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The Role of Spokesperson in Ambiguous and Complex Crises: The CDC and Anthrax

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Abstract

This study evaluates the role of spokespersons in complex organizations facing ambiguous crises. Specifically, the Centers for Disease Control and Prevention's (CDC) response to the anthrax crisis in 2001 is offered as a case study. A content analysis of the print media coverage of the anthrax crisis reveals that many claiming affiliation with the CDC spoke on behalf of the organization, resulting in what appeared to be a fragmented CDC message. The study concludes that the CDC's failure to provide a central spokesperson contributed to the ambiguity of the situation.

Introduction

Nearly all organizations may at some point face crisis situations (Cohn, 2000). For the purpose of this study, crisis is defined as a "specific, unexpected, and nonroutine event or series of events that create high levels of uncertainty and threaten or are perceived to threaten an organization's high-priority goals" (Seeger, Sellnow, & Ulmer, 1998). Ideally, organizations respond to crises with plans for communicating important information to stakeholders and public audiences (Olaniran & Williams, 2001). For public or governmental organizations, a primary purpose of crisis communication is the reduction of public uncertainty and anxiety by dissemination of timely and accurate information on which an informed public can act (Sellnow, Seeger, & Ulmer, 2002).

If effective crisis communication plans are used when an emergency arises, the organization has a better opportunity to meet its obligations to all stakeholders and minimize the damage such events can do to reputation, image, and credibility (Fearn-Banks, 2002). Communicating such information in an orderly and precise manner is paramount. Hence, most crisis management plans encourage the appointment of a primary spokesperson to share consistent messages with the public (Coombs, 1999; Kaufman, Kesner, & Hazen, 1994; Benoit, 1997; Turner, 1999; Rugo 2001). Should the public lose trust or confidence in a public organization, the ramifications can be distressing. A case in point is the Centers for Disease Control and Prevention's (CDC) response to the 2001 anthrax crisis.

On October 4, 2001, the CDC in Atlanta, Georgia, released a statement announcing that the death of Bob Stevens, of Boca Raton, Florida, was due to a suspected case of inhalational anthrax. In the months following, as the anthrax

attack became international headline news with front-page billing, the CDC came under intense scrutiny for its handling of the crisis.

Initially, the CDC assumed the first case of inhalational anthrax, which occurred in Florida, was an isolated incident, with good reason. The US had experienced only 18 cases of inhalational anthrax in the previous century. Within days, however, as the anthrax attack spread to the Capitol, the CDC recognized it was engulfed in a full-fledged crisis.

This study examines the role of spokespersons for the CDC in the print media as the crisis unfolded. The print media was selected because of its wide distribution and its availability. Throughout the crisis, three types of spokespersons emerged in the print media: 1) official and formal CDC sources, including administrators of the CDC and its official spokespeople; 2) unofficial CDC sources, including supra resources such as CDC lab workers, Department of Health and Human Services (HHS) staff (those employees or staff of the HHS and CDC not authorized to comment or report on anthrax and the investigation; and 3) unofficial and informal sources, including anyone called upon by the press to comment, including former CDC staff and non-CDC bioterrorist and anthrax experts.

In this study, we first provide a context for interpreting spokespersons during crisis situations. Next, we clarify the method for the study and reveal our key findings. We conclude with a series of conclusions and implications based on the study.

Spokespersons in Organizational Crisis Situations

Although an organization cannot predict a crisis, it can implement strategies to effectively respond to the vagaries of such an event. By preparing a system of communication, an organization can quickly respond to the public's communication needs (Marra, 1998). If the press presents useful, rather than sensationalized, information on bioterrorism the public can make informed decisions (Covello, 1992; Osterholm & Schwartz, 2000; Seeger, Sellnow, & Ulmer, 2001). The best, most consistent information comes from the cooperation of all agencies involved (Osterholm & Schwatz, 2000). By including the organization's stakeholders in this multi-agency communication coordination, crises can be resolved more quickly and essential channels of communication can be created, resulting in greater understanding between the organization and its stakeholders (Seeger, Sellnow, & Ulmer, 2001). The ability to properly disseminate information may then minimize erroneous public theorizing and avoid unnecessary public alarm.

A crisis contingency plan helps expedite an organization's image restoration process (Benoit, 1997). Such a crisis contingency plan should be based on what has been effective in past models. Effective strategies include three aspects. First, the organization should be willing to share information. Failure to provide information promptly can result in serious negative repercussions to the organization's image and finances (Marra, 1998), while sharing information increases the organization's credibility. Second, legitimacy can be regained when an organization is willing to accept responsibility for harmful mistakes (Hearit, 2001;

Speaker and Gavel, Vol 41 (2004)

www.dsr-tka.org/

Sellnow, Ulmer, & Snider, 1998). Finally, an organization must be flexible enough to meet the diverse needs of its different stakeholders (Benoit, 1997; Sellnow & Ulmer, 1995; Covello, Peters, Wojtecki, & Hyde, 2001). To avoid the threat of imposed legislative changes, an organization's crisis plan can be designed to accommodate change in order to meet the needs of outside parties (Gaunt & Ollenburger, 1995). A successful public information campaign can help the organization regain public trust (Sellnow & Ulmer, 1995), as well as keep the public informed and involved (Covello, 1992). In a health threat situation, an effective plan lets the public know how best to reduce their personal health risk (Heath & Abel, 1996a).

Identifying and presenting a centralized message can often avoid the detriment caused by conflicting messages. Organizational procedures established to meet the needs of the media are a key variable in this process. In cases of a crisis with widespread public interest, the press needs information quickly. Journalists are likely to seek out members of an organization who can provide that information (Covello, 1992). Organizations should try to accommodate them (Balian, 1999). The intense media scrutiny may make controlling the message difficult because different members of an organization have different levels of knowledge (Heath & Abel, 1996b). Because of this, all levels of employees should be informed on the organization's message (Turner, 1999). If the organization has multiple people releasing information, message and time of release should be coordinated (Balian, 1999). To avoid a lapse in the stream of information, an organization's communication with all involved parties—employees, investors and shareholders, and the media—should be continuous. This approach to information sharing reduces the risk of miscommunication or confusion regarding the organization's intended messages (Burton, 1989; Turner, 1999). Coordination with other organizations sharing a common general goal is as important as coordination within an organization. Because different organizations may have different, even incompatible, agendas, one organization should be in charge during a crisis (Osterholm and Schwartz, 2000). In risk situations, apparent disagreements between agencies can lead to public mistrust. Coordinating organizations need to work together from the early stages of a crisis to make sure the public receives clear, consistent messages. Risk communication training for all involved organizations is helpful. Indirectly involved, yet trusted, third party voices lending support to the centralized message will also help achieve the desired result of a credible and consistent message (Covello, Peters, Wojtecki, & Hyde, 2001).

An effective way for an organization to manage the messages it provides to the public is to have a single spokesperson (Kaufman, Kesner, & Hazen, 1994; Benoit, 1997; Turner, 1999; Rugo 2001). Having more than one spokesperson can result in mixed and confusing messages (Kaufman, Kesner, & Hazen, 1994). While a spokesperson should be a top executive in an organization (Turner, 1999) in some situations, the CEO may not be the best person for that role (Kaufman, Kesner, & Hazen, 1994). Whether or not an executive officer should be the spokesperson depends on the severity of the crisis and the executive's willingness to risk public scrutiny (Rugo, 2001). If not the CEO, the spokesper-

son should be an industry expert and ally to the organization (Rugo, 2001). At the very least, the spokesperson should have a positive outlook toward both the press and the organization (Balian, 1999) and be both knowledgeable and flexible in the messages he or she provides (Murphy, 1996). To act quickly, a spokesperson must be an autonomous (Marra, 1998), experienced, and media-trained person who is well informed, prepared, and self-controlled (Rugo, 2001; Nicolazzo, 2001). The key to public receptiveness of a spokesperson is credibility. Covello, Peters, Wojtecki, and Hyde (2001) state that not only do spokespersons need to be trustworthy; they must also be the best persons to communicate messages of risk. If more challenging information needs to be communicated with a sense of credibility, a technical expert can be trained on message delivery and supported by an experienced spokesperson (Heath, 1995). The public attributes low credibility to government and industry spokespersons. It views governments as having insufficient resources to meet the public demands and public agencies as conflict ridden and inadequate (Covello, 1992).

Method

Using three online databases (Lexis-Nexus, Infotrac, and the Electric Library), 503 anthrax and CDC-related news stories appearing in major US newspapers from September 1, 2001, through February 25, 2002, were examined. These databases were selected based on their comprehensive indexing of a wide variety of major newspapers throughout the United States. The search focused on the words "CDC" and "anthrax." The authors read each of the articles to identify instances where a CDC spokesperson was identified. A speaker was not identified as a CDC spokesperson unless the speaker was described in the news article as having some affiliation with the CDC. The identity of the spokesperson and their relationship to the CDC was recorded (see Table 1).

Table 1: Number of Representatives and Appearances Totals

Number of Appearances:	1	2	3	4	5	6	7	8	10	11	15	20	22	41	51	111
	41	13	7	3	3	2	2	1	2	1	1	1	1	1	2	1

Discussion

The data collected during this study indicate the CDC was faced with an ambiguous and complex crisis making it nearly, if not completely, impossible to consistently follow basic crisis communication principle of maintaining a centralized spokesperson during the crisis.

CDC Spokespersons

Perhaps the most telling symptom highlighting the CDC's incapacity to follow traditional crisis communication principals was its inability to control the number of representatives speaking to the media. Table 1 indicates that 81 different individuals were cited by name and title as spokespersons for the CDC during the crisis. CDC Director Koplan and HHS Secretary Health and Human

Services (HHS) Tommy Thompson¹, were quoted most frequently, while 79 other representatives were quoted at least once, some as many as 41 times. The media appeared to have unfettered access to a large number of CDC employees. The result was less than ideal. Because so many individuals spoke freely, apparently in many cases without the assistance or guidance of trained public relations personnel, the CDC was unable to control the consistency of its public messages.

With so many different speakers, confusing and contradictory messages damaging to CDC's image and reputation were inevitable. The *San Francisco Chronicle* summed up the situation, stating, "There has been no single, comparable authority on the bioterror attacks at home. The CDC has appeared reluctant to step into the breach, allowing mixed messages to go through state and local health agencies" (Hall & Stannard, 2001).

Another troubling spokesperson issue for the CDC was the imposition, by outside authorities, of a limit on who could respond to the press at the onset of the crisis. The Atlanta Journal and Constitution reported October 28, 2001, that "privately, CDC staff say they were kept from speaking out in the early days of the outbreak by orders from HHS" (McKenna, 2001). Further, the Boston Globe reported, "In the first two weeks of the anthrax crisis, senior Bush administration officials told both Koplan and Surgeon General David Satcher to remain publicly silent" (Donnelly, 2001). As seen in Table 1, HHS Secretary Tommy Thompson was the second most quoted spokesperson during the crisis. While he had oversight responsibility for the CDC, he is not a physician, an epidemiologist, or an expert in bioterrorism, and therefore in several cases, he appeared ill equipped and unprepared to answer sophisticated medical questions while serving as a principal CDC spokesperson. Some of his remarks were inaccurate or misleading, a fact quickly identified and chronicled by the media. For example, he commented that the nation should be on the lookout for "mysterious health symptoms," and was roundly criticized by the media for feeding hypochondria (Morse & Stoltz, 2001).

A principal focus of crisis communication is the dissemination of centralized messages. Conveying centralized messages is vital as it represents a primary opportunity for an organization to tell its story. Early in the crisis, the CDC was successful in conveying the message that it was inadequately funded, ill equipped, and poorly housed. Shortly thereafter, President Bush visited the CDC's Atlanta offices and Congress passed a bioterrorism finance bill addressing the CDC's financial woes, providing it with a \$4.3 billion budget, approximately \$400 million more than the previous year (McKenna & Eversley, 2001).

This success was not repeated, as the CDC did not follow up with additional centralized messages. Instead of seizing the opportunity to broadcast its mission, scope, and role, the CDC's leadership took a more passive role, allowing staff to

¹ The CDC is under the supervision of the Secretary of Health and Human Services. Hence, Secretary Thompson was empowered to speak on behalf of the CDC during the anthrax crisis.

be characterized as hardworking medical sleuths or detectives (Russakoff, 2001 & McClam, 2001). Unfortunately, frustration over lack of progress in the investigation tarnished even this seemingly positive characterization of CDC staff.

The fragmented function of CDC spokespersons during crisis, summarized in Table 1, ultimately limited the CDC's ability to offer timely and consistent messages to the press. The Palm Beach Post emphasized this point, stating, "Good science is what you want from the CDC; good PR would be an added bonus" (Reid, 2001). The Boston Herald suggested that members of the CDC "are better at science than the bells and whistles of Web design and self-promotion," further supporting this finding (Brown, 2001).

Contributing Factors

Clearly, the CDC did not meet the standards for effective spokespersons established in the crisis communication literature. To assume that this failure was completely due to error or poor planning on the part of the CDC, however, fails to account for the complexity of the anthrax crisis. In this section, we describe those factors that may have influenced or impaired the CDC's crisis communication.

The crisis was ambiguous because little was known about how widespread exposure to anthrax spores would affect the nation. The Atlanta Journal and Constitution reported, "When Bob Stevens, 63, a photo editor at the tabloid newspaper The Sun in Boca Raton, Fla., died Oct. 5 from inhaled anthrax, it was the first fatal U.S. case since 1976. Prior to that, only 18 cases of inhalational anthrax had been seen in this country during the past 100 years" (Seabrook, 2001).

In part, the CDC's spokespersons were limited in that they simply did not have the information the public was demanding. The CDC operated on the basis of the limited knowledge it possessed. It assumed "the inhaled form of anthrax could not be contracted through sealed letters" (Borenstein, Murphy, & Pugh, 2001). "[CDC] Director Jeffrey Koplan said it was 'highly unlikely to virtually impossible' for someone to develop pulmonary anthrax from spores that floated from one piece of mail to another" (Connolly & Nakashima, 2001). By stating its position in such absolute terms, the CDC calmed the fears of millions of Americans worried about contracting anthrax through the mail. But the calming benefit came at a high cost. When it became clear people who had been exposed to anthrax through the mail were becoming sick and dying, the CDC's previously conclusive position caused significant damage to its reputation and credibility. Senator Tom Harkin was quoted as being "upset because he had thought the CDC 'was really on top of this' and it wasn't" (Borenstein, Murphy, & Pugh, 2001). It was widely reported that Harkin told CDC Director Koplan, "Maybe I'm wrong, but it just seems to me that something broke down here or is broken down. It's obvious people are getting sick, people are dying, and we can't afford to keep letting this happen . . . I am very concerned about what CDC is doing and how they are operating" (McClam, 2001; McKenna, 2001).

In the political arena and among other US health professionals the news that people could contract anthrax by handling the mail resulted in an apparent widespread loss of trust in the CDC. The Washington Post reported that Health Commissioner George DiFerdinando acted against CDC advice when, on October 19, he “instructed all 1,000 postal workers at the Hamilton processing center to begin taking antibiotics as a precaution” (Russakoff, 2001). At the time, there was no evidence postal workers could contract inhalational anthrax by handling the mail and “officials in Washington were following the CDC’s advice not to treat postal workers” (Russakoff, 2001). Said DiFerdinando, “Epidemiologically, I had no data. This was a gut decision, and it’s the decision I’m proudest of” (Russakoff, 2001). Within three days, two postal workers “would die of pulmonary anthrax and [CDC] health officials would put thousands of District postal workers on antibiotics” (Russakoff, 2001).

In an attempt to restore its image, CDC Director Koplan defended his agency: “We had had no cases of inhalation anthrax in a mail sorting facility. There was no reason to think this was a possibility” (Meckler, 2001a). He took responsibility for the initial position on cross contamination and acknowledged it was flawed: “Knowing what we know today, would we have done things differently three or four days ago? Yes” (Borenstein, Murphy, & Pugh, 2001). Others helped by addressing this difficult situation. White House spokesman Ari Fleischer attempted to refocus the public’s attention on the real culprits, telling reporters, “The president believes the cause of death was not the treatment made by the federal government or the local officials, or anyone else, but the cause of death was the attack made on our nation by people mailing anthrax” (Meckler, 2001a). HHS Secretary Tommy Thompson was also quick to defend the CDC. He told Congress, “We’re going to err on the side of caution in making sure people are protected” (Meckler, 2001a). These quick and strongly supportive responses assisted Koplan and the CDC in restoring and repairing some of the damage caused by its initial stance on cross-contaminated mail.

The crisis was complex because of the context in which the attack occurred. Due to the September 11 terrorist attacks, the nation was sensitized, alert, and aware of the potential threat of new attacks. As the crisis matured, inhalational anthrax deaths occurred in Florida, New Jersey, New York, Washington D.C., and Connecticut. Cross-contaminated mail processed through the Brentwood, New Jersey, postal facility found its way to dozens of locations throughout the country.

The media’s heightened attention to the crisis generated an insatiable appetite for new information well beyond the CDC’s ability to fully satisfy it. Despite 26 telebriefings conducted by the CDC during the crisis, along with 24 formal CDC press releases, the media still sought statements and interviews from many current and former CDC personnel, sometimes to no avail. The Pittsburgh Post-Gazette implied as much when it commented, “CDC officials would not return numerous calls seeking comment” (Labs, 2001). We suggest the CDC did not intentionally ignore calls; rather, there were so many calls and so much media pressure that the CDC and their inadequate crisis communication systems were overwhelmed. Unfortunately, this void was often filled by infor-

mal CDC spokespersons who, because they lacked coordination and vital information, contributed to the fragmented communication of the CDC.

Conclusions and Implications

Previous research concludes that proper crisis planning is essential and is characterized by the establishment of crisis communication systems before crises emerge. Such systems should be fashioned after historically successful plans and should include mechanisms allowing for continuous communication with all stakeholders through the media. Cooperation among involved agencies is also essential to resolve the crisis and provide greater understanding for all stakeholders.

Effective communication plans help organizations restore credibility because they exhibit a willingness to avoid secrecy and promptly distribute information. Successful plans encourage organizations to admit fault where necessary and accept responsibility, strengthening organizational legitimacy in the process. They allow organizations to be flexible to meet the diverse needs of all stakeholders, especially the public’s need for accurate information on how best to reduce personal health risk. Successful plans for public organizations present centralized messages, establish procedures to continuously meet media needs, educate employees to provide unified messages at appropriate times, call for risk communication training of senior staff, and include a mechanism to determine the appropriate lead agency. Having one specially trained, well informed, trustworthy, and credible spokesperson is ideal. Typically, the CEO or another senior leader of the organization is called on to serve this function and deal directly with the media.

The anthrax attack was a highly complex, difficult crisis fraught with ambiguity and uncertainty. The organizational structure of the CDC, with its multiple centers of expertise, when coupled with numerous investigative sites, made following many of these communication guidelines nearly impossible. The media’s insatiable need for information apparently led the CDC to allow media access to nearly all of its employees, without any coordination except for the message that the CDC was understaffed, inadequately housed, and poorly funded. Once Congress acted to resolve its financial concerns, the CDC could have identified a new central message. No new message emerged. Left to their own devices, the media pursued multiple avenues, putting the CDC in a poor light as the communication crisis seemed to spiral out of control. Subsequent contact with the media led to contradictory, confusing messages from different official and unofficial spokespeople. This problem was exacerbated when the CDC disseminated incorrect information about inhalational anthrax. With so many different voices speaking on behalf of the CDC, officially and unofficially, it was difficult for the CDC to convey its messages to the public and nearly impossible for the public to discern which messages were authoritative and which were not. Conflict with other governmental agencies such as Congress and Health and Human Services also hurt the CDC’s credibility and image.

Implications

The CDC is not without fault in its mishandling of the spokesperson role during the anthrax crisis. Attempts to provide conclusive information before such statements were prudent weakened the CDC's credibility, yet crisis conditions made much of the standard advice for crisis spokespersons impractical. The CDC's experiences during the anthrax crisis suggest two implications. First, a combination of intense media pressure, active political involvement, multiple investigative sites, and public participation of equal yet independent elements of an organization make following existing guidelines on funneling all communication through designated spokespersons difficult if not futile. Much of the literature devoted to crisis communication is based on for-profit organizations with a focused group of stakeholders. The recommendations from this knowledge base cannot account for the intense scrutiny the CDC experienced during the anthrax crisis. Further research is needed to establish practical standards for operating in such a multi-faceted and complex organizational setting.

Second, when faced with a highly fluid, ambiguous situation, it becomes quite difficult and perhaps impossible to follow the major guidelines espoused in well-prepared, effective crisis communication plans. A willingness to share information, admit fault, accept responsibility, work to meet stakeholder needs, and inform the public on how to reduce personal health risk may not be enough to protect organizational reputation and credibility. Many Americans were terrified at the prospect of a bioterror assault through the government mail system. The demands placed on the CDC to offer immediate, accurate, and conclusive information were unattainable. Recognizing and sharing these limitations at the outset of a crisis may contribute to a public understanding of the communication constraints an organization is facing. Further study in this area is warranted.

Terrorism has long been understood as a potential source of organizational crisis. Nevertheless, the existing literature could not have anticipated the level of anxiety and scrutiny generated by the September 11, 2001 assaults and by the subsequent anthrax crisis. This study establishes one clear example of how the complexity of wide-scale terrorism makes it problematical for complex organizations to follow the established crisis communication guidelines. Future research should explore the unique needs generated by such horrific events.

References

- Balian, Jacqueline. (1999). It's always an emergency with the media. *The Safety and Health Practitioner*, 17, 68-72.
- Benoit, W. L. (1997). "Image repair discourse and crisis communication". *Public Relations Review*, 23, 177-187.
- Borenstein, S., Murphy, K., & Pugh, T. (2001, October 23). CDC criticized for response to anthrax cases. Knight-Ridder/Tribune News Service. p. K3813. Retrieved February 26, 2002, from <http://www.elibrary.com>.
- Brown, J. (2001, October 14). The web browser; CDC health site keeps calm in bioterrorism scare. *Boston Herald*. Retrieved December 9, 2002, from <http://www.bostonherald.com>.
- Burton, R. M. (1989). Putting out forest fires. *Physician Executive*, 15, 22-23.

- Connolly, C., & Nakashima, E. (2001, December 6). CDC sets 'tips' on handling mail; precautions aimed at cutting risk from anthrax traces. *The Washington Post*, p. A26. Retrieved February 26, 2002, from <http://www.elibrary.com>.
- Cohn, R. (2000). *The PR crisis bible*. New York: St. Martins Press.
- Coombs, W. T. (1999). *Ongoing crisis communication: Planning, managing, and responding*.
- Covello, V. T. (1992). Risk communication: An emerging area of health communication and research. In S. A. Deetz (Ed.) *Communication Yearbook 15* (pp. 359-373). Newbury Park, CA: Sage.
- Covello, V. T., Peters, R. G., Wojtecki, J. G., & Hyde, R. C. (2001). Risk communication, the West Nile Virus epidemic, and bioterrorism: Responding to the communication challenges posed by the intentional or unintentional release of a pathogen in an urban setting. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 78, 382-391.
- Donnelly, J. (2001, November 11). *The Boston Globe*, p.A1. Retrieved February 25, 2002, from <http://web.lexis-nexis.com>.
- Gaunt, P., & Ollenburger, J. (1995). "Issues management revisited: A tool that deserves another look. *Public Relations Review*, 21, 199-211.
- Fearn-Banks, K. (2002). *Crisis communications: A casebook approach* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Hall, C. & Stannard, M.B. (2001, October 24). Anthrax scare strikes close to White House, lawmakers critical of CDC's reaction. *San Francisco Chronicle*. Retrieved December 9, 2001, from <http://www.sfgate.com>.
- Hearit, K. M. (2001). When an organization speaks in defense of itself. In R. L. Heath (Ed.) *Handbook of public relations* (pp. 501-511). Thousand Oaks, CA: Sage.
- Heath, R. L. (1995). Corporate environmental risk communication: Cases and practices along the Texas Gulf Coast. In B. R. Burleson (Ed.) *Communication Yearbook 18* (pp. 255-277). Thousand Oaks, CA: Sage.
- Heath, R. L., & Abel, D. D. (1996a). Proactive response to citizen risk concerns: Increasing citizens' knowledge of emergency response practices. *Journal of Public Relations Research*, 8, 151-171.
- Heath, R. L., & Abel, D. D. (1996b). Types of knowledge as predictors of company support: The role of information in risk communication. *Journal of Public Relations Research*, 8, 35-55.
- Kaufmann, J., Kesner, I. F., & Hazen, T. L. (1994). The myth of full disclosure: A look at organizational communications during crises. *Business Horizons*, 37, 29-40.
- Labs told to watch hazardous materials, CDC says verify inventory and safeguard shipping. (2001, October 17). *Pittsburgh Post-Gazette*. Retrieved February 26, 2002, from <http://www.elibrary.com>.
- Marra, F. J. (1998). "Crisis communication plans: Poor predictors of excellent crisis public relations. *Public Relations Review*, 24, 461-475.

- McClam, E. (2001, November 29). Anthrax cases send dozens of CDC investigators across the country on secret missions. AP Worldstream. Retrieved December 7, 2002, from <http://www.elibrary.com>.
- McKenna, M.A.J. (2001, October 28). America Responds: At CDC, everything rearranged to put anthrax fight first. The Atlanta Journal and Constitution, p. A12. Retrieved December 7, 2002, from <http://www.elibrary.com>.
- McKenna, M.A.J., & Eversley, M. (2001, December 21). Congress votes \$6.8 billion to support CDC efforts. The Atlanta Journal and Constitution, p C4. Retrieved December 7, 2002, from <http://www.elibrary.com>.
- Meckler, L. (2001, October 23). Anthrax kills 2 postal workers. AP Online. Retrieved December 7, 2002, from <http://www.elibrary.com>.
- Meckler, L. (2001, November 7). Feds seek number of anthrax labs. AP Online. Retrieved February 26, 2002, from <http://www.elibrary.com>
- Morse, S., & Stoltz, C. (2001, October 9). Symptoms include confusion. The Washington Post, p. F03. Retrieved December 7, 2002, from <http://www.elibrary.com>.
- Murphy, P. (1996). Chaos theory as a model for managing issues and crises. *Public Relations Review*, 22, 95-114.
- Nicolazzo, Richard E., & Nickson, Stephen. (2001). The power of public opinion. *Risk Management*, 48, 41-47.
- Olaniran, B. A., & Williams, D. E. (2001). Anticipatory model of crisis management: A vigilant response to technological crises. In R. L. Heath (Ed.) *Handbook of public relations* (pp. 487-500). Thousand Oaks, CA: Sage.
- Osterholm, M. T., & Schwartz, J. (2000). *Living terrors*. New York: Dell.
- Reid, P. (2001, October 28). Learn to analyze confusing reports. The Palm Beach Post, p. 15A. Retrieved February 26, 2001, from <http://www.elibrary.com>.
- Rugo, Vanessa. (2001). How to communicate and prepare for a crisis. *Waste Age*, 32, 20.
- Rugo, Vanessa. (2001). Have your ducks in a row before a crisis. *Waste Age*, 32, 42-43.
- Russakoff, D. (2001, November 11). Success by shoe leather, intuition; no new cases recorded since Oct. 31 signals apparent end to outbreak in state. The Washington Post, p. A08. Retrieved February 26, 2002, from <http://www.elibrary.com>.
- Seabrook, C. (2001, October 17). Flulike symptoms? It could be the flu; anthrax's rarity offers faint solace to fearful. The Atlanta Journal and Constitution, p. A18. Retrieved December 7, 2002, from <http://www.elibrary.com>.
- Seeger, M. W., Sellnow, T. L., & Ulmer, R. R. (2001). Public Relations and crisis communication. In R. L. Heath (Ed.) *Handbook of public relations* (pp. 155-165). Thousand Oaks, CA: Sage.
- Sellnow, T. L., & Ulmer, R. R. (1995). "Ambiguous argument as advocacy in organizational crisis communication." *Argumentation and Advocacy*, 31, 138-151.

- Sellnow, T. L., Seeger, M. W., & Ulmer, R. R. (2002). Chaos theory, informational needs, and natural disasters. *Journal of Applied Communication Research*, 30, 269-292.
- Sellnow, T. L., Ulmer, R. R., & Snider, M. (1998). "The compatibility of corrective action in organizational crisis communication". *Communication Quarterly*, 46, 60-75.
- Turner, Piper. (1999). When the talking gets tough. *Journal of Property Management*, 64, 30-34.
- Ulmer, R. R., & Sellnow, T. L. (2000). Consistent questions of ambiguity in organizational crisis communication : Jack in the Box as a case study. *Journal of Business Ethics*, 25, 143-155.
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