

**Mental, and Behavioral Health Disaster Preparedness and Response:  
What Have We Learned and How Prepared Is North Carolina?**

By

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### **Abstract:**

Natural and man-made disasters expose vulnerabilities within a community. As a nation we have experienced this in recent years with hurricanes Floyd and Fran in North Carolina in 1996 and 1999 and the devastating hurricanes Katrina and Rita that ravaged Alabama, Louisiana, and parts of Texas in 2005. The capacity with which local communities, alongside state and federal governments are able to respond to these tragedies can dictate individuals' access to resources, evacuation strategies, and in some instances, mean the difference between life and death. The focus of disaster response and relief has traditionally been one concentrated on the physical health of a population and the physical structure of an affected area. It is vital to ensure that challenges faced by those currently engaged in mental and behavioral health treatment also are considered in preparation stages prior to a disaster. Even with federal and state policies in place, there continue to be gaps in disaster preparation and relief efforts, especially in ensuring access to ongoing behavioral and mental health treatment.

Individuals involved in behavioral health and mental treatment prior to a disaster have been found to be more vulnerable than others in the community, to suffer longer during and after a disaster, and to be less likely to receive needed services such as medication management and targeted therapeutic services. (North, pg. 423) In general, the idea of behavioral health focuses more on substance abuse while mental health for example follows a diagnosis of bipolar or schizo-affective disorder by a psychiatrist or other licensed therapist.

This paper will outline three major areas that need to be addressed in order to more effectively prepare for and respond to the mental health needs of individuals during disasters in the future. The first is interoperability, or our ability to communicate effectively during and after a disaster. Next is addressing state-to-state legal issues around allowing licensed health professionals from surrounding states to come into and assist a different state during a disaster. Limiting this ability to act in a timely fashion can impede the transmission of critical services and resources to the most vulnerable populations. Last is documentation failure. At this time there is no centralized back-up database for patient information on those being seen by a behavioral health or mental health specialist; this means that when a database is destroyed in a disaster, so are all of a patient's records. For a patient this means that when they travel across state lines searching for therapeutic or medical assistance, the providers will have no way of knowing any historical medical background other than what the patient tells them. .

Many states, including North Carolina, do not have adequate mental or behavioral health infrastructure to be prepared for a disaster like Hurricane Katrina. History has shown that such disasters will continue to occur. This paper seeks to answer the questions of what have we learned about mental and behavioral health disaster preparedness and response, and is North Carolina prepared for a large-scale disaster.

### **Introduction:**

To understand the logistical challenges local, state, and federal agencies face when preparing for behavior and mental health disaster relief, one first needs to understand what these terms mean and who is included within the affected population. The terms “behavioral health” and “mental health” conjure different images, definitions, and stigmas, depending on an individual’s personal level of exposure to someone living with mental health or substance abuse issues. Whether dealing with mental health issues such as depression or schizophrenia, or behavioral health issues to include substance abuse recovery, each entail different levels of intensive care. In order to effectively treat and manage patients in treatment it requires consistency in a therapeutic setting, and typically include medication management.

According to the Substance Abuse and Mental Health Services Administration (SAMHSA), behavioral health is “a general term that encompasses the promotion of emotional health; the prevention of mental illnesses and substance use disorders; and treatments and services for substance abuse, addiction, substance use disorders, mental illness, and/or mental disorders.” (SAMHSA, 2015) In essence, the term behavioral health is an expansive term that includes emotional health and disease. In contrast mental health or mental illness is referring to individuals who have been diagnosed by a licensed clinician as having a long-standing disease like bipolar disorder or schizoaffective disorder or depression. ('Bio-Psych-Social Response to Disaster', 2007) It is important to understand the nuances between traditional clinical services and disaster behavioral health when preparing for and responding to a disaster.

SAMHSA defines disaster behavioral health services as “a set of supportive mental health actions that address survivors’ emotional responses to a natural or human-caused traumatic event.” (Parker, 2015) The most substantial difference between disaster behavioral health and clinical services is that disaster crisis counseling and outreach are focused on short term, incident-specific stress reactions instead of ongoing crisis counseling. Dr. Parker, professor at the Johns Hopkins University Public Health Department, uses the example of the sarin gas release in Tokyo Japan. There were 12 fatalities, however almost 6,000 people sought some form of medical care. In many instances, to include Hurricane Katrina, Rita and 9/11 there can be a lower ratio of physical injuries than emotional and mental reactions that need long term treatment. (Parker, 2015) While there may be less recorded physical injuries it has been well documented that mental health issues are consistently larger and more ongoing concerns in the months and years after a disaster.

Disaster preparedness and response is a relatively new field in the United States. Up until the 1950s, disasters were largely dealt with at the state and local levels, with no federal oversight. The Disaster Relief Act of 1950 was developed after several significant tragedies that prompted the federal government to provide temporary relief funds during times when the president had declared a state of emergency.

“The purpose of the bill is to provide for an orderly and continuing method of rendering assistance to the state and local governments in alleviating suffering and damage resulting from a major peacetime disaster and in restoring public facilities and in supplementing whatever aid the state or local governments can render themselves.” (Platt, pg. 12)

The Disaster Relief Act has been amended numerous times over the past 60 years, each time as a reaction to disasters. Following the Alaskan earthquake of 1964, came the Alaskan Earthquake Assistance Act. In 1972, Tropical Storm Agnes affected much of the Mid-Atlantic States and in the same year Rapid City South Dakota suffered a flash flood; the following year the government passed the Flood Disaster Protection Act. (Platt, pg 13) Whereas disaster response and preparedness was previously thought to be a local and state concern, it quickly became a federal issue.

In 1979, President Carter centralized and focused the federal response to disasters by creating the Federal Emergency Management System (FEMA). Up to this point, any new developments appeared to be reactionary to the disasters that were occurring each year. Each of these previous reforms were initiated to display growth and evaluation in the steps being taken to structure the federal national disaster response. (Brownstone, 1977, pg. 31) Disaster response can involve many agencies from community resources at each level of government, and FEMA was developed to help manage and guide each of the stakeholders involved in assisting with all facets of disaster response. Much of the preparation at this point was focused solely on assisting communities with the physical destruction of property and emergency medical issues; there was little or no focus placed on mental or behavioral health.

It was not until 1992 that Disaster Mental Health was formally recognized by the Red Cross as a subset of crisis intervention through another reform of the Disaster Relief Act. (Parker, 2015) In order to integrate disaster relief and mental health practices into disaster preparedness and response strategies, four recommendations were made in the Act: in the immediate aftermath of an event, counseling services were

to be offered to anyone in need regardless of prior behavioral health history; mental health specialists would train public health practitioners in the basics of how to identify and assist patients in the field; mental health specialists would act as a backup for the public health practitioners on the front line; and mental health professionals would be involved in the planning and evaluation of disaster response and disaster relief planning. (Brownstone, 1977, pg. 31)

In its 2014 Health and Human Services Disaster Behavioral Health Concept of Operations, the U.S. Department of Human Health and Human Services posited a model of disaster behavioral health as including the following characteristics:

- Strength-based
- Anonymous
- Culturally Competent
- Outreach Oriented
- Conducted in non-traditional settings
- Designed to strengthen existing community support systems
- Assumes natural resilience and competence

*U.S. DHHS, 2011*

*('Disaster Behavioral Health', 2013)*

By focusing on a strength-based approach, clinicians and public health practitioners do not assume that everyone is sick or needs behavioral health services following a disaster. ('Disaster Behavioral Health', 2013) In fact, statistics have shown surprising resiliency in survivors from disasters--most are able to bounce back with some short-term intervention or even none at all ('Resiliency in Disasters', 2007).

However, those currently seeking treatment through mental health services or a methadone clinic are often unable to respond effectively in times of crisis due to the disruption of medication management and therapeutic guidance.

In order to be effective in an outreach effort, responders need to know the culture and understand any nuances in a community. New Orleans presented such a challenge by having an internal structure made up of parishes and each parish carrying its own level of diversity and leadership. While some areas may consist of English-speaking fisherman that have lived in the area for generations, the parish next to them may speak only Vietnamese. Responders need to understand these distinctions before going into the area so that they are culturally competent and able to effectively reach out.

Another facet of disaster behavioral health is that it is outreach oriented and community focused. The most effective way for responders to evaluate an area is to go into the community for outreach and meet the affected population where they are. The last two characteristics of disaster behavioral health circle back to the fact that it is strength-based. Assuming that individuals and communities are naturally resilient and competent allows for the responders to assess how they can support the local system and let the existing structure begin to heal itself. (U. S. Department of Health and Human Services, 2014)

Continued development and integration of behavioral health into disaster preparedness should occur for three reasons. First, there needs to be a better communication system that will allow emergency response units in an affected area to connect with surrounding less affected areas. In the immediate aftermath of hurricane



Katrina there was a complete breakdown of all communications. This lack of interoperability meant that there was no way for the current mayor of New Orleans, governor of Louisiana, director of FEMA, local law enforcement, or any other local or federal officials to communicate what was happening, what resources were needed, and where. This failure in communication caused the belated delivery of much needed resources for days, and prevented real-time updates to allow outside organizations to know how to help. Had there been any form of communication it could have been relayed that all of the substance abuse clinics were shut down and there could have been plans made to deal with the impending consequences.

Second, when transferring patients to different facilities, be they mental health or substance abuse related, an initial assessment and medication management documentation needs to be transferred with them. Due to the destruction and shut down of all of the clinics in New Orleans there was a complete document failure. With no central electronic storage protocol, most of the patients lost the majority of the documents that proved existence of their previous care and medication regimen. This left many previously vulnerable individuals in a worst-case scenario, where they found themselves without basic needs such as food, water, and shelter, and they were running out of medication with no way to get prescriptions filled.

Last, many states have developed policies allowing licensed practitioners internally and from neighboring states to have legal ability to practice during a disaster. An example of this is the use of the State Defense Force (SDF) in the aftermath of Hurricane Sandy. (Ncdhhs.gov, 2015) The SDF is a group made up of not just military forces such as the National Guard but also professionals with higher levels of training

such as doctors, attorneys, nurses, and engineers. Typically SDF's are built internally so they have a clear advantage when it comes to cultural competency. Unfortunately, over half of the states have elected to not develop SDF's creating a significant vulnerability. (Ncdhhs.gov, 2015)

### **Lessons learned from Katrina and Rita**

In August of 2005, Hurricane Katrina collided with the coast of New Orleans; three weeks later Hurricane Rita struck east of the Louisiana–Texas border. As Hurricane Katrina subsided, many thought the city had successfully survived the storm. However, not long afterwards the surging tides broke the levees, which flooded the city. The flooding killed hundreds of people, destroyed homes and businesses, and essentially shut the city down. (Carlisle Maxwell, Podus & Walsh, 2009) As Richard Clarke, a former member of the White House National Security Council in both the Clinton and George W. Bush administrations stated, this was “something beyond a disaster.” (pbs.org, 2015)

More than a quarter of the patients who sought mental and behavioral health treatment in Texas following these two hurricanes, had some form of preexisting severe and persistent mental illness (SPMI). (Wang et al., 2007) As noted earlier, an example of SPMI is defined as any patient that has been clinically diagnosed with schizophrenia/schizoaffective disorder or bipolar. This same review showed that around 20% of the patients struggled with alcohol abuse, and just under 20% were cocaine abusers. Those patients who presented themselves as needing mental health services were more likely to need specialized treatment services such as detoxification and

methadone clinics. (North, 2010) Due to a lack of consistent communication, Texas mental health and substance abuse clinics found themselves inundated with new patients.

Even before hurricanes Katrina and Rita, the Gulf Coast boasted some of the lowest socioeconomic areas with inadequate access to any form of health care. (North, 2010) According to one study that looked at mental health services use among survivors eight months post-Katrina, “less than one-third of those with active anxiety or mood disorders received any form of mental health care” (Wang 2007, pg. 1408). The authors went on to say that although many of the patients that sought mental health care received some services, more than half of the most severe cases received no services (Wang 2007).

New Orleans communication systems failed and there appeared to be no plan in place on the local, state, or federal level to manage a disaster of this magnitude. Dr. Parker of Johns Hopkins School of Public Health posits that simply being exposed to a tragic event like Hurricane Katrina is not enough to be considered a psychological crisis. She writes that once the system began to fall apart, the mental health and substance abuse clinics and hospitals shut down, evacuation routes were closed, and food, water and shelter became scarce, then it became a crisis. (Parker, 2015) The cumulative effects of those facing psychological and substance abuse issues during a crisis is made more challenging when basic needs are also in jeopardy.

During the wake of Hurricane Katrina and Hurricane Rita, the United States witnessed one of the largest unsupervised drug withdrawals in history, as drug and medication supplies were completely disrupted for thousands of people. Due to the lack

of communication in the most heavily affected areas, there was no way to know what resources were needed and where, much less to provide them. According to Turnock in *Public Health: What it is and how it works*, “it is not uncommon in the event of a natural disaster or terrorist attack for the most devastating effects to take the form of social disruption and infrastructure damage.” (Turnock, 2011, pg. 427) Hurricane Katrina and Hurricane Rita proved to be no exception to that rule. Questions still remain about where the breakdown of communication occurred, who was in charge of operations, and why it took so long for assistance to get to the areas most affected.

### *Breakdown of Communication*

During Hurricane Katrina there was no effective communication system that connected the hardest hit areas to outside resources to include state police on the local level and FEMA for quite some time. There was essentially no way for FEMA to verify the challenges being faced in the city. Ten years later there is a revived sense of urgency to develop an interoperability system not only in person-to-person communication but also in state-to-state electronic health records. Recent research published in the *Journal of the American Board of Family Medicine* suggests combining behavioral health, mental health, and physical health data into one interoperable electronic health system may prove to be a challenge for three reasons. (JABFM, 2015) First, there are different codes for mental health, behavioral health and physical health, which causes confusion in documentation and tracking. In order to keep track of billing every hospital and doctors office utilize their own coding system to know who to bill. (NCHS, CDC, 2015) Many of these codes are unique to specific practices and

specialties. Second, there a lack of coordination exists among current integrated care facilities. An integrated care facility in this context simply means those practices that are attempting a more unified coding system. Some facilities have bought into this idea while others remain skeptical due to the challenges that changing codes create. Last, good methods for exchanging this information do not currently exist; while primary care practices follow a specific electronic health record system, behavioral health specialists may utilize other systems that are not compatible. (JABFM, 2015)

### *Documentation Failure*

After Hurricanes Katrina and Rita struck Louisiana and parts of Texas there was a growing concern for people seeking assistance for behavioral and mental health. At the time FEMA only provided funding for mental health services and did not recognize behavioral health concerns. (Rutkow, Vernick, Mojtabai, Rodman & Kaufmann, 2012) The state of Texas was offered federal grants from Access and Recovery and Substance Abuse and Mental Health Services Administration to assist clinics who would receive people seeking substance abuse and detox treatment. (Carlisle Maxwell, Podus & Walsh, 2009) A study by Maxwell et al released in 2009 followed 11 substance abuse clinics during the aftermath of both hurricanes to understand how they handled the increased activity and encounters. (Carlisle Maxwell, Podus & Walsh, 2009)

What the authors found was that each clinic was overwhelmed by the challenges its patients posed. The majority of medical documentation was destroyed along with the clinics in New Orleans, so, for example, people who may have been treated in a methadone clinic who were seeking services in Texas had no evidence of ever having

any treatment and no documentation on medication dosage or regimen. Many of the clinics followed in this study simply accepted disaster victims as temporary new patients and had them go through an initial assessment to determine how best to treat the patients. (Rutkow, Vernick, Mojtabai, Rodman & Kaufmann, 2012) This created its own challenges because many of these people had been waiting for medication and were frustrated by having to wait longer by going through the initial process all over again. As the FEMA and other funding began making its way to patients, it was reported that many of the patients who were waiting for admission to clinics had relapsed to drug use. (Carlisle Maxwell, Podus & Walsh, 2009) Others took the money and either returned to New Orleans or relocated in other states.

This gap in information was not isolated to the situation in New Orleans. A pilot program called Digital Access to Medication (D-ATM) was developed in 2002 by the United States Department of Health and Human Services and SAMHSA in response to 9/11 and the gap in care for behavioral health services after that disaster. The purpose behind the project was to create a central cache for limited demographic and clinical information on patients being treated in an opioid treatment program. (Passman, Rosas & Stanton, 2015) This system would ensure that if a particular group of clinics were unable to function due to a natural or man-made disaster, their patients would have some basic information available for neighboring counties and states to draw from in allowing a reliable continuity of care. This 10-year study was closed in 2012 due to a lack of participation in community clinics. The study did accomplish two important goals; first, it demonstrated that this type of system is necessary, and second, it

confirmed that developing this system on a large scale is possible. (Passman, Rosas & Stanton, 2015)

### *Legal Issues*

According to the National Survey of Substance Abuse Treatment Services 2013, between 21–26% of individuals being treated for substance abuse across the nation were being treated for opioid addiction. (N-SSATS, 2013, pg. 19) In the aftermath of a disaster, many players in the mental and behavioral health arena, including individuals, substance abuse practitioners, counselors, and even local and state government officials face a multitude of legal challenges that impact their ability to receive or provide care. After Hurricane Katrina hit and the levees broke in New Orleans, every substance abuse treatment center shut down. (Rutkow, Vernick, Mojtabai, Rodman & Kaufmann, 2012, pg. 7) This situation became complicated for Texas as many of the people who had been in treatment centers in New Orleans were now seeking care in their facilities.

Texas did not have the capacity to take the number of individuals seeking behavioral and mental health treatment and many shelters lacked the necessary training and expertise to properly care for these patients. (Rutkow, Vernick, Mojtabai, Rodman & Kaufmann, 2012) For example, patients who made it into shelters and found themselves going through withdrawal symptoms frequently had side effects such as diarrhea. Rutkow et al noted that shelters isolated such individuals out of fear of a spread of disease, while there was the potential for a spread of disease it was more commonly symptomatic of a lack of treatment. (Rutkow, Vernick, Mojtabai, Rodman & Kaufmann, 2012, pg. 8)

Opioid treatment programs are highly regulated by the state and federal government. Laws place strict rules on prescribing, tracking, and dispensing narcotics during non-emergent times. When Hurricane Katrina struck and hundreds of people began seeking treatment in Texas, some having no personal identification and most without any record of prior treatment or dosage, it created real legal challenges for practitioners. With a fear of losing their license, many practitioners in Texas would not allow individuals treatment until they began to show symptoms of withdrawal (Rutkow, Vernick, Mojtabai, Rodman & Kaufmann, 2012).

There are many laws that have been passed by both federal and state governments that allow out-of-state practitioners to work temporarily in states other than their own. The limitations to these laws are that the practitioners allowed temporary reciprocity have to be state or federal employees. Since Hurricane Katrina, many states have begun to pass more progressive and expansive laws allowing licensed private practitioners from neighboring states the right to work in the aftermath of a disaster (North et al., 2015). For example North Carolina focuses on licensed professionals such as doctors, nurses, engineers, and licensed clinical social workers to join the North Carolina Disaster Response Network.

### **Lessons Learned and Preparation Needed in North Carolina**

#### *Progress in North Carolina*

The North Carolina Division of Mental Health, Developmental Disabilities and Substance Abuse Services states that in the wake of a disaster “North Carolina will provide people with, or at risk of, mental illness, developmental disabilities, and



substance abuse problems and their families the necessary prevention intervention, treatment, services, and support they need to live successfully in communities of their choice.” (‘CenterPoint Human Services Disaster Response Plan’, 2015) They have developed a chart, listed below, that clarifies the major players from federal, state and local levels and where they fall in the diagram.

In 1995 the Disaster Response Network (NC DRN Task Force) was developed in North Carolina to begin building a task force of licensed professionals willing to volunteer during and after a disaster. (Disaster Mental Health Training Fact Sheet, 2015) They now boast one of the largest and most diverse volunteer task forces in the United States. Although there remains to be growth in North Carolina within different sections of disaster relief, behavioral and mental health services continue to experience funding cuts to needed services. (Disaster Mental Health Training Fact Sheet, 2015)



**ALL DISASTER RESPONSE HAS A FOUNDATION IN THE LOCAL COMMUNITY**

Should the lower tier (local/county) exhaust and/or exceed the local response capacity, State agencies are requested to provide additional support/assistance. The same applies should State resources become exhausted and a request for assistance is made at a Federal level. The tiers may build on each other in order to ensure that resources are available and appropriate in responding to and recovering from a disaster.

### *Challenges in North Carolina*

While mental and behavioral health is gaining recognition in disaster preparedness and planning it is seeing a sharp decline in funding throughout the country. According to the National Alliance on Mental Illness (NAMI), between 2009 and 2011 over \$4 billion dollars was cut from mental health budgets across the United States. (www2.nami.org, 2015) In 2014 and 2015, North Carolina joined only a few states that continued to decrease funding for mental health services, decreasing funding by 10% or \$25 million dollars. (www2.nami.org, 2015)

In addition to the decrease in funding, the state also mandated that patients receive prior authorization from their Medicaid provider before attaining any psychiatric medication making it more challenging for patients to receive treatment on a normal day. While the state has been forward thinking in some areas such as statewide communication, gaps have widened with regards to mental and behavioral health services.

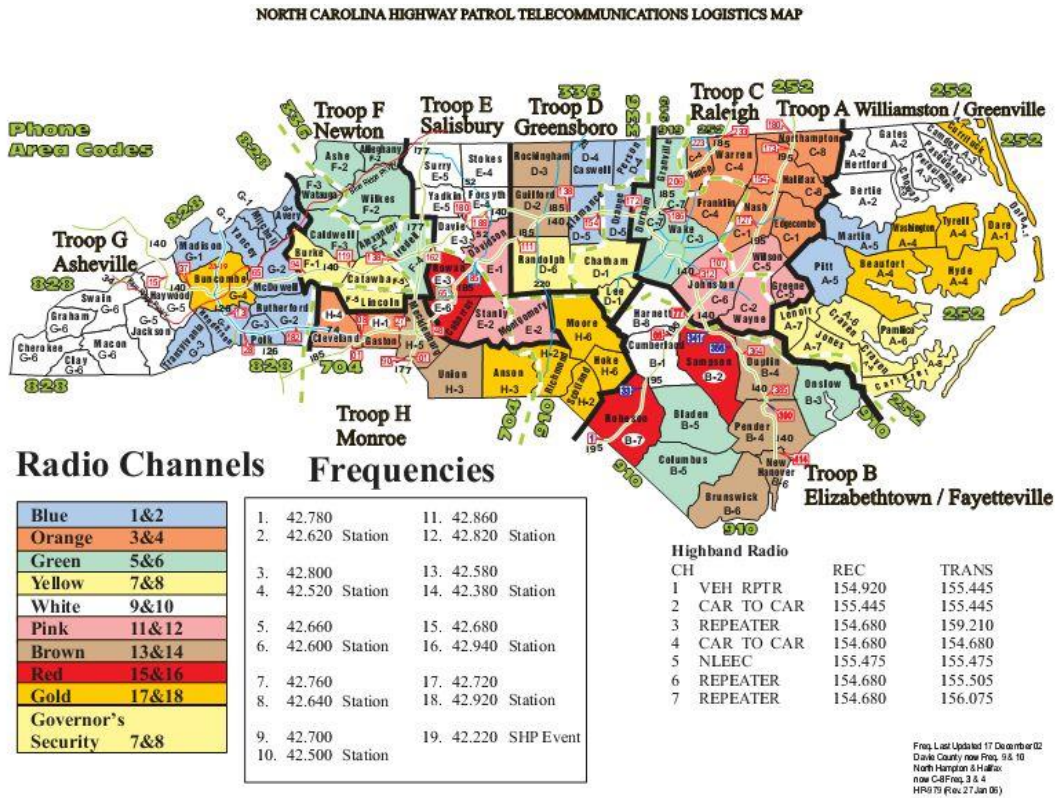
According to a 2012 article in the *North Carolina Medical Journal* looking at mental health provision in the state, just under half of the 100 counties in North Carolina fall within what is considered a “shortage area,” having less than 1 psychiatrist per 10,000 people (Thomas, Ellis, Konrad & Morrissey, 2012). According to the authors, “Three-quarters of North Carolina counties have fewer than half the number of prescribers required to meet county needs (Thomas, Ellis, Konrad & Morrissey, 2012).” According to the authors, it would take almost 1,000 additional mental and behavioral health providers to make up for the deficit currently in the state. If a natural or man-made disaster were to occur in North Carolina, according to this writer it appears that

the infrastructure is not in place to be able to adequately take care of this vulnerable population.

### **Communication strategy**

One area in which North Carolina has excelled for the past decade is its communications infrastructure. In 2002, a year after 9/11, North Carolina was named one of three states that had a “mature” interoperability system that expanded across large regions of the state. (Nccrimecontrol.org, 2015) A program entitled the Voice Interoperability Project for Emergency Responders (VIPER) was developed to strengthen the communications infrastructure and The Public Safety Interoperable Communications Grant Program (PSIC) awarded the program just over \$22 million in September of 2007 to develop a form of communication that would utilize an 800MHz radio system and allow statewide single, common radio coverage in the wake of a natural or man-made disaster. According to the North Carolina Department of Public Safety (NCDPS), the statewide project is 87% complete and fully funded, costing just under \$182 million dollars. Comparatively this appears to be a much larger investment than other states have received since this grant in 2007. Seven states were each awarded a year-long (2012 – 2013) for \$8 million each to boost their statewide technology. For North Carolina, this investment provided seven Domestic Preparedness and Response Regions across the state with one portable tower and equipment to include VHF/UHF/800MHZ conventional radios and a generator (nccrimecontrol.org, 2015) Due to many jurisdictions using obsolete technology, North Carolina hoped

VIPER would begin to address some of these issues. The map below details how the communication grid is laid out for the state.



How does this infrastructure translate on the local level? Developing this system state-wide essentially means that if a storm were to eliminate power in the eastern part of the state, these channels would not get overwhelmed by other technology, such as cell phones, when trying to coordinate assistance. While communication infrastructure has been well funded and developed, other strategies, such as documentation protection, have not been the focus of as much attention.

**Documentation Strategy**

Documentation failure is still a major threat in North Carolina. In spite of the state’s three largest hospital systems—Duke, UNC, and Wake Med—moving to utilize

the same electronic health records (HER) system, there continue to be gaps in logistics. The challenge remains that inputting documentation codes into an EHR for physical health are different from mental health codes, which are also different from those for behavioral health. Research for this paper failed to find evidence that the state of North Carolina has a robust reporting system that would help mental and behavioral health patients find continuity of care outside of North Carolina should a disaster occur matching the type and scale as that seen in New Orleans following Hurricane Katrina.

### **Legal Challenges**

North Carolina has similar legal challenges to those that Texas and Louisiana experienced following natural disasters. North Carolina has extensive programs to develop physician assistants and nurse practitioners. Both physician assistants and nurse practitioners are licensed to perform very similar duties in the state to include direct patient care. Typically these professions are only allowed to work within the state in which they are licensed, and need direct oversight of a doctor who also resides in the state. The only time that this rule does not apply is when an official state of emergency has been declared in North Carolina. At that time, nurse practitioners and physician assistants from other states can work temporarily in North Carolina, however they must be overseen by a local physician. (Rutkow, Vernick, Mojtabei, Rodman & Kaufmann, 2012) While the NC DRN Task Force claims to have several hundred trained and licensed volunteers, research has shown that North Carolina does not have the infrastructure of licensed professionals to respond to a large disaster and would have to rely heavily on outside assistance.

**Looking Forward:**

While North Carolina has many robust areas of disaster preparedness, the decrease of behavioral and mental health funding in North Carolina could have devastating effects. There are many needs for the behavioral and mental health community in North Carolina, three specific areas related to disaster preparedness should be addressed: 1) the need to develop an detailed disaster behavioral health plan, not only in how to respond in a disaster but beginning to develop a statewide infrastructure; 2) laws and policies to allow practitioners quick access to patients in the face of a disaster, and 3) development of a statewide centralized behavioral health database for physicians to easily access basic mental health and substance abuse information. .

After Katrina and 9/11, many states began developing comprehensive approaches to ensure access to mental health treatment. After much research, no such public surveys were found that outline a disaster behavioral and mental health plan for the state of North Carolina. The state has an extensive approach outlining funds for physical repairs, transportation routes, and even addressing elderly and disabled populations. However there is no mention of what will happen if all of the substance abuse treatment centers and mental health facilities were to shut down, as was the case in Hurricane Katrina.

A trend in health care in the United States is in the direction of physician assistants and nurse practitioners becoming the front line of primary care. This is evident in North Carolina, as well, and much of the NC DRN focuses its outreach to those same licensed professionals. Local doctors, physician assistants, and nurses who are directly affected by a disaster could be expected to be occupied in taking care

of their own families, and will presumably need reinforcements. Currently, in order for an licensed practical nurse (LPN) or physician assistant (PA) to work in North Carolina during a disaster they have to locate and work under a resident doctor. Mandating that each licensed practitioner be overseen by a physician during disaster response may limit critical times when such professionals could be providing needed mental and behavioral health services.

Finally, more research needs to be done on whether North Carolina could implement a program similar to the SAHMSA pilot program, the Digital Access to Medication (D-ATM). Even though on a smaller scale, this program showed how effective an interconnected system can be. Implementing such a system on a state-wide level would not only ensure better continuity of care for North Carolinians, but also begin to show a renewed sense of compassion for this vulnerable population.

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