Ambiguity and Uncertainty in the Arkansas Department of Health's Response to Hurricane Gustav

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Organizations faced with crisis uncertainty must communicate effectively. They must manage uncertainty and ambiguity effectively when communicating in a crisis. This method of communicating gives stakeholders the opportunity to make a significant choice. In this paper, uncertainty and ambiguity communication tactics, as well as how they can be used to allow organizations to make significant choice, will be reviewed. These concepts will then be applied in an organizational context. This paper argues that organizations should manage the uncertainty that exists in crisis situations through strategic ambiguity.

Literature Review

A crisis is defined "as a specific, unexpected, and non-routine event or series of events that create high levels of uncertainty and simultaneously present an organization with both opportunities for and threats to its high-priority goals" (Ulmer, Sellnow, & Seeger, 2014, p. 8). Organizations must realize that crisis events are unlike any other that can occur within an organization. When managing a crisis, such as natural disasters or terrorism, organizations frequently deal with a large number of people. Organizations must be able to communicate the right message in a short response time to stakeholders, while taking into account the uncertainty that exists (Ulmer & Sellnow, 2000). They must determine who or what is at fault for the crisis and be able to communicate this with clarity to stakeholders. Therefore, using ambiguous communication can be beneficial. This section outlines the crisis communication concepts to guide this paper: uncertainty, ambiguity, and significant choice.

Uncertainty

Uncertainty is not being able to determine the present or predict the future (Ulmer et al., 2014). Research on uncertainty says that it can come from a lack of information or misinformation (Kramer, 2004). Uncertainty happens to everyone, regardless of job, stage of life, or age (Ulmer et al., 2014). It can also be experienced at the organizational level. For example, when an organization is trying to determine what products or services people will purchase in a bad economy. A level of uncertainty is natural in all crises. Uncertainty that comes from a crisis, or crisis-induced uncertainty, comes from a lack of knowledge following a crisis (Ulmer et al., 2014). In times like these, it is important for leaders of organizations to construct effective messages when communicating to stakeholders during a crisis. Leaders should recognize that "crises are predictably unpredictable" (Heath, 2004). They must also be aware that the crisis starts with uncertainty that can be compounded rapidly as the crisis develops. Managing uncertainty is vital to an effective crisis response. Further, the crisis response must occur through non-routine strategies.

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The 1987 Exxon *Valdez* oil spill in the Prince William Sound, for example, was handled with routine rather than non-routine strategies. At the onset of the incident, Exxon insisted that it was not severe; however, many factors that existed, such as the strong current in the sound and the extensive cleanup efforts, were not taken into account (Ulmer et al., 2014). Ultimately, the uncertainty of the incident was not recognized, and routinely the crisis was minimized. Exxon should have thought about the situation as a non-routine event and managed the situation accordingly.

Uncertainty can be high during crises because organizations do not know what is happening or how to communicate during the situation (Ulmer et al., 2014). Leaders need to determine how they will communicate with the public when there might be limited information throughout the situation (Holder, 2004). Often times, shaping the right message can mean communicating unclearly, or ambiguously, in order to accomplish a certain goal (Eisenberg & Goodall, 2004). In some situations, ambiguity is essential, likely, and even ethical (Ulmer & Sellnow, 1997). The uncertainty that can take place and how fast it can happen during a crisis must be evident to leaders. They also need to communicate early and often the facts of the situation, without giving doubt or creating more uncertainty for the audience (Ulmer et al., 2014).

Ambiguity

Ambiguity is not being clear, being vague or indirect (Eisenberg, 2007). Ambiguity can be used strategically by leaders to promote creativity and offer a different view of the organizational reality (Eisenberg, 2007). In using strategic ambiguity, leaders might use ambiguity purposefully to accomplish their goals (Eisenberg, 2007). Botan and Hazelton (2006) say, "Since the organization is assumed to be in the right, it can justifiably withhold some critical information from publics, and even use deception occasionally" (p. 229). When organizations in crisis are faced with pressure from multiple stakeholders, often times they will communicate strategically to them (Leitch & Davenport, 2002). Communication in this way allows stakeholders the ability to apply different interpretations to the message being sent by the organization. Botan (1997) says, "A strategic communication plan adopts strategies for addressing that [the] problem with target publics and employs a series of measurable tactics through which to implement those strategies" (p. 188). Allowing multiple interpretations among people in organizations is effective for the outcome of the organization because people believe they are hearing the same message and, therefore, agree that the message is clear (Eisenberg, 2007). Eisenberg (2007) says, "It is often preferable to omit purposefully contextual cues and to allow for multiple interpretations on the part of receivers" (p. 7). Here, communicating strategically supports a unified diversity (Eisenberg et al., 2004). Goodall, Trethewey, and McDonald (2006) explain that organizations must "recognize that shared meaning isn't the only goal, but shared principles and goals are singularly meaningful" (p. 11). Organizations must deliver their messages so that they allow for multiple interpretations among audiences.

Research shows that strategic ambiguity allows the organization involved in the crisis to communicate in a way that pleases its stakeholders, without disclosing all information surrounding the crisis. The purpose of communicating this way is to provide answers to stakeholders' questions, but without clarity and directness (Kline, Simunich, and Weber, 2009). Depending on the scope of the crisis, communicating with clarity could cause confusion among stakeholders, which in turn, will be ineffective for the crisis response (Eisenberg et al., 2004; Kline et al., 2009).

Communication Ethics and Significant Choice

Strategic communication applies to many different areas, such as crisis management, health promotion, public health, public information, and risk communication (Botan, 1997). Although some degree of ambiguity is acceptable in communicating to stakeholders, leaders must also remain ethical in their communication. Leaders must not communicate to manipulate people, but contribute "…to the complete understanding of an issue by posing alternative views that are based on complete and unbiased data that aims to inform" (Ulmer & Sellnow, 1997, p. 217). This allows leaders the ability to address difficult issues presented during a crisis, but also to provide enough information so that stakeholders can make the best decision possible, or significant choice. Sellnow et al. (2009) say, "There is an ethical obligation to provide all the relevant information whenever individuals face significant choice" (p. 155). Significant choice can happen ethically when multiple interpretations to the crisis are presented with complete and unbiased information (Ulmer & Sellnow, 1997).

Looking at the tobacco industry crisis it is clear that tobacco leaders communicated unethically. They were vague in their terminology creating confusion and misinterpretation for consumers (Ulmer & Sellnow, 1997). They did this when communicating about the addictive nature of nicotine, the patents involved, as well as their attempt to shift blame away from the industry (Ulmer et al., 1997). For example, "…leaders argued, first, that they simply manufactured a product that consumers chose to use" (Ulmer et al., 1997, p. 227). Here consumers were not given an accurate depiction of the risks and benefits of the product; therefore, they could not make a significant choice. Tobacco industry leaders would have been ethical in their use of ambiguous communication had they offered consumers the information to add to their understanding of the situation.

In order to communicate so the audience can make a significant choice, organizational leaders must remain ethical in their communication. Paul and Strbiak (1997) say that individuals have different ethical systems, which provides a way to discuss ethics of organizational communication. They go on to say, "Strategic ambiguity does not minimize the importance of ethics. Rather, intentional unethical use and the naiveté of communicators serve to minimize the ethical use of strategic ambiguity in organizations" (Paul et al., 1997, p. 156). Strategic ambiguity is ethical for leaders that have a rational, consistent ethical system in their organization (Paul & Strbiak, 1997). Leaders must make sense of the crisis and reason with the situation before communicating ambiguously to its stakeholders about the crisis. When leaders make sense of the situation, rationally, they can provide stakeholders with the right information in order for them to make a significant choice. Strategic ambiguity becomes unethical when leaders communicate irrationally, not aligning with the organizations ethics or when decisions are made from managerial pressure (Paul et al., 1997).

Uncertainty exists in all crises and the crises themselves create uncertainty, both at the onset of a crisis and throughout management of the situation. Organizations must recognize that uncertainty will exist and determining the best way to manage it is essential. Leaders of organizations must realize that uncertainty is inevitable throughout a crisis. Therefore, leaders must create the best message(s) for their stakeholders. Organizations must learn to manage the uncertainty present through ambiguous messages and significant choice. Ambiguity involves using vagueness to communicate to stakeholders. Significant choice allows diverse groups the ability to offer differing interpretations of the message being sent by the organization. Organizations in crisis, therefore, must move toward communicating using ambiguous messages to manage the uncertainty. This gives stakeholders the ability to make an informed significant choice.

Hurricane Gustav

Hurricane Gustav hit near Cocodrie, Louisiana, on September 1, 2008 as a Category Two Hurricane (National Weather Service Forecast Office, 2009). In total, 5,124 people evacuated to Arkansas. Of those, 322 were hospital patients (Mason, 2008). Approximately 20 percent of these patients were critically ill (personal communication, March 25, 2009).

Arkansas was left with uncertainty in communicating to hospitals about how to repatriate patients. Answers to questions raised by area hospitals, the Arkansas Department of Health (ADH), and the Arkansas Hospital Association (AHA) were constantly changing, heightening the uncertainty that existed.

The National Disaster Medical System (NDMS) was responsible for emergency response, transportation, mass evacuation, and management of patients during Hurricane Gustav (Franco et al., 2007, p. 319). Hurricane Gustav was the second time NDMS was activated. It was also the largest pre-disaster evacuation of patients to date. Local hospitals are recruited to participate in the NDMS (HHS, n.d.). Doing so, they agree to make a certain number of beds available if a disaster happens and with the understanding that they will receive compensation for their resources used. There are 12 NDMS hospitals in Arkansas. Of the 322 hospital patients who evacuated to Arkansas, 225 of those were dispersed among the designated NDMS hospital (Mason, 2008). Following this, the communication problems that existed were with coordinating repatriation.

Communication Problems

After the hurricane was over, NDMS hospitals were left trying to determine how to repatriate the patients to Louisiana. A key issue here was that there was no single coordinating agency to determine how to get patients home. Further, difficulties associated with repatriation included keeping a record of patients, getting transportation for patients that had already been discharged from hospitals, finding hotel rooms for these patients until they could be sent back to Louisiana, and determining who was going to fly the hospitalized patients back to Louisiana (Mason, 2008). Further, Arkansas also had to consider the path of Hurricane Ike that was predicted to hit Louisiana within days after Gustav.

Because there was no coordinating agency to aid in dealing with the questions, NDMS hospitals looked to the ADH for answers about what to do with patients. The ADH is the state public health entity in Arkansas that hospitals turn to when a crisis like this occurs and answers are not clearly defined. Therefore, the ADH became the coordinating agency during the crisis in order to answer the hospitals' questions. When uncertainty is evident, organizations must not increase ambiguity. Ambiguity can be defined as indirectness, vagueness, disqualification, and being unclear (Eisenberg, 2007). The ADH, at the time, was unsure what the best answers were. However, they aimed to reduce uncertainty for hospitals by communicating with them. The following presents the uncertainty that took place during the crisis among the ADH, the AHA, and NDMS hospitals. Further, it outlines what the ADH did to manage the uncertainty.

In order for the ADH to coordinate and collaborate with the other agencies, different modes of communication took place. Formal communication occurred in at least seven ways. First, the ADH communicated through email. These messages helped hospitals determine what to do with NDMS patients, how to transport them back to Louisiana, and what patients would need in order to be discharged from hospitals. Second, they communicated through conference call. Conference calls occurred when questions were raised about what to do with evacuees. Third, they communicated through situation reports. These were compiled and sent out at the end of each day by the ADH (personal communication, April 17, 2009). Situation Reports were sent out by the staff duty officer

(SDO) on call in the Emergency Operations Center (EOC) during the crisis response. They included information about any updates on the hurricane and any new information on how to manage the evacuees. Fourth, they communicated through phone-to-phone conversations. These occurred frequently between the ADH, AHA, and hospitals in determining the best course of action for getting the evacuees back to Louisiana. Fifth, they communicated through EMSystems. This is the bed availability software that every hospital in the state reports on daily. This was used by ADH to send out alerts to the AHA and hospitals. It was also used to request information about patients from each hospital. Sixth, the ADH communicated by fax machine. This was used to send medical information and other paperwork back and forth between hospitals and the ADH concerning patients. Seventh, they communicated through Arkansas Wireless Information Network (AWIN) radios. AWIN radios are part of a wireless radio network that emergency responders use to pass along the fastest up to date information during a crisis situation. This is often the means of communicating when power lines are down and electricity is out. This can also be the most efficient way of communicating, depending on the nature of the disaster or emergency.

Research Questions

Extensive research exists on effective crisis and risk communication during emergency response or disaster situations. Limited research exists on using strategic ambiguity to manage the uncertainty that might exist in responding to natural disaster situations. There is a seemingly lack of research on significant choice in disaster type settings that would require an effective crisis communication response. Therefore, the following research questions were developed to help guide this paper.

RQ1: How did ADH, AHA, and NDMS hospital leaders make sense of the response to Hurricane Gustav?

RQ2: How did sensemaking about evacuation and repatriation efforts shape the crisis communication response by ADH, AHA, and NDMS hospital leaders?

RQ3: Did ADH leadership provide ADH, AHA, and NDMS hospital leaders' significant choice in their crisis communication? Why or why not?

RQ4: Was ADH leadership's crisis communication response to Hurricane Gustav effective? Why or why not?

Method

Case studies are used to analyze events in all parts of life. They allow "…investigators to retain the holistic and meaningful characteristics of real-life events-such as individual life cycles, organizational and managerial processes, neighborhood change, international relations, and the maturation of industries (Yin, 2013, p. 4). This case study examined the crisis communication strategies that were used by the Arkansas Department of Health (ADH) involving organizational and management processes of the NDMS hospital patients following Hurricane Gustav. Specifically, the uncertainty that was present in the crisis situation was examined. This paper suggests that strategic ambiguity should be used to manage the uncertainty in order to give the ADH the ability to make a significant choice. Research for this case study was collected from the development of converging lines of inquiry in which the evidence was supported by multiple sources (Yin, 2013). In this section, I provide five sub-sections that help to understand the method that was taken for this case study.

Data Collection

For the purpose of this case study, information was gathered from more than one source of evidence. Table one outlines the sources of evidence used in this paper. First, primary documents from the organization were collected as provided by the ADH (Yin, 2013). Three types of documents were collected: emails ($n = 100$), situation reports ($n = 59$), and information from faxed medical communication ($n = 3$). Copies of emails were collected to help determine what types of messages were used to communicate about NDMS patients. Information from situation reports was gathered to find out how the ADH communicated about the status of the hurricane, as well as management of evacuees. The purpose of collecting information from faxed paperwork was to see the types of public health communication that was sent between the ADH and hospitals concerning NDMS patients.

Second, data was collected from on-line materials. This included information from HHS ($n = 15$), Cable News Network (CNN) ($n = 1$), and the National Weather Service Forecast ($n = 1$) websites. Information from the HHS website was gathered in order to determine the effectiveness and capability of the NDMS. Documentation from the CNN website was used to show statistics from the hurricane in order to provide how the hurricane became complex for surrounding states. Lastly, records from the National Weather Service Forecast website offered contextual facts about the hurricane.

Third, information was collected through semi-structured qualitative interviews ($n = 1$). Questions for interviews were prepared beforehand so structure remained intact; however, the research is effective because the semi-structured nature allowed for open-ended questions that offered the interviewer a chance to stray from the interview guide. It also provided the freedom to identify new ways of looking at the situation at hand. The questions used in these interviews were also adapted from lessons of managing uncertainty, communicating effectively, and leading effectively (Ulmer et al., 2014). Research was conducted in two different ways: focus groups and a one-on-one interview.

The focus groups ($n = 2$) were important in determining how the crisis impacted the ADH, AHA, and hospitals, as well as examining their stakeholder relationship. Questions for both focus groups were based off of three main areas: managing uncertainty, effectively communicating, and effectively leading. The first was conducted on June 5, 2009 at the ADH. Participants were ADH and Department of Human Services (DHS) employees who were present at the Emergency Operations Center (EOC) during Hurricane Gustav. The purpose was to see how ADH and DHS employees communicated with hospital employees. It also provided evidence of the structure of the ADH during the crisis. Sample questions for this focus group were: "How will you manage future crises such as this?," "Were you able to find positive factors that could come from Hurricane Gustav and the repatriation process that took place during it?" and "What can be taken away from the repatriation crisis that happened during Hurricane Gustav?" The second focus group occurred on June 9, 2009 at the AHA. It consisted of representatives from the NDMS hospitals in Arkansas. This focus group showed the effectiveness of the communication messages that were used to determine the right course of action for NDMS patients. No individual names of participants in either focus group were used in the writing of this project. Sample questions for this focus group were: "What uncertainty was evident as the repatriation process began?", "How did you communicate with the patients and their families on trying to get them home?" and "How have you made yourself heard to the ADH since Hurricane Gustav?"

The one-on-one interview was conducted through personal communication on June 16, 2009 with a representative from the AHA. These are used to determine the strengths and possible weaknesses of the ADH crisis response. Example questions that were asked in the interview were "Describe the communication that went on between you and the ADH," "How receptive was the ADH to your needs?" and "How did the ADH respond to the crisis?" Through this research, the role of the AHA during Hurricane Gustav was determined. The research also showed the importance of the relationship between the AHA and NDMS hospitals.

Fifth, observational evidence was gathered from attending two hot wash meetings on the NDMS. Hot washes are debriefs conducted following a crisis event. The purpose is to help determine the strengths and weaknesses of the crisis response. The first meeting was at the ADH, in which employees from the ADH, NDMS hospitals, and the AHA met to discuss strengths and weaknesses of the NDMS, as well as how to have a better crisis response using the NDMS. The second meeting was at the AHA, in which employees from the ADH, NDMS hospitals, and the AHA met with a Federal NDMS official to discuss potential problems with the NDMS, including reimbursement and what needs to be changed with the system in order to make it more efficient. By conducting these two meetings, the ADH was trying to gain a sense of organizational learning through their failures that occurred in the response during Hurricane Gustav. Attending these two meetings allowed the researcher to see the culture that exists at the ADH and how they interact with stakeholders.

Table 1.
Evidence for ADH Crisis Response to Hurricane Gustav

Methodology	Source of Evidence
Textual Analysis • Documentation	• On-line resources • Media releases from ADH • Information provided by ADH
Semi-Structured Qualitative Interview: Focus Group 1	• ADH & DHS employees at EOC during Hurricane • 15 people attended
Semi-Structured Qualitative Interview: Focus Group 2	• NDMS Hospitals (AR Children's, Baptist, Baptist North, Conway, AR Heart Hospital, Jefferson Regional, North Metro, Saline Memorial, St. Vincent, St. Vincent North, UAMS, and VA) • 15 people attended
Semi-Structured Qualitative Interview: One-on-One	• Representative from AHA
Direct Observation	• Meeting at the ADH on NDMS • Meeting at the AHA on NDMS • These were both hot washes following Hurricane Gustav

Context

Based on the information that was collected, a context section for the case was developed. The data was organized based around a communicative context to show the crisis response activities of the ADH, NDMS hospitals, and the AHA following Hurricane Gustav. It focused on the communicative messages used by the ADH in order to show how they were effective and/or ineffective. This provides a tool for understanding how the crisis was managed and what can be done in future situations. The information was then interpreted based on the framework of effective crisis and risk communication. Specifically managing uncertainty and communicating ambiguity in order to gain significant choice.

Data Analysis

Guidelines for communicating with uncertainty and ambiguity are used to analyze the ADH crisis response. After data was interpreted, themes were developed based off the results of the semi-structured qualitative interviews and focus groups. Analyzing the response through these guidelines presents a way to identify the lessons learned from ADH's crisis response. To operationalize uncertainty, the researcher looked for indicators revealing a lack of information, such as "we did not know what to do" and "we did not have a clue."

Case studies are used to show the effectiveness of communication events. This case study analyzes the crisis communication strategies that were used by the ADH to discuss the transfer of the NDMS patients prior to Hurricane Gustav making landfall in Louisiana. Through the analysis, communication strengths and weaknesses of the ADH will become clear. Ultimately, this will provide a platform for organizational learning from the crisis response.

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Findings

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This section examines five main themes that were evident in the ADH response. Using strategic ambiguity and uncertainty to communicate to stakeholders in a crisis situation is necessary. Often times, this will even reduce the uncertainty that exists among stakeholders. This section analyzes the strengths and weaknesses of the communication strategies that were used by the ADH in communicating with hospitals and the AHA about the management of the NDMS patients following Hurricane Gustav.

Theme 1

ADH must recognize that communicating with ambiguity and uncertainty is necessary in crises, especially when information is not exact, but constantly changing. Some level of uncertainty exists in every crisis situation. Uncertainty is inevitable during crises because organizations do not know how to respond or what to do (Ulmer et al., 2014). Organizations that respond by communicating with some ambiguity and uncertainty aim to reduce the uncertainty that the crisis presented; therefore, effectively managing the situation. The ADH had to reduce a lot of uncertainty following Hurricane Gustav in figuring out how to get the NDMS patients home. The ADH must recognize that ambiguous communication will allow stakeholders the ability to make multiple interpretations to the response. To do this, ADH must communicate not only what they know and do not know, but also what they are doing to figure out the unknown information (Ulmer et al., 2014). Information during a crisis can be subject to change, depending on the severity of the situation. It is important for leaders managing crises to communicate this to their stakeholders in order to prevent the crisis situation from getting worse. The ADH should have taken into account all the information at hand and decided as a team what information needed to be passed along to their stakeholders, the AHA and NDMS hospitals.

The ADH had never experienced a crisis of this nature before and was "not aware that this was our [their] job" to manage the situation (personal communication, June 5, 2009). The ADH had experienced hurricane relief efforts before but not the level of repatriation that took place during Gustav. A participant in the first focus group said, "Hospitals and the AHA asked us to take this task on because they could not handle the volume of calls they were getting" (personal communication, June 5, 2009). Due to the impact of the crisis, the ADH was forced to respond with non-routine procedures by setting up an 800 number for families of patients to call to determine the status of their relative (personal communication, June 9, 2009).

After they set up the hotline, the ADH had to figure out how to get the patients home. As a result of the inexperience, ultimately, ADH did not know what to do. They turned to Louisiana and the federal government for answers. One focus group participant said, "We passed on all information from Louisiana or the federal government to hospitals" (personal communication, June 5, 2009). These sources added to the confusion because they, too, were unsure about what to do (personal communication, June 5, 2009). Because the ADH was receiving unclear information, they passed on unclear information to hospitals and the AHA. Therefore, the non-routine procedures the ADH responded with further complicated things. In this instance, the ADH communicated too much information to its stakeholders. Though communicating ambiguously is essential in certain situations, here the ADH should have shaped their message differently. A way to prevent this from happening in the future is to remember to communicate what you know, what you do not know, and what you are doing to find out the unknown information throughout the crisis.

Theme 2

Organizations must identify that opportunities can come from the ambiguity and uncertainty present during a crisis which can create renewal. Any crisis can create threat, both for the organization and its stakeholders. The threat involved for all stakeholders is important to consider in a situation such as this. More importantly the threat involved when communicating to stakeholders, specifically the ADH, the AHA and NDMS hospitals was due to the high level of uncertainty. There were two overall threats that existed for everyone, the NDMS patients' safety in travel and transportation back home and the threat of Hurricane Ike that was anticipated to hit Louisiana within days of Gustav.

A participant in the second focus group said, "Complications are the transportation assets at hand, can receiving site support patients" (personal communication, June 9, 2009). This was a threat to case managers at hospitals. Additionally as they began readying patients to go home, "a designated regional coordinator would say, 'no you can't send them home'" (personal communication, June 9, 2009). They found out the hard way that Louisiana hospitals could not support the NDMS patients. Also, assets that were normally available to case managers were used on other things such as ambulance transport or flight services (personal communication, June 9, 2009).

A threat for the ADH and AHA was losing the NDMS hospitals. This was clear during the second focus group where many NDMS hospital representatives agreed, "Our participation with NDMS is contingent on what changes" (personal communication, June 9, 2009). Other threats that existed for hospitals and the ADH were the ability to track patients and issues involving money, such as Medicaid and Medicare coverage and the hospitals incurring these costs. All of these had to do with the uncertainty of the situation and the information that was being passed between organizations, as well as the Federal government.

Theme 3

ADH needs to communicate early and often about the crisis while acknowledging the uncertainty that exists in the information they are passing to multiple stakeholders. The communicator should have a clear and consistent message when communicating about the crisis. The ADH communicated with hospitals and the AHA "three to four times a day…additional calls took place with other EOC staff…plus several conference calls every day" (personal communication, June 5, 2009). The ADH communicated in seven different ways: by phone, EMSystems, Email, AWIN Radio, conference call, situation reports, and by fax (personal communication, June 5, 2009). Therefore, it is clear that the ADH was effective in communicating early and often with hospitals and the AHA. However, because of the multiple messages that the ADH was passing along to the hospitals and AHA, the response was both productive and counterproductive. A representative from an NDMS hospital responded, "So many cross communication streams further complicated the issue" (personal communication, June 9, 2009). Their answers lacked in consistency of the messages. At times, they helped in dealing with the patients, but also their answers unintentionally created more uncertainty. The ADH needs to consider the ambiguity and uncertainty that exists in their response. This requires being strategic and even vague in their messages so not to create more chaos and confusion. This could mean giving the hospitals and AHA the overall message, without including the intricate details that could cause confusion.

Though the ADH communicated early with the hospitals and the AHA and maintained contact with them, they neglected to ever acknowledge that uncertainty existed, both for the hospitals and the AHA. A hospital representative said, "We were getting information from multiple sources: people taking calls from hospitals who didn't know what information had already been collected. There was uncertainty about whether or not the information was still viable at the time it was received" (personal communication, June 9, 2009). Additionally, the hospitals said, "We did not understand where the information was coming from" (personal communication, June 9, 2009). The ADH should have informed them of this. Stakeholders were also confused about the role that the ADH was playing during the situation. Throughout the crisis, the hospitals did not know that the ADH was experiencing uncertainty themselves and that they were unsure about which answers were the correct ones (personal communication, June 9, 2009). The ADH should have been ambiguous in its communication to stakeholders. They should have allowed only one or two spokespeople. They could have done this by answering the stakeholders' questions, but not being clear or direct about it (Kline, Simunich, and Weber, 2009). Also, if the ADH would have acknowledged to hospitals that this uncertainty existed, then employees at both the ADH and the hospitals would have been calmer about the situation making the response more productive. The ADH should have been more strategic in its communication or communicating to them in a way that they were satisfied, but did not disclose all the information.

Theme 4

The ADH must communicate ethically by allowing stakeholders the opportunity to make a significant choice. When communicating ambiguously to stakeholders, leaders need to maintain high ethical standards. Leaders present all sides of a crisis in order to allow stakeholders to make their own decisions, or significant choice. They provide enough information so that stakeholders can make the best possible decision for their organizations. This will give stakeholders the ability to make a significant choice.

If an organization knows what their goals are then they will know what the right answers are in responding to the crisis and in turn providing enough information to stakeholders to make an informed

decision. They will respond based on their goals and in a way that will benefit the organization. The ADH was ineffective in establishing their goals prior to communicating with stakeholders. In the focus group at the ADH EOC a participant responded, "We didn't ask ourselves what our goals were" (June 5, 2009). If goals would have been outlined before communicating to the hospitals, there would have been less information overload and less confusion in the ADH's response. Examples of goals the ADH could have established are: maintaining a good stakeholder relationship with hospitals and AHA throughout the crisis or communicating with one message throughout the incident. Knowing their goals, the ADH would have been able to filter the information better and provide hospitals with all the information they needed to make the best decisions for their own organizations.

Theme 5

It is essential for ADH to establish positive relationships with stakeholders during normal times in order to manage uncertainty with external stakeholders during a crisis effectively. Communication with external stakeholders is necessary for an effective crisis response. In response to a crisis, "Action may need to be taken to limit the injury to consumers, employees, or members of the community" (Ulmer et al., 2014, p. 75). Leaders also give explanation for the crisis.   The ADH was virtuous in their response to the hospitals. They communicated all complete and unbiased information to stakeholders. Though they had never experienced a crisis of this nature before, they were able to get through it because of their prior stakeholder relationships. The ADH has gained renewal because of their response. The prior stakeholder relationships the ADH built also helped make a more effective crisis response. The hospitals replied, "Our relationship was good before but now we are bonded after 'going through the trenches' together" (personal communication, June 9, 2009). Due to prior relationships being established, it is clear that all parties involved are authentic with one another (Botan, 1997).

It is important to develop this reputation because when crisis hits, organizations need support and trust from their stakeholders. Credibility is therefore established before the crisis and the organization has the support it needs to get through the crisis. When asked about its company reputation an employee at the ADH replied, "It is invisible, except with hospitals and the AHA. There was no communication with Louisiana prior to Hurricane Gustav" (personal communication, June 5, 2009). This shows that the ADH was not visible in the past to Louisiana, as well as Arkansas. Due to recurring hurricanes and evacuees coming to Arkansas, it seems logical that the ADH would have a stakeholder relationship already established with the Louisiana Department of Health and Hospitals. This is necessary in order to have an effective communication response. The ADH should build a company reputation with officials in Arkansas and especially Louisiana in order to get through a crisis of this nature effectively.

It is evident that the ADH has established strong relationships with their stakeholders. Through these relationships, communication will be effective when the crisis happens because of the partnership that has been developed. The ADH had developed a relationship with NDMS hospitals and the AHA prior to the crisis. In an interview with a representative from the AHA the participant stated, "We have had a very good partnership with the ADH for a long time during preparedness efforts in the last nine years. Over these years, the partnership has strengthened" (June 9, 2009). The hospitals also stated, "We have had a professional, cordial relationship with the ADH in the past" (personal communication, June 9, 2009). These stakeholder relationships have helped the ADH, AHA, and hospitals to have a "workable situation during crises" (personal communication, June 5, 2009). Further, working through the crisis during Hurricane Gustav has helped the relationship become more "interdependent as the ADH actually became a part of the operation," as stated by a representative of a NDMS hospital (personal

communication, June 9, 2009).   These relationships are important. ADH should continue to build a form of dialogic communication with stakeholders to have an effective crisis response.

Discussion

All crises should be looked at as learning opportunities for organizations. Public health agencies experience many types of crises. This is why it is important for organizations in public health systems to be able to learn from crisis situations in order to create renewal for the organization and to better respond to future crises. There are learning tools, both for the ADH and other organizations, which can be taken away from Arkansas' public health response to Hurricane Gustav. This study focused on a highly uncertain crisis. These implications and recommendations focus on managerial uncertainty. This section defines six lessons that organizations in the public health system can use in managing crises such as the one defined in this paper.

Lesson One

Organizations that establish goals before a crisis will manage uncertainty effectively and gain renewal from crises. Organizations should respond with non-routine procedures without creating more uncertainty by establishing goals. Organizations "…respond with unique solutions that directly rectify the crisis" (Ulmer et al., 2014, p. 27). By communicating with some uncertainty and ambiguity, organizations will manage crises effectively without confusing the stakeholders involved. The response need not heighten uncertainty. Stakeholders in this case were the NDMS hospitals. Organizations must set goals for their response and make stakeholders aware of these goals. This could include aiming to reduce uncertainty through ambiguity for all stakeholders involved by passing on the right information to the right people, or being credible for the information sent to stakeholders.   They should also know what their goals are prior to the crisis so they will be able to determine the best answers during the crisis more effectively and gain renewal.

Lesson Two

Organizations that manage crisis uncertainty effectively will create opportunities for renewal. The threat for all stakeholders involved should be considered. If threat for stakeholders is not considered, then uncertainty will heighten (Ulmer et al., 2014). In this situation, the ADH needed to be mindful of the fact that their ethical responsibility was to the NDMS patients' safety and getting them home. Further, the ADH should have responded without "…creating unnecessary concern and anxiety…" for the hospitals and AHA (Sellnow et al., 2009, p. 150).   Due to the fact that the ADH was unsure what answers to give stakeholders, they should have communicated with ambiguity. In order to understand each stakeholder's threat, meetings need to take place between the ADH, hospitals, and the AHA so that they will be prepared for future crisis situations and potentially gain renewal.

Lesson Three

Organizations will gain renewal if ambiguity and uncertainty is managed effectively through established key spokespersons. Organizations that establish key spokespersons will manage uncertainty with effective communication practices. A spokesperson is one who is open and honest with stakeholders in figuring out the best way to manage the crisis. Spokespeople also communicate what they know, what

they do not know, and what they are doing to determine the unknown information (Ulmer et al., 2014). These stakeholders needed a clear and consistent answer for where patients were going to go, if needed, and more importantly how they were going to get them home. The communication infrastructure includes rebuilding the NDMS so that crisis response by the ADH and other public health systems will be more effective. Additionally, there must be established points of contact for who the ADH is supposed to contact at hospitals during crises. Crisis situations, such as this, must be used as opportunities to learn and grow.

Lesson Four

It is essential for organizations to maintain positive primary and secondary relationships with stakeholders during times of non-crisis. Organizations need help getting through crises. By maintaining a goodwill relationship with stakeholders before crises they will be able to get through the situation more successfully (Ulmer et al., 2014). Organizations that have positive stakeholder relationships during all times will be able to grow and learn from hard times, such as crisis situations. The ADH showed that they had positive stakeholder relationships in the way that the hospitals and the AHA responded to the focus group questions. The hospitals said that they had good relationships with the ADH before the crisis but that going through the crisis helped make their relationship even better (personal communication, June 5, 2009). The AHA said that they had a very good partnership for a long time with the ADH (personal communication, June 5, 2009). This was a major reason why the ADH was able to get through this crisis.

Lesson Five

Organizational leaders that portray positive company relationships during normal operations will gain renewal during crises. Organizations need leaders that portray a positive company reputation during times of non-crisis. Organizations need leaders that know the values for which the company stands for and are able to communicate those values in a crisis situation. When managing a crisis, organizations need support and trust from their stakeholders. By creating a positive company reputation during times of non-crisis, a reservoir of goodwill or credibility is established, and the organization will have the dependability it needs during the crisis (Ulmer et al., 2014). An established company reputation will include continued communication efforts through monthly meetings, conference calls, phone calls, emails, and monthly reports with stakeholders. The ADH could also send someone to Louisiana to see the culture that their employees work in and vice versa so that an understanding of what each other's organizational culture is like is understood.

As Ulmer et al. (2014) state, "If an organization does not have a partnership with stakeholders prior to a crisis, the communication following one can be quite awkward and often ineffective" (p. 43). The ADH must work with these agencies to develop goals and values for managing a crisis. This can be done by having regular meetings or even simulations with officials from stakeholder agencies. This way all issues can be addressed from previous crisis situations so that the ADH can gain renewal for future situations.

Lesson Six

Renewal and learning will continue if organizations have regular trainings and exercises. Organizations need to have regular trainings and exercises. This paper is an example of this because the ADH is aiming to learn from their mistakes in their response to Hurricane Gustav. The ADH must continue having regular emergency operations trainings and exercises. These should involve all stakeholders involved in

a public health crisis response effort. If the ADH does this, they will have a more effective coordinated response with stakeholders when a crisis happens. It will further allow the ADH to see the questions that can come from different types of crises. As a result, future crisis situations will be managed more effectively with more agility and mindfulness.

Limitations

Four main limitations existed for this project. First, this study only looked at the medical coordination that existed in the Hurricane Gustav response, which included the ADH Emergency Operations personnel, AHA personnel, and NDMS hospital personnel. This study did not look at the communication between Louisiana and Arkansas or other emergency management response personnel in Arkansas. Second, internal organizational structure of ADH personnel was not considered. It is not clear, in the current study, what roles each ADH representative played. Clarification on this might be beneficial in determining why communication issues existed in the Hurricane Response. Third, it is not evident what training ADH, AHA, and hospital personnel received prior to the Hurricane Gustav response. It is important that personnel are properly trained for events such as these. Ultimately, this is a factor that should have been examined. Lastly, the researcher was external to all organizations involved in this response, at the time of this study; therefore, it is possible that some inherent culture of these organizations have not been captured. Understanding the culture of organizations will help determine its capacity and capability of responding to an event such as this.

Conclusion

This case study analyzes the crisis communication strategies that were used by the ADH, the AHA, and NDMS hospitals to discuss the transfer of the NDMS patients prior to Hurricane Gustav. Through the analysis, communication strengths and weaknesses of the ADH become clear providing a platform for organizational learning from the crisis response. Uncertainty exists in all crises and the crises themselves create uncertainty, both at the onset of crisis and throughout management of the situation. Leaders recognize that uncertainty will exist and determining the best way to manage it is essential. In addition, they learn to manage the uncertainty present through ambiguous messages and significant choice. Leaders in crisis move toward communicating using ambiguous messages to manage the uncertainty. This gives stakeholders the ability to make an informed significant choice.

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