The 2009 H1N1 Pandemic Response: Public Information and Crisis Communication in North Carolina

By

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Abstract

The year 2009 played host to the H1N1 Influenza Pandemic, an event public health officials had been preparing for over the past several years. As with any emergency situation, the events did not unfold as was expected or exercised, and plans had to be adjusted to meet the situation at hand. However, planning efforts did prepare officials to meet those challenges head on, adapting and responding to the best of their ability.

As the 2009 H1N1 Pandemic evolved, the importance of public information and communication was recognized with a focus on emergency risk communication. In order to enhance efforts and minimize the potential devastation caused by impending and more severe pandemics, this study will aim to identify the best practices and lessons learned during the H1N1 communication campaign through an examination of local and national media coverage and an assessment of local public health public information response efforts in North Carolina (N.C.).

This assessment, in conjunction with a detailed literature review provided evidence for the following recommendations:

- **Expand the Local Information Team (LIT) concept within N.C. public health at the regional and state level**: By opening the lines of communication through a regional and statewide LIT effort, public health public information officers can share response efforts, create joint messages, and provide consistency across the state.

- **Get ahead of the media**: The media set the tone of the response in May 2009 and was able to sensationalize the pandemic and frame communication, creating challenges for communicators. Public health officials should work to provide proactive, tone-setting, and educational messages from the onset of any event.

- **Expand media relationships**: Local, state, and federal public health officials need to work together to expand media relationships and align messages.

- **Public Information and Crisis Emergency Risk Communication (CERC) courses should integrate health education practice and CERC principles**: By aligning health education and crisis communication theory and practice, public health professionals will exercise these resources daily and become more comfortable with their use.

- **Utilize web-based resources and social media to expand reach**: Even though traditional media sources and communication efforts are extremely important, it will become increasingly vital for local public health agencies to use and become comfortable with web-based communication and social media to expand educational reach.

- **Expand targeted messaging**: Individuals have specific communication needs, and effective messages are matched to audience needs, values, backgrounds, culture, and experience. Public health officials should work to understand the populations they serve by listening to their informational needs in order to create a more robust communication system through targeted messages.

Through greater community coordination, enhanced media partnerships, the synchronization of health education and crisis communication theory, and the alignment of local, regional, state, and national public information efforts, public health and its response partners can and will provide transparent, consistent, and timely messages to protect the health and well-being of all citizens. As a result, individuals will be empowered to make informed decisions based on the communication and education process in their communities.
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I. Introduction

Public health officials around the world and in the United States (U.S.) will long remember the year 2009: the year a novel influenza virus made its way across the world, the year pandemic planning efforts came to fruition, the year the first nationwide Public Health Emergency in U.S. history was ever declared, and the year the first pandemic in over 40 years was confirmed. The year 2009 played host to the H1N1 Influenza Pandemic, an event public health officials had been preparing for over the last several years. As with any emergency situation, the events did not evolve as was expected or exercised, and plans had to be adjusted to meet the situation at hand. However, planning efforts did prepare officials to meet those challenges head on, adapting and responding to the best of their ability. Throughout this pandemic response, public health officials and agencies at the global, federal, state, and local level have comprised numerous lessons learned, best practices, and corrective action plans to improve future response efforts. Included among those are coordination with partners, enhancement of surveillance practices, creation and sharing of medical guidance, encouragement of infection control practices, management of medical supplies and pharmaceuticals, and the development of vaccine. An additional area that ultimately impacts each of these is Public Information and Crisis Communication. This paper will examine the 2009 H1N1 Pandemic Response at the federal, state, and local level, and is comprised of a literature review, media review, the author’s observations from work in preparedness and the H1N1 response, and a study of public information efforts at the local level in order to explore the crisis and risk communication techniques used in the response. Taking a closer look at the response in North Carolina (N.C.), recommendations will be made on the steps public health professionals may take to expand best practices and enhance communication efforts to improve not only future
pandemic responses, but also daily public health communication efforts and their response to all-hazards emergency situations.

II. Literature Review

The role of public health is ever changing, responding to basic community health needs and encouraging the health, well-being, and safety of citizens. This role has, over the last decade, expanded into emergency preparedness and disaster response efforts. Such efforts include planning and response related to natural disasters, disease outbreaks and epidemics, and bioterrorism. While this role some may argue is not entirely new, the focus and attention on public health efforts is more stringent than in years past, making disaster planning and coordination with partners at the federal, state, and local level a leading priority. In addition, crisis and risk communication efforts provide for a coordinated effort of information-sharing with partners and the public. Effective crisis and risk communication is a tremendous endeavor in planning and media coordination. Strides have been made in public health to enhance these efforts through the messages conveyed to partners and the public during public health emergencies. However, many steps can still be taken to incorporate disaster messaging and management into the daily routine of public health, thereby creating a seamless system of public information and communication.

a. Overview of Public Health Preparedness and Response

Since the terrorist attacks of 2001, emphasis has been placed on Public Health Emergency Preparedness (PHEP). A formal definition follows:

Public health preparedness involves the capacity of the public health system to reduce morbidity and mortality arising from intentional terrorist attacks (e.g. release of
aerosolized anthrax spores), large-scale transmission of naturally occurring agents (e.g. pandemic influenza), or natural disaster (e.g. hurricanes, floods etc.) (Nelson, Lurie, & Wasserman, 2007, p. 2).

The Department of Homeland Security (DHS), the Department of Health and Human Services (DHHS), the Centers for Disease Control and Prevention (CDC), state public health systems, and local public health systems each have critical roles in the establishment of this program at the federal, state, regional, tribal, and local level. Along with the planning responsibilities associated with PHEP, the U.S. government has invested tremendous financial resources related to preparedness. Since 2002, billions of federal funds have been allocated to federal, state, regional, tribal, and local public health agencies to assist in planning efforts. These funds have been used to implement surveillance systems for disease epidemic recognition, bio-surveillance systems equipment purchases, plan development, staffing support, and expansion of communication systems (Seid et al., 2007). In fact, as of November 2009, $1.35 billion had been allocated for the 2009 H1N1 Pandemic alone (COTPER, 2009).

As pointed out by Seid et al., the Public Health system is extremely complex. Despite a robust financial investment over the past few years and the efforts dedicated to preparedness, planning, and response, there are still concerns about the ability of this system to respond effectively. “The broad mission of public health, which extends from the promotion of physical and mental health to disease prevention, means that emergency preparedness must compete for resources with many other programs and activities” (Seid et al., 2007, p. 20). In addition, the current economic climate and recession have created gaps in the nation’s infrastructure, requiring many agencies to operate with limited staff. A recent study conducted by the National Association of County and City Health Officials (NACCHO), found that in 2008, local health departments lost 7,000 jobs and in 2009, over 16,000 jobs were lost. These were due to budget-
cuts, layoffs, position elimination, and attrition, resulting in an estimated 15% reduction in the local public health workforce over the last two years (NACCHO Survey, 2009).

The general composition of the public health infrastructure also provides various challenges for the PHEP system at large. Each state has established its public health system in a different manner. “Fifty separate state governments each hold the ‘police power’ and the parens patriae power, on which public health laws are based. When each of the states ratified the U.S. Constitution, it delegated powers, including limited authority for public health matters, to the federal government” (Baker, Jr. et al., 2004, p. 307). Since the federal government delegates the majority of public health authority to state governments, state governments in turn delegate authority and power to local municipalities. There is not a common public health structure among state governments; some are centralized while others are decentralized. In addition, states determine how interaction takes place with private entities, which are necessary partners to expand collaborative efforts and the public’s health. This in turn leads to differences in structure, services, and priorities at the local level (Baker, Jr. et al., 2004). N.C. operates a decentralized public health system. This allows for local authority over programs and governing entities working in conjunction with the state system and the federal system. These varying structures add to an already complex organization and may hinder consistency in a public health emergency response.

Despite this complex structure, developments have been made at each level of government to enhance PHEP. Various capacities have been added including surveillance and response, laboratory capabilities, communications, the expansion of partnerships, and the development of plans. In many cases, the partnerships alone have provided the impetus needed in preparedness efforts. As explained by Katz, Staiti, and McKenzie, before the formalized role
of PHEP, many public health agencies had limited contact with emergency response personnel. Preparedness efforts have encouraged working relationships with emergency responder agencies and in many ways forced partners to work outside of traditional organizational culture to work together, understand partner agency roles, and manage many different types of events. “These efforts have led to ongoing collaborations…and to increased interaction between federal, state, and local agencies” (Katz, Staiti, & McKenzie, 2006, p. 949). As public health continues to build its current system, it will be extremely important to integrate and balance PHEP with existing public health priorities and to cultivate these partnerships.

b. The Role of Public Information, Risk Communication, Crisis Communication and Emergency Risk Communication in Public Health Emergencies

A public health priority that can and does integrate existing practice with PHEP is public information and communication. Public information and communication is an extremely complex topic, and one that public health relies on greatly through health education, health promotion efforts, and PHEP. Communication is the tie that binds community partners and the public; allowing individuals to feel comfortable with the current situation, providing education and understanding, and empowering those on the receiving end. More specifically, crisis communications and risk communication are two differing, yet complementary concepts working together to effectively portray disaster management communications. Crisis communication may take on several definitions; however, in general, this form of communication aims to minimize the negative outcomes of an event in order to protect the organization and its stakeholders from harm. Crisis communication can be verbal, visual, or written that takes place before, during, or after the event (Reynolds & Seeger, 2005). Risk
communication, on the other hand, is defined as "the exchange of information among interested parties about the nature, magnitude, significance, or control of a risk... [and] is closely associated with threat sensing and assessment" (Reynolds & Seeger, 2005, p. 45). Based on these definitions and through practice, risk communication is an ongoing practice that can enhance PHEP in the long term. This form of communication is closely tied to health education, and if done properly could enhance and minimize the need for true crisis communication.

i. Crisis, Risk, and Emergency Communication

The model currently used by CDC to enhance PHEP crisis and risk communication is called CERC – Crisis and Emergency Risk Communication. This model is an educational training component for planners at every level and is encouraged through cooperative agreements and planning benchmarks. It is a blended form of communication, incorporating principles of crisis and risk communication. It is based on a five stage model and "assumes that crises will develop in largely predictable and systematic ways: from risk, to eruption, to clean up and recovery on into evaluation" (Reynolds & Seeger, 2005, p. 51). The working model of CERC consists of pre-crisis actions (risk messages, warnings, precautions); the initial event (uncertainty reduction, self-efficacy, reassurance); maintenance (ongoing uncertainty reduction, self-efficacy, reassurance); and resolution (updates regarding resolution, discussions about cause and new risk/ new understandings of risk) (Reynolds & Seeger, 2005). Through this model, pre-crisis takes the form of risk communication and education efforts, along with risk identification. The initial event is impacted by emotional cues, uncertainty, and the need for information. Maintenance addresses a more general understanding of the threat, actions that can be taken to reduce the threat, and ongoing explanations and information. Finally, resolution provides greater
understanding and the ability to move toward recovery and change in order to meet future risks with more certainty (Reynolds & Seeger, 2005). While not all events will necessarily follow this precisely, it does allow for a truly comprehensive approach to PHEP communication in all types of disaster events and emergency situations.

Working in conjunction with the CERC principles is the Emergency Risk Communication (ERC) CDCynergy program. ERC CDCynergy is “a step-by-step tutorial and performance support tool to help federal, state, and local public health communicators systematically plan, implement, and evaluate emergency health communications” (CDCynergy, n.pag.). In addition to outlining the CERC principles of crisis and risk communication, ERC CDCynergy explains Emergency Risk Communication as communication that combines the urgency of the situation at hand “with the need to communicate risks and benefits to stakeholders and the public” (CDCynergy, n.pag.). In this form of communication, the communicator is a participant in the resolution of the crisis or emergency, decisions made have strict time constraints, the outcome may be uncertain, and decisions may be made with incomplete or insufficient information (CDCynergy).

When dealing with these various types of communication and working on messaging to meet response needs, public health professionals are tied to an intense process, which is a key difference between crisis communication, risk communication, and emergency risk communication, compared with health education. This process is emotionally charged with various stressors, competing priorities, and competing messages. The public is inclined to search for answers – any truth that makes sense to them. The media is looking for breaking news. This combination creates a potentially unstable environment that can also be seen as high risk (Glik, 2007). “Risks of miscommunication in a crisis risk communication scenario are high and the
communication process must contain elements of trust, credibility, honesty, transparency, and accountability for the sources of information. Lack of trust and credibility can doom risk communication efforts” (Glik, 2007, p. 35). Ultimately, the framing of messages, along with how they are portrayed and by whom, is key in determining how individuals will respond. “Messages are more effective when they are strategically matched to audience needs, values, background, culture, and experience” (Reynolds & Seeger, 2005, p. 45). In this case, it is extremely important to gain an understanding of the audience and their needs (Glik, 2007; Reynolds & Seeger, 2005). Audiences vary in literacy levels, primary language, age, and interpretation of messages. This could create many challenges for communicators, and emphasizes the need for planning and coordination pre-event and during an event.

Integral partners in crisis communication, risk communication, and emergency risk communication are the public and the media. The public is made up of various audiences who help determine messaging needs, while the media helps to get those messages out and can ultimately enhance the messaging efforts, if they are approached as a partner. Glass and Schoch-Spana point out it is important to understand the various publics you are working with and developing messages for – that there really is no such thing as the “general public” (Glass & Schoch-Spana, 2002).

The general public is comprised of an interconnected matrix of networks and subnetworks organized around social institutions and relationships. Individuals are members of organizations and groups whose social ties, resources, communication links, and leadership structures might be used to facilitate a better and more coordinated response (Glass & Schoch-Spana, 2002, p. 219).

Vincent Covello, a leading contributor to crisis and risk communication, explains it is necessary to gain a better understanding of your publics and work to frame messages that address their questions and concerns. One of his best practices is simply to listen to people: find out what they
know and let them know that what they have said has been understood. Messages should then be based on those needs and should be clear, concise, and consistent (Covello, 2003). The goal of communication with all target groups should be to provide trustworthy information in order to minimize fear and confusion (Savoia et al., 2008).

Just as the public is an essential partner, the media, while often overlooked, is equally important as a partner. Whether individuals like it or not, individuals turn to the media for information and up-to-date facts about current situations. With the media and news available 24 hours a day, it is extremely important for the public to realize they can turn to their local public health agency for timely and accurate information. Although in many cases the media, and even internet media, is criticized for inaccuracy, those sources are the most efficient means to get information out to large numbers of people quickly (Glik, 2007). The State of the News Media 2010 report noted that cable and online media sources were the only news media sources to grow in 2009. Fox News saw the biggest increase in viewer and readership in cable media during 2009, while CNN came in second (Journalism.org, 2010). On a typical day, six in ten Americans get news online. Online sources are more concerned with pushing information out rather than drawing readers in (Journalism.org, 2010). “What’s more, the data continue to suggest a clear pattern in how Americans gravitate for news: people are increasingly ‘on demand’ consumers, seeking platforms where they can get the news they want when they want it from a variety of sources rather than have to come at appointed times and to one news organization” (Journalism.org, 2010). In this case, public health agencies must be proactive to ensure consistent and timely messaging, encouraging the media to follow the public health agenda, instead of setting its own.
ii. Health Promotion and Health Education Models Related to Crisis, Risk, and Emergency Communication

While crisis, risk, and emergency communication are extremely intense, time-sensitive, and in many cases emotionally charged, the foundation is closely related to health promotion and health education. The working model of CERC follows messaging related to pre-crisis, the initial event maintenance, and resolution. Likewise, Covello et al offer a theoretical perspective in risk communication models that relate to health education. These include the risk perception model, mental noise model, negative dominance model, and trust determination model. The risk perception model allows a level of concern, worry, fear, and anxiety, which ultimately impacts behaviors and message needs. The mental noise model looks at how people process information under stress. The negative dominance model states that individuals pay more attention to information with negative connotations. The trust determination model enforces that trust is needed in order to build relationships and understanding in any crisis situation (Covello, Peters, Wojtecki, & Hyde, 2001). These models, in conjunction with the planning aim of various health belief models, such as the Health Belief Model and the Precaution Adoption Process Model, can assist planners and public information officers in the development of key messaging and campaign focus.

In disaster or emergency events, like other health threats, individuals may follow similar paths that are outlined in health education theory models. While processes may not be followed exactly when dealing with a crisis situation, individuals go through various stages of emotional recognition, and since public health professionals are familiar with these models, it allows for an easy transition to disaster communication.
1. The Health Belief Model

The health belief model is closely related to the risk perception model and the trust determination model. “Perceived risk, not actual risk, determines the population’s reaction, even though these perceptions are often biased” (Brug et al., 2004, p. 1486). The health belief model identifies individuals’ perception of a health threat, the benefits of avoiding the threat, and factors to change behavior, leaning on the following stages: perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cue to action, and self-efficacy (Theory at A glance, 2005).

When dealing specifically with public health emergencies, these stages are quite applicable. In the case of a pandemic for example, individuals’ actions are based on their perceived susceptibility in conjunction with the perceived severity of the illness. If the pandemic or event could negatively impact children, this level of perceived severity may be increased. If a vaccine is available, they will then weigh the benefit of the vaccine against contracting the illness. All of these messages can be addressed through CERC and CDCynergy, along with addressing any barriers or cues to action. This framework is similar to CERC guidelines and best practices. Covello offers such best practice guidelines. Those relevant to this particular theory are as follows:

- Include in the decision-making process the broad range of factors involved in determining public perceptions of risk, concern, and outrage.
- Always try to include a discussion of actions that are under way or can be taken.
- Express genuine empathy. Acknowledge, and say, that any illness, injury, or death is a tragedy to be avoided.
- Personalize risk data. Use stories, narratives, examples, and anecdotes to make technical data come alive.
- Use risk comparisons to help put risks in perspective; make sure those comparisons take into account the distinctions the public considers important (Covello, 2003, n.pag.).
These examples are just a few taught in crisis and risk communication, but can easily be adapted to work hand-in-hand with the health belief model.

2. The Precaution Adoption Process Model

The precaution adoption process model may be particularly helpful in risk communication, encouraging individuals to understand a hazard and their susceptibility to that hazard if the event occurs, or when the event occurs. Related closely to the trust determination model and even the mental noise model, the precaution adoption process “specifies seven distinct stages in the journey from lack of awareness to adoption and/or maintenance of a behavior” (Theory at A glance, 2005, p. 18). These stages are:

- Stage 1: Unaware of the Issue;
- Stage 2: Unengaged by the Issue;
- Stage 3: Deciding About Acting;
- Stage 4: Decided Not to Act;
- Stage 5: Decided to Act;
- Stage 6: Acting; and
- Stage 7: Maintenance (Theory at A glance, 2005).

This theory is particularly helpful during public health emergencies since there are so many unknowns. During the risk communication process it is necessary for planners and communicators to be persuasive in messaging, evoking understanding and providing education to engage the individual in action (Reynolds & Seeger, 2005). By doing this, an agenda is established to proactively refute any competing media agenda. In addition, public health professionals are able to frame and identify themselves as the experts, once again, an avenue that is proactive in nature.

As public health professionals work to prepare and plan for emergencies, it is crucial public information and communication be considered, and balanced with existing practices.
Communication is at the forefront of any response, and in many cases is the area that can cause the greatest concern. Professionals and response plans must work to incorporate the concepts of crisis communication, risk communication, emergency risk communication, partner coordination, and media relations to enhance the response and public understanding of the issues at hand.

c. Overview of the 2009 H1N1 Pandemic

In April 2009, a novel influenza A H1N1 virus was detected in the U.S. At that time, the virus termed early on as Swine Flu, was beginning to spread in the U.S. and Mexico. The term Swine Flu was originally used to describe this particular virus because of gene attributes associated with viruses typically seen in pigs. It is presumed that this particular virus has actually been in circulation for sometime, although it had not previously caused illness in humans (CDC novel H1N1 flu).

Influenza viruses infect many types of animals and are constantly undergoing various shifts and drifts, passing from one animal host to another. These shifts and drifts can cause mutations that cause the strain to evolve into a novel influenza virus, never before detected in humans. “Reassortment of influenza viruses can result in abrupt, major changes in influenza viruses, also known as ‘antigenic shift.’ When shift happens, most people have little or no protection against the new influenza virus that results” (CDC novel H1N1 flu, n.pag.). When this occurs, the virus has the potential to cause an epidemic or pandemic. The 2009 novel influenza A H1N1 virus is one such virus: it has never been seen before in a single influenza virus (CDC novel H1N1 flu). Public health officials have seen similar occurrences in the past, and have therefore been planning for such epidemic and pandemic events.
i. **History of Pandemics**

A pandemic is defined as a global disease outbreak, causing widespread illness in humans. This varies from an epidemic, which is an outbreak that is isolated to a geographic region. Essentially, a pandemic is comprised of numerous epidemics. A pandemic is not characterized by rates of mortality, rather the number of illnesses and rate of spread. “An influenza pandemic occurs when a new influenza A virus emerges for which there is little or no immunity in the human population, begins to cause serious illness and then spreads easily person-to-person worldwide” *(Flu pandemics, n.pag.)*. In many cases, the term pandemic is misunderstood and may evoke concern causing individuals to interpret any pandemic as severe. However, as mentioned previously, pandemic denotes the spread of the illness and not the severity of the illness. Pandemics, like many public health threats, carry a higher level of risk perception because it is not well understood.

When dealing with pandemic influenzas, the viruses are presumed to be similar in nature to seasonal influenza, however there may be significant differences. Seasonal influenza is a respiratory infection, typically accompanied by fever, aches, pains, cough, and runny nose. The highest rates of illness are usually found in the very young and the elderly, with most severe cases in individuals with underlying chronic conditions. In the U.S., the influenza season typically runs from October to May, with the peak seen in January to February. Antivirals can be prescribed by physicians to ease the symptoms of influenza, and are usually available in sufficient quantities. Each year, it is estimated that seasonal influenza kills roughly 36,000 individuals in the U.S., with the majority of deaths occurring in individuals over 65 years of age. While this number may seem concerning, individuals do not always realize the impact seasonal influenza has on the population each year, and many times underestimate its effect.
Seasonal influenza viruses undergo limited shifts and drifts, allowing individuals to build immunity from season to season. Based on these trends, public health officials and scientists are able to predict the seasonal influenza strains that are likely to circulate during the following season, enabling pharmaceutical companies to develop a vaccine for additional protection. These predictions are not always completely accurate, but in many cases they offer the protection needed to build individual and community immunity.

When a novel influenza virus emerges, symptoms are likely to be similar to that of seasonal influenza, but could be more severe. There is limited to no immunity among the population, which causes the virus to spread rapidly. Pandemics can vary in severity and can impact different populations, causing more severe illness in younger, healthier populations. With a higher illness rate, and uncertainty of the virus itself, it is unknown whether antivirals would be effective treatment, or if supply would be able to meet the demand. A vaccine to prevent the spread of the illness is unlikely at the start of the pandemic, and could take three to six months to develop and manufacture. The virus itself may also cause waves of illness, with each wave lasting for several weeks to several months, and multiple waves occurring over one to two years after initial onset. The emergence of a novel virus could also have far reaching economic and social impact. High absentee rates and social distancing measures, such as school closures, cancellation of mass gatherings, and travel restrictions could negatively impact the domestic and global economy. The variability of a pandemic alone may cause concern and makes communication difficult. The situation and estimated impact may change daily, causing added confusion and making it extremely difficult for public health officials and communicators to explain the risk.
Fortunately, pandemics are rare occurrences, historically occurring three times per century. One thing officials have learned from these events is that they do vary greatly, and it is extremely hard to know early on the true impact the virus may have on the population. In any situation, it is pertinent for officials to act quickly and efficiently to properly mitigate those effects; mitigation efforts rely heavily on consistent, timely, and transparent communication.

In the 1900s, there were three global pandemic events: the 1918-1919 Spanish Influenza, the 1957 Asian Influenza, and the 1968 Hong Kong Influenza (Neumann, Noda, & Kawaoka, 2009). These events have allowed for a greater understanding of the level of impact and threat associated with a pandemic and the associated severity of the illness, thereby allowing public health professionals and others to plan for various situations and scenarios. While not an actual pandemic, the most recent novel influenza event in the minds of many Americans is the Swine Flu of the 1970s. One could argue this event added confusion and concern over many of the actions taken during the 2009 H1N1 Pandemic Response.

The 1918-1919 Spanish Influenza was also an influenza A H1N1 virus, and remains an unprecedented deadly pandemic event, killing as many as 50 million people worldwide, and over 500,000 people in the U.S. This event was characterized by three waves of illness. The first wave was a relatively mild wave, however the second and third waves “resulted in mortality rates of over 2.5%, compared to less than 0.1% typically recorded for influenza outbreaks” (Neumann et al., 2009). The Spanish Influenza also impacted young adults causing higher mortality rates in individuals aged 20 to 40. This particular pandemic is categorized as the worst case scenario for public health emergency planners, and in many ways has been the focus of all U.S. planning efforts (PCAST, 2009).
The Asian Influenza of 1957 was an influenza A H2N2 virus that originated in Southern China. This pandemic was a more moderate pandemic resulting in almost 70,000 deaths in the U.S. (Neumann et al., 2009). Unlike the 1918 pandemic, this pandemic was quickly identified, and the highest rate of death was in the elderly (History of flu pandemics). The pandemic of 1957 created a more moderate impact on the community.

In 1968, another novel virus emerged known as the Hong Kong Influenza, an influenza A H3N2 virus. Although this virus was detected in September 1968, the majority of cases did not emerge until December that same year. Once again, the elderly were most severely impacted with the highest mortality rate. This was the mildest pandemic recorded, resulting in approximately 33,800 U.S. deaths; fewer than the number of deaths recorded during a typical influenza season (History of flu pandemics).

Known to many as the “1976 Swine Flu ‘Fiasco’, ... the events of 1976 serve as an example of a public health response premised only on the worst case scenario, which ended up being a false alarm” (PCAST, 2009, p. 8). In January of that year a novel virus emerged in a group of army recruits in New Jersey, with four hospitalizations and one death. Based on public health recommendations, the President launched a vaccination campaign, vaccinating about 45 million people. Confidence was shaken when three elderly adults died shortly after receiving the vaccine, and about 1 per 100,000 individuals reported contracting a paralyzing neuromuscular disease, Guillain-Barre Syndrome. Since there was no evidence of illness beyond the initial cases, these complications, although rare, led to the suspension of the vaccination program (PCAST, 2009). Many lessons were learned from this event, including the importance of surveillance and activity in monitoring an event and determining mitigation strategies. In
addition, since this mass vaccination campaign is the most recent in U.S. history related to the H1N1 response, it has hampered the credibility of the system in handling such events.

With each pandemic event, public health professionals gain additional experience in dealing with outbreaks, epidemics, and pandemics. This experience allows for improved planning efforts including expansion of surveillance and detection, implementation of mitigation strategies, advancements in pharmaceuticals and protective equipment, coordination with response partners, and the development of communication and education strategies. This experience, along with the expansion of PHEP, has enabled a strong and coordinated response to the current 2009 H1N1 Pandemic, yet highlights the many challenges public health faces when dealing with the variability of a pandemic, its severity, and its potential impact on the community.

ii. The First Nationwide Public Health Emergency in U.S. History

On April 26, 2009, after the initial emergence of the novel H1N1 virus in North America, the Acting Secretary of Health and Human Services declared the first nationwide Public Health Emergency in U.S. history, in accordance with section 319 of the Public Health Service Act (Determination). In 1983, this authority to declare a public health emergency was granted by Congress in order to appropriate funds to the Secretary to respond to public health events. When executed in conjunction with other declarations, additional authorities may be enacted such as the issuance of an Emergency Use Authorization (EUA) for the utilization of medications and equipment as not typically authorized (Ray, 2009). Since 2001, eleven public health emergency declarations have been made, including the H1N1 declaration. While public health emergencies
have been declared in the past, those have been specific to certain areas or states, and not a nationwide declaration (Public health emergency declarations).

On June 11, 2009, the World Health Organization (WHO) raised the level of pandemic alert to a Phase 6, signaling a pandemic was underway based on the number of cases seen across the world (The current flu situation). “More than 200 countries have reported cases of H1N1 influenza” (The current flu situation, n.pag.). The U.S. has reported more cases than any other country in the world (The current flu situation).

On October 24, 2009, President Barack Obama declared the 2009 H1N1 Pandemic a National Emergency. This declaration was made to facilitate our ability to respond to the pandemic by enabling – if warranted – the waiver of certain statutory Federal requirements for medical treatment facilities. In particular, this proclamation is aimed at providing HHS the ability to waive legal requirements that could otherwise limit the ability of our nation’s health care system to respond to the surge of patients with the 2009 H1N1 influenza virus (October 24, 2009, n.pag.).

The scope and combination of these declarations enabled the U.S. government, state governments, and local governments to respond to an event that has made a historical impact and has also laid the foundation for future public health emergency events.

Fortunately, to date, the H1N1 influenza pandemic remains relatively mild, with most cases recovering without needing medical care (The current flu situation). Even though this seems to be a mild pandemic, the highest number of cases has been seen in children, with the highest mortality rate in individuals 18 to 64 (CDC novel H1N1 flu). In addition, pregnant women have been at an increased risk for severe illness, along with individuals who have underlying chronic conditions. “About 70 percent of people who have been hospitalized with H1N1 flu have had one or more medical conditions that placed them in the ‘high risk’ category for serious seasonal flu-related complications. These include pregnancy, diabetes, heart disease,
asthma and kidney disease" (The current flu situation, n.pag.). As of December 12, 2009, CDC provided the following estimates of H1N1 influenza impact:

- CDC estimates that between 39 million and 80 million cases of 2009 H1N1 occurred between April and December 12, 2009. The mid-level in this range is about 55 million people infected with 2009 H1N1.
- CDC estimates that between about 173,000 and 362,000 2009 H1N1-related hospitalizations occurred between April and December 12, 2009. The mid-level in this range is about 246,000 H1N1-related hospitalizations.
- CDC estimates that between about 7,880 and 16,460 2009 H1N1-related deaths occurred between April and December 12, 2009. The mid-level in this range is about 11,160 2009 H1N1-related deaths (CDC novel H1N1 flu, n.pag.).

The true impact of the 2009 H1N1 Pandemic will likely be unknown for several years.

With the peak of illness in October to November 2009, officials do not believe the pandemic is officially over, even though the H1N1 vaccine was distributed nationwide in early October 2009. As of January 29, 2010, over 118 million doses of vaccine were shipped nationwide to aid in the prevention efforts of the H1N1 influenza pandemic (CDC 2009 H1N1 flu). Additional waves of illness are likely in the U.S. and around the world. In fact, as of February 2010, H1N1 was still the predominant circulating influenza strain in the U.S., and there had been little to no signs of laboratory-confirmed cases of seasonal influenza strains. Officials hope, however, that the combination of immunity from the initial cases and the distribution of the vaccine will decrease the likelihood for increased transmission, thereby reducing the opportunity for the virus to spread further, as well as reducing the potential for a mutation that could cause more severe illness.

d. The 2009 H1N1 Pandemic Response and Public Information Efforts

Public health agencies across the U.S. have been planning for a potential pandemic for years. Planning and response efforts surrounding PHEP and all-hazards preparedness, along
with the potential for bioterrorist attacks and pandemics have encouraged agencies to increase local, state, and federal response capabilities through coordination with response partners, development of all-hazards plans, enhanced training of personnel, increased surveillance capacity, and expansion of surge capacity. The enhancement of these capabilities and others are outlined in the Target Capabilities List, established at the direction of the Homeland Security Presidential Directive-8. This directive was issued “to establish national policy to strengthen the preparedness of the United States to prevent, protect against, respond to, and recover from terrorist attacks, major disasters, and other emergencies” (DHS, 2007, n.pag.). These efforts, along with the incorporation of lessons learned from other public health emergencies and events have enabled the U.S. public health infrastructure to rise to the occasion at the declaration of the 2009 H1N1 Influenza Pandemic and Public Health Emergency.

In planning for a potential pandemic event, state and local public health agencies, along with DHHS and CDC, had originally based plans and efforts on a virulent pandemic strain that originated in another country (PCAST, 2009). The strain that had been studied and monitored closely was and is the Highly Pathogenic Avian Influenza Virus H5N1 (HPAI H5N1). This particular virus, while not sufficiently transmissible from human to human, causes severe illness in its victims, with a case fatality ratio of over 60% (H5N1 (bird flu)). WHO and CDC officials have been monitoring this virus closely since 2003, worried that it would become the next influenza pandemic. In fact, the possibility that this virus would mutate to become efficiently transmitted from person to person, prompted major planning efforts nationwide. Beginning in 2005, the Federal Government undertook many initiatives to address pandemic planning including the development of a National Strategy for Pandemic Influenza, the stockpiling of medical supplies and pharmaceuticals, and the development of guidance and policy (PCAST,
2009). With HPAI H5N1 looming, planning efforts were geared almost strictly to it becoming
the next pandemic event and in doing so, lacked many key components needed to respond to an
event that would originate in North America or the U.S. When reviewing N.C. planning
guidelines for pandemic influenza, early guidance was primarily focused on initial novel cases
found overseas, or in another country. New guidance reflects new variations of initial case
identification, triggers, and the incorporation of H1N1 lessons learned (Pandemic influenza plan
update guidance). Despite some plan writing inefficiencies, it was evident that many agencies
worked tirelessly to involve key partners in these plans and efforts resulting in a tremendous
impact on the flexibility of the response. In addition, public health officials and planners were
recognized nationwide as trusted and credible partners willing and able to assist and lead in this
pandemic event.

When the initial alert was communicated in April 2009, many public health agencies
began to activate existing plans and partners. The backbone of the response was and is the
public information and communication efforts. During the initial phases of response, clinical
guidance, disease surveillance, laboratory testing, case identification, disease quenching, and risk
mitigation strategies were pertinent (H1N1: Meeting the challenge ). In order to properly
respond in these areas, a robust communication system was needed – a system that included
interagency coordination between public health officials, medical providers, response partners,
government officials, the media, and especially, the public.

Given the complexity of the event and the implementation of vaccination campaign,
officials were faced with many difficult challenges. It was crucial that messages be timely,
accurate, and succinct, and that the officials providing the messages be trustworthy,
approachable, and exact. As the pandemic progressed, so did the messages and communication
strategies. The response shifted from case identification and disease quenching, to risk mitigation, exposure reduction, proper medical care, and vaccination. When dealing specifically with vaccination, public health officials were dealing with limited supply early on, which led to the implementation of vaccine target groups. Target groups included healthcare workers, pregnant women, children, and individuals with high-risk conditions. These groups did not equate to priority groups, and in turn caused confusion for practitioners and the public. Furthermore, the fact that emergency declarations and EUAs were in place caused additional confusion and the need for transparent and consistent communication. "Trust in government will remain a critical factor in determining the response to the vaccination campaign. It is essential for CDC and state and local health departments to communicate clearly about the rationale for priority groups" (Quinn, Kumar, Freimuth, Kidwell, & Musa, 2009, p. 7). The need for clear communication and trust in the government and public health officials does not stop at target groups and vaccination; it expands into every facet of the response. While the messages may have shifted, along with the challenges faced, the principles surrounding public information, crisis communication, and emergency risk communication did not. It is important to identify the areas of communication that provided the greatest benefit to the response effort, while working to improve upon shortfalls.

**III. Methods**

As the 2009 H1N1 Pandemic unfolded, the importance of public information and communication was recognized with a focus on emergency risk communication. During such an event, there is unprecedented anxiety and unanswered questions. Officials leading the response efforts worked diligently to ensure the public's well-being and safety, and in doing so worked to
provide public reassurance through timely and accurate messages that were transparent and truthful. In order to enhance PHEP efforts and minimize the potential devastation caused by the impending and more severe pandemics, this study will aim to identify the best practices and lessons learned during the 2009 H1N1 Pandemic Public Information and Crisis Communication Campaign.

The magnitude of the H1N1 pandemic provides various sources of review and study in the areas of public information, crisis communication, risk communication, and emergency risk communication. This study will look at the response in N.C., with some comparison to the national level response, focusing on media coordination and message trends. To accomplish this, a two part review was used, in conjunction with the previous literature review. The first part of the review focuses on the media – specifically a comparison of the primary message and focus portrayed by the headline in N.C. locally based newspapers, U.S. major newspaper sources, CNN.com, and FoxNews.com. CNN and Fox News not only represent news available on the web, but also cable news sources. The second part of the review looks closely at N.C. and an assessment of the public information response at the local level, along with a review of N.C. local health department information provided on local websites.

a. N.C. Media Review

As mentioned previously, the media is an integral partner in emergency events and in public information campaigns. The purpose of this review was to look closely at the headlines, media framing, and the portrayal of the event from N.C. media, in comparison to national media. In addition, this study compares the primary focus of messages portrayed by more traditional print media and cable and web-based media sources. This was done by conducting headline and
abstract searches from N.C. newspapers, U.S. newspapers, CNN.com, and FoxNews.com. Sources were chosen based on the information provided by the 2010 State of the Media report. In 2009 cable news sources and web-based news were the only sources to grow in reader or viewership. In cable-based news sources, Fox News had the highest growth, while CNN came in second. In addition, the State of the Media 2010 report noted that there was a definite increase in on-demand media; this is intended to mean individuals want news and information at their convenience, and prefer not to wait for print or network news sources. Therefore, this particular media review sought to compare local N.C. newspapers to national newspapers, and print media to cable and web media. By reviewing news sources, it was also determined how closely media messages aligned with the public health response and educational focus and goal. This study included the following news searches for headline and abstract review:

Table 1: Media Search

<table>
<thead>
<tr>
<th>News Area Focus</th>
<th>Search Source</th>
<th>Search Terms</th>
<th>Search Date Range</th>
<th>Articles Returned/Reviewed</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>NC Local Newspapers</td>
<td>News Bank – America’s Newspapers</td>
<td>&quot;H1N1&quot; OR &quot;Swine Flu&quot; OR &quot;Flu&quot;, General Text Search</td>
<td>April 20, 2009 – February 14, 2010</td>
<td>647</td>
<td>36 Local NC Newspapers</td>
</tr>
<tr>
<td>US Newspapers</td>
<td>Newspaper Source Plus</td>
<td>Topic Search &quot;2009 H1N1 Pandemic&quot; OR &quot;Swine Influenza&quot; OR &quot;Influenza&quot; OR &quot;Vaccine&quot; OR &quot;Clinic&quot;</td>
<td>April 20, 2009 – February 14, 2010</td>
<td>457</td>
<td></td>
</tr>
<tr>
<td>CNN – Online</td>
<td>CNN.com</td>
<td>H1N1 Flu Swine Flu</td>
<td>April 20, 2009 – February 26, 2010</td>
<td>286</td>
<td>Adding clinic/ vaccine limited search and did not add additional stories</td>
</tr>
<tr>
<td>Fox News – Online</td>
<td>FoxNews.com</td>
<td>Refined Search: Story, H1N1, Health Section, last 365 days</td>
<td>April 20, 2009 – February 26, 2010</td>
<td>578</td>
<td></td>
</tr>
</tbody>
</table>

Overall, 1,968 headlines and abstracts were reviewed. An overview of the subjects examined during the media review, along with topic area and topic definitions can be found in Appendix A.
b. N.C. Public Health Response

The review of the N.C. public health response was examined in two primary ways: the analysis of website content and a survey of local health department public information officers or media coordinators. The website analysis was aimed at identifying how messages were disseminated to the public, how messages were portrayed, and if the messages were beneficial for multiple target audiences. The purpose of the survey was to gain an understanding of the current structure of the public information and communication system at the local level, how communication and messages were used, and how coordination among public health agencies occurred. This study provided an opportunity for local health departments to conduct a self-assessment, along with an assessment of the communication processes used throughout the response in relation to local, regional, state, and federal coordination. The survey information sheet can be found in Appendix B and the survey questions can be found in Appendix C.

IV. Results

The 2009 H1N1 Pandemic Response Public Information and Communication study aimed to take a closer look at how crisis, risk and emergency communication took place in N.C. By looking at the media portrayal of the event and the local health department response, one can see how the planning efforts that have taken place in previous years related to PHEP have greatly enhanced the local ability to manage and respond to an event of this magnitude. The results of this study indicate a moderately high level of coordination among N.C. local public health and local response partners. Planning efforts have provided the impetus needed to enhance this communication and coordination. In addition, the results emphasize the best practices that were utilized, along with areas for improvement.
a. N.C. Media Review

As mentioned previously, the media review sought to compare local print media in N.C. to national print sources, along with web and cable based sources, Fox News and CNN to determine the impact the media had on the H1N1 pandemic and the public health response. As noted in the literature review, the media is a prime source for updates and information; it is important for public health officials to work with the media to enhance the accuracy of information provided, thereby limiting sensationalism and media framing. Complete results from this study can be found in Appendix D.

An initial trend identified is the frequency of articles from all publications compared to influenza like illness (ILI) activity in N.C., found in Figure 1.

Figure 1: ILI Activity Related to Media Activity

As evidenced, the overall trend of media coverage was fairly consistent with the rates of illness in N.C., except for the month of May 2009. The percent of ILI admitted to the hospital from the emergency department also shows an inconsistent trend, which is expected since it is based on overall ILI activity in the emergency department. In May, there was an abundance of media
coverage related to the novel H1N1 virus. It is important to remember that at that time only a Public Health Emergency had been declared; the H1N1 virus had not yet reached pandemic status and a national emergency had not yet been declared. Furthermore, Figure 2 illustrates the primary focus of the media overall during the month of May was the number of cases, mitigation efforts (e.g. school closures), and deaths. The topic or focus of the news coverage was determined by the number of times a particular focus was noted by month. This does exclude surveillance, general, and general vaccine, since those topics were prevalent throughout.

Figure 2: Focus Comparison by Month

<table>
<thead>
<tr>
<th>Month</th>
<th>Public Health Focus*</th>
<th>News Focus**</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2009</td>
<td>Initial Case Identification; Case Counting</td>
<td>Emergency; Action; Mitigation</td>
</tr>
<tr>
<td>May 2009</td>
<td>Initial Case Identification; Case Counting</td>
<td>Cases; Mitigation; Deaths</td>
</tr>
<tr>
<td>June 2009</td>
<td>Initial Case Identification; Case Counting; Prevention Messages; Preparation; Monitoring Activity</td>
<td>Cases; Children; Deaths</td>
</tr>
<tr>
<td>July 2009</td>
<td>Case Counting; Prevention Messages; Preparation; Monitoring Activity</td>
<td>Children; Action; Cases</td>
</tr>
<tr>
<td>August 2009</td>
<td>Prevention Messages; Preparation/ Planning; Monitoring Activity; Vaccine Prep</td>
<td>Action; Children; Prevention/ Education</td>
</tr>
<tr>
<td>September 2009</td>
<td>Prevention Messages; Preparation/ Planning; Monitoring Activity; Vaccine Prep</td>
<td>Children; Prevention/ Education; College</td>
</tr>
<tr>
<td>October 2009</td>
<td>Prevention Messages; Monitoring Activity; Vaccine Dispensing; Vaccine Education</td>
<td>Availability; Children; Prevention Education</td>
</tr>
<tr>
<td>November 2009</td>
<td>Prevention Messages; Monitoring Activity; Vaccine Dispensing; Vaccine Education</td>
<td>Availability; Clinics; Prevention/ Education</td>
</tr>
<tr>
<td>December 2009</td>
<td>Prevention Messages; Monitoring Activity; Vaccine Dispensing; Vaccine Education</td>
<td>Availability; Expansion; Get Vaccinated</td>
</tr>
<tr>
<td>January 2010</td>
<td>Prevention Messages; Monitoring Activity; Vaccine Dispensing; Vaccine Education</td>
<td>Get Vaccinated; Clinics; Availability</td>
</tr>
<tr>
<td>February 2010</td>
<td>Prevention Messages; Monitoring Activity; Vaccine Dispensing; Vaccine Education</td>
<td>Death; Not Over; Decreased Activity</td>
</tr>
</tbody>
</table>

*Based on Local Public Health Week - Alamance Regional Health Services

**Based on top three most prevalent topics, not including General, Surveillance or General Vaccine. General and Surveillance were prevalent throughout and Vaccine was prevalent beginning in September. The ranking was determined by the number of times a topic was mentioned in all articles by month.

The focus on number of cases and deaths in particular can cause concern and highlights the Negative Dominance Theory and perceived risk as noted in the Health Belief Model, mentioned previously in the literature review. The concentration on number of cases and deaths, as reported
in Figure 2, created a focus on the negative that outweighs any positive message, while also creating a tendency to overestimate the perception of risk by the public. When the news media focuses messages in this way, it is crucial for local, state, and national officials to get in front and provide more proactive and timely messaging. In this particular situation, the media was helpful in getting information out to the public, but the focus on severity of the illness at the forefront followed by a milder impact overall may have overshadowed the response. Individuals were expecting a severe and deadly virus, when in fact the virus was similar to seasonal influenza. As noted in the overview of past pandemics, a pandemic itself does vary in severity – from mild to severe. It is very difficult to predict early on the true impact of a pandemic event. The fact that the media concentrated on illness and death overemphasizing the severity of the event, could have caused individuals to lose interest when they were not seeing a “severe” pandemic in their communities. Ultimately, this could have an impact on the credibility of public health from the public’s perspective.

Figure 3 highlights the top ten topics overall, broken down by news source. This also illustrates the Negative Dominance Theory. Death is highlighted through cable and web sources and the national news as opposed to N.C. news. N.C. newspapers and CNN did have comparable educational messages; however national sources and negative tone likely overshadowed these messages. This can also be seen in Figure 4.
Figure 3: Topic/ Focus by News Source

Figure 4: N.C. News Compared to U.S. Print and Cable/ Web National by Focus

<table>
<thead>
<tr>
<th>Tone</th>
<th>Filter</th>
<th>NC News (n=647)</th>
<th>US News (n=457)</th>
<th>WEB/TV: CNN (n=864)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protecting/ Encouraging</td>
<td>General/ Educational/ Proactive</td>
<td>33.0%</td>
<td>32.6%</td>
<td>44.10%</td>
</tr>
<tr>
<td></td>
<td>Get Vaccinated</td>
<td>22.9%</td>
<td>7.2%</td>
<td>6.70%</td>
</tr>
<tr>
<td></td>
<td>Mitigation/ Action Steps</td>
<td>35.4%</td>
<td>31.9%</td>
<td>26.50%</td>
</tr>
<tr>
<td>General/ Concerning</td>
<td>Activity</td>
<td>36.0%</td>
<td>36.5%</td>
<td>35.80%</td>
</tr>
<tr>
<td></td>
<td>Pandemic</td>
<td>1.9%</td>
<td>13.3%</td>
<td>7.60%</td>
</tr>
<tr>
<td></td>
<td>Impact on Society/ Services</td>
<td>9.6%</td>
<td>23.2%</td>
<td>14.20%</td>
</tr>
<tr>
<td>Negative</td>
<td>Severe Case/ Impact (Children, Pregnant Women, College)</td>
<td>4.2%</td>
<td>4.2%</td>
<td>7.10%</td>
</tr>
<tr>
<td></td>
<td>Negative - Concern/ Worry</td>
<td>8.9%</td>
<td>24.5%</td>
<td>21.90%</td>
</tr>
<tr>
<td></td>
<td>Vaccine Issues/ Concern</td>
<td>6.3%</td>
<td>6.3%</td>
<td>6.80%</td>
</tr>
</tbody>
</table>

Figure 4 shows various filters that were applied to articles and are grouped by positive/ encouraging, general, and negative messages. Local N.C. sources overall provided more positive/ encouraging messages, while national sources, particularly cable and web sources provided more negative messages. In addition, local sources encouraged prevention efforts and
vaccination through clinics and local outreach efforts, demonstrating a partnership between the media and public health at the local level.

b. N.C. Public Health Response

Based on the data collected and analyzed, local public health agencies worked to provide consistent messages and public education on the H1N1 pandemic through local partner coordination, and the development and dissemination of messages. Local public health professionals have worked to increase local capacity and meet community need; however gaps can still be found, along with areas for improvement.

1. Website Study

The first piece of this study aimed to determine the proactive nature of local messages disseminated to the public through information posted on local websites. While website traffic may vary by location, information posted on an agency’s website does illustrate the effort made by local health departments to promote educational and informational messages within their local community. In N.C., there are 85 local county health departments or health districts, each with a web-presence. Of those local health departments, 67 or 79% provided information on H1N1 on the agency website. Figure 5 illustrates the methods used to provide that information. Appendix E provides more detailed results of the website review.
Figure 5: LHD Websites (n=85)

Of the 69% that provided links to additional information, fourteen local health departments provided a link and no additional local information. Five health departments provided local information only, and no links to additional information. Local information typically consisted of clinic or vaccine information. Finally, only 35% or 30 health departments provided information in additional languages. This percentage draws attention to the gaps in targeting messages and the need to identify various audiences and their needs. With most consumers wanting information on demand, as well as the expansion of social media tools, the utilization of a dynamic, informative, and timely website will likely be crucial in future response efforts.

2. Local Public Health Response Self-Assessment

The final piece of the study conducted was a self-assessment of the local public health response in N.C. This review consisted of five sections: structure of public information and crisis communication at the local health department level; local information team coordination and utilization; messages used throughout the response and the coordination of those messages; the coordination with local, regional, state, and federal public health response partners; and needs, lessons learned, and best practices. Out of 85 local health departments, 62 completed this
study. A complete summary of this study, each section, and each question can be found in Appendix F.

When examining the structure of public information in local public health, only 14.5% of local health departments do not employ a public information officer (PIO). However, 64.5% of those PIOs are part time – either in terms of hours, or shared positions and roles. Over 75% of part-time PIOs are employed in a health education-related position, indicating the current strain on the public health workforce through recent staff reductions. Despite the fact that individuals are designated as PIOs, only 17.7% have completed CERC training, and 56.5% have taken introductory PIO courses. The majority of training completed by PIOs is in Incident Command – nearly 100%. While Incident Command courses are required of PHEP and DHS, these courses do not provide training on public information, crisis communication, risk communication, or emergency communication. Additional comments from respondents indicate that there are variances in the actual departmental coordination of public information. Some work closely with the health director, preparedness coordinator, and department heads to coordinate messages, while others do not.

When examining local partner coordination, many local health departments rely on the local information team. The local information team (LIT) is a concept developed by NC DPH Public Health Preparedness and Response (PHP&R). The purpose of the team is to bring PIOs from partner agencies together on a regular basis in order to enhance communication during any event or disaster and to provide transparent communication among partners. This effort exemplifies the strides made in PHEP to expand partner coordination.

The majority of study participants either have a LIT in place (36 or 58.1%) or it is under development (17 or 24.7%). In order to look more closely at the partnerships developed at the
local level through the LIT, the study asked additional questions of these respondents. Those with a LIT under development were asked to consider responses based on current phase of development at the time of the study, and those with an established LIT were asked to respond based on current function. Of the 53 LIT section respondents, over 75% noted that county government, emergency management, school systems, and child care facilities are partners on this team. Additional first responder and partner agencies are also members of many local teams. Most coordination that took place through the LIT was via email and involved information sharing, public education, and message sharing. Nearly 70% of the respondents rated the working relationship of the LIT in the H1N1 response as good or very good. When looking specifically at those with a LIT in place (Figure 6) versus those with a LIT under development (Figure 7), it is clear that the health departments with an established LIT demonstrated strong local partnerships through an overall higher value ranking.

Figure 6: LIT Value, Established LIT (n=36)
When focusing specifically on message dissemination, the majority of respondents felt they provided key messages to staff, partners, and the media that enhanced the H1N1 response. Figure 8 provides local partnership response ratings. Respondents felt they had an excellent working relationship with local partners and the media. In addition, local health departments felt they were generally proactive when sharing messages with staff, local partners, and the media. They also consider the local media a vital partner, assisting in the response and the vaccination campaign.
Comments throughout the study, specifically in Lessons Learned and Best Practices, recognized the value of coordination with local partners to create consistent messaging and educate the public, and that those partnerships are instrumental during event response efforts.

Figure 9 outlines the various audiences targeted by local public health communication efforts. As the figure illustrates, the majority of local PIOs and health departments focused messages on the “general public.” The more specific groups were targeted less overall. Exceptions include schools, parents, pregnant women, and children; however, it is unknown how
messages were targeted. Within each of these groups there are also sub-groups and specific message needs – ethnicity, reading level, special needs, risk, and others.

Figure 9: LHD Target Audiences (n=62)

When looking specifically at message creation, local health departments utilized many types and forms of communication including news releases, presentations, email, fact sheets, and websites. These methods included varying messages as seen in Figure 10, illustrating the complexity of the event and the challenges faced by local public health. It is also interesting to point out the media study demonstrated cases, surveillance, or rates of illness were primary areas of focus, whereas only 43.5% of local public health respondents saw rates of illness as an important topic and focus of local messages.
Figure 10: Messages Communicated (n=62)

Some of the challenges related to messaging noted by respondents included the changing nature of the messages, timely dissemination, and the varying guidance and inconsistency related to specific groups targeted for vaccination. These areas added to the already complex nature of this effort.

The magnitude of the 2009 H1N1 Pandemic emphasized the need for continuous coordination between local, regional, state, and federal public health partners. Figure 11 and Figure 12 review ratings in relation to coordination with NC DPH and CDC, respectively, by respondents.
Figure 11: NCDPH Coordination Rating (n=62)

Average Rating of Scale: Yellow indicates the average was in the AGREE range and Blue indicates the DISAGREE Range.

Figure 12: CDC Coordination Rating (n=62)

Average Rating of Scale: Yellow indicates the average was in the AGREE range and Blue indicates the DISAGREE Range.
Looking specifically at the coordination with NC DPH, most respondents felt the communication campaign in N.C. was not well coordinated with local health departments. In addition, they felt media campaigns did not assist with local communication needs, and that public information and guidance was not timely. One respondent noted they felt they were not kept in the loop regarding releases going to the media and other materials under development. Another respondent cited the need for local public health communicators to assist in message planning and development at the state level in conjunction with state public affairs staff.

Shifting to the coordination with CDC, responses overall were more positive; however there was not a significant difference. Respondents also questioned the coordination of the national communication campaign, the national media campaigns, and the public information and guidance received. Despite this rating, only 24.2% felt there were gaps in communication with CDC and 38.7% with NC DPH. Table 2 outlines this response along with comments related to the assessment.

Table 2: Communication Gaps (n=62)

<table>
<thead>
<tr>
<th></th>
<th>Gaps with CDC</th>
<th>Gaps with NC DPH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>24.2%</td>
<td>38.7%</td>
</tr>
<tr>
<td>No</td>
<td>75.8%</td>
<td>61.3%</td>
</tr>
<tr>
<td>Comments if Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Changing guidance was difficult, especially in relation to targets</td>
<td></td>
<td>- Guidance changed quickly and wasn't always communicated with locals</td>
</tr>
<tr>
<td>- Templates were hard to format for locals</td>
<td></td>
<td>- Most local communication was left up to the locals</td>
</tr>
<tr>
<td>- Rapidly changing information</td>
<td></td>
<td>- Samples and templates came late</td>
</tr>
<tr>
<td>- Many times the media had information before locals did and made local officials look like they were out of the loop</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When looking specifically at the needs of local public health in N.C., well over half of the respondents recognized a need for additional training related to public information efforts. In addition, over half of the respondents felt that media and message templates were needed during
a response, along with predetermined talking points and regular PIO conference calls with NC DPH.

Lessons Learned stressed the need of locals to receive information before it is released to the media and the public. This would assist in efforts to get out in front of media trends and message framing. There is also a need for succinct and timely guidance. Based on study responses, many respondents initiated public information at the local level, with little guidance or input from NC DPH or CDC.

Best Practices featured the use of email, and using email to communicate with the media. Partnerships were highlighted and recognized across the state, adding value to the response and the accuracy of messages. Finally, it was noted by one respondent to first communicate with staff, then LIT members, and then with the media on any updates in order to ensure staff and partners are properly educated on the situation and can accurately address community concern.

V. Recommendations

After reviewing the literature cited previously and conducting the media, website, and local health department self-assessment studies, the strengths, areas for improvement, and recommendations for future public health emergency responses in relation to the 2009 H1N1 Pandemic Public Information and Crisis Communication Response in N.C. are presented.

a. Strengths

The 2009 H1N1 Pandemic featured the diligence of the public health system to work around challenges posed by the current economic climate and staff reductions. Despite these challenges, public health officials worked to meet public need, educate the community, and
manage the H1N1 response. PIOs, like many public health professionals, were responsible for other initiatives and tasks, yet still managed to coordinate with staff, local partners, local medical providers, and the media to streamline all communication efforts.

Throughout the response, partner coordination and communication in N.C. have been major strengths at the local level when looking specifically at local public health and local partners. These relationships were nurtured through PHEP requirements and planning efforts, and have proven to be beneficial in a national public health emergency situation, as demonstrated through LIT coordination and local partnership ranking.

Along those same lines, local media coordination is also a strength. N.C. media articles provided positive messages to the public, which can be tied directly to the previously established local media relationships. In addition, LITs likely contributed to this effort through message sharing and efforts to provide consistent messages.

b. Areas for Improvement

As with any emergency response event, participants and responders are able to identify lessons learned and accompanying areas for improvement. The 2009 H1N1 Pandemic is no different. While planning and coordination efforts have proven to be effective on every level of the response, the coordination between local, state, and federal public health could be improved. This level of response, a true national emergency, requires a greater need for consistency in messages and planning efforts, which will in turn strengthen the credibility of public health in the public’s eye.

The expansion of these efforts could assist in the timeliness of messages, which during the response were quite delayed, and more targeted messages for the various publics that need to
be addressed. There is no need for every local jurisdiction across the state and across the country to develop these messages in solitude. Messages should be shared nationwide to increase consistency and transparency at every level of government. Local public health has staffing issues, evident through the nationwide reduction of the public health workforce and through the dual roles played by local public health PIOs. Duplication of effort therefore diminishes the response capacity and delays all communication efforts. Along those same lines, many local health agencies expressed frustration that the news media in many cases had information from state and federal sources before they did. In addition, the national news, particularly cable and web sources, offered a more negative tone. If there is a greater coordination between officials at every level of government, not only will communication efforts meet the need of the community, but it will also allow for a more streamlined approach for the sharing of messages, and allow for a focus on positive educational pieces.

While media coordination at the local level was noted as a strength, the dominance of the national media, particularly cable media and web-based media, created local challenges. In many cases, individuals relied solely on the national news and on-demand sources, which, accentuates the need for consistency of message and focus nationwide. This also underscores the need for a greater presence of local public health on the web and through social media.

c. Suggestions for Future Planning and Response Efforts

Based on the literature review, study, and identification of strengths and areas for improvement, the following recommendations are offered to improve future planning and response efforts.
Recommendation 1: Expand the LIT concept within N.C. public health at the regional and state level. Local N.C. study respondents recognized the importance of community partnerships and the utilization of the LIT PIO network developed through planning guidance by NC DPH PHP&R. The fact that NC DPH PHP&R provided this guidance demonstrates that state officials recognize the importance of this coordination as well. By expanding this concept at the larger regional level and the state level among public health agencies, the relationship between NC DPH and local health departments could be enhanced providing transparency and timeliness. It could be argued, based on the results of the local health department study, that local public health officials feel they are actually considered a target audience in the eyes of NC DPH, as opposed to a true response partner. By opening the lines of communication through a regional and statewide LIT effort, public health PIOs can share response efforts, create joint messages, and provide consistency across the state. This will link the local efforts to regional efforts, which will ultimately impact the statewide response. Just as PIOs at every level need to assess target audience needs, and the needs of their partners, federal and state public health officials need to listen to the needs of local public health agencies. This expansion could then be mimicked at the national level, creating a top-down and bottom-up effort working simultaneously to create a robust, transparent, and timely public information and crisis communication response network.

Recommendation 2: Get ahead of the media. As noted in the media study, the media set the tone of the 2009 H1N1 Pandemic in May 2009. Public health officials, due to staffing issues and a focus on case identification and mitigating the effects of the pandemic, did not provide timely and proactive messages in the early days. The media was able to, in many ways, sensationalize the event and frame future communication, creating additional challenges for
communicators. Public health officials should work to align and link messages in crisis and emergency situations to everyday public health messages in order to create a more robust public presence and provide proactive, tone-setting, and educational messages early on in any event.

This should be done through enhanced coordination amongst public health officials at the local, state, and national level, which can also be done through implementation of Recommendation 1. In addition, messages should be planned in advanced through PHEP efforts. While exact message creation is not possible, it is possible to plan out the type of message that may be needed to meet the needs of the public and target groups. This is stressed in the CERC model and pre-crisis actions. It is also possible to plan how coordination will take place among local, state, and federal officials when an event occurs. At that time, officials should work diligently to ensure consistent and timely educational messages that put the event and actual risk into perspective, as noted by Covello. Even though officials may not know every detail of the event and cannot predict the future, they can express empathy, and provide stories, narratives, and anecdotes to calm fears and minimize concern. Finally, risk communication principles should be applied daily by public health officials. Every opportunity should be utilized to educate the public, thereby eliminating the need for true crisis and emergency communication, and expanding the opportunity to learn more about the various target groups communicators may be working with in an event.

**Recommendation 3: Expand media relationships.** While local media coordination was noted as a strength, local, state, and federal public health officials need to work together to expand those relationships and align messages. Risk communication can prove very effective in this effort. The media should also be seen as a partner and target audience. In order to expand this relationship, public health officials must work to understand their needs through regular and
consistent coordination, which could be done through annual meet and greet gatherings with LITs or regional partner meetings, since media areas often overlap localities.

In addition, there must be a synchronized effort to prioritize message dissemination throughout the levels of government in public health. The federal government, through public information channels, should ensure that state PIOs and local PIOs receive alerts and messages before the national media. State government officials, should also work to ensure local PIOs receive alerts and messages before the state or local media. In turn, a method for information sharing from the local to state to federal level should be established to ensure true message needs at the local level are understood nationwide, and that federal officials understand the grassroots efforts that are impacting the national event. This will likely prove to be a challenging endeavor, citing the need for more robust relationships to combat rumors and confusion.

Recommendation 4: Public Information and CERC courses should integrate health education practice and CERC principles, and health education courses should integrate public information and crisis communication principles. Many local health agencies employ a PIO; however that position is typically held by a health education professional. As noted in the literature review, many of the principles taught in health education and crisis communication theory are closely related. Since there are staffing issues at the local level, many PIOs have neither the time nor the resources to complete necessary training courses, and if they do complete them, they may not practice those skills on a daily basis. By aligning health education and crisis communication theory and practice, professionals will exercise these resources daily and become more comfortable with their use.

Recommendation 5: Utilize web-based resources and social media to expand reach.
Even though it is recognized that traditional media sources and communication efforts are
extremely important, it will become increasingly essential for local public health agencies to use and become comfortable with web-based communication and social media to expand educational reach. Many local health departments lacked timely and active messages on existing websites. By utilizing websites, and promoting that website continuously, the local public health agency can and will become a primary source for local community members in this type of event. As noted in the literature review, Americans rely heavily on on-demand news sources.

This effort could be enhanced through the adoption of Recommendation 1. If regional and state public health officials and PIOs networked to create joint messages, a webpage standard template could be developed. This page could outline important information needed for target groups, relevant links, and ensure the appropriate reading level. Additional links and information could also be offered in various languages to meet community need. In a large-scale or national public health emergency, consistency and standardization among public health officials is necessary to create a streamlined and credible response. By staying with, and ahead of the times, public health can position itself as a go-to resource for the public.

Recommendation 6: Expand targeted messaging. The local health department study noted that many N.C. health departments create broad based messages that are not targeted to specific audience needs. As mentioned in the literature review, the “general” public does not actually exist – individuals have specific communication needs, and effective messages are matched to audience needs, values, backgrounds, culture, and experience. As Covello points out, communicators should listen to their audience to find out their specific needs. This will allow officials to learn about the concerns and more accurately address their questions. This will be difficult to accomplish during an event, and should a priority in planning efforts and risk communication. If a PIO or communication professional works to implement effective risk
communication strategies, they will gain insight into the various groups that may be targeted in an event. If these groups are understood early on, and even before an event occurs, messages can be quickly compiled or modified to meet the specific need. This is definitely not a small task, and should be coordinated at all levels of government. Federal, state, and local public health officials should work to understand the populations they serve by listening to their informational needs in order to create a more robust communication system and targeted messages.

VI. Conclusion

As the role of public health evolves to respond to community health needs and impending threats, the goal has always been and will remain the protection of the health, well-being, and safety of its citizens. The newest role of public health – PHEP – has put quite a strain on the federal, state, and local public health system at large. However, through continued planning efforts, coordination with emergency response partners, and integration of preparedness into the existing public health system, advancements have been made. The 2009 H1N1 Pandemic serves as a reminder of this role and this progress, along with the gaps that are ever present.

One area that takes tremendous focus and planning is in public information and communication. Effective communication is required in order to meet the various response goals and objectives needed to provide public health and safety. Continuous efforts have been made to integrate communications into disaster and response planning at the local, state, and federal level. As public health continues to find its niche in the PHEP arena, communication efforts are enhanced as well. This can be seen through the 2009 H1N1 Pandemic Response. By expanding partnerships, and implementing practices daily in health education and community coordination, public health will be able to properly respond and communicate in a crisis event. Officials
should work to establish or maintain a partnership with local media outlets and actually regard that partnership as an invaluable asset in agenda setting and community outreach. This proactive step may not only enhance community preparedness, but also may help frame messages in times of crisis. A partnership with the public is also paramount. Not only should public health develop messages to assist the public, but they should use feedback from the public to create targeted messages, based on needs and values. Finally, efforts should be made to expand the coordination of public health officials at every level of government creating a true partner relationship in the development of messages and communication.

Through greater community and public coordination, enhanced media partnerships, the synchronization of health education and crisis communication theory, and the alignment of local, regional, state, and national public information efforts, public health and its response partners can and will provide transparent, consistent, and timely messages to protect the health and well-being of all citizens. As a result, individuals will be empowered to make informed decisions based on the communication and education process in their communities.
VII. Appendices
Appendix A: Media Study Topic Overview

The table below outlines the topic areas and focus areas used to compare news articles, along with an explanation of terms and focus. During the media headline and abstract review, an article was tied to one or more of the subjects listed below based on wording used or tone portrayed.

<table>
<thead>
<tr>
<th>Topic Area</th>
<th>Subject/ Focus</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event Info/ Severity/ Impact</td>
<td>General</td>
<td>Informational, Some Question &amp; Answer related to event</td>
</tr>
<tr>
<td></td>
<td>Animal</td>
<td>Mention of Animal Tie</td>
</tr>
<tr>
<td></td>
<td>Emergency/ Crisis/ Concerning</td>
<td>Mention of &quot;Emergency&quot; &quot;Crisis&quot; or word choice offers a concerning message</td>
</tr>
<tr>
<td></td>
<td>Novel Virus</td>
<td></td>
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<tr>
<td></td>
<td>Epidemic/ Outbreak</td>
<td></td>
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<tr>
<td></td>
<td>Pandemic</td>
<td></td>
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<tr>
<td></td>
<td>Isolation/ Quarantine</td>
<td></td>
</tr>
<tr>
<td>Surveillance</td>
<td>Discussion of cases, trends, any other information related to what is going on with illness, hospitalization, death</td>
<td></td>
</tr>
<tr>
<td>Spread</td>
<td>Typically spread from country to country, state to state, or increase</td>
<td></td>
</tr>
<tr>
<td>Cases</td>
<td>Numbers of cases</td>
<td></td>
</tr>
<tr>
<td>Deaths</td>
<td>Mention of death or deaths</td>
<td></td>
</tr>
<tr>
<td>Mild</td>
<td>Mild Virus statement or implication</td>
<td></td>
</tr>
<tr>
<td>Severe</td>
<td>Severe Virus statement or implication</td>
<td></td>
</tr>
<tr>
<td>Impact – Overall</td>
<td>The impact the virus or activity is making on countries, society</td>
<td></td>
</tr>
<tr>
<td>Economic Impact</td>
<td>The impact the event has on the economy or the fiscal well-being of an institution or agency</td>
<td></td>
</tr>
<tr>
<td>Hospital Impact</td>
<td>The impact the event has on hospitals – staffing, equipment, supplies</td>
<td></td>
</tr>
<tr>
<td>Severe Case Example</td>
<td>The highlight of a severe case</td>
<td></td>
</tr>
<tr>
<td>Pregnant Women</td>
<td>The mention of a pregnant women impacted by H1N1</td>
<td></td>
</tr>
<tr>
<td>Children</td>
<td>The mention of a child or children impacted by H1N1</td>
<td></td>
</tr>
<tr>
<td>College Students</td>
<td>The mention of a college student or students impacted by H1N1</td>
<td></td>
</tr>
<tr>
<td>Vulnerable Populations</td>
<td>Minority, non-English speaking, other potentially vulnerable populations</td>
<td></td>
</tr>
<tr>
<td>Over</td>
<td>Statement or implication that the pandemic is over</td>
<td></td>
</tr>
<tr>
<td>Not Over</td>
<td>Statement or implication that the pandemic is NOT over</td>
<td></td>
</tr>
<tr>
<td>Increased Activity</td>
<td>Information noting an increase in activity</td>
<td></td>
</tr>
<tr>
<td>Peak</td>
<td>Information noting a peak has occurred or is occurring</td>
<td></td>
</tr>
<tr>
<td>Decreased Activity</td>
<td>Information noting a decrease in activity</td>
<td></td>
</tr>
<tr>
<td>Scam</td>
<td>H1N1 related scam alerts</td>
<td></td>
</tr>
<tr>
<td>Comparison</td>
<td>Comparison to other pandemics</td>
<td></td>
</tr>
<tr>
<td>Drug Use</td>
<td>Antivirals</td>
<td>Mention of the use of drugs/ antiviral treatment</td>
</tr>
<tr>
<td></td>
<td>Drug Resistance</td>
<td>Mention of Drug Resistant (Antiviral Resistant) Cases</td>
</tr>
<tr>
<td>Vaccine</td>
<td>General Vaccine</td>
<td>Informational related to vaccine, initial discussions, productions, timing</td>
</tr>
<tr>
<td></td>
<td>Anti- Vaccine/ Concern</td>
<td>Information stating or suggestive of an anti-vaccine message or concern about the vaccine</td>
</tr>
<tr>
<td>Distribution issues</td>
<td>Information highlighting distribution trouble</td>
<td></td>
</tr>
<tr>
<td>Topic Area</td>
<td>Subject/ Focus</td>
<td>Explanation</td>
</tr>
<tr>
<td>---------------------</td>
<td>--------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Targets/ Priority</td>
<td>The discussion of target and/ or priority groups</td>
</tr>
<tr>
<td></td>
<td>Demand</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shortage</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Delays</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Availability</td>
<td>Availability – either when it will be available or what is available</td>
</tr>
<tr>
<td></td>
<td>Expansion of Target Groups</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clinics (All)</td>
<td>Clinics scheduled, planned</td>
</tr>
<tr>
<td></td>
<td>School Clinic</td>
<td>Clinics held in a school setting</td>
</tr>
<tr>
<td></td>
<td>Get Vaccinated</td>
<td>Messages encouraging vaccination</td>
</tr>
<tr>
<td></td>
<td>Decreased Interest</td>
<td>Messages noting a decrease in vaccine demand</td>
</tr>
<tr>
<td></td>
<td>Surplus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recall</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Safety/ Efficacy</td>
<td>Discussion related to safety of vaccine or efficacy</td>
</tr>
<tr>
<td></td>
<td>Trials</td>
<td>Mention or discussion of vaccine safety trial</td>
</tr>
<tr>
<td></td>
<td>Mitigation/ Protect/ Prepare</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prevention/ Education</td>
<td>Message providing education or prevention messages</td>
</tr>
<tr>
<td></td>
<td>Infection Control</td>
<td>Messages discussing or encouraging infection control practices</td>
</tr>
<tr>
<td></td>
<td>Action Steps/ Planning</td>
<td>- cleaning, personal protective equipment</td>
</tr>
<tr>
<td></td>
<td>Mitigation Strategies</td>
<td>Mention of strategies to control the spread of illness – primarily social impact strategies</td>
</tr>
<tr>
<td></td>
<td>Travel/ Travel Restrictions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Event Impact/ Cancellation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>School Closure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gaps</td>
<td>Gaps in H1N1 response or planning efforts</td>
</tr>
<tr>
<td></td>
<td>Praise</td>
<td>Praise of H1N1 response or planning efforts</td>
</tr>
<tr>
<td></td>
<td>Hospital Restrictions</td>
<td>Mention of the implementation or lifting of hospital visitor restrictions</td>
</tr>
</tbody>
</table>
Appendix B: N.C. Local Health Department Study Information Sheet

2009 H1N1 Pandemic Public Information Study: Information Sheet

Who is conducting the study?

Ashley Stoop is conducting the 2009 H1N1 Pandemic Public Information Study in conjunction with her master’s paper in the Masters in Public Health Leadership Program through the Gillings School of Global Public Health at the University of North Carolina at Chapel Hill. Ashley Stoop is the Preparedness Coordinator with Albemarle Regional Health Services.

What is the purpose of the study?

The purpose of this study is to review the Local Public Health H1N1 Public Information Response. This review will examine the structure of risk and crisis communication in local public health during the 2009 H1N1 Pandemic response, the types of messages used throughout the event, and how coordination with state and federal Public Health agencies took place.

What kinds of questions will be asked?

The questions in this study are designed to get a sense of how Local Health Department coordinate public information in disaster situations, how messages are coordinated, what type of messaging tactics are typically used, and how coordination with state and federal Public Health agencies is synchronized.

Who should complete the study?

It will probably be best if the Health Department Public Information Officer, Media Coordinator, or Communications Coordinator completes the study. That individual will most likely have the background and knowledge on the H1N1 communications response needed to complete the study. If this individual is unavailable, the Preparedness Coordinator or Health Director may also have the knowledge to complete the questions.

Do I have to participate?

Participation is voluntary, however if you choose not to participate, we will lose the benefit of your experiences and lower the accuracy of the study.

How long will it take?

The length depends somewhat on your answers. Some people have more comments than others. However, the survey should only take approximately 15 to 20 minutes.

Are my answers confidential?
Yes. Your answers will never be used in any way to identify you or your local health department. Answers will be combined with answers from other respondents to create a statistical report.

How will the data be reported?

The research results from this study will be used in Ashley Stoop’s master’s paper reviewing public information and crisis communication techniques used in Public Health emergencies, and will offer suggestions on how progress can be made to enhance the system state-wide. In addition, results will be shared with preparedness coordinators, public information officers, and PHP&R to enhance future planning efforts.

INFORMED CONSENT:

You are being asked to participate in a survey research project on the Local Public Information and Crisis Communication Response during the 2009 H1N1 Pandemic, which is being conducted by Ashley Stoop, a student at UNC Chapel Hill. This survey is anonymous. No one, including the researcher, will be able to associate your responses with your identity. Your participation is voluntary. You may choose not to take the survey or to stop responding at any time. You must be at least 18 years of age to participate in this study. Your completion of the survey serves as your voluntary agreement to participate in this research project and your certification that you are 18 or older.

Questions or Comments Contact:

Ashley Stoop, 252-337-6716 or astoop@arhs-nc.org