that patterns that emerged later in the coding process, only after reading several of the transcripts were applied to the earlier ones as well, and making sure there was consistency in coding. This research employs the coding methods outlined by Corbin and Strauss, using open, axial, and selective coding (1990: 423-424).

The transcripts were open coded for rules and procedures, formal and informal practices, tasks, structure, and jargon and humor as they emerged to uncover the values, practices, and perceptions. Codes were then clustered into categories of practices, values, and perceptions related to different subject areas, for instance, perceptions, practices, and values related to staffing. Given the applied nature of the original study, the majority of the codes fell under practices and perceptions. Perceptions include, concerns, worries, statements about what others do or do not like, and assessments, such as saying “we won’t blow away” fall under perceptions. These codes were then analyzed for content themes that emerged in the data, collapsed into categories and subcategories. For instance, several codes identified from the data that pertained to facility and staff activity during sheltering in place, including “staff stay

at facility,” “staff sleep at facility,” “people not doing direct patient care bus tables,” “staff sleep in offices,” and “seek staff volunteers before mandate.” These codes all suggested a theme of flexibility, but further examination of the codes in this theme revealed nuanced subthemes under the broad umbrella of flexibility: capacity to expand, repurposing staff, repurposing space, and flexibility in policies and reporting.

Two facilities belonging to the same network, Hillside and Silver Lake, were interviewed at the same time. Additionally, the participant who is the administrator for Silver Lake also holds a regional position within the Genesis network, and was described by the other participant as her boss. As such, there is some overlap in material, in that points raised by one respondent often led to further discussion of those points by the other participant. Steps were taken both during the interview and during coding to ensure that adequate information was obtained for both facilities. Both participants were encouraged to answer every question in at least some way. In some instances, this was as simple as asking if what one participant said was true of the other facility as well, a question which either solicited a confirming response or additional information. Other times, both participants answered the questions on their own initiative.

In order to appropriately reflect the information provided by each institution during coding, the transcript from this interview was uploaded and coded twice, once for Hillside, and again for Silver Lake. Information only applicable to one facility was coded in the respective transcript. Content that applied to both facilities was coded in both transcripts when verbal cues indicated doing so was necessary. One such case was direct affirmation. For example, if Hillside described their preparedness activities, and the interviewer asked Silver Lake, "is that true for you" and the

participant replied "yes," then the same codes were applied for Silver Lake as well. The assumption is that a yes response means that the respondent agrees to the entire statement or that the entire statement applies to the facility and a no statement refutes the entire statement. If the "no" was followed by a qualifier, then the qualifier provides the additional necessary information. Because the Silver Lake participant held a regional position, he sometimes discussed corporate level policies and activity. Such information was coded in transcripts for both facilities. Instances in which the Hillside respondent was unaware of corporate-related information Silver Lake provided were noted. Coding the interview this way allowed for differences in values and especially knowledge to be identified, but also allowed for the maximum information gathering on practices at the individual facilities and corporate level.

Chapter 4

RESULTS

Flexibility

One aspect of organizational culture in the long-term care industry that emerged was flexibility. The facilities exhibited a capacity for flexibility in expanding occupancy, in scheduling and reporting for work, in roles performed in an emergency, and in creative solutions. All of the facilities stated in some way that staff could stay at the facility. Interviews and focus groups revealed much greater variability between facilities as to their policies regarding pets and families. Table 1 below indicates some of the different ways these facilities exhibited flexibility. In some cases, facilities said that they would do these activities. In other cases, the facilities had engaged in some of these activities in the past, but indicated if they would or would not continue to do so in the future. Examination of the table shows that the facilities have some flexibility in expansion, particularly in having staff stay at the facility and providing some kind of sleeping accommodations (though those accommodations ranged from unused resident beds, to allowing them to sleep on couches in the lounge areas. Nine of the facilities were moderately flexible, providing some additional support for staff's family and/or pets. Four exhibited greater flexibility by providing even more of these support services than others in the sample.

The facilities that engaged in the most of these activities were from different networks. Allowing pets to stay was less common, but was also a point of flexibility. The facility that evacuated for Irene, for instance, normally did not allow staff

Table 1 Flexible Facility Activity

Facility Identified by Primary Document Number	Provisions for Staff			Provision for Staff Families			Pets
	Staff Stay	Feed Staff	Staff Sleeping Accommodations	Family Stay	Feed Family	Allow children at facility/ Provide childcare/ Space for kids	Allowed at Facility
P1	Yes		Yes	Yes	Yes		
P2	Yes		Yes	Yes			
P3	Yes	Yes	Yes				Yes
P4	Yes	Yes	Yes	Yes	Yes		Yes
P5	Yes		Yes	Yes	Yes	Yes	Yes
P6	Yes		Yes				
P7				Yes		Yes	Yes
P8	Yes	Yes	Yes	Yes	Yes		Yes
P9	Yes			Yes	Yes	Yes	
P10	Yes		Yes				
P11	Yes		Yes	Yes		Yes	
P12	Yes	Yes	Yes	Yes			
P13	Yes		Yes	Yes		Yes	
P14	Yes		Yes				
P15	Yes	Yes	Yes	Yes			Yes
P16	Yes	Yes					
P17	Yes	Yes		Yes	Yes	Yes	Yes

"Yes" indicates that the facility did this in the past and/or that they may do so in the future.

members to bring pets with them, but during Hurricane Irene they made an exception and allowed pets in the facility (before they made the decision to evacuate). The administrator from this facility explained, "Yeah well we told people that we weren't going to lose staff because someone was afraid to leave their dog or cat or something

like that.” Similarly, the interviewees from two facilities part of the same, multi-state network facilities clarify:

[S1]: I allow them pets and family members and now that’s only during a disaster - I mean it’s got to be a true disaster but yeah, they can bring their children in if necessary, they can bring their - if they have in-laws that they’re you know some people have elder parents. Absolutely. Now you’re responsible. We don’t clean up after your dog or your children but we’re not going to -

[S2]: We do feed the staff and their families - anybody that’s there.

In all, seven facilities indicated a willingness to take pets under some circumstances. All but one of these facilities indicated they would also accept staff family members at the facility. A couple facilities indicated that they did allow pets, but had not had to act on that policy yet. The administrator from a stand-alone facility elaborated on her facility’s position on bringing family and pets during emergencies, saying:

I - it wouldn’t be that I wouldn’t have provisions. I try to discourage that unless they’re in an unsafe situation. If they’re in a trailer, then I have no problem with them bringing their kids in to get them to safety and our provisions are we have enough provisions here that we would be able to do that. I have not ever had anybody bring their pets but again, I would never ask somebody to come to work and leave their dog at home. I would have them come here and the way the property is gated and we have a fenced in area, we would be able to accommodate that.

One facility specifically stated that family members who stayed at the facility would have to sign a waiver, agreeing to abide by the facilities’ rules and that they would not be paid. The perspective here is that of seeing families as detracting from staff’s ability to perform their duties. The respondent from one multi-state networked facility articulated the factors he weighed and balanced when considering whether or not to allow staff family members at his facility:

I'm ready to do that if I have to, but I assess it on a case by case basis. There are a lot of things that go into that decision. You might have somebody who's domestic situation is very unstable, and not only do you want them here, you want them here physically and you want them here mentally, and if this represents the best way to guarantee the safety of their loved ones and I'm asking them to be here for 18 hours, 24 hours, 48 hours, then I'll make the switch if I have to. I have the space here to do it, I know some of the other facilities might not have that luxury, but if I need to I can. I'm not decided about the prospect of having, of opening the doors to family members there's a lot of risks that you bring into the occasion when you do that, but sometimes the risks of not doing outweigh it, so again it's a case by case basis.

This is not to say that these facilities provide no support for staff in their family roles. Several of these facilities allow staff to call home to check up on loved ones and property. During Irene, participants from a state facility even let staff members who live "within reason" go home for a short trip. They explained, "maybe they came back with a suitcase, but they came to work prepared to stay and to care for the residents." Similarly, participants from their sister state facility facilitated the return of one staff member to her home after completing her shifts during a severe weather event, so that she could care for her child with a disability.

Facilities sought out volunteers to report to work during severe weather events. A few facilities indicated that they limited the number of hours worked to avoid worker fatigue. Scheduling was one of the first activities many facilities began in anticipation of Hurricane Irene, and served, at least secondarily as a way to navigate the role conflict staff experienced. By focusing on scheduling volunteers first, facilities were able to let staff who had family commitments remain at home, while others who were willing and able to report in did so. Some facilities did not have a mandation policy. Among administrators who did reserve the right to mandate overtime, the preference was to utilize volunteers as much as possible. The respondent from a stand-alone explained, "We don't do mandatory overtime and I've

never really had to do that. Typically I've had people that have volunteered to stay and if I need them on the floor, I put them on the floor and pay them overtime and if not, then you know they clock out and they go sleep so we have a lot of long-term staff that do that automatically, so I've never had to do mandatory overtime." In the same vein, a respondent from the state facility that received the most residents evacuated for Irene elaborated:

[The department managers] do a great job understanding their staff. In a sense if Patty mandates that people stay and there's a reason for why that person can't stay, like a single parent, you know no place to take the child, even down to having a pet at home, and that employee is the only person there, we won't force that person to stay if we can get enough people that are willing to volunteer. We certainly want volunteers before we do mandation. And so we try to let as many people go home because we know that's where they feel secure, go there first, you know with the understanding that if we need you we'll be calling. If we have to we will have somebody pick you up if you can't get out there or you can't get in, but we have never encountered that really, we've been able to let people go home and not have an issue with it.

Participants showed that facilities can exhibit flexibility when necessary in the face of the demands placed on them by an emergency or disaster event. As one participant from the main receiving facility stated, during Hurricane Irene, "Everybody wore lots of different hats". Staff members took on new roles and activities to support tasks in high demand, temporarily abandoning tasks of less importance. For instance, personnel normally charged with providing activities for the residents (or adult daycare in the case of one facility) were retasked with providing childcare for staff children. In a specific example from Hurricane Irene, participants from the main receiving facility explained how staff not normally involved in food

service helped with food service activities once residents from Harbor Healthcare arrived at the facility.

R1: It was pretty seamless. When we got to meal time it was a little hectic until we got it figured out, after the first meal. But after the first meal we had it down pat, we had everyone fed, all 200 plus people.

R2: It was all cleaned up and we set up for the next one.

R1: It was all set and ready to go for the next setting. It didn't take long.

R2: Wipe with one, come behind and wipe with the other. Got those buckets down.

R1: We taught a lot of folks how to work in the dish room. And we taught then what it meant to have a clean dish, so they worked there. So you know, everybody seems to do their job plus a little bit more.

Some evidence suggests that these changing or additional responsibilities are accounted for in planning to some extent. According to one facility, someone will be assigned to be a public communications officer for the facility during emergencies. Some of the potential candidates for this position, such as the administrator himself, may be engaging in behavior similar to normal activities, but others, such as the director of nursing or the food service director, would be taking on a new task. The administrator specifically stated that the food service director may become the public communications officer because she would be in less demand during an emergency, and thus would be able to take on the role.

Similarly, some participants provided evidence that their facilities exercise creativity in taking advantage of everything available to them, even non-traditional sources. This was especially evident in information seeking behavior described by participants. In addition to utilizing more traditional means of obtaining information during severe weather events, and Irene specifically, a few facilities supplement this

information with alternate and less formal information channels. Participants cited using information from staff members reporting to work to find out more about road conditions, or information from colleagues at other facilities on weather conditions at those locations. Additionally, some staff members have spouses who work for the state as police officers, at the Delaware Department of Transportation (DelDOT), and other organizations who are privy to valuable information, and are able to share that information with the personnel at their facilities.

One example of this creativity during Hurricane Irene comes from a nursing home that utilized two unique information sources. The first source was a security guard who also works as a 911 operator. This man worked at the facility during Irene, but received updates on the situation through his other occupational position. As one of the interviewees said:

And I guess you can say that with the HAM radios, the one who works at the 911 center, he probably – that was probably another source of information from the state because he kept us updated all the time. So that was a short cut. But it worked I mean you know you take what you have and use it to the most advantage.

The second creative source actually came from the residents themselves. Several of the residents were HAM (amateur) radio operators. Not only did the facility personnel get information from these radio operators, but they actually facilitated their operation, setting up a room for the radio operators near the administrator's office. The participant elaborates: "Actually we had a HAM radio station set up in one of the resident lounges down from my office...." This facility exemplifies long term care facilities' potential for creativity. Another example of taking advantage of unique resources comes from the Cadia network. The network owners also own hotels, which are made available on occasion to family members of staff in emergencies.

Participants from these facilities view these hotels as an evacuation and potentially long term relocation option. Overall, the interviews and focus groups echoed the idea of doing what one had to do. Facilities may not have demonstrated all forms of flexibility, but they all demonstrated at least one of them.

Basic Minimum Level of Preparedness

There was a basic minimum level of preparedness present in and accepted in all of the long-term care facilities in this study. Facilities' most common preparedness measure was having additional supplies of food and water. Facilities in the study had at least a three day supply of food and water. Five had five to seven days of food, one had a week or more of some supplies. A few respondents mentioned and the researcher confirmed that the three day minimum was part of their food service regulations. (Delaware General Assembly 2013). Facilities had at least a few days of medication supplies available, but some had as much as a 30 day supply depending on the time of the prescription or supply methods. Many facilities requested early deliveries of medications prior to Hurricane Irene and other events with lead time. Supplies of paper and plastic dish products were also obtained in case of power outages. Mentioned only by the three facilities in one multi-state network, these facilities take on thousands of dollars in additional cash to have on hand at the facility in case of price gouging following the event and a need for some supplies. See Table 2 for a more detailed breakdown of preparedness measures. One facility called to have dumpsters emptied so that trash would not pile up and collect at the facility during the event. Some facilities also mentioned following up on contracts prior to Irene to make sure they could be relied on. Interviewees mentioned other activities

already discussed, like adjusting schedules so that staff members came in early and picking up staff as pre-event activity.

Table 2 Facility Preparedness Activity

Facility Identified by Primary Document Number	Food-3 days	Food 5-7 Days	Food 8+ Days	Disaster Specific Kits	Paper Products	Additional Medications	Take on Additional Cash	Fire Drills	Disaster Drills
P1					Yes	Yes			Yes
P2	Yes				Yes		Yes		
P3				Yes					
P4		Yes				Yes			
P5		Yes							
P6	Yes								
P7						Yes			
P8		Yes		Yes		Yes	Yes		Yes
P9	Yes			Yes					
P10						Yes			
P11	Yes				Yes				
P12						Yes			
P13									Yes
P14			Yes						
P15		Yes		Yes		Yes			Yes
P16		Yes		Yes	Yes	Yes			
P17	Yes						Yes		Yes

"Yes" indicates that the facility did this in the past and/or that they may do so in the future.

Facilities stated that they have plans. These plans are reviewed annually, and sometimes after events. What these plans look like varies with the facilities, but

information from several interviews and focus groups suggest hazard specific plans or at least hazard specific elements in those plans, for instance, for flooding or severe weather. Though not always discussed in terms of planning, facilities often have documentation of important contact information for staff, other administrators, vendors and service providers, and government officials. Fire drills were the most frequently mentioned type of drill, rotating by shift so that all staff members have the experience. Respondents also mentioned performing annual disaster drills

Participants discussed engaging in a number of protective actions to secure the facility for the effects of Irene. They frequently cited bringing in outdoor furniture and other items that could become projectiles in the hurricane's high winds. A few facilities gathered materials like plywood to reactively cover windows or wall breaches should they be broken during the storm. Placing sandbags over window wells to prevent basement flooding was another protective action. The three facilities from the multi-state network that took on additional cash prepositioned transportation resources from inland facilities to coastal ones in anticipation of potential evacuation transport needs.

By and large, facilities in the study provide for the basic physical needs of their staff members, both during Hurricane Irene and in emergencies in general. Staff members stay at the facility during emergency events to make sure that there are adequate personnel available to care for the residents, that facilities meet minimum staffing requirements, and that staff will be able to report at their scheduled times. Though this practice exists to ensure that facility responsibilities were met, at least one facility mentioned that in the past staff stay at the facility during snow storms because

they tried to leave once their shift ended, but were unable to do so because of weather conditions.

A number of facilities also provided a pick-up service to transport staff members to and from the facility if they are otherwise unable to report. This system existed in varying degrees of formality. One of the facilities from the network located entirely in Delaware rented vehicles for this purpose, and directed maintenance personnel to pick up staff requiring transport. In a small number of other facilities, employees used their own personal vehicles to pick up coworkers. In one interview, the respondent indicated that staff members, including himself, owned four-wheel-drive and other similar vehicles for that specific purpose. This service includes bringing staff in early if they would be unable to get in before a later shift during the storm. This appears to be corporate wide practice among one of the multi-state network facilities, evidenced by statements indicating that the participating facilities provide the service, and a story told by one of the respondents about his time at another network facility in Maryland, in which a staff member was brought to the wrong facility in the network because she just got a ride from a vehicle from that network. While this practice existed in varying levels of formality and means of execution, it ultimately achieved the same goal of facilitating reporting for work.

The Value of Emergency Preparedness

Another element of organizational culture that emerged was the degree to which personnel in long-term care facilities value emergency preparedness. Despite the universal possession of a plan, the emphasis was almost always on the plan as a product, not a process (Quarantelli 1997; Quarantelli 1998). Having a plan (and reviewing it) is part of licensing, explained some participants. One exception to this

tendency was one stand-alone facility. It was not that this interviewee did not value the plan as a product, but rather than emphasizing having a document that outlines specific procedures, she took into account the uncertainty and instead crafted her plan to be what she thought would be the most useful tool in those contexts: a reference manual, trusting the training of her staff to then make use of that tool to make the best decisions under the circumstances that they are presented with at that time. It was unclear from many of the interviews and focus groups which specific positions were involved in planning, though it was apparent that for networked facilities, general plans were formed at the corporate level, and then were usually adjusted to some degree to reflect specific conditions of the individual facility. A small number of facilities mentioned having a safety committee that was involved in this process.

Some facilities had boxes of emergency related materials as well, referred to as emergency response boxes by one respondent. These were filled with a range of supplies. The emergency bags (previously buckets before more items were added) had items necessary for evacuation. The emergency backpacks maintained at one facility included “flashlights, gloves, duct tape, electrical tape, eye protection, ear protection, first aid kit, two sets of batteries, CPR mask,” and a raincoat. As with food and water, medication and medical supplies varied in quantities.

Participants from five facilities felt there are major limitations to plans. Plans are unable to predict uncertain circumstances associated with a disaster, and thus have limited use. This was particularly true for the facility that evacuated when it evacuated for the hurricane. Reflecting on their evacuation plans, one respondent said:

I'll be honest with you, we could sit here all day talking about plans, plans, plans, but when you [have] 150 people that you got to take

somewhere, there's not an empty nursing building just sitting down the street, or hospital.

The focus of planning was on an isolated incident which would only affect the facility and thus allow them to rely heavily on nearby community resources. The circumstances they faced during Irene diverged from the plan, and so this respondent found the plans to not be useful.

While the facilities conducted fire drills, only five mentioned running disaster drills.² Though not disaster focused, elopement (missing resident) drills were mentioned among facilities in the study, and resident elopement was a serious concern among some administrators, described by one participant as “the one that keeps you up at night.” Participants mentioned challenges associated with doing drills, namely having to compromise between effectively drilling for a situation while minimizing disruption to the residents. One participant elaborated on these challenges:

You know I think the biggest challenge is that as much planning as you want to be able to do, how much do you want to disrupt the lives of your residents while you're training your staff? You know I mean people talk about every year you should evacuate and you should set it up so that they're all evacuated into the parking lot because that's what your evacuation plan is going to be and that's wonderful but that disrupts the lives of these people that you know count on us to be prepared for their safety but also don't want to be disrupted that way so I think that's the biggest challenge.

Table top exercises are one way they compromise between these demands. Another respondent echoed these concerns in discussion of that facility's evacuation exercise

² I use the word “drills” here because that is what the participants called them I will discuss the use of terminology later during the discussion of knowledge of emergency management.

experience and the limitations these concerns placed on the extent to which they could practice evacuating. A respondent explained:

So have had evacuation drills here, we've evacuated entire wings before. Obviously, that's only just outside the building, you know what I mean. We've never done a drill where we've literally evacuated people to another facility because we are talking about elderly people, you don't want to put them through that kind of thing.

They also valued other activities. The administrator from a stand-alone facility illustrated this point when talking about taking in large numbers of residents from another facility, saying, "I'd like to help, but you know that you also have a customer to keep happy." Although most participants did not state so outright, they alluded to the fact that taking in patients from other facilities may prove challenging as unaffected facilities may place a priority in keeping their own residents satisfied over helping other facilities.

Familiarity with Emergency Management

There was a lack of familiarity with emergency management among the participants. Much of this unfamiliarity appeared through the terminology they used, especially in talking about exercises. Participants used a variety of terms to talk about exercises, including "disaster drill," "tabletop drill," and "actual drills." The actual terms are "table top exercises," "functional exercises," and "full-scale exercises" (Federal Emergency Management Agency 2012). Similarly, participants were not familiar with the term "mutual aid agreement." McEntire and Dawson explain that "Memorandums of understanding (MOUs) and mutual aid agreements are similar in that they are both designed to improve interagency, intersectional, or interjurisdictional assistance and coordination", with MOUs typically "less formal

than mutual aid agreements” (2007: 61). Only the participant from one facility (the stand-alone one engaged in emergency preparedness) provided appropriate information when asked about mutual aid agreements, discussing the agreement her and another facility had to provide emergency shelter for the other if something happened to the facility. Everyone else talked about going to sister facilities, or talked about contracts with suppliers, or having a number to call to let Delmarva Power know that they are a priority facility. In these instances, participants did not speak the language of emergency management. For the Hurricane Irene evacuated facility, there was also lack of clarity as to procedure. The evacuated facility was supposed to contact the mayor of the town to inform him of their evacuation. They did not do so, and DEMA informed them afterwards that they should have. One of the participants reacted to this instruction during the focus group, asking “What’s he [the mayor] going to do?” One administrator thought there were six or seven categories of hurricanes (“I don’t [know] if a 6 or 7 has ever hit Delaware”), when in actuality, the most powerful hurricane is a category five. Additionally, none of the participants were fully familiar with the Medicaid or Medicare reimbursement process, though some mentioned that people other than themselves are responsible for financial aspects of care.

Value Experience

If administrators had inconsistent values of emergency preparedness, they all valued experience, both their own experience and that of others in their field. Several of the respondents indicated that they have been working in their fields for so long, that the response effort came naturally, that they intuitively knew what needed to be done. Respondents described themselves as “seasoned nurses,” and made statements

like we have “been doing this so long” to emphasize their experience. Another said, “I don’t know, we[‘ve] all been doing this for so long. We probably knew what to look for if it didn’t right our way.” Another respondent expanded on this:

For me, based on the experience that I have and what the Director of Nursing brings to the scene, we have been doing this a long time. So we kind of know what the process is, and what the flow is, and the kind of things we need to do and what needs to be accomplished. So once we know of an impending event, we pretty much kick into high gear and start arranging to talk with staff, start arranging to talk with a director, such as director of food services, and other areas to make sure there is adequate staff in the building. It’s documented, but it’s like second nature, you know what you have to do.

One respondent cited his status as a life-long Delawarean and his involvement in the construction of facilities in other locations on the East Coast as experience informing his decisions as an administrator. Many respondents also felt that their drills serve as training for staff, highlighting the importance of experiencing something to learn it.

Participants also indicated learning from events they and others experienced and treating actual events they experienced as drills. More precisely, five facilities specifically mentioned treating exercises as drills, and seven talked about learning from past experiences. Four mentioned learning from others. Table 3 lays out the different ways participants mentioned learning from theirs and others’ experiences.

Learning from others in the nursing home industry was important for participants. One administrator discussed harvesting information during Irene from other administrators in his facility’s network particularly from an administrator who used to be the administrator at his facility. The respondent explained:

There were a couple of conference calls with our regional vice president who would get all of the facilities together. Again, some of our administrators are long tenure in this field, who had previous contingencies that they have went through and were able to give some

insight into those that were newer on the block. That was a very useful resource basically.

Table 3 Ways of Learning

Facility Identified by Primary Document Number	Learned from Own Past Experiences	Learned from Others' Experiences	Treat Events as Drills	Rotate Fire Drills by Shift
P1				
P2	Yes	Yes		
P3	Yes	Yes	Yes	
P4	Yes	Yes		
P5	Yes			
P6	Yes			
P7	Yes			
P8		Yes	Yes	
P9	Yes		Yes	Yes
P10		Yes		
P11				Yes
P12	Yes			
P13	Yes	Yes	Yes	Yes
P14	Yes	Yes		Yes
P15	Yes		Yes	
P16	Yes			
P17	Yes	Yes		

"Yes" indicates that the facility did this in the past and/or that they may do so in the future.

Another participant highly valued her opportunity to talk with someone from the long term care industry who experienced Hurricane Katrina, saying "it was helpful talking to someone who had been through Katrina and hearing some of the things they faced." More broadly, administrators from three different networks look to the news for kinds of experiences, such as workplace violence, that may not have occurred in the

network, or even in a long term care community but could potentially occur in their facility. They then incorporate those scenarios into table top exercises or at least discussions of what the responses would be. Very few of the respondents indicated that they engage in this process.

Scenarios experienced at the facilities were also treated as drills. Several facilities not severely impacted by Irene mentioned treating that hurricane experience as a drill. Similarly, the interviewee from one facility mentioned that their boiler was broken, and they were using that as a drill experience. After events, facility personnel took various measures to review and evaluate their experiences. They viewed experience as key in their success. They saw the communication provided predominantly by e-mail from the Delaware Healthcare Facilities Association (DHCFA) and its president, as an important information source and had a positive view of that association. They saw the president as representing their concerns and as a useful and reliable source of information, and she was a trusted figure in the healthcare community.

Staff provisions varied by facility, but generally met basic needs of the staff. Often, empty beds and rooms not occupied by residents were made available to the staff for sleeping or to otherwise have a space of their own for some privacy. For example, one facility made two apartments available for staff use, one for male staff and another for female staff. Staff also slept under a variety of other conditions, from mats, to air mattresses, to sleeping on tables, couches, and chairs. One facility even mentioned having additional personal supplies for staff if needed. In some cases, facilities provided linens for their staff; in others, staff had to provide supplies for themselves. Staff were also fed at the facilities if they had to stay during meal times.

In some cases, this was simply an extension of normal, non-emergency practice. When asked, respondents indicated that they included staff in their planning for resources. Overall, there was a substantial level of homogeneity in provisions for staff during emergencies.

Eleven facilities will potentially or have allowed staff families to stay at the facility at least under certain conditions. At the opposite end of the spectrum, are those facilities that refuse to accept staff family members. One administrator indicated that they “try to keep that [sheltering staff family] to a minimum because there’s a liability of course with children in the facility.” Similarly, two respondents from the main receiving facility elaborated on why that facility does not accept staff family:

R1: I have one, but still it’s still a very big risk and responsibility and you’ve got to have staff capable of staying in there with the children. You know, have activities and meals, and once again you first have to have the space to do it in.

R2: Peanut butter and jelly only goes so far.

R1: Absolutely, peanut butter and jelly and cookies and invariably the six and seven year olds want to walk the hallway and find mom, and that’s hard. So this comes with a lot, so you know.

In this case, taking on additional occupants in the form of staff family was viewed as a risk and burden to the facility’s operation.

The differences between facilities in how they valued emergency preparedness also emerged in the training expected of staff. While a few facilities offer only basic orientation and safety training for their employees, others offered a range of training programs. One facility had disaster preparedness days for staff. Other additional training included fire safety training/fire school and train the trainer programs, as well

as training for power or water loss. A number also mentioned intentions to attend the workshop that DLTCRP was sponsoring in partnership with the University of Delaware (associated with the grant that funded the study and which took place the spring after the interviews). One mentioned going through mandatory training related to the nearby nuclear power plant. Another facility shared that its network sends two staff members a year to an annual conference dedicated to disaster preparedness. One of the lessons stressed in some of the training is the importance of staff's personal preparedness. Whether or not a facility engaged in training and emergency preparedness, there was an emphasis on personal preparedness of their staff. Many administrators expect staff to plan for their families when they were hired.

Risk Perception

Administrators from both networked and non-networked facilities saw size (in the form of network) as important in their ability to handle a disaster, particularly depending on the size of the event. They believed even stand-alone facilities could handle a small event. Even if the demand exceeded a facility's own resources, if the event was confined to a single facility, they could potentially rely on other facilities in the area. In a larger event affecting multiple facilities, facilities in the area would be unable to help each other, and aid would take place within networks. One participant from a networked facility explained this point:

They [stand-alone facilities] won't struggle if they were the only one that had a disaster because any of the other centers - Silver Lake, Cort - Capital, all those people are going to help them but if there's a disaster that happens in Dover where four or five of the centers get - our centers are going to take care of our Silver Lake capital - Arcadia is going to take care of theirs. That's where I think the biggest thing is. Everyone is going to try to help but they don't have a sister center to go to.

In this opinion, being a part of a network guarantees, or at least better ensures, access to resources and support should the facility experience a disaster. A participant from a stand-alone facility echoed this sentiment, explaining that her facility established a mutual aid agreement with another stand-alone facility in acknowledgement of this predicament. Transportation is one example evoked to illustrate the benefit of networks in disaster. One practice by a network that engaged heavily in emergency preparedness of the included facilities prepositioned transportation resources from inland facilities to those to be affected by the hurricane in case they needed to evacuate. While all of these examples come from facilities that more actively engaged in emergency preparedness activity, statements from less engaged facilities showed that this perception was true among those facilities as well. Specifically, the frequent mention of reliance on sister facilities conveys a ubiquitous assumption that sister facilities will be available and sufficient to meet disaster needs. As the evacuated facility's struggle to meet relocation needs within its network highlights, however, this may not always be the case.

Conceptions of risk also emerged in the way participants perceived residents. Some participants referred to facility occupants as residents while others referred to them as patients. One participant used the term "walkie talkies" to refer to residents who were capable to walking and were communicative. Typically, residents were talked about in ways that indicated that participants (and by extension other nursing home personnel) thought residents are not capable of contributing to their own wellbeing. Residents were frequently described as fragile or having the potential for injury in evacuation. There was also concern for residents' behavior and mental

wellbeing. One respondent articulated this concern when talking about the retiree population at her facility:

But I really feel like - there's a 160 - if not 200 retirees over there that could fall to pieces and panic and then I've got my health center people and retirees that really need to be better prepared for again not probably that hurricane but maybe that chemical spill or something that's not projected.

This fragility versus resiliency language was somewhat mixed when discussing independent residents. The residents of some independent communities were expected to prepare themselves for emergencies, and could expect to receive little to no support from the larger facility. Other facilities took very active roles in preparing their independent residents for disaster, helping secure their residences, and/or inviting them to shelter at the main health center facility, perceived to be much safer based on construction materials.

Most of the participants viewed transportation in an emergency as a challenge or a concern. In fact, this is the area most frequently seen as a disaster risk. One way they frequently conceptualize this risk was in terms of lack of available transportation for evacuation if needed. While most had at least some transportation options available, such as wheelchair vans and other vehicles, several of the participants from these facilities felt that they did not have sufficient transportation resources to adequately facilitate evacuation. Many of the facilities had contracts with transportation providers, be they ambulance companies or bus lines, but acknowledged that they can only rely on those resources if an event affected only their facility, or perhaps a very small number of them. Transportation is considered by some to be the greatest challenge, one participant saying, "The only riddle that we can't solve is the transportation".

Questions of ability to execute an evacuation due to limited transportation resources was not the only factor informing respondents' perceptions of evacuations as risky and their preference to shelter in place. Concern over road conditions, especially under deteriorating weather conditions, led some administrators to see being on the road for evacuation to be more dangerous than sheltering in place

With a Category 4, a Category 5 storm, the bridges are at risk, the roads becoming impassable are risks, so you might want to get on the other side of that. A place where you could have some problems transferring before the contingency if it were, say, a Category 5 storm. But lower storms, that very same risk of damage actually makes it more of a danger to try to evacuate, that's why sheltering in place is the preference if you can.

Limited exit options also troubled a few participants. One administrator in southern Delaware cited the existence of only two main ways out of the state (Routes 1 and 13), and saw the traffic congestion associated with beach traffic as an indicator of the kind of slow moving traffic problems that would arise if there were an evacuation of the county. Similarly, another interviewee mentioned the limited options for getting out of the area, explaining "...Delmarva is uniquely situated in that we are three sides surrounded by water, and so there is a very finite number of vectors off of the peninsula...." They viewed the safety and wellbeing of residents to be at risk from what they anticipated would be dangerous conditions on the roads, as well as physical trauma to residents from moving them. Skin tears and falls were anticipated physical consequences of the move. They perceived evacuation as a logistical nightmare, between meeting the physical needs of residents who cannot just be piled on a bus, to having to find places to go, to transporting the necessary records and supplies.

Beyond just looking at what is and is not seen as risky, how these risk assessments are made is also a part of organizational culture. Overall, personnel in the

facilities included in this study grounded their risk assessments in routine events and based them on mostly non-disaster experiences. One respondent used beach traffic to predict what evacuation traffic might be like. Their previous experiences, particularly weather events and specifically snow storms, informed much of their risk perception and perception of appropriate responses. Snowstorms were a common point of reference for the participants. They felt that a major snow event is more likely to happen than other events and pose greater challenges. One participant specifically stated as such, saying “I understand the focus on Hurricane Irene, but I would like to put it on record that I find it more of a challenge, more of an impact on everything when we have snow emergencies versus having Hurricane Irene.” Another respondent explained “So I definitely think that the hurricane went much smoother than it does with the snow emergencies.” While facilities in the study experienced a few severe snow events in the past, none of the participants of the included facilities experienced anything that had incapacitated a building and required evacuation. Most discussions of being at risk were in the context of weather or natural phenomena, though there were some additional perceived risks, most notably chemical incidents and workplace violence. Although a few participants indicated concerns over other kinds of events like chemical based scenarios and workplace violence, few were seeking out information or otherwise trying to prepare for them. While some efforts were being made in some of these other areas, the focus in knowledge and risk assessment was on weather related phenomena.

When asked if staffing during emergencies was an issue, the respondent from a stand-alone facility replied:

It has not been for 13 years. I’ve never had an issue, if anything I would say that in general as snowstorms and hurricanes and those kind

of things have approached [the facility] - I tend to be overstaffed because people call and say hey I'm available, I'm willing to come in. So you know we'll err on the side of having more staff and you know not let it be that the residents' care is at all compromised.

For the respondent from one facility, staffing was “an area of confidence because I had gotten their commitment and I've seen the staff when we've had the snowstorms and it's not - yea they're absolutely committed to being here and doing what needs to be done.” Respondents from at least a third of the facilities described their staff as committed. On the other hand, there were respondents who were more skeptical about staff reporting, like the respondent from Regency who claimed, “Well you have to be concerned about staffing or it will become a problem. We are concerned about staffing just in normal – in the normal operations.”

In the same way that participants assessed their capabilities by looking at non-crisis events and assuming that the skills were transferable, participants also assessed the structural strength or vulnerability of their buildings during a disaster by drawing from their observations in past events and normal times. Four participants used the age of the building to demonstrate its ability to withstand severe weather. Many also referenced the age of the buildings as a measure of their survivability and variously described them as solid. In talking about the buildings on the facility campus, one respondent said “some of the buildings are 80 years old and they are solid as a rock.” Many referenced the construction materials of the buildings—like concrete, stone, and brick—as the sign of the strength of the building. They also made comparisons to private dwellings, describing buildings as “like your house” and saying that it “won't blow away.”

What evidence was used to base these assessments of structural security on was unclear. Personnel used weather reports for the information about the severity of

impending events, but participants who made statements that they would not “blow away” or that the structure was solid or built like a fortress offered little to support their claims other than saying that the building was made of concrete and steel or brick, and past experiences. A couple of other representatives referenced the buildings’ previous lives as civil defense or other shelters as evidence of structural security. It did not appear that participants consulted or referenced any sort of documentation or scientific evaluation to make assessments regarding structural security. Similarly, participants said whether or not they were in a flood zone, but did not indicate how they came to know that information. Not only did they evaluate their own past experiences, but they compared them to others’ experiences. One participant said “It [the building] did well during the earthquake and other properties did have some damage, we really didn’t here in that brief little encounter.”³

The participants did not have a lot of experience with big events. In some cases, they were dismissive of these larger incidents in a fatalistic way. They said things like “if we were damaged, the whole community would be damaged.” Another elaborated,

If anything was going to be a disaster, Governor Bacon [a state facility], chances are, the whole area would be ripped apart and the town would be looking to Governor Bacon for shelter for buildings that were secure. Likewise, if this building suffered a major catastrophe, chances are the surrounding area would be disastrous. We would most likely be a shelter for other parts of the town.

³ A 5.8 magnitude earthquake with an epicenter in Louisa County, Virginia, roughly five miles from the town of Mineral, shook Delaware on August 23, 2011 (United States Geological Survey 2013).

The administrator at one facility taped up windows on only two sides of the facility, believing that the other sides of the building were protected. One center said that they fared well during the earthquake while others did not, putting that experience forward as proof of structural soundness. The impression was that if that facility was damaged, the whole community would be devastated.

As with staff, where concerns about staff reporting to work did not match staff behavior, the dependency and fragile language used to describe language did not always fit with the experiences of residents during Hurricane Irene. One of the major concerns against evacuation expressed by participants was the potential for negative health consequences, such as skin tears, or evacuated residents. The facility that evacuated for Irene, however, reported that there were no skin tears or any other injuries during the evacuation. One woman who was in hospice care died while at the receiving location, but her death was not attributed to the evacuation.

The one exception to the pattern of basing risk assessments based on the routine and familiar was references to Hurricane Katrina. The experiences of nursing homes in New Orleans during Hurricane Katrina resonated with the participants, and informed some of their risk perceptions. However, Katrina did not have a universal effect. Data suggests that Katrina reinforced existing ideas. Facilities that value emergency preparedness cited it as leading towards more preparedness work, while others used Katrina to justify their position on evacuation, that is, preference to shelter in place. There were two perspectives on Katrina. One perspective was that Katrina was a “watershed episode for our industry,” jumpstarting disaster preparedness and planning initiatives. One respondent mentioned talking to someone who experienced Katrina. Another participant from one of the facilities that took a very proactive

approach to preparedness, in talking about Katrina, said “That’s when our company really kicked it into gear and cracked down that next year.” After Katrina, one participant had DEMA review her facility’s plan. Another respondent referenced conversations with someone in the field who had experience Katrina, and found that “it was helpful talking to someone who had been through Katrina, and hearing some of the things they faced.”

However, Katrina (and the quick-to-follow Hurricane Rita) also served as a sign of everything that can go wrong, especially in evacuation. For these facilities, Katrina solidified their decision not to evacuate, but not necessarily to invest in planning. The stories of bus fires killing nursing home residents during the Hurricane Rita evacuation justified for some respondents their planning to not evacuate. One participant explained how some of the horror stories from Katrina and Rita affected his views on evacuation:

And I think for me the whole idea of moving residents by any sort of common carrier, scares the living daylights out of me because of what we heard as a result of Katrina. Buses upsetting, being in accidents, catching on fire. I mean all those things, from my perspective run through my mind and scare me because I’m thinking that’s a tremendous amount of responsibility....

Facilities that highlighted the challenges to evacuation that occurred during Katrina and Rita did not reference the hardships faced by healthcare facilities in and around New Orleans that did not evacuate during Katrina. Katrina did not propel these facilities into action in the same way that it seemed to motivate or encourage preparedness efforts in other organizations, typically those that engaged in disaster preparedness activity.

Chapter 5

DISCUSSION

Like the hospitals included in Aguirre et al.'s (2005) study, a few facilities had safety committees, a characteristic of high reliability organizations. Some of the long-term care facilities here also resemble the hospitals in that study, in that they considered events that had not happened at their facilities, but could in their planning. Consistent with Cornell, Cusack, and Arbon's (2012) findings in their review of the literature on the elderly and emergency preparedness, the residents of these facilities were rarely involved in the emergency preparedness work of the facilities in this study.

Emergency preparedness' competition for time and attention with other concerns in the long-term care setting resembles what Connell found in his 2002 study examining the effect the Y2K threat had on hospital planning and preparedness. He found that the Garbage Can Model developed by Cohen, March and Olsen where a variety actors and ideas all shape decision-making fit with the decision-making process of hospitals in the study. Though the competing factor in that study was cost, an issue not as prominent in this analysis, this model of decision-making seems to apply in the long-term care context as well.

Denny claims that risks are based in the knowledge people have about them, including interpretations the perceived causal relationships. As a result, he claims that "Risks can therefore be exaggerated, dramatized or minimized, and are open to social construction and political manipulation" (Denney 2005: 191). Though writing in the

context of risk society, such construction of and alteration of risk was apparent in this study. For instance, the reliance on sister facilities and the belief that having sister facilities to rely on made them more capable of withstanding the effects of a disaster. Consistent with Wang et al.'s (2009) claim that organizations more generally believe that organization size among other factors will protect them from the effects of a disaster, this also demonstrates a minimization of the risk posed by a disaster.

Participants' tendency to equate their frequent, non-crisis experiences to what they would go through and be capable of performing during a disaster relates to Clarke's (1999) concept of an apparent affinity. Clarke explains that people create an apparent affinity by claiming that "things are alike in essential ways, and that one knows what those essences are....[making] a claim that if we know something about event number one we also know *the same thing* about event number two" (1999: 71). When interviewees claimed that their facility would fare fine in a disaster or that they knew what to do in a disaster because of experiences like a broken water boiler, they were claiming that the characteristics these smaller experiences were like those of a disaster event, despite them being what Quarantelli (1997; Quarantelli 1998) states are qualitatively different events and experiences. This may be, at least in part, due to the interviewees' heavy reliance of their personal experience in constructing their ideas of risk as they pertain to their facilities, which, when experience is not placed in the appropriate context, Clarke (1999) claims can misguide people into believing that they are safer or more prepared than they actually are. Unlike high reliability organizations (HROs) which view near misses as small failures and "liabilities of success" (Weick and Sutcliff 2007: 20), the facilities in this study were more typical of non-HRO organizations which view near misses as successes and signs of their preparedness.

Near misses provided “evidence of safety” and their ability to escape or avoid disaster, supporting their existing preparedness measures rather than identifying a potential risk (Weick and Sutcliff 2007: 61). These facilities used their experiences and their plans as indicators of their preparedness, confirming their preparedness assessments instead of challenging them (Weick and Sutcliff 2007). Even when participants talked about the challenges they faced, they did not talk about them in a way that would challenge their perceptions of preparedness. The data presented here suggest that the facilities included in this study may be functioning under a perceived level of preparedness that is greater than their actual ability to handle a disaster.

There are several limitations to this work. First, there were only 17 facilities included in this study. While this begins to paint a picture of preparedness culture in the long-term care industry, the limited number makes it challenging to see patterns and especially to see differences emerge between facilities. Inclusion of more facilities would better facilitate explorations of the patterns and differences that exist between and consistencies within different types of facilities. For instance, it is difficult to know if the one independent facility taking an active approach to preparedness is an anomaly of sorts, which might be made apparent if more facilities were included and no more were found like it, or if there is a pattern here, but the limited sample affords the study only one example of such a facility.

The second limitation comes from the nature of secondary data analysis. With an original focus in practices and the applied information related to emergency preparedness, evacuation, and sheltering, less exploration of values, and to some extent knowledge, took place than would be ideal. There may be more complex nuances in organizational values than are apparent in this study because such

information was not probed for during the interviews and focus groups. Third, administrators and other senior personal at the facility level of organization participated in the interviews and focus groups, it is hard to know how much of what those individual said accurately reflects culture as it is manifested in the facility or network as a whole, as opposed to that specific level of hierarchy. Finally, employee turnover makes it challenging to know how much of the respondents' attitudes are reflective of the culture of their current place of employment versus their collective experience in multiple facilities and multiple networks. To some extent, the effect of this limitation is mitigated in the interview guide by questions focusing specifically on the facility he or she represented and in the study by an approach that is generally looking at the industry as a whole. However, it is still something that makes the nuanced differences between facilities and networks more difficult to understand.

Another point to examine is the role that organizational culture plays in terms of the employees perceptions of disaster preparedness. Is it that the organizational culture of the company attracts people who are interested in disaster preparedness, or is it that employees internalize the goals and values of the organization? Similarly, is it simply that employees have to prioritize certain activities because it is their job to do so according to the company, but if taken out of that company and put in another context, their expressed attitudes may differ.

All of that acknowledged, the purpose of this study was to begin to explore organizational culture as it relates to preparedness at the industry level in Delaware, and that it does. The contribution of this research was to look at culture horizontally at multiple organizations in the long-term care field to examine culture. While it was useful in generating an initial comparison of facilities to generate an understanding of

organizational culture as a whole for the industry, this work would still benefit from vertical study at multiple levels within these facilities and networks to understand how culture performs and is developed at each level of the organization. This research suggests that leadership may play an important part in the formation and maintenance of culture. Future work should further explore how leadership influences organizational culture.

Looking at multiple levels would allow for examination of culture from the upper echelons of corporate hierarchy in networks where there is development of company-wide policies, to regional leaders who may be more in tune with particular hazards, to facility administrators, down to the low level staff directly involved in patient care and preparedness activity. Doing so may determine if culture is generated at the top or bottom of hierarchy, and if there is variation in culture at different parts of the structure, what is responsible for those differences. Additionally, this research may help discover more about the emergency preparedness champions in these facilities, whether these individuals adopt values of emergency preparedness because it is simply a part of their job descriptions to do so, if companies that emphasize preparedness attract employees who value it, or if emergency preparedness becomes important at this facility because it is important to the person accepting the position.

Interviews and focus groups specifically directed at understanding culture, versus relying on secondary data analysis, would also be valuable in understanding preparedness culture as it forms and develops in the long-term care industry. Additional future research should examine organizational culture of preparedness in the nursing home industry in other states. The organizational culture of this industry exists within a larger cultural context with multiple factors potentially shaping what

that culture looks like. These factors include market forces, social forces, and regulation requirements. These factors may be countered by champions in the profession or within emergency management. Delaware is a small state, located on a peninsula, characteristics that may produce conditions distinct from those faced in larger, land-locked states for instance. While it is likely that the findings in this study are relevant to the long term care industry as a whole, research in other states would both determine the extent to which this is true as well as identify factors that may only be important regionally.

Chapter 6

CONCLUSION

This research found that there are industry wide aspects of organizational culture related to preparedness. Returning to the definition of organizational culture posed earlier in this work, values, practices, and perceptions emerged that illuminate the organizational culture of long-term care facilities as it relates to emergency preparedness. This research reveals that participants in this study value experience in the industry, both their own and the experience of others. The value of emergency preparedness varies between facilities, so that some place minimal value on it, while others see it as having greater importance than others in the field do. In all cases, however, emergency preparedness was competing against other demands considered valuable, including the level of disruption to residents.

As revealed by many of the respondents, there is a basic minimum level of preparedness required of and generally accepted as necessary by the personnel included in this study, and facilities demonstrated a capacity for flexibility when necessary. Practices, such as minimum supply levels and regular participation in fire drills demonstrate a minimum level of engagement with emergency preparedness, though the additional provisions, particularly training that some facilities represented in the study have staff participate highlight the differences in attitudes towards emergency management (though competing values and limited resources may also be contributing factors). In terms of perceptions, though some variation occurred, there was a general lack of familiarity regarding emergency management. Information

gleaned through experience (again, something valued) held a privileged position in guiding their perceptions of risk and preparedness activities. In this way, values are informing practices and perceptions. Overall, the organizational culture of preparedness for the long-term care industry in Delaware as emerged in this sample is characterized as one that, despite accepting and participating in a basic level of emergency preparedness, prioritizes other tasks and responsibilities over emergency preparedness activity and grounds risk assessments in routine events and mostly benign experiences, believing that these experiences can be scaled up to a disaster event (Quarantelli 1997; Quarantelli 1998). This results in an imagined preparedness, in which people in these facilities think they are more prepared for disasters than they may actually be.

In addressing the second research question posed by this study, there are differences in the organizational cultures of preparedness between these facilities. Three networks appeared to be more engaged with preparedness and valued it more than other networks: Genesis, Five Star, and ACTS Retirement. Additionally, there was a stand-alone facility that was also engaged in emergency preparedness and valued it. These facilities were not more engaged in the same way. Each of these networks (and facility) had a stronger preparedness component of their culture in different areas. This difference between networks indicates a presence of a corporate culture or corporate influence that exist network wide. Values, policies, and/or practices were directed down to the facilities from upper levels of the network hierarchy, and played an important part in the development of the organizational culture related to emergency preparedness. However, within networks, there was variation as well. While there was only one Five Star network facility, there were

instances where two facilities in either the Genesis or ACTS Retirement networks were different from the third, or where all three differed from each other. Among state facilities, there was one facility that engaged in different policies regarding taking in staff families than the others did. This variation within networks suggests that whatever force the network may have in shaping organizational culture, there are factors at the facility level that also shape organizations' cultures of preparedness.

Based on the data available in this study, it is difficult to discern what exactly is causing this variation. All three of the networks with stronger cultures of preparedness have facilities in multiple states, including Florida. It is possible that the networks' exposure to a variety of hazards, or ownership of facilities in high risk areas, may encourage a corporate wide value of preparedness. These networks may have additional resources available to help facilitate preparedness among their facilities. The instance of the stand-alone facility with a strong culture of preparedness, however, suggests that this is not the sole determining factor. Culture is shaped by something more than simple membership in a network. Based on the data available, it appears that an important part in shaping the organizational culture of long-term care facilities is leadership, having someone at the top of the hierarchy who values emergency preparedness and engages in preparedness activity. The top of the hierarchy may be someone at a network level, but may also be someone at the facility level.

REFERENCES

- ACTS Retirement-Life Communities. 2011a. "ACTS Senior Retirement Communities." ACTS Retirement-Life Communities. Retrieved June 23, 2013 from (<http://www.actsretirement.org/community-locations/>).
- ACTS Retirement-Life Communities. 2011b. "Peninsula United Methodist Homes." ACTS Retirement-Life Communities. Retrieved June 23, 2013 from (<http://www.actsretirement.org/acts-retirement-life-communities-inc/acts-company-history/peninsula-united-methodist-homes/>).
- Aguirre, Ben, Russell R. Dynes, James Kendra, and Rory Connell. 2005. "Institutional Resilience and Disaster Planning for New Hazards: Insights from Hospitals." *Journal of Homeland Security and Emergency Management* 2(2):1-17.
- Bovender Jr., J. O., and Carey, B. 2006. "A Week We Don't Want to Forget: Lessons Learned from Tulane." *Frontiers of Health Services Management*, 23(1):3-12.
- Cadia Rehabilitation. N.d.. ". " Cadia Rehabilitation. Retrieved June 23, 2013 from (<http://cadiahealthcare.com/>).
- Castle, Nicholas G. 2008. "Nursing Home Evacuation Plans." *American Journal of Public Health* 98(7):1235-1240.
- Castle, Nicholas G., and Engberg, J. B. 2011. "The health consequences of relocation for nursing home residents following hurricane Katrina." *Research on Aging*, 33(6):661-687.
- Centers for Medicare & Medicaid Services. 2013. "Glossary" from Medicare.gov The Official U.S. Government Site for Medicare. Retrieved July 7, 2013 (<http://www.medicare.gov/Homehealthcompare/Resources/Glossary.aspx?AspxAutoDetectCookieSupport=1>).
- Chong, Mark. 2009. "Employee Participation in CSR and Corporate Identity: Insights from a Disaster-Response Program in the Asia-Pacific." *Corporate Reputation Review* 12(2):106-119.
- Clarke, Lee. 1999. *Mission Improbable*. Chicago, IL: University of Chicago Press.

- Connell, Rory. 2002. "The Impact of the Y2K Threat on Hospital Emergency Preparedness." *Student Research Accomplishments, 2001-2002*. (Buffalo, NY: Multidisciplinary Center for Earthquake Engineering Research):87-95.
- Corbacioglu, Sitki, and Naim Kapucu. 2006. "Organisational learning and self-adaptation in dynamic disaster environments." *Disasters* 30(2):212-233.
- Cornell, V.J., L. Cusack, and P. Arbon. 2012. "Older people and disaster preparedness: a literature review." *The Australian Journal of Emergency Management* 27(3):49-53.
- Delaware General Assembly. Title 16 Health and Safety Delaware Administrative Code: Department of Health and Social Services division of Long Term Care Residence Protection. 2013. *3201 Skilled and Intermediate Care Nursing Facilities*. State of Delaware the Official Website of the First State Retrieved June 23, 2013 (<http://regulations.delaware.gov/AdminCode/title16/Department%20of%20Health%20and%20Social%20Services/Division%20of%20Long%20Term%20Care%20Residents%20Protection/3201.shtml>).
- Denison, Daniel R. 1995. "What is the Difference between Organizational Culture and Organizational Climate? A Native's Point of View on a Decade of Paradigm Wars." *The Academy of Management Review* 21(3):619-654.
- Denison, Daniel R. and Aneil K. Mishra. 1995. "Toward a Theory of Organizational Culture and Effectiveness." *Organization Science* 6(2):204-223.
- Denney, David. 2005. *Risk and Society*. London: Sage Publications.
- Department of Health and Human Services. 2006. *Nursing Home Emergency Preparedness and Response during Recent Hurricanes*. No. OEI-06-06-00020.
- DiCicco-Bloom, Barbara and Benjamin F. Crabtree. 2006. "The qualitative research interview." *Medical Education* 40:314-321.
- Eaton, Susan C. 2000. "Beyond Unloving Care: Linking Human Resource Management and Patient Care Quality in Nursing Homes." Forthcoming in *International Journal of Human Resource Management*.
- Federal Emergency Management Agency. 2012. "Exercises." Ready.gov. Retrieved April 11, 2013 (<http://www.ready.gov/business/testing/exercises>).

- Five Star Senior Living. 2013. "Community Locator: Follow Your Star." Five Star Senior Living. Retrieved June 23, 2013 from (<http://www.fivestarseniorliving.com/community-locator.php?state=&city=&service=38&radius=30>).
- Forbes-Thompson, Sarah, Byron Gajewski, Jill Scott-Cawiezell and Nancy Dunton. 2006. "An Exploration of Nursing Home organizational Processes." *Western Journal of Nursing Research* 28:935-954.
- Frey, James H. and Andrea Fontana. 1993. "The Group Interview in Social Research." In *Successful Focus Groups: Advancing the State of the Art*. David L. Morgan, ed. Newbury Park, CA: Sage Publications.
- Gallagher, J. J., Jaco, M., Marvin, J., & Herndon, D. N. 2006. "Can Burn Centers Evacuate in Response to Disasters?" *Journal of Burn Care & Research*, 27:596-599.
- Genesis HealthCare. 2012. "Find A Location." Genesis HealthCare. Retrieved June 23, 2013 from (<http://www.genesishcc.com/findlocations>).
- Government Accountability Office. (2006). *Limitations in federal evacuation assistance for health facilities should be addressed*. No. GAO-06-826.
- Guest, Greg, Arwen Bunce, and Laura Johnson. 2006. "How Many Interviews Are Enough? An Experiment with Data Saturation and Variability." *Field Methods* 18(1):59-82.
- Handler, Steven M., Nicholas G. Castle, S A Studenski, S Perera, D B Fridsma, D A Nace, and J T Hanlon. 2006. "Patient safety culture assessment in the nursing home." *Qual Saf Health Care* 15:400-404.
- HCR ManorCare. 2013. "Find a Location." HCR ManorCare. Retrieved June 23, 2012 from (<http://www.hcr-manorcure.com/find-a-location/>).
- Hutchins, Holly M. and Jia Wang. 2008. "Organizational Crisis management and Human Resource Development: A Review of the Literature and Implications to HRD Research Practice." *Advances in Developing Human Resources* 10:310-330.
- Krueger, Richard A. 1994. *Focus Groups: A Practical Guide for Applied Research*. 2nd ed. Thousand Oaks, CA: Sage Publications.

- Laditka, Sarah B., James N. Laditka, Sudha Xirasagar, Carol B. Cornman, Courtney B. Davis, and Jane V.E. Richter. 2008. "Providing Shelter to Nursing Home Evacuees in Disasters: Lessons From Hurricane Katrina." *American Journal of Public Health* 98(7):1288-1293.
- Lalonde, Carole. 2010. "Organisational socialisation in a crisis context." *Disasters* 34(2):360-379.
- Lopez, Ruth Palan, Elaine J. Amella, Neville E. Strumpg, Joan M. Teno, and Susan L. Mitchell. 2010. "The Influence of Nursing Home Culture on the Use of Feeding Tubes." *Arch Intern Med* 170(1):83-88.
- Martin, Joanne. 2002. *Organizational Culture: Mapping the Terrain*. Thousand Oaks, CA: Sage Publications.
- McEntire, David A. and Gregg Dawson. 2007. "The intergovernmental context." Pp. 57-70 in *Emergency management: Principles and Practice for Local Government*, edited by W.L. Waugh and K. Tierney. Washington D.C.: ICMA Press.
- Mileti, Denis S., Daniel M. Cress, and JoAnne DeRouen Darlington. 2002. "Earthquakes and Corporate Action." *Sociological Forum* 17(1):161-180.
- Nationwide Health Care Services. 2010. "Company Profile." Nationwide Health Care Services. Retrieved June 23, 2013 from (<http://www.nationwidehealthcare.com/profile.htm>).
- Quarantelli, Enrico. L. 1997. "Research Based Criteria for Evaluating Disaster Planning and Managing. Preliminary Paper #247 University of Delaware Disaster Research Center, Newark, DE.
- Quarantelli, Enrico. L. 1998. "Major Criteria for Judging Disaster Planning and Managing and Their Applicability in Developing Countries." Preliminary Paper #268 University of Delaware Disaster Research Center, Newark, DE.
- Schultz, Carl. H., Kristi L. Koenig, Erik Auf der Heide, and Robert Olson. 2005. "Benchmarking for hospital evacuation: A critical data collection tool." *Prehospital and Disaster Medicine*, 20(5):331.
- Sheridan, John E., John White, and Thomas J. Fairchild. 1992. "Ineffective Staff, Ineffective Supervision, or Ineffective Administration?: Why Some Nursing Homes Fail to Provide Adequate Care." *The Gerontological Society of America* 32(3):334-341.

- Trainor, Joseph E. and Lauren E. Barsky. 2011. "Reporting for Duty?: A Synthesis of Research on Role Conflict, Strain, and Abandonment Among Emergency Responders During Disasters and Catastrophes." Miscellaneous Report #71 Disaster Research Center University of Delaware, Newark, DE.
- United States Geological Survey. 2013. "Magnitude .58-VIRGINIA." Earthquake Hazards Program. Retrieved July 7, 2013
(<http://earthquake.usgs.gov/earthquakes/eqinthenews/2011/se082311a/#details>)
- Wang, Jia, Holly M. Hutchins, and Thomas N. Garavan. 2009. "Exploring the Strategic Role of Human Resource Development in Organizational Crisis Management." *Human Resource Development Review* 8(1):22-53.
- Weick, Karl E. and Kathleen M. Sutcliff. 2007. *Managing the Unexpected*. 2nd ed. San Francisco, CA: John Wiley & Sons, Inc.

Appendix A

TABLE OF FACILITIES INCLUDED IN THE STUDY

Facility Name	Network	Experience	Interview Type
Harbor Healthcare and Rehabilitation	Cadia	Evacuated	Focus Group
Broadmeadow	Cadia	Received Residents	Focus Group
Veterans Home	State	Received Most Residents	Focus Group
Delaware Hospital for the Chronically Ill	State	Sheltered in Place	Focus Group
Governor Bacon	State	Sheltered in Place	Interview
Stokely	State	Sheltered in Place	Interview
Cokesbury Village *	ACTS Retirement-Life Communities	Sheltered in Place	Interview
Methodist Country House (Wilmington)	ACTS Retirement-Life Communities	Sheltered in Place	Interview
Methodist Manor House *	ACTS Retirement-Life Communities	Sheltered in Place	Interview
Churchman Village	Genesis	Sheltered in Place	Interview
Hillside	Genesis	Sheltered in Place	Interview
Silver Lake	Genesis	Sheltered in Place	Interview
Regency Healthcare and Rehabilitation Center	Nationwide Healthcare Services	Sheltered in Place	Interview
ManorCare Health Services—Wilmington	HCR Manor Care	Sheltered in Place	Interview
Stonegates	Independent	Sheltered in Place	Interview
Newark Manor Nursing Home	Independent	Sheltered in Place	Interview
Shipley Manor Health Care Nursing Home	Five Start Senior Living	Sheltered in Place	Interview

*These two facilities are also part of Peninsula United Methodist Homes, Inc., (a four-facility network), but management and operations of these facilities was assumed by ACTS Retirement-Life Communities in 2010 (ACTS Retirement-Life Communities 2011b).

Appendix B

TABLE OF NETWORKS INCLUDED IN THE STUDY

Network Name	Network Description
Cadia Rehabilitation	A Network of seven facilities all within the state of Delaware (Cadia Rehabilitation N.d.)
State	A facility owned by the State of Delaware
ACTS Retirement-Life Communities	Multi-state network with 21 facilities in eight states in the eastern U.S., including Florida (ACTS Retirement-Life Communities 2011a)
Genesis Healthcare	Multi-state network with facilities in 28 states across the country, including Florida (Genesis HealthCare 2012)
Nationwide Health Care Services	Network with 4 locations, two in Delaware, two in Pennsylvania (Nationwide Health Care Services 2010)
HCR Manor Care	Multi-state network with facilities across the country, including Florida (HCR ManorCare 2013)
Independent	Owned by a company that does not own other long-term care facilities
Five Star Senior Living	Multi-state network with over 200 facilities in 30 states, including Florida (Five Star Senior Living 2013)

Appendix C

INTERVIEW GUIDE

INTERVIEW ON HURRICANE IRENE'S IMPACT ON DELAWARE NURSING FACILITIES, THEIR STAFF, AND THEIR RESIDENTS⁴

A Study Conducted by the University of Delaware

1. Please describe the disaster planning that was in place prior to Hurricane Irene. We are particularly interested in the plans that were in place, how they were developed, modifications made, the extent to training for staff and residents, emergency provisions on site, contract or mutual aid agreements in place, the extent to which drills were conducted, and under what circumstances – if any – the plan has been implemented.
2. Can you describe the structure and infrastructure of the facilities, as well as any changes or contemplated changes that may make the site safer for residents in a shelter-in-place scenario? [probe for issues such as generators or submarine doors that would prevent basement flooding]
3. Please walk us through the events leading up to the Hurricane Irene evacuation. We are particularly interested in how decisions were made, how information was communicated, how people were transported, and staffing.

⁴ In cases where focus groups/interviews/surveys are with staff from facilities that were not evacuated during Hurricane Irene, the questions will be slightly reworded to ask what is planned, what would they do, or what they anticipate needing. Some adjustment of wording might occur to make questions appropriate for the stakeholders participating in the focus group, and some questions will only be asked of particular stakeholders (i.e. residents will have different information to share compared to facility decision-makers).

4. Please tell us about the information sources that were important in your decision making process, the specific type of information that was important, and what information was needed but not readily available.
5. Please describe the evacuation or shelter-in-place decision making process, including timing as well as the involvement of clinical and administrative staff in making those decisions. We are particularly interested in the factors that feed into those decisions as well as the process of determining resident fitness for travel.
6. We are interested in staffing during a disaster. To what extent do you believe that staff will remain at work during a disaster, either evacuating or sheltering in place with residents? We would appreciate hearing about accommodations, if any, for families of staff to accompany them during the disaster as well as the extent to which family members are planned for, for example in the amount of supplies on hand.
7. How is information about patients kept and transferred as they leave the facility? For example, are electronic files forwarded to particular individuals? Do hard copy files or wearable flash-drives accompany patients? Please describe the process and how it works.
8. Please describe the Medicare/Medicaid reimbursement process for residents and facilities in the event of an evacuation, and your experience with reimbursements during Hurricane Irene?
9. If returning to the nursing home facility is not a viable option – for example, due to structural or infrastructure damage – what alternatives are in place for residents and what procedures are in place to facilitate relocation?
10. What aspects of the evacuation and return to the facility do you think went particularly well and why?
11. What were aspects of the evacuation and return that could be improved upon and why?
12. What are the next steps for your facility or organization in terms of disaster preparedness and planning?

Survey Questions

To be administered prior to the focus groups or interviews, or as an in-depth interview guide in conjunction with focus group or interview questions:

1. a. Did you receive information from emergency managers? Yes/No
b. What was the substance of that information (briefly)? _____
c. Did that information inform the decision to evacuate or shelter in place?
d. If an evacuation occurred, did that information inform the timing of the evacuation?
2. Please list other sources (e.g. various government agencies, the media, family members, officials within the facility, etc.) of information and (briefly) the type of information each provided?
3. What are the internal (e.g. staff, residents) methods for communication during a disaster event?
4. What are the external (e.g. family members, government agencies) methods of communication during a disaster event?
5. Did you ever use the media to disseminate information during the disaster? If so, what type of media, what kind of information, and who was the information directed to?
6. What communication system was used to contact families pick up their relatives from your facility during the evacuation?
7. What was the timing of this communication relative to the hurricane's arrival?
8. What procedures or practices are in place if a family member is unable to pick up their relative?
9. Were there instances of families unable to pick up relatives prior to Hurricane Irene's arrival, and if so, what happened?
10. Are there impediments to asking family members of residents to help and, if so, what are they?
11. How are patients assessed for fitness for transport? Please provide information on who makes the assessment, how often the assessment takes place, how long before an evacuation it occurs, and any other relevant information.
12. Are assessments made routinely? That is, for example, are daily, weekly, or monthly assessments of fitness for transport conducted, even when a disaster is not imminent?
13. Do you provide hospice care at the nursing home?
14. For those residents in hospice care, who makes the decision regarding if the resident should evacuate or shelter in place (e.g. hospice nurses, nursing home clinicians, nursing home administrators, others?)
15. Do you track resident immunizations?
16. Did you immunize residents before transferring them?
17. What kind of transportation did your facility use during the evacuation?

18. Would other types of transportation been more appropriate? If yes, what type and why?
19. What are the names of the transportation companies that your facility relies on in a disaster evacuation?
20. What type and how many vehicles are required to be sent to your facility in an evacuation?
21. Were there formal contracts with transportation companies in place pre-event?
22. Do you contract with any out-of-state transportation providers?
23. Do you know of other facilities that do contract with out-of-state transportation providers?
24. Is specialized equipment on site to aid in moving people from the building during an evacuation? If so, please list the equipment.
25. Are there contracts in place for providing assistive technology (AT)?
26. Who are these contracts with and for what type of AT?
27. Were residents evacuated with their AT?
28. Were transportation providers informed to bring AT with the resident during the evacuation?
29. Was disaster mental health services or counseling services provided for nursing home residents?
30. If so, by whom and when?
31. If electricity were no longer available, are there nursing services that could no longer be provided? If so, please list those services. Consider equipment needs as well as the skills of personnel.
32. If electricity were no longer available, are there nursing services that could no longer be provided after a certain amount of time had passed? If so, please list those services as well as the time frame in which they would still be offered after electricity ceased to be available.
33. Do you keep extra supplies on hand at the facility?
 - a. If so, what type of supplies and for how many days? Please list the number of days for each type of supply (e.g. medicine, food, potable water, oxygen, clinical consumables, medical gases, etc)
 - b. Have you ever tested the amount of supplies kept on hand to see if it is long enough?
 - c. If so, was it sufficient?
34. What is the Medicare/Medicaid reimbursement process for residents and facilities in the event of an evacuation?
35. Is there someone in emergency management or state public health to whom you turn with billing questions? If so, whom?
36. What is the routine process for Medicare/Medicaid reimbursement?

Does this differ from times of disaster? Yes/no

If yes, how so?

Are there people within Medicare/Medicaid that you can contact with questions during and after a disaster?

Do you trust in the accuracy of this information? Why or why not?

37. Do you think an increase in government standards for nursing homes certified by Medicare/Medicaid is needed? Briefly, why or why not?
38. Do you believe more guidance should be provided on existing policies? If yes, please briefly list what kind of guidance would be useful.

ADDITIONAL QUESTIONS:

Hello, thank you for talking to me. I am Ben Aguirre/Jim Kendra/Tricia Wachtendorf from the Disaster Research Center of the University of Delaware.

I am interested in understanding nursing homes in Delaware and their approach to disaster. I am interested in understanding what is going on in your nursing home and in your relationships with other organizations as you plan to ameliorate the impacts of disaster.

Let us start with matters inside the nursing home.

1. When you think about disasters and your nursing home, what is your highest worry?
2. What if anything, are you and other members of the staff doing right now inside your nursing home to ameliorate the disaster-related problems you have identified?
3. What are the most important disaster-related challenges that you and other members of the staff have identified as you have tried to change the situation inside your nursing home?

Now let us consider the situation with other organizations.

4. What if anything, are you and other members of the staff doing right now outside your nursing home---together with other organizations and agencies in the community---to help you ameliorate these disaster-related problems?
5. What are the most important disaster-related challenges that you and other members of the staff have identified as you have tried to improve relations with other agencies and organizations?

Appendix D

FOCUS GROUP GUIDE

FOCUS GROUP ON HURRICANE IRENE'S IMPACT ON DELAWARE NURSING FACILITIES, THEIR STAFF, AND THEIR RESIDENTS⁵

A Study Conducted by the University of Delaware

The purpose of this focus group is to better understand community stakeholder opinions on the impact of Hurricane Irene on Delaware nursing homes, their staff, and their residents. The group will also discuss overall lessons learned for future disaster preparedness. A range of community stakeholders will participate in several focus groups as part of this study, and your insight is very important to our research. We will start by asking you to briefly introduce yourself – in one minute or less – by telling the group:

1. Your name
2. Your organization or community
3. And ONE challenge for nursing homes, staff, or residents that you noticed during the Hurricane Irene Response. We will discuss challenges more later in the focus group, so please keep this initial answer brief.

The following is a list of question and issues we will be covering in the two hours allotted for this group.

LIST QUESTION SUMMARY AS RELEVANT FOR VARIOUS STAKEHOLDER GROUPS

⁵ In cases where focus groups/interviews/surveys are with staff from facilities that were not evacuated during Hurricane Irene, the questions will be slightly reworded to ask what is planned, what would they do, or what they anticipate needing. Some adjustment of wording might occur to make questions appropriate for the stakeholders participating in the focus group, and some questions will only be asked of particular stakeholders (i.e. residents will have different information to share compared to facility decision-makers).

We are not looking for consensus. Every opinion is valuable, and we welcome different viewpoints on these issues.

1. Please describe the disaster planning that was in place prior to Hurricane Irene. We are particularly interested in the plans that were in place, how they were developed, modifications made, the extent to training for staff and residents, emergency provisions on site, contract or mutual aid agreements in place, the extent to which drill were conducted, and under what circumstances – if any- the plan has been implemented.
2. Can you describe the structure and infrastructure of the facilities, as well as any changes or contemplated changes that may make the site safer for residents in a shelter-in-place scenario? [probe for issues such as generators or submarine doors that would living basement flooding]
3. Please walk us through the events leading up to the Hurricane Irene evacuation. We are particularly interested in how decisions were made, how information was communicated, how people were transported, and staffing.
4. Please tell us about the information sources that were important in your decision making process, the specific type of information that was important, and what information was needed but not readily available.
5. Please describe the evacuation or shelter-in-place decision making process, including timing as well as the involvement of clinical and administrative staff in making those decisions. We are particularly interested in the factors that feed into those decisions as well as the process of determining resident fitness for travel.
6. We are interested in staffing during a disaster. To what extent do you believe that staff will remain at work during a disaster, either evacuating or sheltering in place with residents? We would appreciate hearing about accommodations, if any, for families of staff to accompany them during the disaster as well as the extent to which family members are planned for, for example in the amount of supplies on hand.
7. How is information about patients kept and transferred as they leave the facility? For example, are electronic files forwarded to particular individuals? Do hard copy files or wearable flash-drives accompany patients? Please describe the process and how it works.

8. Please describe the Medicare/Medicaid reimbursement process for residents and facilities in the event of an evacuation, and your experience with reimbursements during Hurricane Irene?
9. If returning to the nursing home facility is not a viable option – for example, due to structural or infrastructure damage – what alternatives are in place for residents and what procedures are in place to facilitate relocation?
10. What aspects of the evacuation and return to the facility do you think went particularly well and why?
11. What were aspects of the evacuation and return that could be improved upon and why?
12. What are the next steps for your facility or organization in terms of disaster preparedness and planning?

Survey Questions

To be administered prior to the focus groups, or as an in-depth interview guide in conjunction with focus group questions:

1. a. Did you receive information from emergency managers? Yes/No
b. What was the substance of that information (briefly)? _____
c. Did that information inform the decision to evacuate or shelter in place?
d. If an evacuation occurred, did that information inform the timing of the evacuation?
2. Please list other sources (e.g. various government agencies, the media, family members, officials within the facility, etc.) of information and (briefly) the type of information each provided?
3. What are the internal (e.g. staff, residents) methods for communication during a disaster event?
4. What are the external (e.g. family members, government agencies) methods of communication during a disaster event?
5. Did you ever use the media to disseminate information during the disaster? If so, what type of media, what kind of information, and who was the information directed to?
6. What communication system was used to contact families pick up their relatives from your facility during the evacuation?
7. What was the timing of this communication relative to the hurricane's arrival?
8. What procedures or practices are in place if a family member is unable to pick up their relative?
9. Were there instances of families unable to pick up relatives prior to Hurricane Irene's arrival, and if so, what happened?
10. Are there impediments to asking family members of residents to help and, if so, what are they?
11. How are patients assessed for fitness for transport? Please provide information on who makes the assessment, how often the assessment takes place, how long before an evacuation it occurs, and any other relevant information.
12. Are assessments made routinely? That is, for example, are daily, weekly, or monthly assessments of fitness for transport conducted, even when a disaster is not imminent?
13. Do you provide hospice care at the nursing home?
14. For those residents in hospice care, who makes the decision regarding if the resident should evacuate or shelter in place (e.g. hospice nurses, nursing home clinicians, nursing home administrators, others?)
15. Do you track resident immunizations?
16. Did you immunize residents before transferring them?
17. What kind of transportation did your facility use during the evacuation?

18. Would other types of transportation been more appropriate? If yes, what type and why?
19. What are the names of the transportation companies that your facility relies on in a disaster evacuation?
20. What type and how many vehicles are required to be sent to your facility in an evacuation?
21. Were there formal contracts with transportation companies in place pre-event?
22. Do you contract with any out-of-state transportation providers?
23. Do you know of other facilities that do contract with out-of-state transportation providers?
24. Is specialized equipment on site to aid in moving people from the building during an evacuation? If so, please list the equipment.
25. Are there contracts in place for providing assistive technology (AT)?
26. Who are these contracts with and for what type of AT?
27. Were residents evacuated with their AT?
28. Were transportation providers informed to bring AT with the resident during the evacuation?
29. Was disaster mental health services or counseling services provided for nursing home residents?
30. If so, by whom and when?
31. If electricity were no longer available, are there nursing services that could no longer be provided? If so, please list those services. Consider equipment needs as well as the skills of personnel.
32. If electricity were no longer available, are there nursing services that could no longer be provided after a certain amount of time had passed? If so, please list those services as well as the time frame in which they would still be offered after electricity ceased to be available.
33. Do you keep extra supplies on hand at the facility?
 - a. If so, what type of supplies and for how many days? Please list the number of days for each type of supply (e.g. medicine, food, potable water, oxygen, clinical consumables, medical gases, etc)
 - b. Have you ever tested the amount of supplies kept on hand to see if it is long enough?
 - c. If so, was it sufficient?
34. What is the Medicare/Medicaid reimbursement process for residents and facilities in the event of an evacuation?
35. Is there someone in emergency management or state public health to whom you turn with billing questions? If so, whom?
36. What is the routine process for Medicare/Medicaid reimbursement?

Does this differ from times of disaster? Yes/no

If yes, how so?

Are there people within Medicare/Medicaid that you can contact with questions during and after a disaster?

Do you trust in the accuracy of this information? Why or why not?

37. Do you think an increase in government standards for nursing homes certified by Medicare/Medicaid is needed? Briefly, why or why not?
38. Do you believe more guidance should be provided on existing policies? If yes, please briefly list what kind of guidance would be useful.

Appendix E
IRB APPROVAL LETTER



RESEARCH OFFICE

210 Hullihen Hall
University of Delaware
Newark, Delaware 19716-1551
Ph: 302/831-2136
Fax: 302/831-2828

DATE: January 9, 2013

TO: James Kendra, PhD
FROM: University of Delaware IRB

STUDY TITLE: [303744-6] Long Term and Acute Care Facility Emergency Preparedness Study

SUBMISSION TYPE: Continuing Review/Progress Report

ACTION: APPROVED
APPROVAL DATE: January 9, 2013
EXPIRATION DATE: January 30, 2014
REVIEW TYPE: Expedited Review

REVIEW CATEGORY: Expedited review category # 7

Thank you for your submission of Continuing Review/Progress Report materials for this research study. The University of Delaware IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All sponsor reporting requirements should also be followed.

Please report all NON-COMPLIANCE issues or COMPLAINTS regarding this study to this office.

Please note that all research records must be retained for a minimum of three years.

Based on the risks, this project requires Continuing Review by this office on an annual basis. Please use the appropriate renewal forms for this procedure.

If you have any questions, please contact Jody-Lynn Berg at (302) 831-1119 or jlberg@udel.edu. Please include your study title and reference number in all correspondence with this office.