ORGANIZATIONAL CRISES IN LOCAL NORTH CAROLINA PUBLIC HEALTH AGENCIES: A CRISIS TYPOLOGY AND ASSESSMENT OF ORGANIZATIONAL PREPAREDNESS

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A dissertation submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Doctor of Public Health in the Department of Health Policy and Administration in the School of Public Health.

Chapel Hill
2007

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ABSTRACT

DONNA R. DINKIN: Organizational Crises In Local North Carolina Public Health
Agencies: A Crisis Typology and Assessment Of Organizational Preparedness
(Under the direction of Bruce Fried)

The serious outcomes of crises, such as diminished public confidence and the death of

people and wildlife, illustrate the importance of preparing for organizational crises. Serious

threats of terrorism, rapid advances in medical technology, increasing complexity of social

problems, and increased scrutiny of public agencies suggests that public health organizations

are ripe for organizational crises. This study aimed to explore the levels of crisis preparedness

in local North Carolina public health departments.

The first phase of this study included the creation of a crisis typology by public health

practitioners. The resulting typology revealed 7 categories of organizational crises: Disasters,

Personnel, Quality Assurance, Legal, Public Relations, Political, and Plant/ Equipment. The

second phase of the study used a comprehensive systems model of crisis preparedness (DTP

Model of Preparedness) to assess the level of preparedness of local health departments to

prevent and respond to the different types of crises. Health departments considered crisis

prepared have human, cultural, and structural characteristics that support crisis prevention

and response activities. They also have written strategies, such as crisis plans and media

relations procedures, which provide a systematic framework for responding to a variety of

crisis situations.

A written survey sent to local health directors and interviews and document reviews at 5 public health departments provided valuable insight into the level of crisis preparedness of health departments. Key findings included an over-estimation of organizational preparedness by health directors and seven significant gaps in the dimensions of the preparedness model. Local health directors felt most prepared to deal with situations related to quality assurance, legal issues or personnel concerns and least prepared to manage emergencies such as terrorist acts or kidnapping. Health departments did have some crisis preparedness structures and policies in place but they lacked integration and comprehensiveness.

One indicator of the ability of public health agencies to respond to community-wide disasters is the extent to which they are prepared to handle a variety of crisis situations that could impact their own organization. Pandemic flu or some other major crisis is inevitable. More than ever, local health departments must be prepared to deal with crises.

ACKNOWLEDGMENTS

When a project takes as long as this has taken me to complete, there are many people to thank. Too many, in fact, to acknowledge each and every one of them here. But, their support and encouragement throughout the years has not only been appreciated, it was also very much needed. I thank all of them for believing in me.

There are a few people, however, that I would like to recognize individually. I truly believe that without their help I would never have made it through the process of finishing this dissertation. First, I would like to thank my committee members. Bruce Fried, my committee chair, who met with me countless times over the years and never once lost his faith that I would finish (or at least, didn't show it.) Leah Devlin, North Carolina State Health Director, who has always made me feel like I had something to contribute to the practice of public health and has always kept me connected to that world. Christine Pearson, faculty member at Thunderbird Global School of Management, who never thought twice about helping me apply her knowledge of crisis preparedness to the world of public health and hung in there with me, despite the years. Vaughn Upshaw, friend and UNC faculty member, who has been a strong advocate and cheerleader of my work ever since I met her. And Felicia Mebane, HPAA faculty member, who provided a fresh perspective on my work and helped me remember to keep the customer in mind.

I must also thank several colleagues and friends including the public health leaders at the Guilford County Department of Public Health, where my true public health roots are and

my interest in the areas of crisis communication and system preparedness began. I am also deeply grateful to my colleagues from the National Public Health Leadership Development Network who share my passion of crisis leadership and who challenged my thinking on this topic along the way. In addition, I owe a tremendous amount of gratitude to the Greensboro Montessori School for allowing me to chair their crisis preparedness committee. It is through my work with the staff and faculty at this school that I truly began to understand the real-life difficulties and the amazing rewards of becoming a crisis-prepared organization.

Finally, I must recognize and thank my family for their understanding, love and support. I appreciate the nagging from both my mother and my father over the years and the unconditional love from my sister who called me doctor long before I made this last attempt to finish. But it is truly the encouragement and cheering from my husband, Sylvester and our sons, Joseph and Noah that got me to the end. Their words written on a congratulatory card bring me the most joy as I finally reach this goal – "Good Job, Mom!"

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CHAPTER 1

INTRODUCTION

"*The world will not evolve past its current crisis by using the same thinking that created the situation.*" *Albert Einstein*

Organizational crises can rival natural disasters in their destructive outcomes. Crises such as the space shuttle Challenger explosion, the Chernobyl nuclear reactor disaster, the Exxon Valdez oil spill off the coast of Alaska and Union Carbide's deadly chemical gas release in Bhopal, India, are often cited for the harm that they caused. Death of people and animals, contamination of the environment, diminished public confidence and huge economic losses are just a few of the consequences that these events have had. The impact of an organizational crisis may be so significant that it cripples the organization, making it impossible to effectively meet organizational goals and mission. And for some organizations, it may end their very existence. The serious outcomes of organizational crises illustrate the importance of preventing and preparing for them.

In the last two decades a disturbing trend has emerged. The number of organizational crises has been rising (Mitroff, 2005). The 2003 Annual Report for the Institute for Crisis Management reported that 2001 and 2003 were the most crisis-prone years since their organization began collecting data on business crises. Over 18,000 separate corporate crises

were recorded by business-news editors during this three-year period. Among these are the explosion of the West Pharmaceutical Services plant in Kinston, NC (2003), the fall of Enron and WorldCom (2001), the attacks on the World Trade Centers (2001) and deaths and injuries from the intentional exposures of anthrax (2001). While natural disasters, such as Hurricane Katrina in 2005 and the Southeast Asian Tsunami in 2004 continue to impact organizations, the recent increase in crises appears to be the result of two other causes.

The first is related to the growth in complex systems. In the 1980's businesses began to experience the negative effects of the increased complexity of technologies and systems used in organizations. This complexity increases the risk of system overloads and malfunctions, which can lead to crises (Perrow, 1984). Recent examples of this type of crisis include the Northeast / Canadian power outage (2003) and the space shuttle Columbia explosion (2003) (Mitroff & Alpaslan, 2003).

The second factor contributing to the recent growth of organizational crises is more troubling. The 1990's saw an increase in events caused by people with intent to do evil, such as bombings, extortion, terrorism and cyber-attacks (Mitroff & Alpaslan, 2003). Unfortunately, this disturbing trend has continued into the 21st century. Recent examples of this include the Wendy's chili scare (2005), the events that took place on 9/11 (2001) and the bombings of buses in London, UK (2005).

The variety of events that have occurred demonstrates that no organization, regardless of size, nature of operations, or type of industry, is immune to crises (Kuklan, 1986). Even federal, state and local public health departments have experienced devastating organizational crises. For example, in Oklahoma a state health officer resigned after pleading guilty to conspiracy to defraud the state ("Health Unit's Former Chief," 2001), in San Francisco a

public health worker was charged with knowingly spreading the HIV virus and in Washington DC, the inspector general for the Department of Health and Human Services was investigated for keeping a gun and life-sized human target in her office ("Janet Rehnquist Resigns," 2003). Local health departments in North Carolina have also had to respond to various types of organizational crises. Accusations of employee bribery, forced resignations of local health directors for misconduct, and mismanaged infectious disease outbreaks are just a few of the situations that have occurred (Guilford Officials Seize, 1990; "Dr. K's Parting Gift," 2005; Jacob vs. Onslow County, 2002). Crises can affect any organization.

While empirical data are limited, business scholars and public relations practitioners agree that the degree to which an organization is affected by a crisis is directly related to its crisis-preparedness efforts (Fink, 1986, Booth, 1993; Shrivastava & Mitroff, 1987; Runyan, 2006). One indicator of the ability of public health agencies to prevent and respond to community-wide disasters is the extent to which they, themselves, are prepared to handle a variety of crisis situations that could impact their own organization. Crisis-preparation will help organizations prevent some crises from occurring and will minimize the impact of those that do occur by enabling the organization to implement a quick and effective crisis response. Mitroff and Alpaslan (2003) claim that in contrast to crisis-prone organizations, crisis-prepared businesses experience fewer crises, stay in business longer, fare better financially and are regarded more highly. Runyan (2006) also found this to be true of small businesses affected by Hurricane Katrina in 2005. Given the potential catastrophic nature of crises, organizations should be engaging in the efforts needed to prevent and respond to a wide range of events.

Despite the importance of crisis prevention and response, the existing literature

offers an uneven and incomplete picture of organizational crisis preparedness. The current literature is not only weak in its development and integration of crisis management theory but it is also limited in its inclusion of research on practical applications of the existing theory. Specific weaknesses of the existing literature include a lack of clear definitions, a lack of consensus around a crisis typology and a comprehensive model of crisis management, a lack of empirical research on crisis management in small, public organizations and an absence of studies that compare organizational crisis-preparedness models with other emergency-preparedness frameworks. The limited scope of the existing crisis management literature leaves much room for future research.

1.1 Purpose of Study

This study, unlike much of the early crisis management research, is not a case-study description of an individual crisis situation. Instead it is an exploratory study designed to uncover information about how local health departments in North Carolina are viewing and preparing for various types of crises. Specifically, this study sets out to answer the following four questions:

1. What are the types of organizational crises that might be experienced by local public health departments in North Carolina?

2. Can these various crisis situations be categorized to form a useful framework to aid in crisis management?

3. How well prepared are health departments to prevent and respond to the various categories of crises?

4. What are the major gaps in crisis preparedness for these health departments?

During the five year period of 2001 to 2006 the federal government spent an estimated $5 billion towards efforts to enhance the public health system's ability to respond to community emergencies (Lurie, 2006). Despite this investment, government officials, public health scholars and local health leaders are questioning whether or not the public health system has really made much progress in its levels of preparedness (Fraser, 2007; Trust For America's Health, 2005). One indicator of the ability of public health agencies to prevent and respond to community-wide disasters is the extent to which they, themselves, are prepared to handle a variety of crisis situations that could impact their own organization. This study provides a framework for public health administrators to systematically prevent and prepare for large-scale organizational crises.

1.2 Definition of Key Terms

In November 2003, a newly appointed health director of a large urban public health department was arrested and charged with a DWI (Driving while intoxicated). He subsequently lost his driving license, his monthly travel allowance and use of a county car. Fourteen months later he resigned. ("Dr. K's Parting Gift," 2005)

In October 1993 a health director of a local North Carolina Department of Public Health was accused of improperly using public money to purchase a table saw, fatigues, arctic-style boots, binoculars, ready to eat meals, duffel bags and other federal surplus items. In September he had also pleaded guilty to 52 misdemeanor charges of authorizing nine septic tank permits without proper certification. The health director was fired that fall. ("Decision on Health Director," 1993)

Events that are labeled as crises typically are described as having significant consequences, low probability of occurrence, a high degree of ambiguity and a sense of urgency for decision-making. This paper will focus on organizational crises, the type of events "that can bring your organization down" (Pearson, classroom presentation, 1994). The

two examples above illustrate some organizational crises that have occurred in local North Carolina health departments. Health departments are routinely faced with many other events that require urgent action, such as infectious disease outbreaks, tobacco use in children and bioterrorism threats. These events, however, are not encompassed in the definition of organizational crises used in this study. While serious, these situations are considered to be within the normal scope of work for a public health department. That is, the activities associated with preventing and responding to these scenarios fall within the responsibility of a public health department. These events can become organizational crises, however, when not handled well or when they directly affect the public health staff or facilities. This distinction will be described in more detail later in this paper.

Since the focus of this study is at the organizational level, the term "crisis preparedness" is also defined at the agency level versus the community level in which public health practitioners conduct their work. Here it is defined as an organization's ability to prevent, respond to and learn from organizational crises. An organization that is considered crisis-prepared will have more than just a crisis plan. The theoretical model for organizational crisis preparedness used in this study is outlined in chapter 3.

1.3 Assumptions

To gain benefit from this study, it is necessary to believe two underlying assumptions. The first is that it is possible to prepare for organizational crises and the second is that public health organizations are multi-dimensional like other organizations.

It is important to assume that an organization can influence the occurrence and impact of a wide variety of crises. Even in instances where it is impossible to prevent an

event from happening, such as a natural disaster, individuals must believe that there are things they can do to limit the harm or destruction that is possible.

While it is difficult to prove, it is believed (Alpaslan, 2004; Mitroff et al., 1989) that organizations that have a crisis-preparedness mindset may prevent crises from occurring. In addition, there is some empirical data that shows that organizations that prepare for crises are more likely to successfully resolve events than organizations which have not prepared. In his study of British organizations, Booth, for example, found evidence that the effects of crises on firms was less for those firms that had systems for crisis management than for those without systems (Booth,1993). Murat Can Alpaslan (2004) also found in his research of Fortune 1000 companies that organizations that adopted a proactive approach to crisis management achieved greater crisis management outcomes.

It is also important to accept that public health organizations, like other organizations, are multi-dimensional. Organizations are comprised of technical, human and social, administrative and external dimensions (Kovoor, 1991). In a health department, a crisis might affect the buildings and grounds, the financial resources, the stability of staff, the opinions of the public, the functioning of equipment, the organizational culture and the infrastructure of the organization. Since crises can arise from and impact on any area of an organization, an effective crisis-management strategy must address all dimensions of an organization (Kovoor, 1991). Despite differences in mission, public health departments are similar to private corporations in that they function by integrating multiple systems. This premise supports the use of a multi-dimensional crisis-preparedness model derived from the business literature.

1.4 Setting Description

To date, much of the crisis management literature has focused on private sector industries that deal with hazardous processes such as chemical plants and tightly-coupled technologies such as airline industries (Kovoor, 1991; Kovoor-Misra, 1996; Shrivastava, 1987). However, all organizations may find themselves in a crisis situation (Spillan & Crandall, 2002). "Immunity from the trauma of such events is not guaranteed and the public sector is coming under increasing scrutiny with regard to its levels of crisis preparedness" (Smith, 1993). What is ironic, however, is that the public sector is the 'home' of a number of organizations which exist either to manage crises or to ensure that other organizations facing such events can recover from the intense trauma that accompanies them (Smith, 1993). For example, governmental agencies such as the Federal Emergency Management Agency (FEMA), County Emergency Services, and City Police and Fire Services all have as their primary mission to assist communities in times of crisis. Local public health departments also have a critical role in responding to community disasters and other public health crises. Yet, there is little evidence in the literature that suggests that any of these agencies utilize their crisis management skills to include preparedness for their own organizational crises. Given the importance of crisis preparedness and this apparent paradox within the public sector it is important to ask "what is the state of crisis preparedness in the public sector?" The context for this research is one agency within the public sector, the local public health department.

Public health departments in North Carolina have broad authority to protect and promote the health of the citizens within their jurisdictions. The Centers for Disease Control and Prevention National Public Health Performance Standards Program lists the following as core public health functions:

1. Monitor health status to identify and solve community health problems.
2. Diagnose and investigate health problems and health hazards in the community.
3. Inform, educate, and empower people about health issues.
4. Mobilize community partnerships and action to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. Assure competent public and personal health care workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Research for new insights and innovative solutions to health problems.

CDC, Core Public Health Functions Steering Committee, 1994

Public health departments provide an interesting setting to study crisis preparedness because they are not only increasingly vulnerable to organizational crises, but also because the consequences for poor performance are so high. At least three environmental factors are contributing to an increase in the risk of crisis in health departments. These are instability and complexity of the health system environment, reduction of both financial and human resources and increasing public distrust in government and governmental agencies.

The health system is changing. There have been several events over the last ten years which have forced many health care organizations to re-examine their purpose and scope. One of these events was the discussions around health care reform at both a national and state level in the early 1990's. At this time, health organizations scrambled to redefine their place in the health care system. This confusion, along with the national reports by the Institute of Medicine (IOM Future of Public Health, 1988) which claimed that the public health system is in disarray, pushed many public health agencies to rethink how they carry out their mandate of promoting health. More recently, the fear of terrorist attacks has contributed to significant changes in the service priorities of many health agencies. This is certainly true in public

health departments. However, many public health employees feel that the funds for bio-terrorism-preparedness efforts are directly reducing the funds that are available for other programs which address more significant community health issues. Changes and confusion make an organization more vulnerable to crisis (Smart et al., 1984).

Acts of violence against public employees such as the bombing of the federal building in Oklahoma, shootings within the US Postal Service and the anthrax scares across the nation also suggest that there is an increasing possibility that public health departments may experience certain types of crises. Growing anger over governmental regulations and increasing taxes has caused some individuals to target their frustration toward public agencies and public employees. This trend has created an increased awareness in public agencies of the potential for incidences of workplace violence, sabotage and negative media coverage.

Unfortunately, sometimes the fear of violence can also create other kinds of crises. Such is the case of the federal-level investigation of the inspector general at the Department of Health and Human Services. Janet Rehnquist was investigated in November 2002 for keeping an unauthorized 9mm handgun and a poster of a target in her office (Janet Rehnquist Resigns," 2003). Well-documented acts of violence within public agencies suggest that health departments are at risk and should prepare for these kinds of incidents.

Public health agencies are also interesting to study because, despite their value to the community and the increase in complexity of their services, they have a continuously decreasing availability of resources. For example, as public health agencies try to define their place in the rapidly-changing health system, politicians with limited knowledge of public health are cutting the budgets of health departments (Late, 2006; OMB Watch, 2003). Wisenblit's (1989) survey of 166 firms shows that larger organizations have both the need

and the resources to be better prepared for crisis. Smaller organizations have the need, but often lack the resources. Local health departments, when faced with the choice of having a nurse to give immunizations or a public relations specialist, will choose the former. Small local health departments, struggling to keep staff to maintain needed health programs, may limit the attention they put towards planning for situations they feel are rare and unlikely.

The consequences of failure to prepare are high for a health department. Health departments are very vulnerable to public opinion. In fact, trust and credibility are the most important resources that public health agencies have. If members of the community perceive the health department as less-than-professional or less-than-capable, then they will not see the health department as a leader of health for their community. Without this, they are virtually ineffective in working with the community to promote its own health. Health departments that are seen as community leaders are able to organize strong community coalitions, they are able to garnish strong support for the promotion of healthy public policies and they are able to network with other community agencies to assure health services for all those in need. Health departments cannot afford to be unprepared.

1.5 The Study

This study of crisis preparedness was conducted in two phases. Phase I used focus groups to develop a typology of the crises faced by public health agencies. Phase II used multiple methodologies to obtain data on the level of crisis preparedness of local health departments in the state of North Carolina. These methods include key informant interviews and document reviews from five local health departments and a written survey given to all local health directors in the state. The various types of data were necessary to provide insight

into the very complex nature of organizational crises.

Prior to the collection of data for this research an extensive examination of the literature on organizational crisis was conducted. Chapter 2 provides a review of this literature and its limitations. Chapter 3 presents the conceptual framework used to conduct this study. Definitions of key terms and a more in-depth description of the crisis preparedness model are provided. The methods used for this study are described in chapter 4. This includes a brief description of the methodologies used for each phase of the study and a review of the methods used for analysis of the data. The results of the study are presented in chapters 5, 6 and 7. Chapter 5 presents the formation of a crisis typology from a list of potential worst-case scenarios. Chapter 6 summarizes the results of the written survey given to all health directors and chapter 7 highlights the themes that emerged through the key informant interviews and document reviews in each of five local health departments. Chapter 8 includes a summary of the key findings of the study and discusses the limitations of the research design. Finally, chapter 9 presents the implications of the findings and ideas for future areas of study.

CHAPTER 2

REVIEW OF THE LITERATURE

"Thus the wise win before they fight, while the ignorant fight to win"   The Art of War

The word "crisis" is derived from the Greek word krisis, meaning "decision". In early Greek writings the term was used to describe a political conflict or to explain the developmental process of an illness. After being relatively forgotten for some centuries, the notion of "crisis" came back in the study of political economy. From that time on, the notion of crisis has been increasingly used in different fields, such as economics, political science, philosophy, psychology, history and public health (Pauchant & Douville, 1993; Pearson & Clair, 1998; Boin, 2004).

The formal study of crises in the field of management began with the release of a landmark publication in 1963 by Hermann. This article identified the effects of crises on the viability of organizations. Despite Hermann's interest in this topic, little more was published by other authors during the following two decades. It wasn't until the late 1980's, after the historic Johnson & Johnson Tylenol crisis (Mitroff, Diamond & Alpaslan, 2006), that the literature on this topic began to develop (Pauchant & Douville, 1993). Crises affecting major organizations, such as the tire recall for Ford Firestone (2000), the bankruptcy case for Enron (2001), the failings of FEMA after Hurricane Katrina (2005) and the recent toy recall by Mattel (2007), have prompted more interest in this field of study. Despite this interest there

are still some issues and gaps in the literature on the topic of organizational crisis. The

following section provides an overview of the existing literature on organizational crisis and

the limitations of this literature. This literature is reviewed to provide the theoretical

background for the study of crisis preparedness in local health departments.

2.1 Limitations of the Literature

The literature on organizational crisis reveals that the research suffers from three

major deficiencies. First, the literature is limited by inconsistent terminology and incomplete

theoretical models. Second, the existing empirical research on organizational crisis

preparedness is limited in its comprehensiveness, often using a single method of data

collection, typically a written survey. Finally, most studies of crisis preparedness have been

directed at large, private corporations. There have been few studies on small, governmental or

nonprofit organizations and virtually nothing on the types of organizational crises faced by

small, local public health agencies.

One of the most apparent weaknesses of the literature on organizational crisis is the

lack of a generally agreed-upon common language for this field of study. The literature

provides no generally-accepted definitions for the terms crisis and crisis management (Reilly,

1989; Shaw & Harrald, 2004; Boin, 2004) and the field still lacks an overall, integrated

paradigm (Pauchant & Douville, 1993; Pearson & Clair, 1998). The multidisciplinary nature

of crises has contributed to the confusion as separate disciplines have conducted their own

research and created their own language around the same topic (Pearson & Clair, 1998; Boin,

2004).

The limited literature on organizational crisis shows that many terms have been used

as synonyms for "crisis". For example, terms such as disaster, threat, problem, emergency, incident and catastrophe have been used to describe crisis events. Despite the lack of consensus regarding a definition of crisis, many believe that in order to effectively prepare for and respond to crises, administrators must know what constitutes a crisis. Billings et al. suggest that "a useful model of crisis should allow us to understand the consequences of crisis more fully and to manage crises better" (Billings et al., 1980).

The research on crisis is also limited by the confusion over how a crisis is viewed. Some researchers have lumped all crises into a single phenomenon (Nystrum & Starbuck, 1984; Boin, 2004) while others have examined different types of crises (Barton, 1993; Kovoor, 1991; Sipka & Smith, 1993) or have examined only one manifestation of crisis (Marra, 1992; Doepel, 1991; Lagadec, 1987; Alpaslan, 2004). Different types and forms of crises have entirely different implications for organizations and for their crisis management strategies. The lack of consistency on the issue of crisis suggests that there is a need for an overriding classificatory framework which allows for the study of organizational crisis and crisis management (Richardson, 1994, Mitroff et al., 2004).

Most prior studies also fail to clearly discriminate between the concepts of crisis prevention, crisis preparedness, mitigation, business continuity and crisis management (Reilly, 1989; Shaw & Harrald, 2004). Adding to the confusion, various authors have used the same term to discuss different phases or dimensions of a crisis. For example, Reilly (1989) uses the term crisis management to describe the process of effective resolution of a triggering event. Pearson and Mitroff (1993), however, use the term 'crisis management' to describe not only crisis resolution, but also crisis prevention and preparation. Crisis prevention, crisis preparation and crisis management appear to be different concepts and

imply different activities on the part of the organization (Reilly, 1989). Shaw and Harrald (2004) have decided to blend the terms crisis management and business continuity since these terms are often used interchangeably in the field. A comprehensive model of organizational crisis which differentiates between these terms may be useful for managers and practitioners as they assess their organizations' strengths and weaknesses regarding crisis preparedness.

The existing literature on crisis is further limited by the methodologies used to study organizational crises and their management. At the time of this study, crisis research relied heavily on a single method of study: the post-mortem case study (Gottschalk, 1993; Kurzbard & Siomkos, 1992; Shrivastava, 1987; Wise, 2003; Paraskevas, 2006). Examples of this include in-depth descriptions of the Challenger disaster, the Perrier product contamination, the Three Mile Island meltdown and the Johnson & Johnson Tylenol case. Case studies can provide substantial depth of analysis yet they are difficult to compare (Reilly, 1989; Robert et al., 2002). Case studies are also limited as a teaching tool since some organizations find it difficult to learn from the unique experiences of other organizations (Booth, 1993) while others recognize that it is not possible to prove that a different approach to the crisis being studied would have resulted in different outcomes (Robert et al., 2002).

Despite the need for a more comprehensive study of crisis, the nature of crisis makes it difficult to study in a systematic manner. By definition, crises are rare, unique events (Robert et al., 2002). Situations such as the murder of an employee or the bombing of a building do not occur every day, nor do they occur in the same way in different organizations. These characteristics of crises make them more difficult to compare or study across organizations. Crises are also very complex and often impact several dimensions of the organization in which they occur. A thorough case study of the Union Carbide disaster in

Bhopal, India illustrates the complexity of this crisis. Shrivastava suggests that this crisis was caused by a failure of human, cultural, financial, technological, political and environmental factors (Shrivastava, 1987). A comprehensive study of organizational crisis requires an understanding of how different types of crises impact the various dimensions of an organization at different stages of their development. The unusual and complex nature of crises makes them difficult to study in a systematic manner. Because of these challenges there is limited empirical research on the nature of crises and how an organization might prepare for them.

More recent studies have tried to explore organizational preparedness in different industries prior to the occurrence of a crisis. Unfortunately, many of these studies use only a single method of data collection, typically, a written survey of top managers (Loosemore et al., 2006; Penrose, 2000; Zdziarski, 2001; Mitroff et al., 2006). Written survey instruments allow for a quick retrieval of data from a large number of people. However, their value to the study of organizational crises is limited since they don't allow for a full understanding of the respondents' perceptions and how their perceptions differ from the perceptions of others within the same organization or how closely they match reality. More studies that use multiple methodologies will help further the development of a comprehensive model of organizational crisis.

In addition to the limitations of the methodologies used to study preparedness, another gap in the literature is that, of the studies that exist, most are focused on large organizations, typically private corporations. The potential for catastrophic crises that affect many people makes these organizations an appealing target for the study of crisis management. Researchers such as Pauchant and Mitroff focused on Fortune 1000 companies in the US,

Canada and France in their study of crisis preparedness. These organizations had, on average, 50,000 employees and often employed an expert on crisis management (Pauchant & Mitroff, 1992). Reilly studied the crisis management activities of thirty-five banking organizations with an average asset size of $14 billion and Fink (1986) surveyed chief executive officers of Fortune 500 companies in the United States to assess their attitudes about crises and crisis management. Others have studied technologically-based organizations (Perrow, 1984; Sarah Kovoor, 1991; Kovoor-Misra, 1996) or other high-reliability organizations such as aircraft carriers and nuclear power plants (Medvedev, 1990; Vaughan, 1996). More recent research has included a broader group of organizations, such as small businesses (Runyan, 2006), nonprofit organizations (Spillan, et al., 2002) and universities (Mitroff et al., 2006, Zdziarski, 2001).

Despite the emergence of new studies and research, there has been almost no research on the topic of organizational crises in local governmental organizations. This is particularly true for public health departments. For instance, a literature search of the most influential public health professional journal, the *American Journal of Public Health*, did not identify a single article or editorial on organizational crisis management over the ten-year period prior to this study (1985-1995). Since that time, only the work of Louis Rowitz, from the University of Illinois, links the study of organizational crises to the practice of public health. In his book, *Public Health for the 21st Century: The Prepared Leader* (2006), he suggests that the prepared public health leader is a leader that can handle a variety of crises, including those that are caused by or impact various parts of a public health agency. The increased vulnerability of public agencies to crises as highlighted by several recent crises only highlights the need for crisis preparedness research which focuses on public organizations.

In general, the study of organizational crisis in the field of management still has significant gaps. The existing crisis literature is uneven in scope and hindered by the lack of clear constructs and theory-based models. Despite these limitations, the previous work of others is helpful in setting the background for this study. The remainder of this chapter provides a review of the crisis literature.

2.2 Organizational Crises

2.2a Crisis Defined

Although crises are becoming increasingly common, little is known about how a situation becomes defined as a crisis (Billings, Milburn, & Schaalman, 1980). In public health, the term "crisis" has been used for decades to describe when an undesirable health condition becomes widespread such as the HIV/AIDS epidemic, teen smoking rates or childhood obesity levels. Many professionals feel like they deal with crises every day. They are often confusing crisis with other negative situations such as conflicts or other routine business problems. There is much debate over the differentiation of crises from ordinary business challenges. Yet having to deal with a new competitor in the marketplace or having to fix a leaky water heater is not the same kind of "crisis" as people dying because of your product or service. Barton (1993) differentiates business problems from organizational crises by suggesting that "problems" require a shorter timeframe to be addressed, they tend not to arouse much public attention and they need limited human resources to be handled. Crises, on the other hand, take a considerable amount of time and resources to be handled and often arouse regulatory and public attention.

One of the best known models for crisis is that of Hermann (Billings, Milburn, &

Schaalman, 1980). Hermann's model suggests that a crisis can exist if three variables are present. These are: threat to valued goals, short decision time, and surprise. Threat is a potential hindrance to some state or goal desired by the unit and only occurs if the decision makers recognize it and believe that it will hinder attaining goals. Decision time is short when the situation will be altered in the near future, after which no decision can be made or the decision can be made only under less favorable circumstances. Surprise refers to a lack of awareness by the decision makers that the crisis situation is likely to occur but is not equated with the lack of planned response to the situation (Billings, Milburn, & Schaalman, 1980).

There has been limited support for Hermann's model (Billings et al., 1980). Specifically there has been little empirical support of the importance of the variable of surprise as a determinant of a crisis. A revised model of crisis devised by Billings, Milburn and Schaalman suggests that this variable be dropped and that the variable of time can be refined. Other definitions of crisis have included characteristics such as low probability (Weick, 1988; Shrivastava et al., 1987; Pearson & Clair, 1998), severe consequences (Irvine & Millar, 1997; Mitroff et al., 1987), multiple stakeholders (Shrivastava et al.,1987), ambiguity of cause and resolution (Pearson & Clair, 1998; Boin, 2004), high magnitude (Reilly, 1989), and requiring responses outside of the typical operating frameworks (Reilly, 1989).

While much of the research on organizational crisis takes the perspective that a crisis is a detrimental situation that has the potential to destroy the organization, some stress that a crisis can be an opportunity as well. Fink highlights in his book on crisis management that the Chinese symbol for the word "crisis", called wei-ji, is actually a combination of two words, "danger" and "opportunity" (Fink, 1986). While a crisis can be dangerous and cause harm,

crises can also open up new possibilities, can liberate innovative ideas (Booth, 1993) and can be a catalyst for risk-taking and thinking in new ways (Robert et al., 2002). In public-sector organizations, Bryson states that crises are often necessary to bring about basic changes (Bryson, 1981) and therefore can have a positive outcome. For example, a local health department which has requested more staff for years might finally be given additional employees when a mismanaged public health situation highlights the need for them.

Whether a crisis is seen as a threat or an opportunity depends on the perspective of the decision maker. What is seen as a crisis by one person may not be seen as a crisis by another (Kuklan, 1986; Boin, 2004; Conte et al., 2007). Goldstein (1994) claims that this perception is determined by the self-efficacy of an organization's leader. For example, leaders who view a situation as manageable are more likely to see an opportunity than those who feel that a situation is uncontrollable. Billings et al., (1980) suggests that a model for crisis should include this fact. They defined a crisis by a set of variables (probability of loss, value of loss, extent of time pressure) perceived by the decision maker. Therefore, crisis resides not only in the situation, but in the person as well.

2.2b Crisis Types

Nightly news programs highlight the variety of negative events that can and do occur. Many of these situations, such as product tampering, embezzlement, sexual harassment, fraud, and workplace violence, have the potential to devastate an organization. These different types of crises can lead to different organizational impacts and will demand different management techniques (Booth, 1993).

"Since the number of potential crises seems endless, no organization, even with the

healthiest of budgets could plan for all possible contingencies" (Pearson & Mitroff, 1993). A framework which groups similar crises together, may allow organizations a realistic model for preparing for the variety of situations that may occur (Mitroff, 1988). According to Newsom et al. (1993), "Crises are like plays; there are only so many basic plots. Everything else is a variation." These 'basic plots' can be found in an effective categorization system.

A review of the crisis management literature reveals a wide range of ways to categorize the list of potential crisis situations (Coombs, 1994). Booth (1993) suggests that there are three general types of crises: creeping crisis, periodic threat, or sudden threat. A creeping crisis is defined as a gradually increasing threat to an organization. A creeping crisis for public health organizations may be changes in the health care environment, such as the discussions around health care reform in the 1990's. The second type of crisis, the periodic threat, is seen as routine, expected situations. Situations such as budget-cutting mandates or regular political changes in government would be included here. The third type of crisis described by Booth is the one that most scholars of organizational crises consider as a 'crisis'. This is the sudden threat which puts the whole organization in immediate danger.

Studies that attempt to categorize the events included in Booth's third type of crises tend to rely upon a set of dimensions for generating categories. With the exception of the typology created by Mitroff (1988), these dimensions have typically been determined by the researcher. Lipman-Blumen (1973) has created the most complex categorization system. She has identified at least ten dimensions in which to view crises. These are: (1) externality-internality; (2) randomness-expectability; (3) natural generation-artificial generation; (4) chronicity-transitoriness; (5) pervasiveness-boundedness; (6) intensity-mildness; (7) scarcity-surplus; (8) perceived solvability-perceived insolvability; (9) precipitate onset- gradual onset;

and (10) substantive content. She suggests that cross-categorization of these dimensions characterizes the exact nature of a given crisis (Lipman-Blumen, 1973). Most others have suggested less complex typologies of crises.

Coombs (1994) selected two dimensions for the characterization of crises: internal-external and intentional - unintentional. The internal-external dimension indicates whether the crisis was precipitated by something the organization did (internal) or by actions from some group outside of the organization (external). The intentional-unintentional dimension indicates whether the crisis event was triggered purposefully or not committed purposefully by some actor. Newsom et al. (1993) offers a slightly different scheme by replacing Coombs' internal-external dimension with the dimension of violent-nonviolent. They also further differentiate unintentional crises by separating acts of nature, such as earthquakes or forest fires, from other unintended system breakdowns such as explosions, leaks or other accidents.

In their book, *Transforming the Crisis-Prone Organization*, Pauchant and Mitroff (1992) share a categorization system that was developed by grouping crises that often occurred at the same time together into a "crisis family." Figure 2.1 highlights this model (Pauchant & Mitroff, 1992). The families labeled as External Information Attacks, External Economic Attacks, Mega Damage, Breaks, Psycho and Occupational Health Diseases (Mitroff, 1988) are differentiated based on two dimensions: severity and cause. The horizontal dimension represents severity. The crises on the left hand side fall outside the range of normal, rational human behavior. Those on the right are more easily understood and can be handled by existing institutions, for example, the legal system, or technical knowledge, for example, plant design. The vertical dimension differentiates between those crises that are caused or influenced by relatively impersonal economic or technical factors

and those caused by human factors such as organizational miscommunication, employee

sabotage, etc. (Mitroff, 1988).

Figure 2.1 Crisis Typology

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                        ┌─────────────────────────────┐
                        │   TECHNICAL / ECONOMIC      │
                        └─────────────────────────────┘
 ┌──────────────────────────┐              ┌──────────────────────────────┐
 │ External Economic        │              │ External Information Attacks │
 │ Attacks                  │              │                              │
 │                          │              │ Copyright Infringement       │
 │ Extortion                │              │ Loss of Information          │
 │ Bribery                  │              │ Counterfeiting               │
 │ Boycotts                 │              │ Rumors                       │
 │ Hostile Takeovers        │              └──────────────────────────────┘
 └──────────────────────────┘
 ┌──────────────────────┐                 ┌──────────────────────┐
 │ Megadamage           │                 │ Breaks               │
 │                      │                 │ Recalls              │
 │ Environmental        │  ┌────────────┐ │ Product Defects      │
 │ Accidents            │  │ Occupational│ │ Plant Defects        │  ┌──────────┐
 └──────────────────────┘  │ Health     │ │ Computer             │  │ NORMAL   │
 ┌──────────────┐          │ Diseases   │ │ Breakdowns           │  └──────────┘
 │ SEVERE       │          └────────────┘ │ Poor Operator /      │
 └──────────────┘                         │ Errors               │
 ┌──────────────────────────────┐         │ Poor Security        │
 │ Psycho                       │         └──────────────────────┘
 │ Terrorism                    │
 │ Copycats                     │
 │ On-site Sabotage / Tampering │
 │ Off-site Sabotage /Tampering │
 │ Executive Kidnappings        │         ┌──────────────────────┐
 │ Sexual Harassment            │         │   HUMAN / SOCIAL     │
 │ Rumors                       │         └──────────────────────┘
 └──────────────────────────────┘
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Pauchant, T. & Mitroff I. (1992). Transforming the Crisis-Prone Organization. San Francisco, CA: Jossey-Bass, Inc. Reprinted with permission from John Wiley and Sons, Inc.

Stephen Gundel (2005) believes that for a typology to be useful, the categories must

be mutually exclusive. While there are similarities and differences between different crises

which may make it possible to place events in categories, in reality, crisis events are never

this neat. They don't always fit into one box. Crises can originate in any dimension of an organization and can affect any and all dimensions of an organization. Any one crisis situation typically requires multiple responses including a legal response, a public relations response and facility response. The anthrax crisis in the US Postal Service provides a nice example of the reality of organizational crises. The deliberate act of mailing this toxic substance through the US Postal Service created a variety of worst-case scenarios for this federal organization. It impacted the physical and mental health of employees, it closed down some postal facilities and it required that the organization investigate a criminal act. Despite the messiness of crises, categorizing crises by identifying their similarities and differences can help leaders appreciate the variety of situations their organizations may face and can help them more effectively plan for preventing and responding to these multidimensional situations.

2.2c. Causes of Organizational Crises

Scholars in the field of crisis management believe that our world is becoming more crisis-prone (Richardson, 1994; Mitroff & Alpaslan, 2003; Robert et al., 2002). There has been a significant increase in the number of devastating crises experienced by major American corporations in the past several years, from product tampering to environmental disasters, from acts of terrorism to employee sabotage (Wisenblit, 1989; Mitroff & Alpaslan, 2003; ICM Report, 2005). One indication of the rising frequency of corporate crises is the number of product injury lawsuits filed. In just ten years the number increased dramatically. In 1974 there were less than 2,000 suits filed. By 1984, that number had jumped to 10,000 (Mitroff, 1988). Similarly, an analysis of corporate crises conducted by the Institute for Crisis

Management (2006) identified over 10,100 newsworthy crises in both 2005 and in 2006. During the years of 1997-1999, this number was an average of 6,500 distinct crises. To assure that appropriate response strategies are used to manage these crises and to prevent these crises from occurring in the future, organizations must understand the nature and cause of particular crisis situations.

The literature shows that the perceived cause of a crisis affects how the situation is viewed by the stakeholders. In a crisis, observers make judgments about the cause of a crisis and about the level of organizational responsibility (Coombs, 1994). The perception of the cause often influences the amount of support an organization receives from its stakeholders when a crisis occurs. Crises that are thought to have originated within the organization generally have less support than those felt to be caused by forces outside of the organization's control. For example, the public reacts more favorably towards crises caused by a natural disaster such as an earthquake than they do to crises that are human-induced such as product defects or abuse of public trust.

The way the crisis is perceived by the stakeholders should be an important factor in an organization's response. Coombs (1994) suggests that in situations when the organization is considered responsible for the crisis, the response strategy should include a communication message of acceptance and asking for forgiveness. In situations of 'accidents' where the organization is not held responsible for the crisis, Coombs suggests that a 'distance strategy' may be more appropriate. This communication strategy includes an acknowledgment of the crisis with an attempt to weaken the link between the organization and the crisis (Coombs, 1994).

A number of authors have written on the causes of crises. A review of this literature

reveals that most researchers believe that organizational crises occur because of the simultaneous breakdown of the technical, organizational and human systems of an organization (Kovoor, 1991; Mitroff & Pearson, 1993; Boin, 2004). Pearson and Clair (1998) suggest that social-political forces also contribute to the creation of crises while Milburn et al. (1983) suggest that crises arise from an organization-environment mismatch. That is, the organization is unable to meet the demands of the environment or the environment is not able to serve the goals of the organization. In situations where there is a mismatch between the environment and the organization, the organization seeks to restore equilibrium. This unstable situation could precipitate a crisis (Milburn et al., 1983).

Crises do not occur in isolation (Fink, 1986; Pearson et al., 1993). Because they are the result of complex systemic interrelationships among many different variables, one crisis often triggers other crises (Pauchant, et al., 1993). Research conducted by Pearson et al., (1993) showed that the simultaneous occurrence of multiple crises was actually more the norm than single-crisis situations. The triggering of multiple crises is more likely to occur if one crisis is poorly managed or if the system affected by a crisis is 'tightly coupled'. Tightly coupled systems are systems in which the variables of the system are tightly linked; that is, a change in one variable causes changes in another (Perrow, 1984). Tightly coupled systems ensure that a failure in one component will move throughout the system and will result in damage beyond the immediate initiating event. The speed of this interactive cascade of failures is determined by the degree of coupling in the system. The closer the coupling, the less time will be available to ensure that remedial action or containment can be initiated (Smith, 1993). One example of how a crisis event can affect a tightly coupled system is the Challenger space shuttle explosion. In this disaster, the failure of one part (O ring) of the

system caused the entire system to fail. The tightness of coupling between the different components of this system made it virtually impossible to stop the one defect from affecting the whole spacecraft. In addition to the loss of the Challenger shuttle, seven human lives were lost and the very existence of the United States Space Program was severely challenged (Vaughn, 1996).

While some crises are unavoidable, some scholars of organizational crises believe that organizations play a role in creating and shaping their own crises (Mitroff, 1988; Alpaslan, 2004; Wise, 2003). Mitroff et al. suggest that organizations that are unaware or intentionally ignore the complex interactions between the different dimensions of their organization are 'crisis-prone'. They suggest that the culture, values and management style of crisis-prone organizations actually contributes to the types of crises experienced by these organizations. In addition, Mitroff claims that organizations also shape the crises they face by the kinds of early warning, prevention, damage limitation, recovery, and learning mechanisms they institute. The manner in which an organization prepares for crises is a crucial factor in determining the kinds of crises with which they will ultimately be faced (Mitroff, 1988).

2.2d Impact of Crises

Regardless of the cause, crises can have a severe impact on an organization, on its stakeholders, and on the community in which it resides. Organizational crises can inflict considerable losses. They can negatively affect an organization in tangible ways such as decreased profit or loss of manpower and in intangible ways like the loss of reputation or the infliction of emotional stress (Udwadia et al., 1991; Pearson & Clair, 1998). Crises, if handled well, can also have a positive impact on an organization and its stakeholders. They

can create heroes, they can improve organizational image, and they can lead to much-needed change. It is the potential of these consequences that makes organizational crisis an important topic to study.

Crises can affect all aspects of an organization. The literature on organizational crisis contains discussions of how crises can affect image and financial stability, managerial decision-making, and physical and emotional well-being of employees and other stakeholders. Some of the potential negative impacts of crises are described below.

Human and Social

The potential for loss of human life is one of the most severe outcomes of organizational crises. Crises such as the mass shooting at Virginia Tech University (2007), the crash of a USAir aircraft in Pennsylvania and the death of a child from contaminated beef at a Jack-in-the-Box Restaurant have shocked us all. While the potential for physical injury is well-documented, the mental or emotional effects of crises on individuals are often overlooked (Doepel, 1991). Employees involved in a crisis can suffer severe trauma, stress, depression, withdrawal from social interaction, inability to concentrate, fear, anxiety and sleeplessness. Doepel (1991), in his work on the psychological aspects of crises, states that stress on individuals may originate from at least three sources: 1. the nature of the crisis and their action or inaction during the event, 2. their lack of experience in dealing with such events, leading to feelings of uncertainty about appropriate responses, and 3. the expectation placed upon them by the various stakeholders to reestablish control, safety and confidence in the organization. The ability of individuals to deal with stressful situations varies. The emotional consequences of crisis can appear at any time during the crisis and may continue

well after the situation has resolved (Doepel, 1991).

Administrative

Most people are aware of the negative impact crises can have on the financial status

and the public image of an organization. However, a crisis can also impact other

administrative activities in an organization, *e.g.,* managerial decision-making and

communication. The literature suggests that these activities are more difficult to effectively

carry out during a crisis than during routine business and that an organization's inability to do

either in times of crisis has severe consequences (Pearson & Clair., 1998).

Tackling crisis issues places exceedingly difficult demands on decision makers'

ability to reason effectively (Stubbart, 1987; Tjosvold, 1984). The types of decisions, the

amount of stress and the use of available information are all factors which influence a

manager's ability to make decisions in times of crisis. Crisis decisions are "wicked problems"

with characteristics such as uncertainty, complexity, and conflict (Stubbart, 1987). Dealing

with these types of issues under the pressure of time creates the stress that is often associated

with large-scale crises. In periods of high stress, decision makers make more errors and suffer

from impaired intellectual functioning (Dutton et.al, 2002). Part of this is due to the fact that

during a crisis decision makers may become preoccupied with the potential for loss and may

seek premature closure (Tjosvold, 1984). In an attempt to rapidly solve issues, decision

makers become cognitively rigid (Tjosvold, 1984) and rely more on prior experience than on

available information to make decisions. They also will tend to increase control, by

centralizing decision-making. This makes it less likely that the people with the most

information have input into making critical decisions (Milburn et al., 1983). The resolution of

crisis decisions may be difficult to accomplish yet it is key to the successful management of a crisis situation. Decision makers that become cognitively narrow and disregard useful information will be less able to resolve the numerous issues that occur during these times.

The importance of an organization to effectively communicate in times of crisis has also been reviewed in the literature. Scholars and authors who have written on crisis communication stress the need for timely and effective communication with both internal and external stakeholders (Werner, 1990; Fink, 1986; Seeger et al., 2003). Quality information shared in a timely manner can promote the implementation of effective crisis management strategies and can prevent information distortion. In the absence of information, people are likely to create their own. This can lead to the formation of harmful rumors which have the potential to magnify the crisis situation (Blohowiak, 1987).

Despite the need for information, individuals and organizations are often unwilling to share bad news (Robert et al., 2002). Sociologists Rosen and Tesser call the phenomenon of individuals being reluctant to share negative information with particular audiences the 'MUM' effect (Rosen et al., 1970). Research has shown that in some crisis situations, there is reluctance on the part of the organization to share information. For example, in a study of the banking industry managers reported that they perceived their organizations as more likely to be reticent than forthcoming with information during a crisis (Reilly, 1991).

While there may be a reluctance to share bad news, being the first to communicate an event is necessary for effective crisis response. The first few hours after a crisis has occurred is the time when public opinion begins to develop (Wisenblit, 1989; Newsom et al., 1993). Stakeholders that are unable to the get the information they need from the organization may draw their own conclusions about the situation or may go elsewhere for information. This is

particularly true of mass media. The media is often identified as a key external stakeholder, yet many organizations resist interacting with them. Scholars on crisis communication stress the importance of communicating with the media in times of crisis (Fink, 1986; Blohowiak, 1987; Mallozzi, 1994). While crises may vary in their cause and their impact, Dalzell and Castillo, state that one fact remains consistent; the media will be banging on the door (Dalzell & Castillo, 1993). An organization that is quick to communicate information about a crisis to its many stakeholders will convey a sense of confidence, control and honesty.

Technology

Organizations are becoming more dependent on high technology. Computers, advanced medical equipment, transportation systems and rapid communication systems are examples of technologies used in everyday business. These technologies and systems are now so complicated that it is difficult to anticipate all of the possible interactions and inevitable failures (Pauchant & Mitroff, 1992). Failures of these systems can have severe consequences for an organization, including disruption of normal business. Crises that could affect an organization's technological dimension include natural disasters, such as the flooding of a computer room, employee sabotage of equipment or unpredicted mechanical breakdowns. Well-documented crises which affected the technological dimension of an organization include the nuclear accident at Chernobyl and the 2003 Northeast blackout. Examples of technological failures that have the potential of severely disrupting the business of a public health department may include interrupted telephone service, computer failure or defective laboratory equipment.

External Impacts

A number of articles in the literature discuss the effects of particular crises on people and communities external to the organization (Pauchant et al., 1990; Perrow, 1984). Most notable are the cases of the Exxon Valdez oil spill in Prince William Sound and the Union Carbide chemical leak in Bhopal, India. These situations not only contaminated the physical environment, they also contributed to the death of a significant number of people and destroyed wildlife. In addition, these crises also had a negative impact on other social systems, such as the political and economic interactions between countries. The physical effects as well as the social impacts of these situations will undoubtedly be felt by subsequent generations.

Crises are very complex. They can impact all dimensions of an organization, including the human/social dimensions, the administrative dimensions, the technological dimensions and the external dimensions. The nature of the crisis and the effectiveness of the organizational response will ultimately determine the outcome of the situation.

2.3 Crisis Management

> "*Plan for what is difficult while it is easy, do what is great while it is small.*
> *The most difficult things in the world must be done while they are still*
> *easy; the greatest things in the world must be done while they are still*
> *small. For this reason sages never do what is great, and this is why they*
> *can achieve that greatness.*"   Sun Tzu, The Art of War

It is commonly believed that the faster one responds to a crisis situation the more positive the outcomes. The response time appears to be influenced by how much or how little an organization prepares for crises. Advance planning by an organization can ultimately help minimize the damaging impact of a crisis since key issues have already been anticipated and

therefore can be more effectively managed (Gottschalk, 1993).

The terms crisis management, crisis preparation and crisis readiness are often used interchangeably in the literature to describe the process of preparing for organizational crises. These terms, however, are different and imply different activities for the organization.

Crisis management has been defined as organizational efforts to prevent, react to, and learn from crises (Pauchant & Mitroff, 1992). Prevention is the proactive component of crisis management which is concerned with reducing the likelihood of crisis. The reactive component is concerned with the rapid containment of and recovery from crisis situations. The learning component includes the process of continuous learning from all other phases of the crisis management process.

Despite this broad definition of crisis management, many of the articles written on this topic in the 1990's focused on only one component, crisis containment (Pauchant & Mitroff , 1992) or "what-to-do-when-the-worst-happens'. Some call this "business continuity" (Shaw & Harrald, 2004). Pauchant et al. calls this part of crisis management, 'crash management' (Pauchant & Mitroff, 1992). "Crash management" includes a reactive approach to crisis management. A large body of knowledge has been created to help practitioners deal with the outcomes of crises, including methods for responding to medical emergencies, dealing with the media, and organizing the volunteers at crisis sites. These types of activities are implemented after a crisis has occurred, in an attempt to contain its damage and recover from its effects (Pauchant & Mitroff, 1992).

Authors that view crisis management as the rapid containment of a crisis typically suggest that organizations develop comprehensive crisis plans which anticipate and plan for the worst-case scenarios. Since 99% of the policy decisions affecting how the crisis is

handled are made by the company in the first seventy-two hours, a completed crisis management plan (CMP) is imperative to provide orderly guidance for timely and effective interaction with the media and public affected by the situation (Wisenblit, 1989). A CMP is "built upon rational expectations about how a crisis will manifest itself and how the organization will respond to it" (Paraskevas, 2006). Wisenblit suggests that crisis management plans contain seven key elements. These are:

- a mechanism for determining potential crises;

- identification of the audience that would be affected;

- procedures to follow during a crisis;

- contingency plans for continuity of business during the crisis;

- appointment and training of a crisis management team;

- development of a crisis communication plan; and

- evaluation and revision of the plan in response to simulated scenarios and actual crises.

In the 1980's relatively few companies reported having a crisis management plan. For example, in 1984 a survey commissioned by the Western Union Corporation found that 45% of the nation's largest corporations had no provisions for handling crises (Wisenblit, 1989). Pauchant and Mitroff (1992) found that fifty-seven percent of their sample of companies made no or only fragmented efforts to plan for crisis. More recent studies highlight an increase in the percentage of organizations that have a plan or some pieces of a plan. For example, Zdziarski's study of four-year colleges and universities found that 86% had prepared a plan for at least one type of crisis (2001). Mitroff and colleagues (2003) also have

found an increase in preparedness efforts by corporations following the events of 9/11.

While most support the need for crisis plans (Fink 1986; Booth, 1993; Kovoor-Misra, 1996), there have been few empirical studies conducted to demonstrate the impact of written crisis plans on crisis outcomes. What exists is mostly anecdotal and based on the perceptions of those being interviewed. For example, studies conducted of both British (Booth, 1993) and US corporations (Fink, 1986) found that individuals in organizations with crisis management plans reported that the effects of crisis were less than those without. This included shorter crisis duration and fewer after effects. These studies support the hypothesis that the existence of crisis plans will positively impact the outcome of a crisis.

More recent opinions of crisis scholars is that the real indicator of success is not that a company has a plan, but that when the plan is *in action* it is effective in helping the organization prevent or rapidly contain the crisis. A written plan can help employees within an organization think out, ahead of time, many of the questions that will arise during a crisis such as what resources need to mobilized and what stakeholders need information. However, recent case studies of crises, such as the one conducted by Paraskevas (2006) on a hotel chain, are showing that a plan alone does not necessarily guarantee an effective crisis response. There now appears to be growing agreement with the views of Mitroff and colleagues (1988, 1992); there is more to organizational preparedness than just having a plan (Clarke, 2004; McConnell & Drennan, 2006).

2.3a Organizational Dimensions - Systems Approach

Since crises are complex phenomena, it is now believed that preparedness cannot be completely understood by linear models and single disciplinary frames (Paraskevas, 2006,

Kovoor, 1991; Pearson & Clair, 1998.) Ian Mitroff and colleagues (1992) were early

contributors to the theory that a multi-dimensional approach was needed for the study and

management of organizational crises. Pearson and Clair (1998) further specify that

psychological, social-political and technological-structural issues should be recognized and

managed while preventing or responding to crises.

Using a systems view of preparedness, Mitroff et al. (1989) suggest that two types of

organizations exist. First there are organizations with individuals, cultures and structures

unfavorable to crisis management. They call these organizations crisis-prone. These

organizations employ individuals with high defense mechanisms and self-inflated or self-

deflated egos. The cultures of these organizations also hinder effective crisis management.

Crisis-prone organizations are seven times more likely to use faulty rationalizations, such as

"our size will protect us" or "someone else will rescue us" and are unlikely to allow decisions

to be made nearest to where they need to be made (centralization of decision-making)

(Milburn et al., 1983). The structure of these organizations also acts a barrier to crisis

management. These organizations have not incorporated crisis management activities into

individual job descriptions and have not included crisis training or emergency drills as part of

ongoing staff development.

The second type of organization described by Mitroff et al. is the 'crisis-prepared'

organization. These organizations have healthy defense mechanisms, realistic assumptions

and well-established structures and written plans for crisis management throughout the

organization. They strategically identify threats and weaknesses. They employ individuals

that are open to continuous quality improvement and ongoing learning. These organizations

include crisis management activities into their normal work and proactively communicate

with key stakeholders.

Since human, cultural, technological and structural systems can affect an organization's vulnerability to major crises and they can have an impact on the manner in which an organization carries out its crisis management strategies, these systems should be included in a crisis-management model (Mitroff & Pearson, 1993). The Onion Model, devised by Mitroff, Pauchant Finney and Pearson (1989), provides a framework for crisis management which includes these systems (see Figure 2.2). In this model all four layers of the organizational system are important to crisis preparedness.

Figure 2.2 Onion Model of Crisis Management
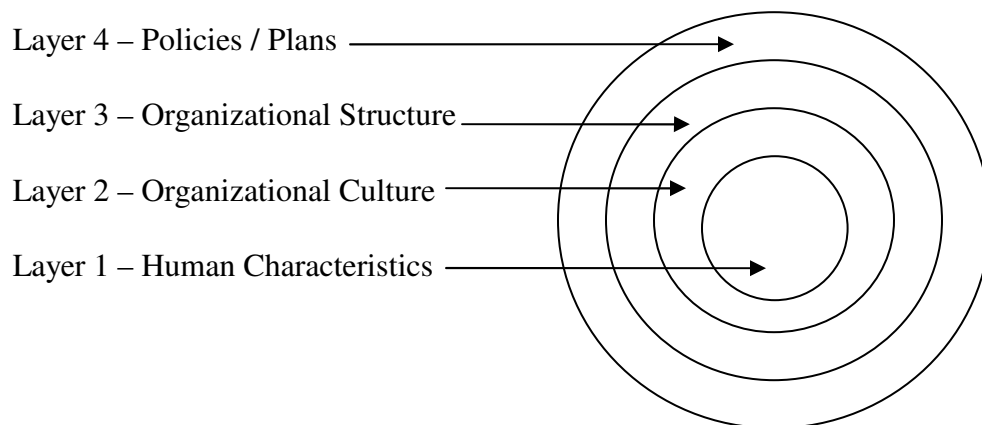
Layer 4 – Policies / Plans

Layer 3 – Organizational Structure

Layer 2 – Organizational Culture

Layer 1 – Human Characteristics

Pauchant, T. & Mitroff I. (1992). <u>Transforming the Crisis-Prone Organization</u>. San Francisco, CA: Jossey-Bass, Inc., Reprinted with permission from John Wiley & Sons, Inc.

2.3b Crisis Phases

Mitroff et al. further suggest that organizations can increase their ability to manage crises by properly managing each phase of the crisis process (Mitroff & Pearson, 1993). While crises can arise from different causes and may require different solutions, nearly all

crises pass through the same set of phases or stages. Most agree that these stages include, at minimum, a pre-crisis phase, a crisis phase and a post-crisis phase. Fink (1986) describes four stages of crisis: the prodomal stage when there are early warning signals, the acute stage when the crisis event occurs, the chronic stage of the crisis when recovery takes place and the resolution stage when it's business as usual. The most commonly used model is one that contains five phases: signal detection, preparation and prevention, damage containment, recovery and learning (see Figure 2.3). Others, in an attempt to integrate the cross-disciplinary knowledge of crisis preparedness, have added to the depth to this five-stage model. Pearson and Clair (1998) added a contextual component which includes political, technological, social and psychological aspects to each of the stages. Shaw and Harrald (2004) integrated their knowledge of business procedures to the model and Pelfrey (2007) applied this staged model to community preparedness efforts for terrorist attacks. Each of the five phases proposed by Pauchant and Mitroff are briefly described below and expanded to include some of the new knowledge from these other crisis scholars.

Figure 2.3 Crisis Phases
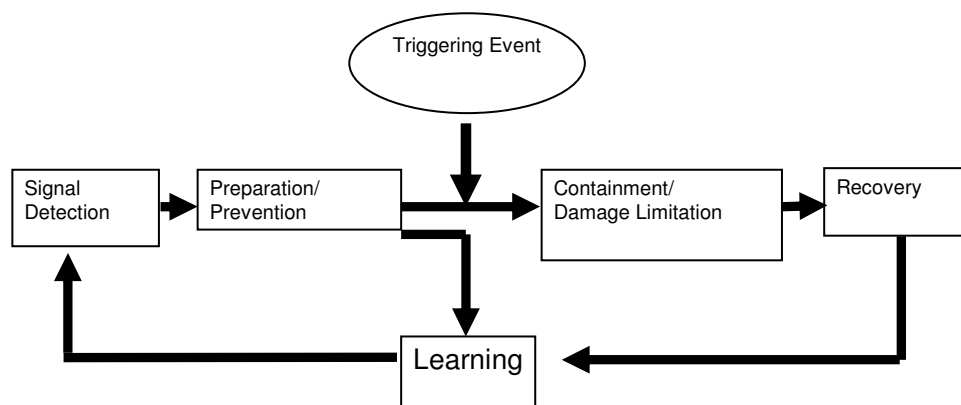
Pauchant, T. & Mitroff I. (1992). Transforming the Crisis-Prone Organization. San Francisco, CA: Jossey-Bass, Inc. Reprinted with permission from John Wiley & Sons, Inc.

Signal Detection

With very few exceptions, all crises leave a repeated trail of early warning signals (Mitroff & Pearson, 1993). These may include patterns of customer and client complaints, financial inconsistencies or threatening notes sent to employees. The challenge for managers is to differentiate these warning signals from the mass amounts of information they are faced with each day (Mitroff & Pearson, 1993). Avoiding these signals can lead an organization into a devastating crisis, such as the case with the Virginia Tech University Massacre. Ronald Rhody, Senior Vice president of Bank of America, claims that 'when an organization fails to spot a crisis in the making, it's usually due to four shortcomings, 'ignorance, arrogance, bad judgment, negligence' " (Newsom, 1993).

Organizations should conduct deliberate searches for warning signals, including conducting procedural audits, vulnerability/ risk assessments, and 'worst-case scenario' discussions (Mitroff, Alpaslan & Green, 2004, Shaw & Harrald, 2004). Early recognition of a problem will have an impact on the outcomes. Situations effectively managed at this phase typically become business problems or challenges and do not progress into full-fledged crises.

Preparation and Prevention

This phase of the model involves doing as much as possible to both avert crises and assure readiness for those that may occur. Much of the early literature on this pre-crisis phase focused on identifying the types of activities that are needed to demonstrate readiness. These

activities are typically implemented at the same time as assessing the potential for various

crises and as conducting the activities for identifying the early warning signals of new

problems. Some examples of activities that would fall in this phase for preparing for possible

crisis situations include training key staff in media relations, nurturing relationships with key

stakeholder groups, identifying a chain of command and conducting routine crisis scenario

drills and exercises. Activities which may help to mitigate or prevent future situations from

occurring include repairing building or technology breakdowns, creating personnel policies or

advocating for safe and healthy workforce practices.

Trigger Event

The trigger event is the situation that people most equate with a crisis. Fink (1986)

calls this the 'point of no return'. Notable examples include the disintegration of the space

shuttle Columbia over Texas in February, 2003 and the seventy-four deaths/injuries from fire

at the Imperial Chicken Plant in Hamlet, NC. The dramatic occurrence of the trigger event is

typically the announcement that a crisis is unfolding. It is important at this point to quickly

acknowledge the event and define the actual crisis. Time is of the essence.

Containment and Damage Limitation

This phase of the crisis model consists of the implementation of strategies to resolve

the crisis and to prevent it from spreading to other areas of the organization (Pauchant &

Mitroff, 1992; Mitroff, Alpaslan & Green, 2004). In some crises, this is the period when lives

are on the line. Blythe (2002) outlines ten immediate actions that need to be taken following

the recognition of a triggering event. These include evaluation of continuing danger,

notification of response team members, securing the crisis site (if appropriate),

implementation of prevention strategies and implementation of communication plan.

With or without a plan, Reilly (1989) suggests that there are five key activities that must occur for an organization to effectively contain a crisis: problem-sensing and diagnosis, decision response, resource mobilization and implementation, internal information flow and external information flow. These activities emphasize the importance of the organization's ability to recognize crises, to make timely decisions, to identify and mobilize necessary resources such as money and equipment and to communicate effectively and quickly to the appropriate stakeholders.

One of the major difficulties in managing a crisis during this phase is the intensity and time limitations that often accompany and characterize this stage (Fink, 1986). The very nature of crisis can impede one's ability to act quickly and effectively. Boin (2004) claims that both the excess of and the lack of information can make it difficult to determine the real crisis. Others have discussed the limitations on cognitive abilities such as decision making in times of stress (Tjosvold, 1984; Stubbart, 1987; Pearson & Clair, 1998). The speed at which an organization makes decisions and mobilizes resources after the crisis occurs will determine the outcomes. Organizations that mismanage a crisis situation run the risk of having the crisis spread or of prolonging the negative effects of the crisis, such as poor public image.

Recovery

This phase involves an organization's attempts to recover from a crisis. This includes the recovery of both tangible and intangible assets (Pauchant & Mitroff, 1992). It is also a period of self-analysis, of self-doubt and of healing. Short- and long-term strategies may

involve identifying other facilities to resume normal business, providing personal stress counseling for staff and conducting targeted public relations campaigns. Market research conducted by Burson-Marstellar (Continuity Forum, 2005) of 685 senior officials from business and governmental agencies showed the average recovery period following a reputation-damaging crisis was 3.2 years. Organizational leaders need to realize that recovery is not quick.

Learning

Crises can create a critical period of learning for an organization. Learning can occur during each stage of the crisis-management process. Learning can also occur during or after 'near miss' situations or during or after events experienced by other organizations (Kovoor, 1991). Stakeholders both on the inside and the outside of an organization are frequently motivated to learn and make changes (Kovoor-Misra et al., 2000) after a crisis. Learning from an event should help individuals and systems respond quicker to other events and help prevent future events from occurring.

Despite the fact that a crisis can be a motivator for change, Kovoor-Misra and Nathan (2000) have found that there is only a short window of opportunity for learning post-crisis. They state that organizations go through three successive post-crisis learning phases: defensiveness, openness and then forgetfulness. The openness period is the time when most learning can occur. Unfortunately there are many reasons that people and organizations do not maximize the potential for learning after a crisis. This aspect of preparedness has recently been given more attention in the literature. Crisis scholars suggest that there are many barriers that impede learning such as desire for normalization, lack of trust, scapegoating and

a whole range of defense mechanisms. (Kovoor-Misra et al., 2000; Elliott et al., 2000; Roux-Dufort, 2000) To maximize learning, organizational leaders must recognize and deal with these barriers and do so with an understanding of the importance of time.

2.3c Crisis Types – Creating a Portfolio

Organizations with crisis-prepared cultures, structures and strategies will be better prepared to manage each phase of a crisis. But even organizations with this mindset and goal cannot prepare for every possible crisis they may encounter. A model which assists managers in identifying which situations to plan for would be a useful tool.

Fink describes one possible model for selecting which crises an organization should prepare. He suggests that organizations plot potential situations on a Crisis Barometer Scale. This grid has two dimensions. The vertical dimension indicates the level of impact the crisis could have on the organization. The horizontal dimension indicates the likelihood of the crisis occurring. Using this model, organizations should prepare for situations that could severely impact the organization and have a high likelihood of occurring (Fink, 1986). While this model provides one tool for identifying which crises to prepare for, it assumes that the individuals placing the situations on the grid are not in denial of what situations could occur. For instance, public health practitioners may make the faulty assumption that all people that work in public health are caring and trust-worthy. Based on this assumption they may believe that an employee would never hurt a client or another employee, thus placing situations of workplace violence in the low probability area of the grid.

Mitroff et al. (1988) suggest that organizations prepare for a variety of crisis situations. They suggest that the array of crises can be grouped into a limited number of types

and that an organization can minimize its crisis vulnerability by preparing for at least one situation in each type. They call the results of this preparation, a 'crisis portfolio' (Pauchant & Mitroff, 1992). This strategy allows organizations to think through the strengths and weaknesses of each dimension, technology, human/social, and structure of their organization, and how each of these systems interacts inside and outside the organization. The nature of the crisis on these different systems has a great impact on how the crisis should be handled and what the ultimate outcome of the crisis will be. Hence, planning for a variety of situations will strengthen an organization's ability to react to each unique situation in a timely manner.

In order to prevent and respond effectively to crises, an organization must go beyond the creation of a crisis-response checklist. Crisis plans that identify the potential warning signals and potential response actions for a variety of crisis scenarios for all phases of an event are useful. However, organizations will only be truly prepared if their ethical orientation, their behaviors, their stakeholder relationships and their culture also support crisis preparedness.

2.4 Summary

This chapter outlines the critical concepts of organizational crisis preparedness needed to set the stage for this study and outlines some of the shortcomings of literature on this subject.

Three limitations of the academic literature on crisis preparedness were described. First, there continues to be a lack of agreement between disciplines on terminology and theoretical models for crisis preparedness. Second, the difficulty in studying crisis preparedness has led to a gap in comprehensive studies which use multiple data collection

methods. And finally, despite a recent interest in preparedness in the field of public health, there is a void in research on the levels of organizational crisis preparedness in local public health agencies.

Following the discussion of the limitations of the literature, a summary of how key terms have been defined by different scholars and a description of existing models of preparedness are presented. Definitions of the terms crisis and crisis management are shared as are ways in which scholars have grouped types of crises and the common beliefs about the causes and potential outcomes of crises. Two models of preparedness are presented which are not mutually exclusive but are often used separately in various studies or commentaries: the Onion Model, which focuses on preparedness in a multi-dimensional organization, and the Crisis Management 5-Phase Model, which allows users to focus on what is needed for preparedness at the various phases of a crisis. Finally, the concept of a "crisis portfolio" is described as a way in which to improve organizational preparedness.

CHAPTER 3

CONCEPTUAL FRAMEWORK

Since crises can originate in and impact all dimensions of an organization, an organization as a whole must be prepared for crises (Kovoor, 1991). Therefore a multi-dimensional model of crisis management was used to understand the level of crisis preparedness of public health organizations. The model integrates three concepts found in the literature: a multi-layered organizational system view, phases of a crisis and a crisis portfolio. This chapter provides a review of the key definitions and conceptual framework upon which this study is based.

3.1 Definition of Terms

As presented in Chapter 2, definitions of the terms "crisis" and "crisis management" are plentiful. The term crisis is often used synonymously with many other words, such as, emergency, disaster, and catastrophe. In an organization, the term crisis can also be used to refer to both acute and long term situations that may result in negative outcomes. "Crisis preparedness" is also used in similar ways to the terms "crisis management", "crisis readiness" and "contingency planning." To understand the value of this research and its limitations, it is necessary to understand how these terms are used and defined. Definitions of

the terms "organizational crisis", "crisis management", "crisis prevention" and "crisis preparedness" are presented below.

3.1a Organizational Crisis

Organizational leaders sense a crisis when there is an urgent threat to a systems basic structures or values (Boin, 2004). Boin describes the term crisis as a catchall concept which encompasses a variety of "un-ness" events; unwanted, unexpected, unprecedented, uncertain and almost unmanageable. Public health professionals face a myriad of situations with these characteristics. Not all of these high threat situations are included in the definition of organizational crisis used for this research project. A clear definition of the concept is therefore important to understanding the focus of this study.

For the purposes of this study, an ***organizational crisis*** is defined in the following way. Any situation that:

1. is sudden, acute and demands a timely response,

2. requires responses outside of the organization's typical operating frameworks, and

3. is perceived as being a <u>severe</u> threat to the ability of the organization to be effective

These three key attributes serve to distinguish crises from the many of the other challenging situations that face public health administrators as a part of their work as managers and practitioners. These characteristics of the definition will be explained in further detail now.

First, for a situation to be described as a crisis, it must be 'sudden, acute and demanding of a timely response'. Crises are often identifiable by a trigger event which occurs suddenly and acutely. While these situations are typically preceded by a series of warning

signals, they seem to appear abruptly and dramatically, e.g. the Oklahoma City federal building bombing or the Malden Mills fire. Crisis situations also have the potential for immediate serious consequences, such as public harm or rapid deterioration of public image. Since these situations have acute, imminent consequences they are seen as needing a timely response. Situations which occur over long periods of time or which may have negative consequences sometime in the future are not considered organizational crises in this study. For example, in this research study, situations such as changing environmental trends or changing federal funding guidelines for public health services are not considered crisis situations. Environmental trends, i.e. the trend of local hospitals to provide new community health services may be seen as a threat to the existence of public health departments, however it is not a sudden and acute problem. And while it may require action, it does not require an immediate response by the agency.

A crisis situation must not only be sudden and require a timely response; it must also require strategies that are different from normal operating procedures. A crisis is a rare event that is not part of an organization's mission-driven business. If the situation can be handled by the procedures and services normally provided by the organization, then the situation falls within the scope of work for that organization and is not considered a crisis in this study. For example, a house fire is a crisis to a homeowner. However, responding to a house fire is considered part of the core business of a fire department and hence not an organizational crisis for them. For public health professionals, responding to a Hepatitis A outbreak in a restaurant or day care is an example of an event requiring quick and immediate action. Despite the apparent sudden nature of an outbreak and the need for a quick response, this situation is not considered an organizational crisis because responding to infectious disease

outbreaks falls within the purview of the health department's responsibility. This is also true for the response to either a bioterrorist event or a natural disaster in a community. Responding to such events is considered an important core responsibility of a public health agency. However, these situations can become organizational crises for public health agencies and other first responders.

When an organization whose mission includes responding to high threat events, such as fires, disease, or natural disasters, causes an event or responds inappropriately or inadequately to an event, the organization can experience an organizational crisis. Such is the case when a volunteer fireman was charged with arson in Virginia ("Fireman Charged," 2006) and when FEMA was accused of a poor response to the devastation in New Orleans after Hurricane Katrina (Sullivan, L., 2005). A poor response to a public health problem or illegal behavior on the part of a public health employee can also create an organizational crisis for a local, state or federal public health agency. A recent example of this is the public relations crises now being experienced by the Fulton County (GA) Health Department and the Centers for Disease Control for what has been perceived by many as a mishandling of a globe-trotting individual with a potentially dangerous TB infection ("Lawmakers rip CDC," 2007). When an organization does not effectively carry out its work as perceived by its stakeholders, a crisis can occur.

Natural disasters or terrorists attacks can also create other types of organizational crises for local public health agencies. For example, a severe weather related storm or a bombing may damage all or some of the public health facilities, including offices, laboratories and clinics. Terrorist attacks or naturally occurring infectious disease outbreaks, such as pandemic flu, may cause such fear in people, that public health workers may not

show up for work, hence making it impossible to carry out the essential services of a public health agency. Under these circumstances, these events would be considered a crisis at an organizational level and would fall under the study of this paper.

Organizational crises require actions that are atypical of normal work. Responding to charges of incompetence or mismanagement may require actions that are outside of typical operating frameworks. Likewise, responding to physical threats within the health department facilities or to the destruction of equipment and buildings are not normal work activities. Responding to these events will require that public health leaders take actions that are different than their usual day to day responsibilities. For example, a crisis might require that law enforcement be called, that services are established in another off campus location or that a press conference is called to apologize for or explain the status of a situation. Organizational crises are uncommon events which require response activities that fall outside of the agencies' daily work practices.

The third criteria which defines a crisis is that the situation must be perceived by the stakeholders as a *severe threat* to the organization's ability to be effective. A public health department will obviously be less effective in providing public health services if a situation has caused profound damage to the facility in which services are provided (e.g. the collapse of the Cantor Fitzgerald Office on 9/11). However, they may also lose their ability to fulfill their mission, if a situation damages their credibility and reputation. The success of a public health department is similar to other nonprofit organizations, in that it is greatly affected by public perception (Lally, 1993). Organizational crises can severely threaten the existence of the organization by negatively impacting the level of public confidence and trust. In private corporations this may manifest itself in a loss in profits or market share, but in a public health

organization, the crisis may cripple the organization by diminishing its ability to be seen as credible or effective. This in turn, may directly affect its level of financial and community support. A public health department which is considered ineffective is like a private organization going out of business.

3.1b Crisis Management

Crisis management has been defined as a catch-all concept which includes all of the activities undertaken by an organization related to crisis prevention and response (Pauchant & Mitroff, 1992; Shaw & Harrald, 2004). In this study, however, "crisis management" is more narrowly defined. It is defined here as the approach and activities involved in the containment and recovery from an organizational crisis. Hence, crisis management focuses on the activities that occur after a triggering event has occurred. This is often referred to as the stages of damage containment and business continuity. It includes the time period when the crisis is first made know and the immediate efforts for salvage and rescue. It also includes the activities that occur for recovery, including those that allow for a full cultural readjustment, normalization and learning (Kovoor, Clair & Bettenhausen, 2001).

Reilly (1989) describes the key activities of crisis management as problem sensing, decision-making, stakeholder communication and resource mobilization and implementation. Typically these activities are facilitated by the activation of a cross functional crisis team and the execution of key activities included in a crisis plan.

Others (Kovoor et al., 2000) have referred to another set of activities that assist organizations and their members with recovery. A crisis may disrupt organizational systems in fundamental ways. Operations may cease, personnel may be distracted or unavailable, and

facilities may be closed down (Seeger et al., 2005). To recover from such events an organization must initiate activities for business continuity including the psychological recovery of individuals from trauma and stress (Pearson & Clair 1998). The recovery phase is thought by some (Phelps, 1987; Boin, 2004) to be the most under-studied aspect of crisis management.

The success of these efforts should not just be measured by the organizations ability to come out the other side of a crisis. Pearson and Clair (1998) suggest more rigorous criteria to judge the effectiveness of an organization's crisis management efforts. They state that crisis management efforts are effective when operations are sustained or resumed, organizational and external stakeholder losses are minimized and learning occurs so that lessons are transferred to future incidents. For a public health agency, outcomes of a successful recovery might include: no loss of life or injuries, health department services are maintained or immediately reinstated, reputation or image is enhanced or improved, internal coordination and integration is strengthened, financial resources for handling the crisis are recovered, and new policies are created or lessons from experienced are learned for the future.

3.1c Crisis Prevention / Preparation

The term crisis prevention is defined in this study as the approach and activities conducted by an organization to identify, prevent and prepare for potential crises. As described by Kovoor et al. (2000) the literature describes prevention activities as those that help to address the underlying systemic causes of potential crises, those that allow for the

early detection of crises and those that support the application of past learnings to present and future realities.

The activities included in this strategy are conducted prior to the occurrence of a remarkable triggering event. It includes the assurance of norms, structures and procedures to prevent situations from occurring and to allow for a quick and effective response should something occur. Examples of activities that an organization may engage in to identify, prevent and prepare for crises include, conducting audits and other forms of problem surveillance, correcting problems identified from past experiences, developing a crisis plan, providing staff training in crisis communications, and conducting drills of various crisis scenarios.

3.1d Crisis Preparedness

Crisis preparedness is broadly defined in this study and encompasses the concepts of both crisis management and crisis prevention. Crisis preparedness is defined here as an organization's ability to prevent, respond to and learn from organizational crises. This includes a multitude of formal and informal practices and policies as described above. In this study, an organization that is considered crisis-prepared will have human, cultural and structural characteristics that support proactive crisis prevention and response activities. It will also have a set of organizational strategies for crisis management that address a variety of types of crises, the different phases of these crises and the different dimensions of the organization that these crises affect. "Crisis readiness" is sometimes used with the same meaning in this document as crisis preparedness.

The concepts defined by the terms "organizational crisis" and "crisis preparedness" will be included in the overall framework used for the study. This model will be described next.

3.2 Crisis Preparedness Framework – DTP Model

A useful model of crisis preparedness must include those factors deemed important. These factors are: organizational system characteristics or dimensions, types of crises, and phases of crises (Pauchant & Mitroff, 1992). Models previously discussed in chapter two, the 'Onion Model', 'Crisis Portfolio' and 'Phases of a Crisis' will serve as the framework for this study. To provide a comprehensive view of these concepts they have been combined to form a model which will be called the DTP (Dimensions-Types-Phases) Framework of Crisis Preparedness.

The DTP Model of Crisis Preparedness (see Figure 3.1) provides an over-riding schema for crisis preparedness. It summarizes the three concepts that will be used to assess an organization's level of crisis preparedness. These are:

1. Dimensions of the organizational system: the human, cultural and structural characteristics that influence crisis preparedness as well as the presence or absence of well established plans or strategies for crisis prevention and management.

2. Types: whether or not the organization has strategies for a variety of crisis situations.

3. Phases: whether or not the strategies for each crisis type include activities to address potential issues that may arise through the each phase of the crisis lifecycle.

Figure 3.1 DTP Model of Crisis Preparedness
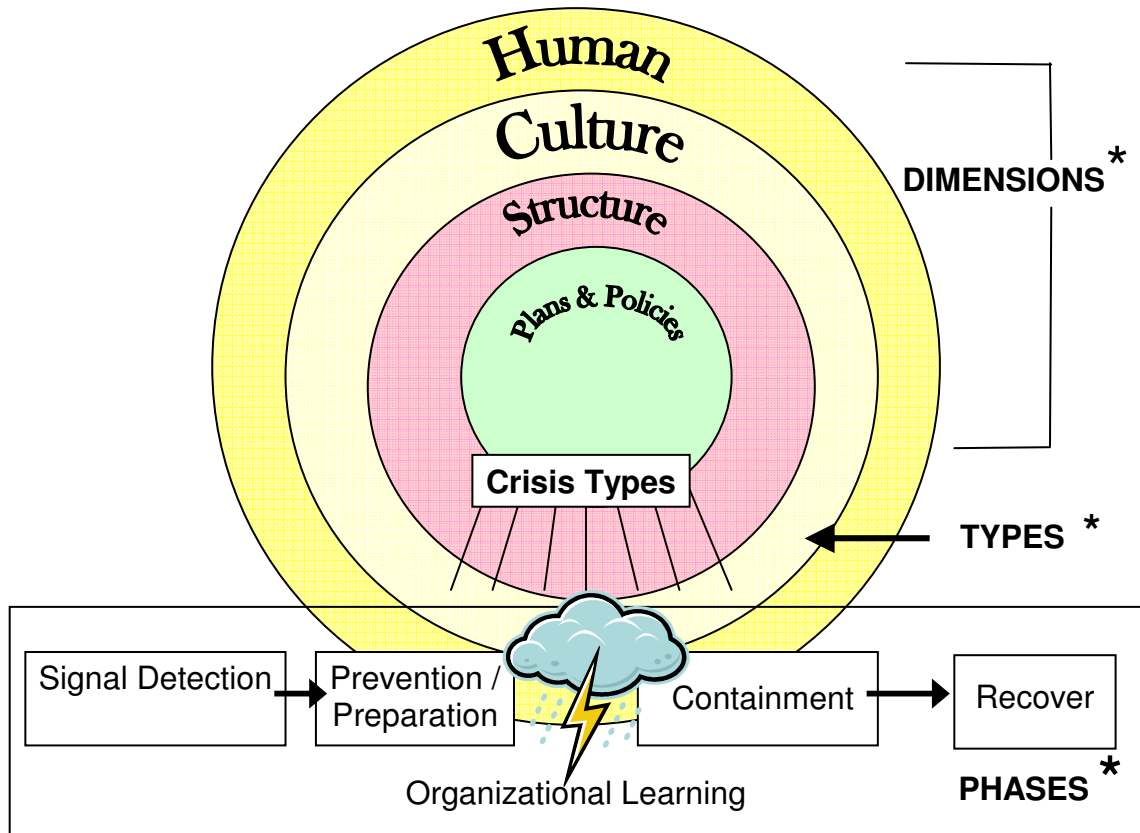
3.2a Dimensions of an Organization

The dimensions of an organization which are considered important for crisis preparedness are covered by the Pauchant and Mitroff Onion Model described briefly in Chapter 2. The concept of dimensional layers is used here to provide a comprehensive framework for studying crisis preparedness. Each layer of the model and the interactions between each level are important factors to consider. Preparation for the prevention and response to crises means that an organization is performing well across all layers of the model (Mitroff et al., 1989). For visual purposes the layers of the Pauchant Onion Model have been inverted in the DTP Model to highlight the importance of the organizational

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environment in promoting or impeding the use of an organization's written strategies. This

visual change does not change the importance of each layer nor does it alter the way in which

the model will be used. The layers of the model are discussed below.

Layer 1 addresses the subjective experiences of the individuals who form an

organization. In this model, this layer is called "Human Beliefs." Included here are the basic

needs of individuals, including the hopes, fears and dreams of the employees. This level also

focuses on the relationship the employees have with both the organization and the

environment (Mitroff et al., 1989). Particularly important to crisis management is the

propensity of individuals to be self-centered and use different defense mechanisms in relation

to crises and other traumatic events (Pauchant & Mitroff, 1992). Table 3.1 lists eight

common defense mechanisms. An organization may be considered crisis prone if it employs

individuals that deny that crises affect the world beyond their organization or individuals that

claim that they can handle anything that comes their way.

Table 3.1 Core defense mechanisms

- Denial: refusal to acknowledge threatening realities
- Disavowal: discredits importance of threatening realities
- Fixation: rigid commitment to a particular course of action
- Grandiosity: feeling of omnipotence
- Idealization: idealization of a person, object or organization
- Intellectualization: the elaborate rationalization of an impulse
- Projection: the attribution of unacceptable impulses to others
- Repression: the pushing down of threatening impulses into unconsciousness
- Splitting: the extreme isolation of different elements, fragmentation

Pauchant, T. & Mitroff I. (1992). Transforming the Crisis-Prone Organization. San Francisco, CA: Jossey-Bass, Inc. Reprinted with permission from John Wiley and Sons, Inc.

Similar to the core, Layer 2 represents a largely invisible aspect of an organization -

but often one of the most important factors in effective crisis preparedness. Layer 2 addresses

an organization's culture; it's unwritten rules, codes of conduct, and informal communication

patterns (Pauchant & Mitroff, 1992). This level also reflects the attitudes and beliefs of top

managers regarding the organization's potential for crises. For example, some managers

believe that properties of their organization, the environment, the crisis itself or their prior

crisis management efforts protect them from experiencing future crisis (see Table 3.2 for a

list of faulty rationalizations). These faulty rationalizations may hinder crisis preparedness

efforts in the organization.

The second layer of the model also reflects an organization's willingness to learn

from experiences and past mistakes. Organizations that believe that nothing is gained by

mulling over past mistakes or believe that they don't make mistakes will undoubtedly be less

able to prevent or deal with a crisis.

Layers 3 and 4 represent those aspects of an organization that are easiest to observe

and easiest for an organization to change. Layer 3 refers to the structural level of the

organization and its effects on crisis management. Structure refers to the types and hierarchy

of employees in an organization and whether or not the organization has in place an

infrastructure for crisis management. "This includes open and effective communication

channels among levels and across divisions, as well as job descriptions which specify who is

accountable for supporting crisis management activities and reporting bad news" (Pearson &

Mitroff, 1994). Another critical aspect to consider in this layer of the model is whether or not

the organization has a crisis management team (Mitroff, 1988; King, 2002; Shaw & Harrald,

2004) and whether or not members of this team practice their different roles.

Table 3.2 Faulty rationalizations that hinder crisis preparedness efforts

Group 1 **Properties of the Organization**	Group 2 **Properties of the Environment**	Group 3 **Properties of the Crises Themselves**	Group 4 **Properties of Prior Crisis Management Efforts**
• Our size will protect us • Excellent, well-managed companies do not have crises • Our special location will protect us • Certain crises only happen to others • Crises do not require special procedures • It is enough to react to a crisis once it has happened • Crisis management or crisis prevention is a luxury • Employees who bring bad news deserve to be punished • Our employees are so dedicated that we can trust them without question • Desirable business ends justify the taking of high risk means	• If a major crisis happens, someone else will rescue us • The environment is benign; or, we can effectively buffer ourselves from the environment • Nothing new has really occurred that warrants change • Crisis management is someone else's responsibility • It's not a crisis if it doesn't happen to or hurt us • Accidents are just a cost of doing business	• Most crises turn out not to be very important • Each crisis is so unique that it is impossible to prepare for all crises • Crises are isolated incidents • Most crises resolve themselves; therefore time is our best ally • Most (if not all) crises have a technical solution • It's enough to throw technical and financial quick-fixes at a problem • Crises are solely negative in their impact. We cannot learn anything from them	• Crisis management is like an insurance policy; you only need so much • In a crisis situation, we just need to refer to the emergency procedures we've laid out in our crisis manuals • We are a team that will function well during a crisis • Only executives need to be aware of our crisis plans; why scare employees or members of the community • We are tough enough to react to a crisis in an objective and rational manner • We know how to manipulate the media • The most important thing in crisis management is to protect the good image of the organization • The only important thing in crisis management is to ensure that our internal operations stay intact

Pauchant, T. & Mitroff I. (1992). <u>Transforming the Crisis-Prone Organization</u>. San Francisco, CA: Jossey-Bass, Inc. Reprinted with permission from John Wiley and Sons, Inc.

Layer 4 comprises the organization's written plans and strategies for crisis management. This includes their existing programs, procedures and mechanisms specifically designed to prevent and deal with crises. Assessment of a health department at this level may include a review of the policies in place to deal with infectious disease outbreaks, employee theft and facility bomb threats. In may also include an examination of any written guidelines for working with the media, of agreements with other organizations for use of facilities in an emergency or of personnel policies to prevent misconduct.

3.2b Types of Crises

While organizations should have a set of crisis plans, no organization can prepare for the limitless crisis situations that may occur. It is, therefore, important for organizations to find a way to determine which crises to prepare and which to neglect. Mitroff et al. suggests that a crisis typology which groups similar crisis situations into a manageable set of *types* could provide a framework by which organizations could comprehensively prepare for crises (Mitroff & Pearson, 1993). Using this framework, an organization should prepare for at least one crisis scenario in each of the crisis families. Mitroff et al. calls the results of this preparation, a "crisis portfolio".

3.2c Phases of a Crisis

Preventing and managing crises requires an understanding of the life of a crisis. As described in Chapter 2, nearly all crises pass through a series of distinct phases or stages. "Regardless of the type of crisis, effective organizational crisis management involves managing the five distinct phases through which crises pass" (Mitroff & Pearson, 1993).

These phases are signal detection, preparation and prevention, damage containment, recovery and learning. Mitroff et al. suggests that organizations can increase their ability to manage crises by properly managing each phase of the crisis process (Mitroff & Pearson, 1993).

A crisis-prepared organization will have strategies and activities which address the different phases of a crisis. For example an organization that proactively searches for potential crises will routinely conduct quality assurance audits, collect and review customer complaints and identify organizational strengths and weaknesses in a strategic planning process. An organization that actively prevents and prepares for crisis situations will conduct routine training programs for staff (i.e. media training) and will engage in crisis scenario drills. An organization prepared to rapidly contain a crisis situation will have identified individuals to serve on a Crisis Management Team (CMT) and will have a process in place by which to make rapid decisions; including decisions about resource mobilization and communication with internal and external publics. A crisis-prepared organization will finally have in place strategies for recovery and learning. These may include plans for providing staff and other individuals affected by the crisis with psychological counseling and a crisis debriefing meeting with key managers at some point after the immediate threat of the crisis has passed. Crisis-prepared organizations prepare for a variety of crisis situations through each phase of the crisis lifecycle.

3.3 Other Organizational Attributes

Previous research has indicated that a number of organizational attributes may contribute to an organization's level of crisis preparedness. Two of these factors, organizational size and previous crisis experience are described here.

3.3a Organization's Size

Much of the prior research on crisis management suggests that an organization's size impacts crisis preparedness levels. However, it is not clear exactly whether or not it has a tendency to improve an organization's readiness to deal with crises or if it distracts from the organizations readiness. On one hand, it is felt that larger organizations may be more ready to cope with crisis situations because they have more resources. They generally have more manpower, they have access to specialty equipment (e.g. extra phone lines, fax machines) and they tend to have access to more money than smaller organizations. They are also more likely to have individuals with particular skills, such as public relations, safety officers, and medical staff. Specialized staff members are often not found in small organizations. A study of small businesses after Hurricane Katrina's devastation of the gulf state region highlighted some of these issues as impediments to crisis recovery. Of particular note was a lack of crisis planning, a vulnerability to interruptions in cash flow, a lack of access to resources and serious infrastructure problems (Runyan, 2006).

On the other hand, some see large size as a barrier to effective crisis management. Large organizations often have more barriers to effective communication and may have more controls on how and when resources may be used. Larger organizations may be less flexible. They may have more manuals and policies to follow, making it difficult to respond quickly to an emerging crisis situation (Reilly, 1991).

Despite the potential barriers to crisis preparedness from large organizational size, empirical data collected during research on the banking industry found strong support for larger size contributing to crisis readiness (Reilly, 1987). Size is also expected to influence crisis preparedness in public health agencies as well.

3.3b Previous Crisis Experience

Lessons learned from previous experiences can be also be valuable and are thought by some researchers (Mitroff & Pauchant, 1992; Spillan & Crandall 2002) to be beneficial to improving crisis readiness abilities. Research conducted by Reilly (1987) shows some support for past experience enhancing an organizations readiness to deal with crises. Similarly, Kovoor's (1996) research on technology focused organizations and Spillan & Crandall's (2002) work with not-for profit agencies found these organizations to be motivated towards greater concern for preparedness with past experience of a crisis. Experience can motivate change because a crisis can create an awareness of organizational vulnerabilities and can challenge existing assumptions and beliefs that limit preparedness.

Individuals often rely on past experience to make decisions in the present. Organizations, too, rely on established procedures and past experience to handle arising situations. Often the way situations were handled previously will be the way they are handled in the future (Milburn et al., 1983). If this is true, past experience may also make an organization less crisis ready since the organization may treat all crises as if they were the same. One example of this was the inability of small business owners in the Gulf coast to recover quickly from Hurricane Katrina in 2005 because of their belief that previous storms had been enough experience to be prepared for any crisis (Runyan, 2006).

Past experience with crisis can be a powerful motivator for change and learning. It can also provide a false sense of readiness. Organizational administrators should build on the lessons learned from past events. The crises of the future will never be the same as the crises of the past.

3.4 Summary

In this chapter definitions of four key terms were shared and the model of crisis preparedness to be used in the study was defined. The word "crisis" includes three defining characteristics as perceived by a stakeholder; a sudden and acute threat, requires responses outside of typical operating frameworks and has the potential to negatively impact the ability of the organization to function. Preparedness is defined in very broad terms, including both the activities to prevent and prepare for crises but also the activities to effectively respond, recover and learn from crises.

To assess the level of organizational preparedness in local North Carolina health departments a multi-dimensional model of preparedness is used. This conceptual model combines three pertinent frameworks found in the existing literature; "crisis phases", "crisis portfolio" and the multi-layered, "Onion Model." The resulting model suggests that prepared organizations have crisis mindsets and cultures that support preparedness and they have infrastructures and plans that facilitate prevention and response activities for a variety of types of crises and for all phases of a crisis lifecycle. This model is called the DTP Model of Crisis Preparedness.

Finally, this chapter describes two additional factors which may be important to preparedness levels for an organization; organizational size and past crisis experience. The extent to which these factors contribute or impede an organization's ability to be crisis-prepared will not be thoroughly reviewed in this study but suggest that more research is needed. The study methodology is described in the next chapter.

CHAPTER 4

STUDY METHODOLOGY AND ANALYSIS

To improve understanding of the complex phenomenon of organizational crises preparedness, a multi- method exploratory study was designed. The study was conducted in two phases over the time period of August 1995 to December 1995. Phase I focused on the development of a typology of the crises that might be faced by public health agencies. Phase II focused on obtaining multiple sources of data to describe the level of crisis preparedness in local health departments in the state of North Carolina. Descriptions of the sample groups that were studied, the methodologies used and the methods of data analysis are described below for each phase of this research.

4.1 Phase I – Development of a Crisis Typology

The development of a typology of organizational crises was accomplished in two steps.

First, a list of potential crisis situations was developed. Four public health administrators, known to the researcher, were asked to assist in the creation of this list. One individual was an assistant health director from a large urban health department, two were local health directors, one from a rural health department and one from a coastal community and the final individual worked in the Office of Public Relations at the North Carolina

Department of Health and Human Services. Each of these administrators created his /her own

list. To facilitate this process, each was given the definition of "organizational crisis" used in

this study and a list of potential organizational crises developed by the Lukaszewski Group

(Appendix A). A single list of worst-case scenarios was created by combining each of the

lists generated by the administrators with a list created by the researcher. All redundant

entries were eliminated.

The next step was to develop a categorization framework, or typology, from this list

of potential crises. A modified focus group methodology was used to sort the list of situations

into similar groupings or "crisis families." The process used to develop the crisis typology is

described below.

Three focus groups were conducted in different regions of the state during the months

of August and September, 1995. Two additional focus groups were conducted to pilot the

process prior to the study groups. The duration of each group discussion was approximately

90 minutes and included at least five local public health managers from the participating

county. The participating agencies were selected to provide diversity in both geography and

organizational size. The health director was known to the researcher for each of these

organizations. He or she was asked to select the members of the focus group; including

individuals with the most interest or understanding of crisis prevention and response

activities.

The researcher facilitated each focus group discussion. Initially, each of the public

health administrators was asked to individually sort the crisis situations into distinct

groupings (see Appendix B for Focus Group Discussion Guide). The instructions were to sort

the situations based on similarities in how each crisis should be resolved. Crisis situations

placed together in a particular group should be perceived by the participants as requiring similar strategies for resolution and management. To facilitate the process, each participant was provided the definition of organizational crisis used in this study and a list of sample crisis response strategies, such as holding a press conference, providing tours of the affected facility and obtaining back-up communication technologies.

After each individual sorted the situations into groupings, the group discussed some potential crisis categories. Then the group, as a whole, was asked to sort the same situations (individually written on index cards) into different categories. During the discussion, situations that were felt to be too broadly defined, such as fire, which may be further broken down into arson, damage by lightening, or faulty wiring, were expanded. Finally, each group named the final categories or "crisis families" that they had established.

Crucial to understanding the crisis families identified by each group is an understanding of why the crises in each grouping were placed together. The researcher took notes during each group discussion to capture the perceptions of the individuals sorting the situations into the groupings. Of particular interest were the ways in which the public health administrators found the individual crises similar and the ways in which they found them different. Differences in opinion among group members were recorded if the members were unable to agree on a specific crisis category.

The resulting groupings derived by each of the three focus groups were reviewed by the researcher and combined into a draft model typology. The similarities and differences between the different crisis families identified by each focus group were used by the researcher in determining this draft. This draft model was then mailed to each of the administrators for their approval or comments. As a result of this process a final crisis

typology was developed. The results of the focus group process and the final typology are shared in chapter 5.

4.2 Phase II: Assessment of Crisis Preparedness

The second phase of this study focused on the level of crisis preparedness in North Carolina health departments. The DTP Model of Crisis Preparedness described in chapter 3 provided the conceptual framework for this work. In an effort to provide breadth of information as well as depth, three types of data were collected and analyzed for this phase of the study:

- Quantitative data from a written survey of local health directors across the state of North Carolina

- Qualitative data from 29 key informant interviews; at least 5 interviews from each of five local health departments

- Archival data from five health departments, i.e. crisis plans, pertinent agency policies and training records

The various types of data were necessary to provide the richness needed to describe the very complex nature of organizational crisis preparedness. In addition, the use of multiple methodologies and various sources of data allowed for some measure of the internal consistency of the findings (Patton, 1990). The following section provides a brief description of the methods that were used to collect each type of data for this research, including an overview of the proposed study setting and participants for each step. In addition, it outlines how this data was analyzed to answer the study's research questions.

4.2a Written Survey

A written survey was used to collect quantitative information on the general level of perceived crisis preparedness of local health departments in North Carolina.

Survey Sample

The survey obtained information on local health departments in the state of North Carolina. Seventy-seven (90%) of the eighty-six health departments in the state participated in the survey. The number of employees in these agencies ranged from twelve to five hundred. Most of the participating health departments provided services to the residents of one county. Six of the health departments provided public health services to multiple counties. Table 4.1 lists some key characteristics of those health departments included in the results of the written survey.

Table 4.1 Health departments by size -employees, counties served and buildings

	Number of Participants
Number of Employees	
0-50	20
51-100	26
101-200	23
200 – 500	8
Number of Counties Served	
One County	71
Multiple Counties	6
Number of Separate Buildings	
1	25
2 -3	34

4-6	12
7+	6

Health directors from each local health department in the state were asked to serve as respondents for the survey. In cases where there was no health director, the highest ranking employee was asked to participate. Senior management was selected as the informant level because of the key role these individuals play in preventing and responding to organizational crises. They do this by promoting an organizational culture that leads an organization to be crisis-prone or crisis-prepared and by providing the leadership needed to manage a crisis when one occurs (Pearson & Clair, 1998).

As previously mentioned, representatives from seventy-seven (90%) health departments completed the survey. Eighty-six percent of the respondents were health directors and 81% had over two years of longevity at their health department. Table 4.2 lists key characteristics of the survey respondents.

Table 4.2 Survey respondents by job title and tenure

	No. of Respondents
Job Title	
Health Director / Interim Director	66
Assistant Health Director / Deputy	1
Nursing Director	7
Administrative Assistant / Health Educator	3
Years at Agency	
0-2 years	15
3-7 years	19
8-15 years	21
16+ years	22

Survey Instrument and Data Collection Method

The written survey was the primary method of quantitative data collection. This survey was administered to local health directors attending the October 1995 North Carolina Health Director's Legal Conference held at the Institute of Government in Chapel Hill, North Carolina. Health directors that did not complete the survey at the conference or those that were not in attendance were sent the survey in the mail.

The survey was designed to identify the level of experience health departments have had with the different types of organizational crises and to measure their level of crisis preparedness for each crisis family. To do this, the survey included questions which addressed each of the four dimensional layers of the DTP Model of Crisis Preparedness. In addition, questions were included to obtain information on crisis readiness for ten specific response activities and on perceptions of preparedness for the various types of crises in the typology.

The survey instrument used was a modified version of a survey developed by Pauchant, and Mitroff (1992). Since this survey was developed primarily for use with large private sector corporations, it was pre-tested with members of the intended audience for length, clarity of questions, format, sequence and quality of the instructions (Woodward & Chambers, 1986.) After the pre-testing, the tool was modified to apply to small public health agencies. Changes affected both the length and the wording of some of the specific questions. The survey was shortened to forty-four questions. Questions that did not apply to the public sector were omitted and questions with inappropriate language were reworded. For example, questions such as "Our responsibility is, before all, legal and financial," and "Prove to me it can hurt us financially," were felt to be inapplicable to the public health system and were

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therefore omitted from the survey. Other questions such as "Our products are not dangerous," and "Desirable business ends justify taking high risk means," were changed to "Our services are not dangerous," and "Desirable public health ends justify taking high risk means". The modification in language allowed the questions to be understood by public health professionals yet did not change the original intent.

The final survey instrument was divided into seven sections (see Appendix C for a copy of the survey instrument). The first set of questions pertained to demographic and background information. This included information on the title and tenure of the informant, the size of the organization, and the number of facility locations.

The demographic section is followed by a section (Part I) on perceived crisis readiness. This section listed ten crisis management responses and asked the survey respondents to indicate those which they felt their agencies would be immediately able to implement in the event of a severe traumatic crisis, such as the bombing of the federal building in Oklahoma. Some of the responses listed are the ability to mobilize a crisis team, the ability to provide services at another location and the ability to evacuate the building.

The following four sections (Part II) included a series of questions which provided information on the four layers of the preparedness model. Each section contains between ten and twelve questions. Each question was followed by a 7-point Likert scale. The scale for each of the questions pertaining to Layers 1 and 2 of the model (the human beliefs and the organizational culture) included three anchors: 1 was "very true", 4 was "neither true or false" and 7 was "not true at all." For the set of questions pertaining to levels 3 and 4 of the model (structure and strategies), the three anchors were 1, "not at all", 4, "somewhat in the process" and 7, "well established."

The final section, Part III, of the survey provided space for the respondents to indicate their perceptions of the organization's level of crisis experience and crisis preparedness. This section listed the different crisis types (as determined in Phase I of the study) and asked the informant to indicate the number of crises experienced and the perceived level of preparedness for preventing and responding to each crisis type. A 5-point Likert scale (1= not at all prepared; 5= very prepared) was used to gauge the respondent's perceptions of their organization's abilities.

Analysis of Survey Data

A descriptive analysis was performed on the written survey. The number of affirmative responses in Part I was totaled and ranked. This provided information on the types of responses that the respondents felt their agencies were most ready to implement in the event of a crisis.

In Part II, each of the four sections was given a score by totaling the answers to the questions in that section. The resulting scores were then placed on a scale which indicated whether the agency was in the "danger," "questionable" or "safety" zone for each of the four layers of the DTP Model. Zone ranges were calculated to reflect the number of questions in a section but also to match those used by Pauchant and Mitroff (see Table 4.3). Organizations which had any of the four layers in the danger zone were considered dangerously unprepared to prevent and respond to crises. Those that had at least one layer in the question mark zone, but none in the danger zone, were identified as being questionably prepared for crises. Only those with all layers in the safe zone were scored as "crisis-prepared."

Table 4.3 Preparedness zone ranges for each dimensional layer of the DTP Model

Dimensional Layer	Danger Score Zone	Questionable Score Zone	Safe Score Zone
Layer I	0 - 32	33 – 55	56 – 77
Layer II	0 - 35	35 – 60	61 - 84
Layer III	0 - 34	35 -57	58 - 77
Layer IV	0 -29	30 – 50	51 – 70

In addition to calculating scores for each health department, average scores were computed for each of the four layers of the model. These scores were then compared to determine which layers of the model were considered the strongest or weakest for all of the health departments. To arrive at these scores the average scores for sections 3 and 4 of the survey were adjusted. These sections were recalculated by converting the scores to a 77-point scale (consistent with sections 1 and 2). With all layers weighted equally, they were compared.

Part III of the survey provided information on the number and types of crises the respondent felt the agency had experienced in the last five years and his or her perception of how ready the agency was to prevent and respond to each of the different types of crises. Group averages were calculated for the total number of crises experienced, the number of crises experienced from each crisis family and the scores for perceptions of preparedness. Averages were compared to determine the most common types of crises faced by local health departments and to identify which of the crisis types health administrators felt most ready to prevent or respond.

4.2b Health Department Case Reviews

In addition to data obtained through the survey, the crisis-preparedness levels of five local health departments were examined. Qualitative data was collected from these agencies through key informant interviews. Archival data was also obtained through a review of all crisis-related documents. The information gathered from these assessments served to explain and validate the quantitative data obtained from the written survey. It also provided additional information on the factors which promote or inhibit organizations from being crisis-prepared.

Five local health departments in North Carolina served as case sites. These agencies were selected by the author based on size and geographic location. An effort was made to include both large and small health departments from various regions of the state. One of the health departments selected served multiple counties in the western mountain region. Two of the health departments served largely urban populations, one served a landlocked rural community and one served a coastal community in the eastern region of the state. In addition to these demographic characteristics, at least two organizations were purposefully selected because of their known recent experience with crises. This allowed a richness of data and helped to explore the value of past experience on crisis prevention and management activities in an organization.

Key Informant Interviews

At least five individuals from each of the five health departments served as key informants for this part of the study. A total of twenty-nine individuals were interviewed. The health director at each department was one of the individuals interviewed. The

remaining four-to-six individuals interviewed at each location were selected by the health

director. These people were selected based on knowledge about crisis management efforts

throughout their agency (Table 4.4). Data collected from these different perspectives allowed

for an assessment of the validity of the data for each organization.

Table 4.4 Key informants by discipline

DISCIPLINE	NO. INTERVIEWED
Health Director	5
Nursing	8
Environmental Health	8
Health Education / Public Relations	3
Management Support / Clerical	4
Board of Health Member	1

Data from the key informant interviews was collected exclusively by the researcher

during a two day site visit to each of the participating health departments. This was

accomplished during the months of October and November in 1995.

The key informants from each of the five organizations were independently

interviewed to determine the types of crises experienced by the agency, key factors of the

organization that either enhance or detract from effective crisis prevention and response and

the overall perceived level of crisis preparedness for the organization.

The interviews were conducted in a semi-structured manner in a setting convenient

and comfortable to the informant. Interviews lasted between 1 and 1.5 hours. An interview

guide was developed (see Appendix D) by the researcher using standardized open-ended

questions and conversational prompts. This increased the comparability of the responses,

while allowing for in-depth discussions of issues that were deemed important to the

understanding of crisis preparedness in that organization.

Each interview began with a discussion of the purpose of the research and a clarification of the key terms, such as "organizational crisis". Following this introduction, questions were asked to gain insight into the human, cultural, structural and procedural characteristics of the organization that affected its level of crisis preparedness. In addition, questions were asked to assess the perceived quality of crisis management strategies used by the organization, the availability of resources for crisis management and ability of the organization to learn from past crisis experiences.

During each interview the researcher took handwritten notes. In addition, each interview was audio-taped. Since other researchers (Reilly, 1989) have experienced informant inhibition when interviews were taped, participants were told that they could turn off the tape recorder at any time during the discussion. Notes were filled in by the researcher after listening to the recorded audiotapes of each interview.

Archival Document Review

Crisis-preparedness documents were reviewed to support and validate the information gathered through the interviews and the written surveys, particularly as they related to Layer Four, written plans and policies, of the DTP Model of Crisis Preparedness.

Existing written policies and plans relating to crisis management were reviewed and collected at the time of the site visits at each of the five agencies described above. Documents that were examined included disaster plans, crisis plans, policy and procedure manuals, staff development and training records, and media contact logs.

The audit tool in Appendix E was developed by the researcher and used to identify the specific components of each document that was reviewed. Particular components of interest

included: the existence of a comprehensive crisis plan and a crisis management team, the identification of steps necessary to identify and deal with a variety of crisis situations, a plan for both internal and external communication, and a strategy for organizational learning. The location of each document was also recorded at the time of inquiry.

Analysis of the Case Data

The surveys, key informant interviews and archival materials formed the basis of a case review for each of the five local health departments examined in the study. A separate study database was established for each site (Patton, 1990). Each database included relevant documents, including interview notes, document audit reports and the quantitative written survey for each agency.

A content analysis was performed on the qualitative data. The use of recurring sentences or phrases were noted and compiled to identify the existence of patterns or themes in the data (Patton, 1990). Specific threads or themes were sorted to align with the DTP Model of Preparedness used in the study.

Archival records were analyzed in two ways. First, a table of existing documents was created. This was used to compare the types of crises for which each of the health departments had written policies or plans. Next, the contents of the specific documents were reviewed to identify general themes related to the types of information they included or omitted. The results from the qualitative analysis and the archival reviews were then compared to the results from the written survey analysis to determine the current status of crisis preparedness for health departments in North Carolina.

4.3 Summary

This chapter describes the multi-method study design used to explore the level of organizational crisis preparedness in North Carolina's local health departments. The study included two phases: Phase I, the creation of a crisis topology, and Phase II, an assessment of the level of preparedness to prevent and respond to the various crisis types in the typology. Data was collected using a modified focus group methodology, a written survey, key informant interviews and an archival document review. The results of these activities are presented in the following three chapters.

CHAPTER 5

RESULTS: DEVELOPMENT OF A CRISIS TYPOLOGY

This chapter will present the results of Phase I of the study; the development of a crisis typology. These findings specifically address the first two research questions:

- What are the types of organizational crises that might be experienced by local public health departments in North Carolina?
- Can these various crisis situations be categorized to form a useful framework to aid in crisis management?

The findings will be presented in the order suggested by the research methods. First, are the results from the process used to identify a list of potential worst-case scenarios. Following this section, are the findings from the modified focus group process used for developing the crisis typology. Finally, the typology framework used for the remaining part of the research is presented.

5.1 Development of a List of Potential Organizational Crises

Using the methodology described in Chapter 4, forty-six (46) situations were identified as potential organizational crises for local public health departments. Scenarios included in the list were as varied as acts of terrorism to rumors of poor public health

response and asbestos in the building. Table 5.1 provides an alphabetical listing of these scenarios.

5.2 Development of the Final Crisis Typology

The list of worst-case scenarios was used by the focus groups charged with creating categories of crises. Each of the three groups was able to complete this task. Below are the results from the modified focus group process.

Overall the categories formed by the three groups were very similar. Two of the groups identified 7 distinct categories; the other group identified six crisis families. There was unanimous agreement of the placement of twenty-six crisis scenarios (57%) into five similarly titled categories. These categories were titled: "Personnel", "Political", "Emergencies / Disasters", "Legal" and "Plant / Building / Equipment."

The categories were most different in their placement of situations that had to do with public relations and employee issues. Two focus groups identified a need for a separate category for public relations issues, while the third felt that these situations could be included with the politically based crises in a merged category called "Political / Image" crises. The situations in question included: public anger over a health policy or action, board of health member arrested, mass media criticism, activism, and rumor of poor department response. Whether or not these situations were in one category or two separate groupings, all three of the focus groups agreed that the main characteristic that tied these situations together was the potential for the community to have a negative image of the health department. This potential outcome would necessitate an effective public relations response.

The other area of disagreement between the focus groups was in the grouping of scenarios related to employees. All focus groups included a personnel category but two

groups felt that quality assurance issues should be included as category distinct from employee misconduct. The root cause of the items included under "Quality Assurance" was incompetence on the part of staff or unintentional error (e.g. death of a client due to incompetence, medication errors.) This is distinguished from situations that were intended or purposeful (e.g. dismissal of an employee, staff exhibiting racism). One group also felt that a third category of employee health issues was also significantly different from the other crises to warrant its own category. This group included death of an employee, HIV infected worker and infectious disease outbreak in staff as part of a separate crisis family. These differences in crisis categories were remedied when the various crisis response strategies were discussed and some scenarios that required similar response strategies were then grouped together.

The final typology of potential crises for health departments agreed upon by the members of the focus groups consisted of seven (7) crisis families/ categories. These are: "Disaster", "Legal", "Quality Assurance", "Personnel", "Plant / Equipment", "Political", and "Public / Public Relations". Table 5.2 lists these categories, including the placement of the individual worst-case scenarios.

Table 5.1 Potential organizational crises in local public health departments

1. Accidents
2. Activism action
3. Asbestos in building
4. Board of Health member arrested
5. Bombing of a Building
6. Breech of confidential information
7. Bribery of a health worker
8. Budget cuts
9. Chemical gas release in building
10. Client stealing supplies / equipment
11. Computer failure, loss of telephone lines
12. Death of a client
13. Destroying files under investigation
14. Dismissal of an employee
15. Employee death
16. Equipment malfunction
17. Fire in the building
18. Government action to require new services without funds
19. HIV infected health professional
20. Inadequate resources to deal with a situation (e.g. not enough vaccine)
21. Infectious disease outbreak in staff
22. Kidnapping / hostage taking
23. Lack of support from politicians
24. Mass media criticism of the health department
25. Mismanagement of funds
26. Natural disaster that affects the buildings: Hurricane, tornado, flood
27. Outdated /inadequate equipment, e.g. Autoclave, defective condoms
28. Poor response to public health problem resulting in injury or death
29. Poor security in facility
30. Poorly maintained building, unsafe buildings
31. Poorly skilled staff/ unqualified staff
32. Privatization of public health services (externally driven)
33. Public anger or a public health policy or action
34. Rape
35. Rumor of poor response
36. Sabotage
37. Sexual harassment
38. Staff exhibiting racism
39. Staff molesting client or other worker
40. Staff participation in unprofessional activities (unethical behavior)
41. Staff promoting political agendas unrelated to health
42. Staff stealing supplies, pharmaceuticals
43. Terrorism
44. Violation of law (e.g. open meetings law, Fair Labor Standards Act)
45. Workplace violence
46. Wrong medicines given to a client

Table 5.2 Crisis scenarios for each crisis family

FAMILY / CATEGORY	SPECIFIC CRISIS EXAMPLES
DISASTER	• Kidnapping / Hostage Taking • Chemical gas release in the building • Bombing of building • Workplace violence • Natural disaster that affects the building • Sabotage • Fire in the building • Terrorism
LEGAL	• Violation of law • Rape / Staff molesting client or other worker • Destroying files under investigation • Staff stealing supplies • Bribery of a health worker • Breech of confidential information • Mismanagement of funds • Sexual harassment • Client stealing supplies or equipment • Staff exhibiting racism
PERSONNEL	• Dismissal of a key employee • HIV infected health professional • Employee death – not caused by a work situation • Infectious Disease outbreak in staff
PLANT AND EQUIPMENT	• Poor security in the facility • Poorly maintained building, unsafe building • Asbestos in the building • Equipment malfunction • Outdated, inadequate equipment • Computer failure, loss of telephone lines
POLITICAL	• Budget cuts • Inadequate resources to deal with a situation • Privatization of pubic health services (external force) • Lack of support from politicians • Government action to require new services without funds
PUBLIC / PUBLIC RELATIONS	• Public anger over public health policy or action • Board of Health member arrested • Mass Media criticism of health department • Activism action • Rumor of poor response
QUALITY ASSURANCE	• Poorly skilled staff / unqualified staff • Staff participating in unprofessional activities • Poor response to health problem – injury/death • Death due to incompetence or negligence • Wrong medicines given to a client • Unintentional accidents

Each of the crisis families is distinct in at least one significant way. For example, one family includes situations that focus on the organization's building or equipment while another includes situations that are precipitated or caused by external political factors. The key differences between the crisis families also reflect differences in needed response strategies. Table 5.3 highlights how each of the crisis families is seen to be different and how the primary response strategies differ for each group.

Despite the differences between categories and response strategies, it is important to note that there are critical crisis response strategies common to all crises. For example, while public relations crises, in particular require a communication strategy, all organizational crises will require a rapid, effective communication response. It is also worth noting that crises don't always fit into distinct categories. It is possible, and in fact, likely, that a situation would fall into multiple categories. For example, the criminal act of planting a bomb in a building could fit into the Plant / Equipment category or into the Legal category or even, the Disaster category. This does not diminish the usefulness of the typology but highlights the benefit of using it for crisis preparedness. If an organization has prepared for legal crises, plant/equipment crises and disaster situations – it will be prepared to respond affectively to a bomb threat.

Table 5.3 Key characteristics and response strategies of each crisis family

FAMILY	CHARACTERISTICS	RESPONSE STRATEGIES
DISASTER	Situations with the potential for immediate mass destruction and multiple casualties. These situations affect everyone. Many people are needed for a coordinated and well orchestrated response.	Requires the mobilization of multiple resources instantaneously. May require protective equipment, evacuations, psychological counseling, extensive communication to multiple target audiences. May require the inclusion of representatives of outside agencies for an effective response.
LEGAL	Situations that include an element of the law. Typically an infraction of the law.	Requires outside expertise from the judicial system.
PERSONNEL	Situations that are employee focused but are not legal in nature	Requires an internal response, such as changes in work assignments and effective communication with staff. Public communications require protection of employee rights.
PLANT / EQUIPMENT	Situations that impact on either the availability or working condition of the organization's equipment or facilities.	Requires complete knowledge of the facilities, grounds and equipment. May require evacuations and changes in service delivery locations or strategies. Requires outside assistance from technicians and other experts. May require obtaining new equipment quickly such as generators, telephones, computers, laboratory equipment, etc.
POLITICAL	Situations caused by external political agendas or actions. May involve changes in laws, rules or regulations which affect the functioning of the health department.	Will require changes in the service delivery and organizational structure. Will require effective communication efforts directed at policy makers and decision makers.
PUBLIC RELATIONS	Situations focused on the perceptions of the community and may result in a damaged public image for the agency.	Requires a focus on public communication using both face to face interactions with key individuals and mass media outreach to the public.
QUALITY ASSURANCE	Situations caused by or related to staff incompetence	Requires an internal operational response to correct the situation and communication messages that highlight intolerance of the problem and fast actions to remedy the problem

While each of the focus groups was instructed to sort the crisis situations by the similarities in response strategies, groups tended to categorize crises more on the basis of root causes rather than response strategies. For example, an employee caught embezzling money and an HIV infected health care worker may both need a strong public relations and

communications response strategy. However, these situations were put in two different categories (Legal and Personnel, respectively). Each group felt that the root cause of the incident would affect how the situation was perceived by outsiders and hence, would dictate the types of communication messages delivered and to which target groups. They felt that the cause of the incident is an important factor in identifying the most effective response strategy.

The root cause of a crisis has also been used as a key characteristic in the Pauchant & Mitroff crisis topology (1992). The two factors deemed important in their model for identifying the appropriate response strategy are: External-Internal causes and Human/Social – Technical/Economic causes. An application of the final crisis families from this study to those dimensions can be seen in Figure 5.1. This crisis typology formed the basis of the rest of the study.

Figure 5.1 Crisis typology for public health departments
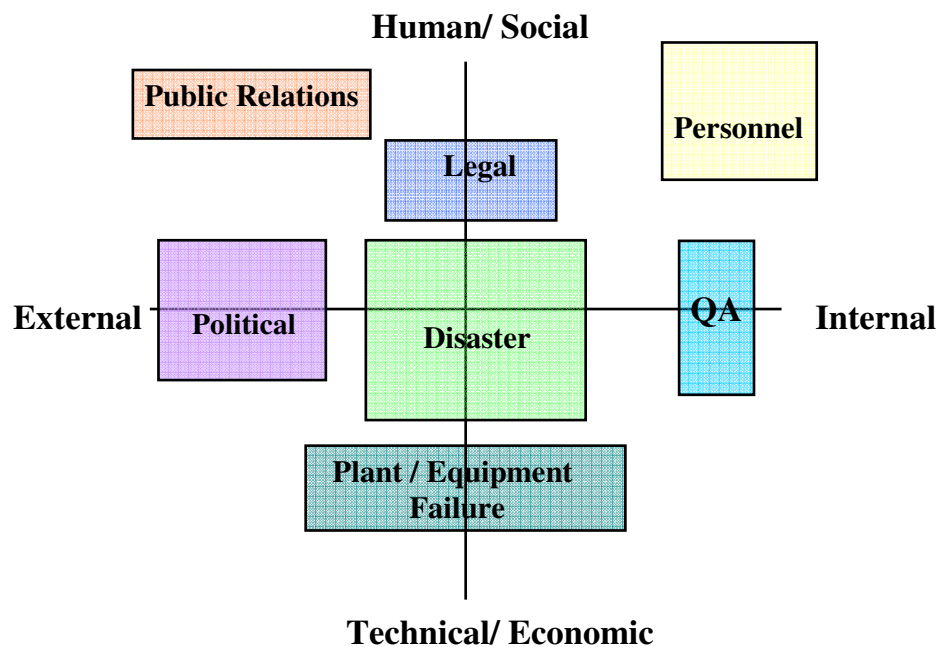
5.3 Summary

This chapter presented the findings of the two steps taken to answer the first two questions of the study. Step one was to engage in a process which would generate a list of potential organizational crises that a health department may encounter. A list of forty-six (46) worst-case scenarios was generated. Step two was to use a modified focus group methodology to sort these situations into a categorization framework that would could help an organization strengthen it's ability to prevent and respond to these situations. Three separate focus groups categorized the crisis scenarios into a seven family typology. The distinct families of crises were titled: "Disaster", "Legal", "Quality Assurance", "Personnel", "Plant / Equipment", "Political", and "Public / Public Relations". These categories were used as the basis for the remainder of the study.

CHAPTER 6

RESULTS: PERCEPTIONS OF PREPAREDNESS BY HEALTH DIRECTORS

This chapter summarizes the results of the written survey that was given to all local health directors in North Carolina. This information will be used with the results from the interviews and document reviews found in the next chapter, to answer study questions 3 and 4. These questions ask about the overall abilities of health departments to prevent and respond to a variety of crises and about the common gaps in preparedness found in these agencies.

Seventy-seven (77) surveys out of a total of eighty-six were completed, yielding a 90% response rate. All returned surveys were used in the analysis. A description of the survey respondents can be found in Chapter 4 and a copy of the survey instrument is in Appendix C.

The survey provided information about the perceptions of readiness from the viewpoint of the leaders of local health departments in North Carolina. In addition to information about the number of crises that health departments had experienced in a five year period, perceptions of prevention and response readiness for the various families of crises and for various response activities was captured. The survey also provided some insight into the perceptions of health officials as to the culture, behaviors, structure and plans within their own health departments. A summary of these findings is presented here.

6.1 Overall Experience with Crises

During the five years prior to administering the survey (1991-1995), local public

health leaders reported that their health departments had experienced a total of three hundred

eighty-seven (387) different organizational crises. Totals for individual agencies ranged from

zero to twenty-five different events. As shown in Figure 6.1, sixteen percent of respondents

reported that their health departments had not experienced any major organizational crisis,

while over fifty percent stated that theirs had responded to more than three separate events.

Figure 6.1 Percentages of health departments by levels of crisis experience
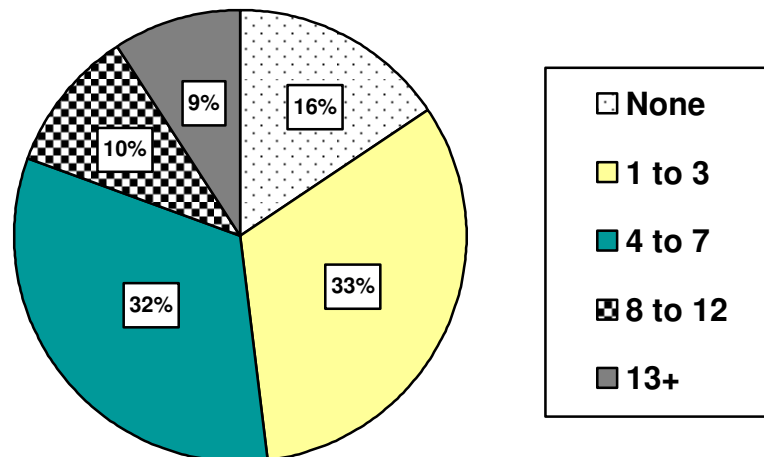
Seven respondents reported that their health departments had experienced over

thirteen significant organizational crises during the five year time period. Four of these

health departments are situated in urban areas, while three are in rural communities. Their

locations extend from the eastern coastal region of the state to the far western mountainous

area. Similarly, those that had not experienced any crises are located in various locations

across the length of the state. None of these health departments, however, are situated in

major population centers. Of the twelve health departments that had not experienced any large-scale organizational crises, ten had 70 or fewer employees. The remaining two agencies employed no more than one hundred fifty individuals.

6.2 Types of Crisis Events Experienced

During the reporting period, survey respondents reported that health departments in North Carolina had experienced every type of crisis in the crisis typology as defined for this study. As shown in Figure 6.2, the most frequently cited crisis situations are those that fall into the "Political" and "Plant/Equipment" families. Forty-two (42) health departments had experienced political crises and forty-one health administrators had indicated that their organizations had experienced plant and equipment crises (Table 6.1). Disasters were the least frequently reported type of event experienced. Twenty-nine percent (29%) of health departments indicated experience with dealing with a situation that included the possibilities of loss of life, wide-spread chaos and extreme panic. Some of these agencies, however, had experienced more than one of these events as indicated by a total of thirty-eight separate disaster events during the time period in question. Natural weather events, such as hurricanes in the coastal region, may explain this level of experience for some health departments.

Figure 6.2 Total number of crises reported by crisis family (1991-1995)
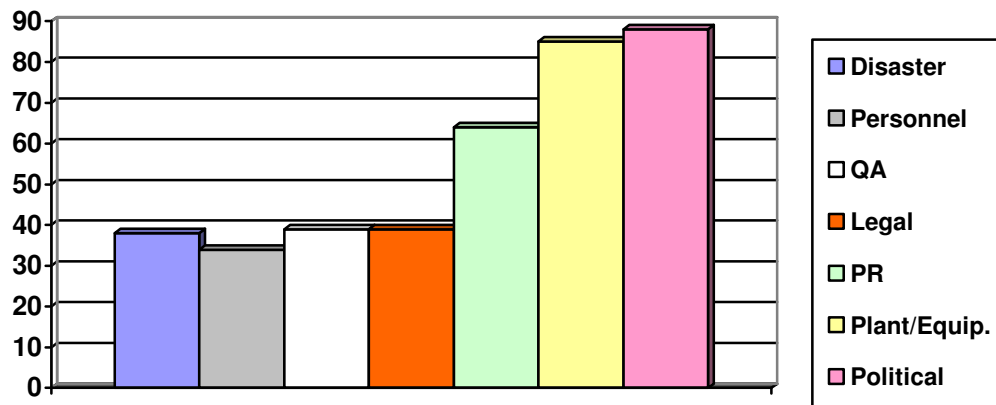
Table 6.1 Number and percentage of health departments reported by crisis family experience (1991 – 1995)

Crisis Family	Number of Health Departments	Percentage of Health Departments
Political	42	55%
Plant / Equipment	41	53
Public Relations/ Public	30	39
Legal	28	36
Quality Assurance	26	34
Personnel	26	34
Disasters	22	29

6.3 Perceptions of Prevention and Response Readiness

Survey results indicate that at the time of this study, public health leaders felt more prepared to respond to all the various types of crises than to prevent their occurrence.

Survey respondents rated their level of readiness to respond to all seven families of crises above the mid point of the 5 point Likert scale. On the other hand, when asked about their level of preparedness to prevent situations from occurring they rated 5 of the 7 items less than a 3.0 (the midpoint) on the scale. The overall average score for responding to these 7 crisis types was 3.35 and 2.71 for preventing them.

As highlighted in Table 6.2, survey respondents felt more prepared to respond to scenarios in the quality assurance and public relations families, than any other types of potential situation. They felt least prepared to respond to the chaos that results from disasters or high-panic situations. Survey respondents indicated that on average they felt most prepared to prevent crises that fall in the "Quality Assurance" family. They felt least prepared to prevent the crises that would be classified in the categories of Disasters, Political and Personnel (Table 6.3.) The differences between ability to prevent versus respond can be best seen in the Disaster, Political and Personnel families of crises (Figure 6.3).

Table 6.2 Respondents perceptions of preparedness to <u>respond</u> to the various types of crises (Scale 1 = not at all, 5 = very prepared)

Crisis Family	Respondents n = ?	Average Response
Disasters	N=74	3.01
Plant / Equipment	73	3.18
Political	74	3.23
Personnel	73	3.36
Legal	73	3.41
Public / Public Relations	73	3.58
Quality Assurance	73	3.70

Table 6.3 Respondents perceptions of preparedness to <u>prevent</u> the various types of crises
(Scale 1 = not at all, 5 = very prepared)

Crisis Family	Respondents n = ?	Average Response
Disasters	70	2.07
Plant / Equipment	73	2.37
Political	68	2.43
Personnel	73	2.75
Legal	73	2.99
Public / Public Relations	73	3.01
Quality Assurance	73	3.38

Figure 6.3 Perceptions of preparedness for prevention and response by crisis family (Scale: 1
= not at all, 5 = fully prepared)
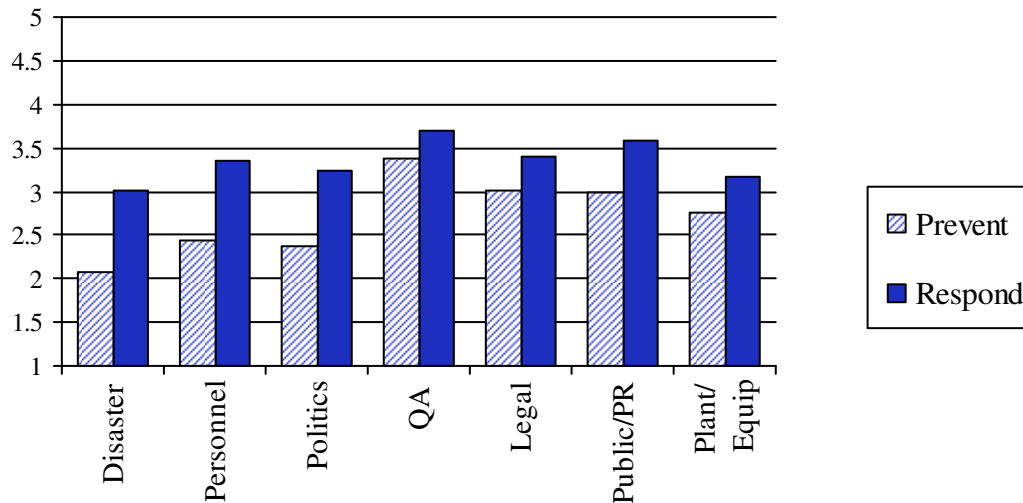
To elicit a deeper understanding of the aspects of crisis response that local public

health leaders felt most competent, respondents were asked to indicate which of ten activities

their agency would be most ready to implement at the onset of a triggering event. Table 6.4

shows that respondents felt most able to effectively evacuate the building if needed and to

communicate quickly with staff and Board of Health members. Less than fifty percent of them, however, felt confident about their agency's ability to initiate five of the ten actions on the list. Overall, they were least confident that they could quickly obtain psychological counseling for individuals traumatized by an event or obtain back-up equipment, such as phones and generators.

Table 6.4 Number and percentage of health departments perceived as ready to implement ten specific crisis response strategies

Activity	Number	Percentage	Rank Order
Evacuate the Building	65	84 %	1
Communicate with Staff and Board of Health	54	70 %	2
Obtain help from other agencies	49	64 %	3
Communicate to Media / Public	46	60 %	4
Mobilize a Crisis Team	42	55 %	5
Treat Medical Emergencies	38	49 %	6
Offer services at new location	30	39 %	7
Set up back up communication technologies	25	32 %	8
Obtain generators and other equipment	25	32 %	8
Obtain psychological counseling	22	29 %	10

6.4 Assessment of Dimension Layers

To further validate respondent's perceptions of crisis preparedness, the survey included questions to identify the strengths and weaknesses of each layer of the DTP model. As described in Chapter 3, Layer 1 of the model represents the human beliefs and values; Layer 2 represents the culture of the organization; Layer 3 represents the organizational crisis structure and Layer 4 reflects the written policies and plans for crisis preparedness. Each dimensional layer of an organization must be crisis-prepared for the overall agency to be crisis-prepared.

6.4a Mean Layer Scores

Table 6.5 illustrates the average overall scores for the questions that represent each layer of the model. Layer 2 had the highest overall average score. Layer 4, with a score of 43 points is the weakest layer in the model. The scores for Layers 1 and 2 fall within the safe zone, as described in Chapter 4. Both Layers 3 and 4 fall within the questionable range.

Table 6.5 Overall mean scores and zone labels for each layer of the DTP Model (Maximum score of 77 points for each layer)

Dimensional Layer	Mean Score	Zone
Layer 1	56	Safe
Layer 2	57	Safe
Layer 3	44.5	Questionable
Layer 4	43	Questionable

Table 6.6 provides a closer look at each of the layers of the model for the group. Overall, Layers 3 and 4 (Structure and Plans) included the greatest number of health

departments falling within either the questionable or danger zones. Over eighty percent of the health departments had scores that placed them in these two zones. On the other hand, more than 55% of health departments fell within a safe range for Layers 1 and 2. No health department had a score that put them in the danger zone for either of these two layers of the model.

Table 6.6 Number of health departments by zone for each dimensional layer

	LAYER 1 HUMAN	LAYER 2 CULTURE	LAYER 3 STRUCTURE	LAYER 4 STRATEGIES
DANGER	0	0	18	15
QUESTIONABLE	33	33	48	49
SAFE	44	44	11	13

The survey results also indicated that four health departments scored "completely safe" or "crisis-prepared." All four of the layers for these health departments were rated as safe and adequate for effective crisis preparedness. Twenty-five health departments, however, had at least one layer of the model scoring in the danger zone. This represents 32.5% of the health departments. Eight of these agencies had two layers in the danger zone. None of the agencies had more than two layers in the danger zone.

The four health departments which rated entirely in the safe zone span the state, geographically. They range in size from seventy-four employees to one hundred seventy-seven employees. One is located in an urban setting, the others in smaller communities. Despite being scored as safe in this part of the survey, three out of the four respondents still identified shortcomings in their readiness abilities. Results from Section I of the survey

(specific crisis response activities) revealed that the respondents from these four agencies felt that they were not ready to obtain extra phone lines or other equipment, treat medical emergencies or arrange for psychological counseling and support for responders or victims. One respondent indicated that his/her agency was ready to implement all ten of the crisis response activities listed on the survey.

Health departments of all sizes are included in the twenty-five agencies with at least one layer in the danger zone. However, nineteen (76%) of the agencies that have this distinction are small, having less than one hundred employees. Fourteen of the twenty-five health departments have less than fifty employees. This represents seventy percent (70%) of the very small health departments included in the study.

It is plausible that health directors with more crisis experience would have dedicated more time to creating an effective crisis prevention and response infrastructure. However the data does not support the hypothesis that more experienced health directors lead agencies that are more prepared. The twenty-five agencies with at least one layer in the danger zone had various levels of crisis experience. Six respondents (24%) indicated that they had not experienced a crisis, while another twelve had experienced three or fewer events. Seven respondents (28%), however, indicated much more experience, having been involved in four or more different crisis events. None of the survey respondents from these agencies felt ready to implement all of the ten crisis response strategies listed in the first section of the survey.

Below is a closer look at how respondents answered the individual questions related to each of the dimensional layers of the DTP Model.

6.4b Layer 1 Scores – Human Beliefs and Values

No health department received a score in the danger zone for this layer of the model. Table 6.6 shows that thirty-four had scores within the questionable range, but over half were rated as safe. Average scores for each question related to Layer 1 of the model are listed in descending order in Table 6.7. These eleven statements represent personal beliefs that can make the organization more crisis-prone. A low score represents agreement with the crisis prone statement. Of the eleven items in this section, the lowest average scores were for the two statements: we focus on prevention" and "other agencies will help out." These scores both fell below a score of 4, the midpoint of the scale. The highest average scores were for the statements: "only bad agencies have crises" and "if you managed one crisis, you've managed them all."

Table 6.7 Mean scores for survey questions related to Layer 1 (Human Beliefs)
Scale 1-7 (1 – very true, 7 – not at all true)

Question	Mean Score
1. Only bad agencies have crises	6.57
2. Managed one you've managed them all	6.23
3. Doing of few rotten apples	6.04
4. We're too small/big	5.94
5. Not good to dwell on past	5.74
6. We can handle anything	5.30
7. Our services not dangerous	5.18
8. We can trust our employees	4.66
9. No time to think about crisis	4.56
10. We focus on prevention	3.34
11. Other agencies will help	2.39

6.4dc Layer 2 Scores – Organizational Culture

Similar to Layer 1, no health department fell into the danger zone for crisis-preparedness because of their score for organizational culture. Thirty-three agencies, however, received scores that placed them in a questionable zone. As shown in Table 6.8, the statement with the lowest score, demonstrating the highest level of agreement with the crisis-prone statement was: "we have rumors." On the other hand, respondents most disagreed with the statements, "we can't learn from crises" and "we would not function well as a team in a crisis." These two cultural characteristics would support crisis preparedness in an organization.

Table 6.8 Mean scores for survey questions related to Layer 2 (Organizational Culture) Scale 1-7 (1- very true, 7- not true at all)

Question	Mean Scores
1. We can't learn from crises	6.36
2. Would not function well as team	6.23
3. Employee suggestions not useful	5.92
4. Most crises resolve themselves	5.79
5. Not very flexible	5.53
6. Each crisis too unique	5.51
7. We manipulate the media	5.40
8. Most important – image	4.97
9. Crisis Management is a luxury	4.90
10. Small number of decision makers	4.27
11. We are more reactive	4.17
12. We have rumors	2.95

6.4d Layer 3 Scores – Organizational Structure

Survey questions which focused on layers 3 and 4 of the DTP Model provided more insight into the health director's perceptions of the gaps in their organization's preparedness efforts. Eleven questions were asked to clarify the level of structure that was in place to

support the agency's ability to prevent and respond to crises. As described in Chapter 3, structures deemed important for crisis preparedness include, the existence of a crisis team, a process for identifying problems, one or more trained media spokespeople and a history of practicing drills and other crisis simulations. Weaknesses in this layer placed more health departments into the danger and questionable zones than any other layer in the model. As shown in Table 6.6, eighteen health departments fell within the danger zone in this layer and another forty-eight have questionable levels of preparedness because of their shortcomings in organizational structure. Not one survey item in this section reached an average rating of six or above on the 7 point scale. The two items rated the highest (5.78 and 5.60 respectively) were having a "relationship with the media" and having a "history of sharing resources." The four items with the lowest overall scores were:

- Services available to deal with stress

- Rewards for whistle-blowers

- Existence of a communication plan

- Plans and conducts crisis drills / simulations

Rewarding whistle-blowers (1.86) and practicing crisis drills and simulations (2.77) were reported as the two areas most often neglected by health departments.

Table 6.9 Mean scores for survey questions related to Layer 3 (Structure) Scale 1-7 (1 – not at all in place; 7 – well established)

Question	Mean Scores
1. Relations with the Media	5.78
2. History of sharing resources	5.60
3. Searches for problems	4.62
4. Have Trained Spokesperson	4.42
5. Have a Crisis Team	4.32
6. Have access to Back-up Communication	4.16
7. Resources for responding	4.04
8. Have a Communication Plan	3.53
9. Services for Stress	3.40
10. Conducts Crisis Simulations /Drills	2.77
11. Whistle-blowers rewarded	1.86

6.4e Layer 4 Scores - Organizational Plans and Policies

Eighty-three percent (83%) of health departments fell into either the danger or questionable zones in the area of written polices or plans for crisis preparedness. While health departments have some written policies, they typically lack policies or plans for a variety of crisis situations or their plans do not consider the impact of crisis on the various aspects of their organizations.

When asked about strategies for responding to crises, respondents reported an overall low level of preparedness. Similar to the questions relating to organizational structure (Layer 3), no question regarding written plans and strategies (Layer 4) reached an average score of six (see Table 6.10). The highest rated item for the entire survey group was the existence of "a method for updating policies" (5.21). An average score of 4.99 for a "policy for handling complaints" was the next highest rated item. Weakest scores in the written plans layer based on average scores were, "having all crisis management policies in one integrated plan" (2.83),

"having procedures for organizational learning" (3.30) and "having a policy for media

relations" (3.39).

Table 6.10 Mean scores for survey questions related to Layer 4 (Polices and Plans)
Scale 1-7 (1 = not at all in place; 7 = well established)

Question	Mean Scores
1. Methods exist for updating policies	5.21
2. Policy exists for handling complaints	4.99
3. Schedule exists for maintaining equipment	4.58
4. Staff are informed of crisis management policies	4.21
5. Procedures are in place for a variety of crises	3.86
6. Crisis management plans contain strategies for different organizational dimensions	3.58
7. Crisis management is integrated in the strategic planning process	3.47
8. Policy exists for media relations	3.39
9. Procedures exists for Organizational learning	3.30
10. All crisis management policies are together in one plan	2.83

6.4f Overall Organizational Scores

Overall scores were computed for each health department by adding up the scores for

all questions on the survey. The highest score one could achieve was three hundred eight

points. Actual scores for the health agencies ranged from a low of 138 to a high of 271.

Twenty-one of the twenty-five health departments with at least one layer of the model in the

danger zone, were in the lowest third of the scores. The other four had scores which placed

them within the lower two thirds of all the health departments.

The ten health departments with the highest overall preparedness scores were situated

in both urban and rural areas. They spanned the entire state, geographically. Despite rating

themselves highly prepared, these health departments still identified response activities for which they felt ill-prepared. On average, the twenty-five health departments with at least one layer in the danger zone identified on average only 3.3 activities that they are ready to immediately initiate, while the ten most prepared agencies identified anywhere from four to ten activities, or an average of 6.8 activities. As shown in Table 6.11, obtaining psychological services, providing medical treatment, obtaining additional service locations and setting up additional communication equipment were the top problem areas mentioned by the ten highest scoring health departments.

Table 6.11 Number of top 10 health departments unprepared for specific response activities

Activity	Number of Health Departments
Evacuate the Building	0
Mobilize a Crisis Team	0
Communicate with Staff and Board of Health	1
Communicate to Media / Public	1
Obtain help from other agencies	2
Obtain generators and other equipment	4
Set up back up communication technologies	5
Treat Medical Emergencies	6
Offer services at new location	6
Obtain psychological counseling	7

6.5 Summary

The crisis preparedness survey reveals a great deal of information about the perceptions of the level of crisis experience and crisis preparedness in local North Carolina public health departments in 1996.

Health departments in general have substantial experience with crises. Most (84%) health departments had experienced at least one organizational crisis in the five year period of 1991 to 1996. During this period the seventy-seven survey respondents reported that they had experienced three hundred-eighty seven (387) different organizational crises. The most frequently cited crises were categorized as "Plant and Equipment Failures" or "Political Events". Health departments had the least experience with large scale, catastrophic events including life threatening emergencies (e.g. natural disasters).

Respondents indicated that, in general, they felt more prepared to respond to crises than to prevent them. They reported that they are most prepared to prevent and respond to crises that involve quality assurance issues, but least prepared to prevent and respond to crises that would be considered "disasters." They were most ready to initiate the following crisis response strategies in the event of a trigger event: building evacuation, communication with staff and board of health members and obtaining help from other agencies. They felt least prepared to arrange for emotional and counseling support for those traumatized during a crisis and to obtain such equipment as back up generators and communication technologies.

The survey revealed additional details of the level of crisis preparedness in local health departments by assessing the strengths and weaknesses of the various layers of the DTP Model. Only four (5%) of the health departments represented in the survey scored completely in the safe range for all layers of the model. An organization with scores in the safe range for all four layers should have employees that have values and beliefs that support crisis preparedness, they should have organizational cultures and structures that support staff in preventing and responding to crises and they should have written policies and procedures

which outline their crisis prevention and response strategies for a variety of worst-case scenarios.

Most of the health departments (95%) reported crisis preparedness shortcomings. Thirty two percent of the health departments (25) have at least one layer that scored in the danger zone; eight of these had two layers in the danger zone. None of the health departments scored in the danger zone for Layers 1 or 2: employee beliefs or organizational cultures. The health departments that fell into danger zones did so at the structure or written policy/plan levels.

Two commonly held beliefs emerged amongst health directors which might contribute to health departments being crisis-prone. Respondents reported that they have a strong belief that other agencies will come to help if and when a crisis hits. They also stated that they believe they should focus more on the prevention of crises rather than put effort into thinking out how they might respond if a crisis hits. While these beliefs might hold some truth they actually make agencies less crisis-prepared. Assistance from outsiders may not be as quick as expected or desired (Himberger, 2007). The first responders to the incident will be staff and others in the immediate vicinity of the crisis. This must be anticipated. Also, if a health department only spends time on activities to prevent crises from occurring they will be less equipped to take on the role of responder in the event of a crisis.

The data suggest that, in general, cultures within health departments support crisis preparedness. Respondents indicated that employee suggestions are valued, that employees learn from crises and that they would function well as a team during a crisis event. However, a number of health leaders indicated that rumors are common in health departments. This part of the organizational culture could undermine preparedness effectiveness.

More gaps in preparedness were identified at the organizational structure and policy/plan levels than in the other two layers of the model. Only 14-17% of the respondents had scores that would put their agency in the safe range for these layers of the model. The remainder had deficiencies that put them in a questionable or dangerous range for crisis preparedness. The weakest areas for organizational structure were found to be, rewarding whistle blowers, obtaining psychological support services, conducting crisis drills and simulations and creating a crisis communication plan. Many health departments also lack comprehensive crisis management plans which include all policies related to preventing and responding to crises, polices for working with the media, plans or procedures for organizational learning and written descriptions for responding to a variety of situations.

CHAPTER 7

RESULTS: PERCEPTIONS OF PREPAREDNESS BY EMPLOYEES AND REVIEW OF ARCHIVAL DOCUMENTS

This section highlights the results of the key informant interviews and the archival document reviews that were done in the five local health departments. Employee statements which describe the organizational culture, human belief systems and agency crisis-preparedness structure add significant depth to the understanding of crisis preparedness in local health departments and are used to validate the findings of the survey of local health directors. The findings are presented as thematic insights. General themes on how public health officials viewed crises, how they viewed their levels of crisis experience, how prepared they felt to prevent and respond to organizational crises and how they viewed the various dimensions of their organization that impact preparedness are described. Concluding this section is a description of the types of written policies and procedures that existed for preventing and/or responding to crises, including a general review of where these documents were located within the agencies, what information they contained and the extent to which they were integrated with each other.

7.1 Crisis Definition

Despite the tremendous opportunities a crisis can bring, health officials believed that crises are negative events. With remarkable consistency, those interviewed defined

organizational crises in negative terms: dangerous, threatening, upsetting. Only one health

director suggested that a crisis might provide an opportunity. Despite the fact that a crisis

may be a motivator for change (Kovoor, 1996; Kovoor-Misra & Nathan, 2000) or a valuable

source for learning, the literature shows that most share this negative view of organizational

crises (Forgues & Roux-Dufort, 1998).

While the study participants are in agreement that crises are negative events, they

varied on whether any one particular situation would be defined as a crisis. They did,

however, identify the same four characteristics that would elevate an event to the level of a

crisis in their eyes. These were:

- there are imminent danger and significant consequences,

- resolution requires quick action,

- there are feelings of not being prepared and

- there is knowledge of the event by the outside world, particularly the mass media.

Health administrators describe a situation as a crisis when it poses an imminent

danger: threatening human life, property, or other things of value, such as credibility and

public image. Because of the significance of the consequences, these situations are also seen

as needing quick action.

"*A crisis is a situation that is immediate and life-threatening.*"

"*A crisis makes us nervous. It threatens the public's health or our operations. If immediate action is not taken, there is imminent danger.*"

"*A crisis requires a fast response and we must be ready to mobilize.*"

Feelings of "surprise" and "un-preparedness" also made public health professionals perceive a situation as a crisis. When an event is unexpected and not previously experienced or considered, people feel unprepared to react. Research summarized by Goldstein (Goldstein, 1994) proposes that "self-efficacy" is an important factor in how situations are framed. When a person perceives that he or she has the ability to successfully accomplish a goal then they are more likely to see an event as an opportunity rather than a threat. This is consistent with the feelings shared by participants in this study. When public health practitioners feel ready to respond, they no longer see the event as a crisis. When they feel unprepared, the situation is viewed more negatively.

> "*A crisis is anything that happens that is not expected, with no existing plan (big or small situations.)*"

> "*When I don't have a book or plan, that's a crisis!*"

> "*We are most prepared for the situations where we have past experience or training.*"

Finally, events are also seen to be a "crisis" when the situation is no longer just an internal problem. Situations that have become public or include actions that involve people outside the agency increase the levels of anxiety and feelings of un-preparedness in public health workers. Key informants noted that this is particularly true if members of the mass media become interested in the situation and make requests for information. Events that are limited in scope to within the walls of the organization, both in terms of awareness and action are less likely to be viewed as a crisis.

> "*Situations become bigger crises when they hit the media.*"

7.2 Types of Potential Crises

Public health practitioners have not been proactive in identifying the kinds of threatening situations that they may encounter while on the job. Not one health leader from these five agencies had ever engaged their staff in a "think the unthinkable" brainstorming session. Therefore, it was no surprise when initial types of worst-case scenarios that the key informants described as possible were very limited in scope. The types of events that first came to mind as potential crises were situations that were industry-related such as public health challenges, had been experienced in the past by their own agency or had been experienced by another social service agency in close geographic proximity. Some of the potential crises identified included infectious disease outbreaks, severe weather conditions, management / staffing shortages, lack of political support and budget shortfalls.

When presented with a broader list of worst-case scenarios, such as terrorist attack, workplace violence, collapse of one of the health department's buildings or criminal activity by an employee, and asked if these situations were possible, most interview respondents stated that anything is possible. Some, however, felt that the probability of these events occurring at their health department seemed low. This feeling was most often expressed from the public health officials residing in the far western part of the state. As described later, perceptions that crises are unique events with very low probabilities can create a crisis-prone organization.

7.3 Crisis Experience

Perceptions of the number of crises experienced by an agency varied from person to person. Two health departments involved in the study had recently experienced situations

which had made national news. In these two agencies, all individuals that were interviewed agreed that their agency had experienced a large organizational crisis. However, the public health officials in the other 3 organizations varied greatly in their assessment of the number of organizational crises experienced by their health department. Within the same agency, some individuals stated that they could not recall experiencing a single crisis in the previous five-year period, while others stated that they deal with crises every day. Environmental Health specialists most often felt like they had experienced many crisis situations. Comments like, *"All I do is put out fires,"* and *"We've had lots of crises,"* were made by public health practitioners working in the domain of environmental health.

When asked to describe crises that had occurred within the last five years, key informants described a variety of unpleasant situations. Situations were described for all five agencies that met the definition of an organizational crisis. The larger health departments in this study were able to cite many events that were negative in nature. Situations that were described included fraudulent behavior of an environmental health employee, lack of political support for needed health programs, hurricane or severe weather resulting in damage to the health department and to employee homes, public perceptions of an inadequate public health response to an environmental concern and physical threats made to staff members. Even the health department in the far western part of the state, where informants believed that they were immune to many potential crises, shared three recent experiences: a sexual harassment lawsuit against the health director, a breech of confidential information and a drug arrest of the spouse of the health department's chief medical officer.

Experiencing one or more crises may influence how future situations are perceived. As mentioned previously, having experience with a particular type of event was mentioned

consistently by those interviewed as a significant factor in increasing feelings of preparedness. The impact of past experience on feelings of readiness is described in the next section.

7.4 Perceptions of Prevention and Response Readiness

Initial comments made by health officials suggested a high level of confidence in their organizations' abilities to effectively prevent and respond to a variety of crisis situations. However, answers to more probing questions about their agencies' abilities to initiate specific response activities hinted at a different level of crisis readiness for various events. For example, one health director felt confident that his institution would respond effectively to a natural disaster. Yet further questions related to the responses needed to handle this kind of event, such as "where will you provide services if your building is devastated?", "how will you obtain more equipment, if needed?" or "how will you support the stress and trauma felt by employees?" made him realize that, while his agency is prepared to deal with a community crisis, they had not thought out how a natural disaster might affect their own agency or their own employees.

"*I thought we were prepared until you presented all of this.*"

"*We could evacuate the building but we would not be ready to deal with the psychological part of the crisis.*"

Overall, key informants were similar in their perceptions of the types of situations that they felt most prepared for as well as those that they felt least prepared to prevent or contain. The reasons given for why they either felt prepared or not prepared to handle particular events were also remarkably consistent. Themes about perceptions of readiness will be

presented in the next section.

7.4a – Perceptions of Readiness for Various Types of Crises

Interviewees felt more prepared to prevent and respond to some events than others. The list of forty-six potential crisis situations generated for Phase I of this study was presented to each individual during the interviews. From this list there were two events that members from all five health departments identified as not feeling prepared to handle. These were kidnapping/ hostage-taking and acts of terrorism. At least three other events were also identified by most of those interviewed. These were a bombing, a natural disaster, and a situation of workplace violence. While all of these events are included in the crisis family of "Disasters" (see typology), not all events in this category do the informants feel ill-prepared to handle. For example, everyone felt capable of effectively responding to a fire in the facility. This will be described in more detail later.

In addition to knowing how to evacuate the building in case of a fire, interviewees stated that they were most comfortable preventing and responding to situations that involve quality assurance issues or personnel problems. They claimed to feel more prepared for these situations because their agencies have personnel policies, audit requirements, record checks and other procedures in place to prevent a variety of employee-related problems from occurring. Document reviews in the five studied organizations prove that indeed a wide variety of policies and procedures are in place, which outline ways to prevent and respond to some events.

7.4b. Factors Influencing Perceptions of Readiness

Interviewees described a number of factors which have an impact on their perceptions of preparedness. These factors are very similar to the characteristics used by practitioners when they define an event as a crisis. Factors deemed important to perceptions of preparedness or un-preparedness are listed here to obtain a more thorough understanding of where strengths and weaknesses exist in crisis prevention and response capabilities. As seen below, the factors almost exactly mirror one another.

Individuals felt most prepared to deal with crisis situations under the following conditions:

- They had experienced that or a similar situation before, even if it was on a smaller scale or during a practice exercise, such as a fire drill,

- They had been trained,

- There were policies or procedures already in place that outlined what to do,

- They felt that someone within the agency, even if it wasn't themselves, would know what to do, or

- The event required only internal actions and was not known outside of the agency.

Individuals felt least prepared to handle situations that had one or more of the following characteristics:

- The situation had never been thought about or experienced,

- The situation has immediate life or death consequences,

- The situation was felt to have a low probability of occurring, or

- The situation was known to the outside world and requires a high level of communication skills, particularly skills in working with the mass media.

These lists highlight two themes that warrant elaboration. These are the value of the

feelings of familiarity and the impact of "others" on perceptions.

First, a number of the characteristics identified as having an impact on how prepared one feels to handle a crisis have to do with feelings of familiarity. When one feels like they have seen or experienced a situation before or that they have prepared for a similar event either through training or by writing up policies, they feel a sense of familiarity and an increased sense of ability to deal with the situation.

"*The more familiar I am with the situation, the more comfortable I am that we are ready to respond.*"

Prior familiarity with a situation can help to decrease the number of unknown factors or surprises but may not significantly increase an organization's overall preparedness levels. For example, the two health departments in this study that had recently faced crises of national significance appear to have gained different levels of benefit from their experiences. All of the individuals working in the agency that had been severely affected by a natural disaster stated that they had grown significantly in their level of preparedness after experiencing this event. Since all employees were affected by the crisis and all components of their response system were tested, all staff grew in their knowledge of what would and should be done in a crisis. After this event, this agency used their experience to work with all employees on crisis-preparedness strategies. On the other hand, the health department which had to respond to a significant public relations crisis gained much less from their experience. In this case, only the health director and the environmental health supervisors were involved in handling the response efforts. Even these individuals admitted that they were not sure how other staff members learned of what had occurred or how the health department was handling the crisis situation. In general, those interviewed from this agency felt no more prepared to

handle like-situations than before the most recent crisis event.

Given that the knowledge and skills from prior experiences are not always shared equally throughout an agency, it was not surprising to hear that not everyone was aware of the level of readiness within their own agency to deal with various events. Citing frequent practice drills and clearly posted evacuation maps, everyone claimed they knew how to get out of the building, if needed. There were a number of other scenarios, however, that individuals did not know what to do to respond nor did not know if the agency had a plan to tell them what to do. A common belief was that someone else in the agency was more knowledgeable about the actions that might need to be taken. Individuals frequently stated that even if they did not feel personally competent to handle a particular situation, they believed the agency would effectively deal with the situation because they believed another person knew what to do and would direct others in a response.

"*The people in the know are the higher ups*"

"*I don't know if we are ready to respond to some situations – we may be ready – I may just not know the plan. If a husband came in here and grabbed his wife, I don't know the plan.*"

The perceived knowledge or skills of others appeared to have a positive influence on one's feelings of readiness. The involvement of others can also have a negative impact on perceptions. In particular, interviewees stated that they felt less prepared to respond to crises if people external to the agency were aware of the situation. Potential external stakeholders include individuals from regulatory agencies, local or state politicians, or concerned citizens or advocacy groups. Of particular concern, however, was any member of the media. Awareness of the event by individuals outside of the agency may increase the feelings that

the response should be quicker and that the consequences of poor response will be more severe and public.

"*Once the media calls and says it is a crisis, we are less prepared.*"

"*I don't think we would handle a high level of public criticism very well.*"

Perceptions of crisis readiness are influenced by a number of factors. Many of these factors are related to an individual's sense of familiarity with a situation or their perceptions of the role of others during a crisis. Experience with particular events, prior training and involvement in writing crisis policies provide individuals with a sense of familiarity. The role of others is perceived both positively and negatively. Feelings that someone in the agency will know how to respond to a situation support individual perceptions that the agency is prepared. However, perceptions of readiness diminish if others from outside the agency become aware of the crisis.

7.5 Views on Preparedness using the DTP Model

Comments obtained from the key informants also provided insights into the various aspects of an organization that affect preparedness. Themes that emerged around the concepts and abilities found in each dimensional layer of the DTP Model are presented in this section. This includes the common human beliefs about crisis preparedness that influence the organizational mindset for preparedness. It also includes perceptions of organizational culture, agency structure for preparedness and existing crisis plans and policies.

7.5a Dimensional Layer 1 - Human Beliefs and Rationalizations

The ability of an organization to ready itself for a crisis is dependent on the leader's value for crisis preparedness activities. It is the "mindset" of senior executives that determines the cultural beliefs in the organization and creates the environment in which crisis management is prioritized and supported (Pearson & Clair, 1998). What individuals believe to be true sets the stage for how events are perceived and how they are prepared for or responded to within organizations. Pearson and Clair posit that "executive perceptions about risk that can be characterized as ambivalence about or disregard for crisis preparations will hinder the adoption of organizational crisis management practices." Perceptions about risk that can negatively impact the crisis-preparedness orientation of an organization emerge through conversation as faulty rationalizations. Four categories of common beliefs used to justify the lack of attention to preparedness efforts were described in chapter 3 (Pauchant & Mitroff, 1992). This categorization system is used here to present the most common crisis prone beliefs that emerged in this study.

Statements made by the health officials interviewed in this study suggest that faulty rationalizations do exist in some local health departments in North Carolina. Table 7.1 highlights the ten most common rationalizations that were held by health administrators in this study. Five of the ten beliefs frequently mentioned from public health workers were related to the properties of the agency. Two other common beliefs were rationalizations which focus on properties of the environment and another two reflect beliefs related to prior crisis-management efforts. The final common rationalization heard was from Group 3. This was that "each crisis is so unique that it is impossible to prepare for all crises." The most common faulty rationalizations that emerged through statements made during the interviews are described in more detail below.

Table 7.1 Most common faulty rationalizations used by key informants

Group 1 Properties of the Organization	Group 2 Properties of the Environment	Group 3 Properties of the Crises Themselves	Group 4 Properties of Prior Crisis Management Efforts
- Our special location will protect us - Certain crises only happen to others - It is enough to react to a crisis once it has happened - Crisis management or crisis prevention is a luxury - Our employees are so dedicated that we trust them without question	- If a major crisis happens, someone else will rescue us - Crisis management is someone else's responsibility	Each crisis is so unique that it is impossible to prepare for all crises	- In a crisis situation, we just need to refer to the emergency procedures we've laid out in our crisis manuals - We are a team that will function well during a crisis

Group 1 Beliefs – Properties of the Organization

Public health workers share several crisis prone beliefs which focused on the properties of their work and organization. While those interviewed stated that they felt that it was important to prepare for crises, they were limited in their views of what kinds of situations they might actually experience and whether or not they had the resources to put towards crisis preparedness. Pearson and Clair suggest (1998) that if executives do not believe their organization is vulnerable to crises, they will not allocate resources to prepare for that potential.

Despite initial comments which suggest administrators believe "anything could happen", additional statements made during the interviews showed that they actually believe otherwise. The public health workers in this study do not really believe that they are

particularly vulnerable to certain kinds of crisis events. Location and types of employees were common reasons given for feelings of immunity to some negative events.

For those from smaller communities, location seemed to influence their perceptions of which crises seemed more likely. All five of the employees interviewed for this study from the health department located in the western mountainous region felt that they were immune to certain types of crises because of the type of community in which they work. In particular they felt immune to man-made crises resulting from evil acts.

> "*Some of these situations would not happen here because we are a small community with less crime.*"

> "*We don't have the same type of people as you have in Wake County, etc. Mountaineers are less likely to sue or cause problems.*"

Key informants from all health departments also made statements which reflected beliefs that public health employees would not cause a crisis. For example, public health administrators believe that they hire competent, caring, trustworthy professionals. No one in the study group had considered preparing for events that might be caused by employee failures, such as incompetence or criminal activity. This is partly because they felt that policies already exist, but it is also because they do not believe that public health professionals would ever do harm or that anyone would want to do them harm.

> "*As far as situations that involve unethical behavior – our staff are above this. We have good people.*"

Even for situations that health workers felt were likely, preparedness efforts fall short because efforts to prepare are seen as a "luxury" or not a good use of time. Crisis preparedness is not viewed as a way of way of doing the job of public health, but as an extra

activity requiring additional resources. Health administrators felt that they don't have extra

resources to put towards anticipating, preventing and planning for a variety of crisis

scenarios, particularly if the events are unlikely to occur. Planning is not a priority.

> "*Our main mission is to serve the public, not to spend time preparing for things that might happen.*"

> "*If I spent my time writing policies on all these situations, I wouldn't get anything else done.*"

> "*Someone has to die to increase the priority of issues.*"

> "*Everyone is stretched so thin there is no time to think ahead.*"

There were also beliefs that whether or not the agency has planned for events, they

will take action should something occur and that whatever action was taken would be

sufficient. In some cases, it was felt that some known or unknown "white knight" would lead

the response. In other cases, the "white knight" would be the health director because others

did not want the responsibility. This particular feeling was most often expressed by the key

informants who described the leadership style of their health director as either authoritative or

as "hands-off".

> "*We would handle the situations, but, I guess, it would be better if we talked about it ahead of time.*"

> "*If the clinic had to be moved we would do it, but we would be reactive.*"

> "*I'm sure the head nurse would know what to do.*"

> "*I would pass on as much as I could to the administration.*"

Group 2 Beliefs – Properties of the Environment

Public health employees also had beliefs that the characteristics of the environment

would protect them from having to deal with crises. In particular, there was a belief that, should an event occur, then typical first responders would intervene and take charge or that "bigger" agencies were more prepared and would come to the rescue. These beliefs were particularly evident in the comments made about scenarios involving criminal acts or violence. Health department employees felt that the only action that they needed to take in these kinds of emergencies would be to call the local emergency responders; they should dial 9-1-1. In general, they felt that once law enforcement arrives on the scene, it was no longer their "crisis" and therefore, they would have no authority or responsibility to initiate any other crisis-response activity.

> "*We spend too little time on crisis management, but the time spent on this at the county level is sufficient.*"

> "*Kidnapping! We're not equipped to handle that. That's law enforcement. Public health people are not equipped to handle that. That falls under law enforcement.*"

There was also the belief that in larger community-wide incidents, such as a severe weather event, other agencies would come to the rescue and that the local health department would not be responsible for leading the crisis response, even if the event had a significant impact on the health department facilities or on the public health employees. With the exception of the health department that had been affected by a Category 5 hurricane, there was no indication that any of the other health departments in this study had considered what actions should be taken to allow their agency to function in the event of a serious disaster or community-wide emergency. While most were aware of a community disaster plan and response team, their perception of the health department's role in responding to an event was very limited. A common view was that the Director of Emergency Services in their town was

responsible for planning and coordinating efforts for community preparedness. The health director from a coastal town which had recently experienced a potentially-harmful environmental crisis realized, however, that rescue by other outside agencies, particularly the federal government, was a fantasy. With this exception, others did not see themselves as first responders even when the crisis was in their building(s) and affected their own employees or clients. Their beliefs that someone else would take over has contributed to their lack of preparedness for some types of crisis situations.

Group 3 Beliefs – Properties of Crises Themselves

A common belief held by those interviewed that may make health departments more crisis-prone was that it is impossible to prepare for some crises. It was reasoned that it was impossible to plan for events that are unknown until the facts present themselves. This was particularly true for the situations that were perceived as out of their control, such as natural disasters, acts of violence by outsiders or political demands made by politicians or other community or state agencies. Believing that there is no way to prepare yourself and your agency to respond to unknown or unthinkable events is a fatal flaw in being a crisis-prepared organization.

> "*How can I prepare for things I don't know of? I never thought of this kind of crisis so I don't know what and how to prepare.*"

> "*You can prepare if you have some warning – like a blizzard is coming but you couldn't prepare for a shoplifting CEO.*"

Group 4 Beliefs – Properties of Prior Crisis Management Efforts

Faulty beliefs that relate to prior crisis-readiness activities are found in Pauchant and

Mitroff's Group 4 rationalizations. Two of these rationalizations were repeatedly mentioned during the interviews. These are the reliance on prior crisis-management efforts and the belief that employees will work well together in a crisis event.

As mentioned earlier, direct experience with a particular situation or a near-miss, such as another agency in the same town or region experiencing a particular crisis, may provide the impetus for an organization to create a plan for the prevention of future incidents or for the response should the incident occur. As will be described later, all of the health departments that served as cases in this study have employee policy manuals and community disaster plans. Some even have safety plans or medical response procedures. Many of the existing policies undoubtedly were developed after a concern or problem was identified in other private or public organizations. Those interviewed appeared to find great comfort in having plans or procedures available to them. Worst-case scenarios that are perceived to have been addressed in existing policies or plans are seen as less of a problem or, in some cases, not a crisis at all. As will be described later, however, the policies or plans that do exist are often limited in the types of scenarios that are addressed and in the types of prevention and response strategies that are included.

In addition to the level of comfort that written policies provided, the key informants also falsely believed that they were prepared for crises when they could identify an individual or team that would take the lead to resolve a particular situation. The lead person for OSHA requirements or safety issues was often seen as the "Crisis Person". *"If there's a problem, Mary will know what to do."* Epidemiological response teams were also seen as the "crisis team". All health departments had such a team. In all instances, however, these teams had responsibility for investigating and responding to infectious disease outbreaks and no other

type of crisis.

A small amount of preparation can be dangerous. As mentioned by Pearson and Clair (1998), "Executives and managers can develop too much faith (and a false sense of security) in their abilities to successfully prevent dangers when some level of crisis management preparation is adopted. Limited preparation actually may reinforce assumptions of invulnerability and reduce organizational vigilance." Having an individual or team with responsibilities for a particular type of emergency seemed to inflate the sense of preparedness in these health departments.

Whether or not a specific crisis team existed, all of the individuals that were interviewed felt that the employees of the health department would work well together should they need to. "*We all pull together in times of crisis*". With the exception of the largest health department, there was little evidence that demonstrated that employees from different disciplines or work units worked together at all. Research on team effectiveness suggests that the lack of prior interactions between members could have a significant impact on how well people will work together in a crisis (King, 2002). Prior interactions between team members may promote a greater understanding of individual skills, perspectives and interpersonal styles. This group familiarity may influence the effectiveness of a crisis team by allowing for a more open style of communication so that team members may be better able to resolve problems (King, 2002). Creating more opportunities for multi-disciplinary problem-solving and team work would greatly support the beliefs held by health department employees that they would work well together when needed.

The health department employees, who expressed the least number of faulty rationalizations, as outlined by Pauchant and Mitroff (1992), were from the largest, most

complex agency in the study. The public health professionals from this organization had also experienced the most chaotic, life-threatening emergency of the five health departments in the prior 5 year period. It is not clear whether the employees are less prone to faulty rationalizations and defenses because of their experiences or if their leader's realistic view of crisis preparedness efforts has set the tone for their beliefs and values. No matter which came first, it is clear from other studies (Pauchant & Mitroff, 1992; Lerbinger, 1997; Alpaslan, 2004) that the beliefs of the health director and the employees create the culture of the organization. The unwritten rules and behaviors in an organization contribute to its level of preparedness.

7.5b Dimensional Layer 2 - Organizational Culture

Despite having similar missions and goals, each of the five health departments in the study conducted business in a different manner. How decisions were made, how information was communicated, how bad news was identified and acknowledged, how actions were taken and the ways in which the employees interacted were all parts of the culture that impacted the organization's ability to effectively prepare and respond to crises. While differences existed in how these agencies operated, there were common themes that emerged about their organizational cultures. Factors deemed important to crisis preparedness and the themes that emerged in those areas are described below.

Leadership / Decision-Making / Proactive vs. Reactive Nature

Leadership styles varied greatly in these five health departments. In the largest agency involved in the study, the health director was seen as the leader of an agency-wide

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management team. This team consisted of top administrative employees from the various service divisions. In two of the agencies, the health director was seen by employees as using an unforgiving, autocratic leadership style. The final two agencies were described by employees as having health directors that were invisible or, as described by some, neglectful. With the exception of the first agency, the health directors viewed their own leadership styles slightly differently than their staff members. Most described their style as participatory and engaging. What may have been described as "neglectful" by some employees was described by the health directors as "having trust in their employee's decisions".

The leadership style of the health director sets the stage for how decisions get made and how information is shared throughout each agency. In general, decisions and information-sharing occurred on two levels in health departments. Decisions were made either by the health director or his/her management team or they were made by the supervisory team within a specific service division or unit. An individual employee's level of involvement in decision-making appeared to be related to the management style of their own unit supervisor.

In situations where staff members felt limited in their power or decision-making ability or in situations where they felt that the health director would not support them in taking risks, they reported that "crisis response" was not their job.

"*These events are not my problem. I would pass them on to the health director or my supervisor.*"

"*I would try to pass on responding as much as I could. I would pass it to administration.*"

The timing and type of decisions that are made can offer some insight into how an

organization responds to the changing world. Best practices for a crisis-prepared organization suggest that organizations proactively think out the worst-case scenarios including what warning signals might be observed, what actions need to be taken and what resources need to be available for an effective response. Health department employees were split, even between employees within the same agency, as to whether they would call their agency proactive or reactive in nature. They were consistent in their views that their health department employees are skilled and effective at providing both surveillance and follow-up for potential or real infectious disease outbreaks. They were less consistent, however, in their overall assessment of the basic "nature" of the organization. To them, their agency was "both reactive and proactive." As one informant states, "*We are both. It depends on the situation. We are proactive in planning for some program things, but reactive when administrative issues arise.*"

Communication

Like the decision making process, the sharing of information also appeared to be occurring in a top down fashion within health departments. In most cases, information was shared with employees in two ways. The more formal format for information dissemination was by way of staff meetings with the division directors or through a memo that had been distributed by the administrative office. The second, more common route of information sharing was labeled the "rumor mill". Even in instances where information was thought to be shared in a systematic way, some employees felt ill-informed. This was particularly true for people working in buildings different from those which house the main administrative offices.

"*People find out information through the rumor mill.*"

"*The grapevine is accurate and quick. I use the grapevine.*"
"*This agency does not seek feedback from staff or clients*"

"*I'm not sure if information ever works its way up the chain.*"

"*The people in the outside clinics feel left out. They say that they are not informed.*"

Despite the impact crises can have on all employees, in the health departments studied there was very little evidence that information about previously experienced crises had been shared with employees in a formal way while the crises were occurring. This was particularly true in events where the crisis was seen as being caused by employees of the agency, such as the case of the sexual harassment lawsuit against the health director and the incident of perceived poor response to the environmental disaster. While there may be a lack of formal communication by administrative staff during these difficult times, employees do get information about organizational crises. They claimed to get their information either from each other or from the mass media.

"*How would staff find out about a situation if we had one? It could be that some of our staff may read about it in the paper.*"

"*Staff found out about this incident through the rumor mill*"

"*I'm not sure how other staff got information on what was going on during this crisis.*"

Tensions

Tensions and differences occur in any organizations. Tensions that are not resolved can create organizational crises or can negatively impact an organization's ability to respond.

Issues causing tensions with health departments included concerns over feeling

unappreciated, concerns over the actions of others and employee feelings of being left out. In

addition, some of the health departments appeared to be experiencing tensions related to race.

Comments focusing on race were made most often from the individuals from the two largest

health departments. Any tensions can undermine the levels of trust between employees which

may make the organization more crisis-prone.

> "*Race is a polarizing issue here.*"

> "*In my area, I think we do openly discuss issues, but if you talk to a black clerical worker you might hear some gripes. There are racial tensions here.*"

> "*Many of the minority staff members feel that they are left out of the decision-making process for the health department.*"

When asked if their health departments openly talked about topics that were either

controversial or difficult to discuss, there was a balance of opinions. Some emphatically

stated that it was easy to talk and deal with difficult subjects while others said that topics that

highlighted differences or tensions were never openly discussed. Most, however, stated that it

was more likely that hot topics such as racism, sexism, or whistle-blowing would only be

between members of small peer groups.

> "*Difficult topics … people talk amongst themselves*"

Telling Bad News / Whistle-blowing /Learning

Creating an environment in which employees feel free to talk about bad news and to

learn from bad situations is important to becoming more crisis-prepared. Informants varied in

their opinions as to whether or not whistle-blowing and problem identification were valued

activities within their agencies. Health directors generally claimed that rooting out bad

performance, criminal activity or other problems was important to them. "*Staff are encouraged to tell.*" Other employees were less optimistic about the outcomes of speaking openly about inappropriate or incompetent activity within their department. Some felt that a whistle-blower would be tolerated only if he/she pointed a finger in directions other than towards members of the administration.

"*A whistle-blower would be seen as an outcast.*"

"*We are encouraged to identify problems, but you would be treated like dirt by the other staff.*"

"*A whistle-blower would be tolerated if he or she did not focus on the administration.*"

Willingness to tell one's own bad news also appears to be dependent on what the news is about. "*We don't like to air our dirty laundry.*" In general, interviewees wanted their agencies to be seen as proactive with sharing bad news, but in reality they felt that many would not take steps to be the first to announce bad news. Most of those interviewed did not believe that members of the health department would try to lie or hide what was going on but that they would try to work the issue out internally before informing others.

"*We are not a tell-all agency, although it would depend on the situation.*"

"*We wouldn't sweep things under the rug, but we would wait to see how something works out before we would tell.*"

Willingness to share bad news may not only be related to the topic of the news, it may also be related to the audience with whom the bad news is to be shared. In general, public health employees did not enjoy sharing information with the media. Interactions with the media were generally reactive in nature and seen as an annoyance. The largest health

department appeared to be the exception to this theme. "We respect the media and their needs."

"*We see the media as a foe. Our objective is to keep the media off of our backs.*"

"*We don't like talking to the media.*"

"*The media recently called about hepatitis B shots for schools – I don't have time to talk to them.*"

Willingness to talk about bad news allows for learning to take place. Learning from key experiences is a critical activity if an organization is going to have a crisis-prepared mindset and culture. While learning undoubtedly occurs on an individual basis after major life experiences, organizations could greatly benefit from allowing employees to share experiential learnings together. Creating a safe space to talk about negative, high-concern issues or events in a safe, non-judgmental environment is one way to promote learning. As indicated in the above paragraphs, not everyone agreed that their health department had a supportive environment for talking about controversial or tough issues, at least not issues that are personally sensitive or which may indicate individual fault or wrong-doing. Despite this, however, the interviewees felt that their organizations are "learning organizations." Some examples were shared about how an agency had used experiences to improve clinic operations or had identified the need for additional resources for particular events, such as mass vaccination clinics. The overwhelming theme that emerged about organizational learning was that few health departments have any formal practices for learning.

"*Learning is casual, not planned.*"

In health departments, if learning occurred as a shared experience, such as in a group

debriefing session, it was typically done by members of a particular discipline or work unit.

Even when individuals or groups identified ways to function more effectively, there did not

appear to be any expectation that the lessons learned would be shared with other health

department employees. Learning from each other could improve overall agency performance,

particularly as it relates to preventing and responding to crises.

"*It is common with nurses to learn from past problems.*"

"*Learning takes place differently in each division.*"

Team Work

The ability to work in teams is important for the prevention and response to

organizational crises. As described in Chapter 2, the use of crisis teams is a recommended

strategy by crisis-management experts (Fink, 1986; Pearson & Clair, 1998) for improved

crisis-response performance. High performing teams include individuals from multiple

disciplines and with diverse sets of abilities. Being able to lead teams is a critical crisis

leadership skill.

Public Health employees conduct much of their work through the use of teams.

Despite the use of teams in their work, however, key informants stated that employees from

different service units did not work together regularly and in some instances didn't even

know each other. Most enjoyed their coworkers and felt that the smaller team units within

their agency function well together. They did not believe, however, that the employees of the

entire organization viewed themselves as an overall team.

"*Each division is its own kingdom; no one really feels like there is a Health
Department team – but they like their own division team and feel that they work well
together.*"

"*We are segmented kingdoms, we do not share resources.*"

Individuals who work either in an off-site location or for environmental health services were most often cited as being disconnected from the other public health employees. Growth in the numbers of staff, ineffective methods of communication with direct line staff and differences in geographic location of work space were some of the reasons given for employees not feeling connected to each other and for not sharing common agency team goals. Despite limited interaction with fellow employees, it was generally believed that, if they had to, the public health workers would pull together and be an effective team.

> "*Environmental health services is a separate unit and they are not housed in the same building which impacts how they are seen and how they see themselves.*"

> "*The employees in the northwest office may feel that they are the red-headed stepchild.*"

> "*We do not usually work as a team, but when push comes to shove, we work well together.*"

The values, beliefs and unwritten rules of a health department set the stage for how the employees conduct public health business. While the health departments involved in this part of the study varied greatly, themes emerged from the key informant interviews about the cultural aspects of these organizations. These findings illuminate some areas from dimensional layer 2 of the DTP model which could make health departments more crisis-prone.

7.5c Dimensional Layer 3 – Crisis-Preparedness Infrastructure

Key informants were asked to share their knowledge of the structures that exist within

their agency which support crisis preparedness. Specifically they were asked to comment on who had job related responsibilities related to crisis prevention and response and what structures were in place to mobilize employees for action. They were also asked to share their knowledge of the types of crisis training opportunities, drills/exercises, problem-sensing activities and support services that were available. Despite differences among the five health departments, a number of similarities emerged in the types of structures that were either in place or were not.

Crisis Team

While all crisis management experts suggest the formation of a crisis response team, not one of the health departments had one, at least in terms of a core group of individuals that is responsible for overseeing the efforts of the agency for the prevention and response to a variety of organizational crises. The largest health agency in the study did have a "Ready Team" which included key individuals from each building site. While this team was ready to respond to a variety of situations, those interviewed did not see it as having responsibility for handling crises of a more administrative nature, such as employee misconduct or negligence.

All of the health departments did have teams that had formed around specific types of crises. They all had a team of professionals, often called the epidemiological response team or mobilization team, responsible for coordinating responses to infectious disease outbreaks. Several key informants also mentioned the existence of a "safety team", which was responsible for monitoring OSHA requirements and other employee- or client-safety issues. And while not everyone knew much about the county-level disaster plan, at least one person in each agency stated that a member of the health department, typically the health director,

was a member of a county-level disaster-response team. For situations that didn't fit under the responsibility of an existing team, the interviewees most often identified the "Management Team" as the most likely group of individuals to be called upon to coordinate a response.

Chain of Command / Employee Mobilization

At the time of this study, none of the health departments had written down a chain of command for handling crises. Yet most of those interviewed felt that they would know who would be in charge should the health director not be available when a crisis hit. Most often another senior level administrator, such as the Nursing Director, was seen as the next person of authority after the health director. After this person, however, opinions varied within the members of the same health department of who might be in charge should the top two individuals not be available.

In the event of a crisis, particularly one that is triggered during nonworking hours, agencies need a plan for how they will mobilize their human resources quickly. Due to weather-related problems in the past, some agencies had established phone trees but for the most part, those interviewed were not aware of any existing plan for how they would assure the safety of their employees and mobilize them into action. The largest health department, which had experienced a large community disaster, appeared to have given the most thought to this issue. Besides a phone tree, they had given key employees pagers and had placed a list of phone numbers for the members of the Ready Team at the front desk for immediate contact. Despite their efforts, some of those interviewed expressed fear that as time passes, it was more likely that lists and plans will be forgotten or become outdated.

Crisis Communication

In these five health departments, an infrastructure for crisis communication efforts was either non-existent or very limited. Again, the largest health department had created the most thoughtful system for communicating in times of high concern. Their structure and efforts for communicating more effectively with the public were relatively new at the point of the interviews. Concerns from the hurricane that had hit their area and a current restructuring of their agency had created a sense of urgency for creating more structure. They had assigned communication responsibilities to a senior-level employee, they had drafted a media relations policy, they had established a weekly cable television show, and they had put in place a dedicated phone line for employees to receive regular updates on issues of concern. While a considerable amount of effort has been put into improving the infrastructure for communications at this health department, the structure still falls short of what could be in place.

For the other health departments, the communication needs associated with responding to a crisis had not been considered and had not been seen as a priority. No prior attention had been given to developing systems that would allow for ongoing communication with key stakeholders during an event such as staff, the Board of Health, other community leaders or the families of victims.

For these agencies, working with the media was by far the most feared and disliked aspect of crisis communication. While each health department had experience responding to media requests for information, "*working with the media in a crisis is a last thought, not a priority."* Only one health department had officially selected an individual to coordinate media interactions and had identified key spokespersons for various topics. For the other

health departments, there was no formal structure in place for interacting with the mass media. When asked to identify the health department spokesperson, the health educator was most often seen as the media contact person for general public health topics. In a crisis or in times of controversy, most interviewees guessed that the health director would be the spokesperson. Responding to the media was seen as the health director's responsibility because he or she was perceived as wanting to control the communications with the media or because no one else felt they had the authority or competence to speak effectively.

> "*If "60 Minutes" showed up at the office, I'd say, "no comment, you have to speak to the health director."*

> "*The health director talks to the media. No one else does unless he says.*"

> "*There is no written policy. Everyone just knows that the Health Director and Nursing Director take the media calls. This is common knowledge.*"

Since few of the health departments had formally selected a lead media spokesperson it is not surprising that none of them had a crisis team in place with specific responsibilities for planning and implementing a communications plan in the event of a crisis. Not one key informant indicated that their health department had made any effort to pre-plan for the vast number of diverse communication needs that arise during a crisis, including the need for media / press packets, message maps for key issues, news releases or draft stakeholder letters.

Psychological and Emotional Support

Public health professionals felt ill-prepared to deal with the emotional or psychological aspects of a crisis. Despite their feelings of inadequacy, they have done little to set up an infrastructure that would assist them in meeting the human needs of people

experiencing a traumatic event. No agency had considered what process they would use to assess and monitor the mental health needs of employees or clients during a crisis. No agency had identified a list of mental health professionals that would be called in the event of a crisis nor had they determined where counselors might work if they were needed on site. And, no agency had provided stress-response training for the supervisors or for other lead staff who might be the first to identify or handle the initial effects of trauma on their employees.

For the most part, interviewees had not considered the need for counseling and support services for dealing with crises. Informants from the two larger health departments stated that they would most likely use the county Employee Assistance Program (EAP) if they needed to refer employees for support or counseling. Both of these agencies had previous experience with referring employees to the county program for personal issues and felt that these services would be available to them in the event of a crisis. The employees from the other three health departments were unaware of a similar program in their area. In general, they were not clear what mental health services they would utilize from their communities, if they needed assistance.

Based on the interviews, it appears that public health professionals have seen stress relief to be an individual responsibility. Even in the counties where EAP services are available, there was no evidence that this or any other community mental health service had been used to help people through prior organizational crises. In fact, for the most part, it appears that individuals have been left on their own to find ways to deal with the stresses of a crisis. The health director responsible for responding to the recent environmental concern and the subsequent public relations crisis at the health department stated "*I know some people are stressed out, but I don't know what to tell staff to do. I tell them 'just don't take your stress*

out on the clients'." And he, himself, claimed to be under so much stress during the event that he now cannot remember anything that occurred during the four-month time period of the crisis.

> "*During the crisis we had in our environmental health division, there was no formal stress reliever; each individual dealt with it over time. People deal with stress around here by either taking a vacation or closing their office door and screaming.*" There has been virtually no thought given to what kinds of psychological needs might

present themselves during a crisis nor has there been any consideration of what internal

structure and resources might be needed to support these needs.

Training / Drills

Despite the importance of maintaining a competent workforce, there was little

evidence that public health employees had focused much attention on building individual or

team-level skills for crisis preparedness. A deliberate effort to identify training needs and to

develop a plan for meeting those needs was not visible in any of the health departments.

Crisis related training programs or drills that had been offered to employees were

almost always mandated by some outside group or policy, such as a state law or a specific

discipline-related standard. The one exception to this was mass media training which will be

discussed later.

Health officials mentioned a number of training programs or educational sessions that

employees had attended in recent years. Topics of the training programs included CPR,

hurricane/ natural disaster response, hazardous materials guidelines, media relations, medical

emergencies and other safety issues. No one mentioned training sessions to build stronger or

more effective teams, to facilitate the use of systems-thinking skills for working out complex

problems or to understand or identify the psychological impacts of crises on people. The focus of the training sessions most commonly mentioned fell into the categories of dealing with medical emergencies, natural disasters, environmental threats or other public health problems such as infectious disease outbreaks.

Attendance at the programs that were mentioned appeared to be required of particular staff members as determined by their position or role in the organization. Typically the individuals responsible for representing the health department for community-level disaster response had attended sessions on natural disaster response and the person or persons responsible for leading the safety committee or for maintaining OSHA regulations had attended special training for handling or storing hazardous materials or other safety-related issues. These roles were often held by the health director, an environmental health specialist or a nurse.

Training in media relations or working with the mass media was the only training program that was mentioned that was not mandated by some outside group. At least four individuals stated that they had been trained on how to be interviewed by a news reporter. In most cases, these individuals participated in a one-time training program that was a day or less in length. In general, the other public health practitioners that were interviewed were not aware of who in their agency had received special training in this area. Only the members of the largest health department felt that their agency had some level of competency in working with the media. In general, media training was seen as a current training need.

Only two types of practice drills or exercises were mentioned with any consistency between the five health departments: fire evacuation drills and community disaster drills. Staff members had attended the planned community disaster response drills but had not had

any significant role in the planning of these exercises. On the other hand, health department employees were responsible for arranging the routine fire evacuation drills as mandated by law. While everyone agreed on the need for evacuation practice, many claimed that they were not holding as many drills as required. Time and the difficulties around client logistics were the most common excuses for not maintaining a regular practice schedule for fire drills.

Problem Sensing

Health officials were evenly mixed in their beliefs as to whether or not their agencies are proactive and aggressive in their pursuit of potential problems or crises. Whether or not they are seen as doing all they can to identify problems, health departments do implement some activities to identify issues. Despite the current efforts being made in this area, however, those interviewed suggested that there are gaps in the types of problems they look for and a haphazardness in the methods that they use for problem assessment.

Some believed strongly that their agency does not seek to identify the existence of problems or look for the early warning signs of potential crises. One reason given for not being more proactive in this area was that the current day-to-day problems were more than enough to keep public health employees busy. Another reason was that there are not enough resources to make a special attempt to identify new issues or to deal with problems once they are found. And finally, at least some believe that their organizational culture is to do only what is required of them and no more.

"*We don't look for problems. We tend to ignore warning signals.*"

"*There are too many other problems to think of what might happen.*"

Others believe that their agency does a good job looking for issues or potential

problems. The document reviews, in fact, show that health department employees do have policies in place for specific problem-identification efforts. Strategies that were mentioned for identifying potential issues included record audits, staff meetings, quality improvement circles, infectious disease surveillance, staff performance evaluations, community health assessments, staff complaints, sanitarian daily reporting records, equipment checks for laboratory equipment, and patient satisfaction surveys.

Despite the variety of activities that health officials engage in to detect problems, no one believed that their agency was comprehensive or systematic in their approach. Health officials felt that their current signal detection activities were conducted in a haphazard way; often lacking integration. Activities for identifying problems were often instituted because they were mandated or because a problem had occurred in the past. Best practices for finding early warning signals may be a standard procedure in one service area but may not be done in other divisions within the same agency. Comments made by health officials suggest that problem identification could be improved by integrating the efforts made throughout the organization and by making an effort to look for potential problems beyond the obvious.

> "*We have a Quality Assurance team but each division works on its own. There is no department-wide effort to look for problems.*"

The structure for crisis preparedness was described by the key informants in each of the study agencies. Of particular interest for this study was the existence of: a multi-disciplinary, all-hazards crisis team, a training and drill plan, a communication infrastructure, an integrated and deliberate set of problem-sensing procedures and a support system for dealing with psychological and emotional issues. Written documents are used to support or question the perceptions about structure shared above by the key informants. The following

section will describe the availability and accessibility of written documents and plans for

crisis

7.5d Dimensional Layer 4 - Written Plans and Policies

The written policies and plans that exist in an organization are the easiest part of the

DTP Model of Crisis Preparedness to see. During the interview phase of the study, health

officials were asked to identify what plans or policies had been documented in written form

that related to crisis preparedness and where these documents were housed within their

organization. Below is a description of the themes that emerged from both the interviews and

from the document reviews within the five case organizations.

Existing Documents

Health departments, in general, have a number of written policies that relate to crisis

preparedness. Table 7.2 lists the titles of those documents identified in each of the five

agencies. Documents with similar contents are placed in the same row to highlight

consistency between the agencies.

Health departments had several written policies or plans for preventing or responding

to a variety of worst-case scenarios. The most common types of crises addressed in these

documents were fire/building evacuations, infectious disease outbreaks, natural disasters or

civil disobedience, chemical/hazardous material exposure, medical emergencies, professional

standards and expectations for employee conduct.

The content of these documents, even those with the same title, varied greatly between

agencies. In most cases, the problem or problems that the document addressed were defined

and the basic procedures for responding should the problem occur were outlined. For example, the issues related to exposure to blood-borne pathogens were documented by all health departments. Each one had outlined the steps needed for preventing exposure to blood-borne pathogens and for the response should an employee become exposed. The most comprehensive document for handling crises in all five of the agencies was the county disaster plan.

Table 7.2 Crisis preparedness documents and plans in the five case health departments

Health Dept #1	Health Dept. #2	Health Dept. #3	Health Dept. #4	Health Dept. #5
Evacuation Plan / Fire	Fire Safety Plan	Evacuation Plan	Evacuation Plan	Evacuation Plan
Personnel Policies	Personnel Policies	Personnel Policies	Personnel Manual	Personnel Policies
		Computer Retrieval Plan		
OSHA / Hazardous Materials Plan* / Laboratory Policy Manual		Hazardous Materials Plan	OSHA / Hazardous Materials Guidelines	OSHA guidelines – Exposure Control
County Disaster Plan* / Emergency Plan for County Governmental Offices	County Disaster Plan	Civil Defense Emergency Operations Plan and County Disaster Plan	County Disaster and Emergency Operations Plan	County Disaster Plan
	County Safety Policy			
Phone Tree	Phone List			Phone List
Nursing / Pharmacy Policies*		Nursing Policies		Nursing Policies
Medical Emergency Plan / Crash Cart *	Medical Emergency Plan	Medical Emergencies Plan	Medical Emergency Plan	Medical Emergency Plan
Epi Response Plan / Communicable Disease Plan	Epi Response Plan	Mobilization Plan for Infectious Disease Outbreaks		Infectious Disease Outbreak
Procedure for writing news releases*		Media Relations and Communications Policy		
Personal Care Division Policy Manual (includes items with *)				

The county disaster plans were developed under the leadership of the county emergency services department. These plans were written for events such as major transportation accidents, natural disasters, acts of war, mass casualties and acts of civil disobedience. While some plans appeared more thorough than others, all of them contained more information than any other crisis plan found in the health departments. Disaster plans typically included the following:

- list of the responsibilities and contact information for the agencies and people involved in the response

- list of equipment needs, including radios, faxes, pagers etc.

- description of the chain of command

- description of how communication efforts should occur

- list of recovery procedures, including psychological counseling guidelines

- list of community resources and available medical facilities

- list of designated safe areas

- description of warning signals

- procedures for evacuation and injury response

- list of the response team activation steps

- schedule of practice drills

While health departments had access to copies of their county's disaster plan, not one of them had developed a similar document for the multitude of potential crises that could affect their own agency. Not one had a single document entitled "Crisis Plan" that incorporated the vast number of policies and procedures that existed for specific incidents or

emergencies. Nor did any of the existing policies or procedures go into the same level of depth as the disaster plans. Overall, the existing health department documents were missing the following information:

- A list of who will respond to the incident (Crisis Team) and what each person's responsibility would be

- Information about the warning signals that might exist prior to a crisis

- A list of the resources that exist for recovery, in terms of continued operations and in emotional / human recovery

- A sample of the messages that might be communicated to the various stakeholders, by whom, and by what method (Communication Plan, Message Maps, Draft Letters)

- A list of equipment/facility needs and community resources

While there are several crisis related policies and procedures that exist in each health department, few people were truly aware of what existed in their agency. Most knew of some of the policies and plans. Most often they were aware of those documents related to their work or area of responsibility but they were unsure of what other written procedures existed. Most everyone was aware that procedures existed for building evacuations, for infectious disease outbreak control and for hazardous material exposure. People were less sure of the kinds of policies that existed for employee misconduct, such as sexual harassment, misuse of county funds, discrimination, for county-wide disasters or for other safety issues.

Location and Accessibility of Written Plans and Policies

With the exception of the largest health department in the study, no other agency had

a single location for storing all of their policy and procedure manuals. It was common for an employee to state that he or she was aware of a particular policy but was not sure where to get a copy of it. Even when an individual had an idea of where a manual or policy was suppose to be stored, when searching for it, it was no where to be found.

Procedures or manuals were most often scattered throughout the agency. Typically at least one copy could be found in the work area of the individual or team who had authored the document or had primary responsibility for enforcing the policy. It was not clear if a copy of any policy manual or crisis plan, other than the county disaster plan, was also located in off site/campus location. In general, employees did not have quick access to the written plans that existed and might not have access at all to information if an event required that the response be coordinated away from the office.

7.6 Summary

Visits to five local North Carolina public health departments provided a wealth of information about the level of preparedness for organizational crises. First, crises were seen as negative events that can have significant consequences and require prompt action. Events were defined as a crisis when officials did not feel prepared to respond and when individuals external to the agency were made aware of the event.

Health departments have experienced a wide variety of negative situations. Despite this experience, however, most public health officials were limited in their imagination of what worst-case scenarios might impact their agency. None of them had ever engaged in a brainstorming activity for identifying the "unthinkable". Past experience, prior discussions or a perceived crisis leader helped to create a perception of preparedness.

Health officials initially felt relatively prepared for preventing and responding to "crises" until they were presented with a list of potential situations and a set of questions about the types of response activities they had planned within their agency. They felt most prepared to handle incidents involving employees, such as quality assurance issues or personnel problems. With the exception of fires, they felt least prepared for the types of crises that would be included in the typology family labeled as "Disasters."

Several beliefs were held by public health employees that may have limited the preparedness efforts within health departments and made them more crisis-prone. The most common faulty rationalizations focused on beliefs that were specific to the public health industry; specifically, that certain crises won't happen within health departments or that efforts focused on crisis preparedness are a luxury beyond the time or resources for local health departments.

The impact of these faulty beliefs and values could be seen on the organizational cultures within these health departments. While the cultures within each of the study agencies varied, there were some common themes about "how business is accomplished" which may have negatively impacted levels of organizational preparedness. Public health employees pride themselves on being prevention-oriented, nonjudgmental and team-focused. Yet discussions suggested that the health departments did not function in this way. Work tended to be accomplished within specific work units with employees that seldom coordinated or learned from people working in other divisions. There were tensions around controversial issues and agencies tended to shy away from organization-wide discussions that might open wounds or result in finger-pointing. Much of the official information shared within agencies was done in a top down manner or within specific work units. The fastest route for

disseminating bad news within the organization was the "grapevine" or "rumor mill." Sharing bad news with the outside world was only done when unavoidable, particularly when the news reflected poorly on the agency. Most employees were very wary of the media and their motives.

An overall structure for crisis preparedness within health departments was almost nonexistent. Fragments of structure were in place for specific types of crises such as the county disaster response teams and the health department epidemiological response committees but there was little to no evidence of other existing structures that might help with preparing or responding to a wide range of crises. One of the areas in which gaps were found was in the infrastructure for communication. There was a void in the level of readiness to communicate bad news both within an individual agency and outside with a variety of stakeholder groups. While most felt that the mass media plays a significant role in how an incident is perceived and how well the agency responds, most health departments had no structure in place for working with news journalists, particularly in times of crisis. They were equally ill-prepared to respond to the psychological or emotional needs that will play a role in both the agency's ability to respond effectively and its ability to recover quickly. With the exception of fire drills, there were few drills and training programs that were routinely offered to health department employees to build crisis preparedness skills. More preparation and practice would help individuals feel prepared.

Having policies or plans in place also creates a sense of preparedness. Health departments had a variety of policies in place that focus on specific situations. There was not one agency, however, that had a comprehensive crisis-response plan that reflected an attempt to address a variety of potential scenarios or that used a systems approach to preventing and

dealing with such events. The county disaster plan which exists in each community could provide a model for writing a more integrated crisis-response plan for organizational crises.

For the manuals or policies that were available, only one health department had identified a location for all agency policy manuals. Most documents were scattered throughout the agency and were not easily found. The lack of comprehensive crisis plans and policies, the scattered locations of what does exist, the variations in how documents are written and cared for and the general confusion over what exists are key indicators of the state of crisis preparedness in local health departments.

CHAPTER 8

SUMMARY OF FINDINGS AND CONCLUSIONS

While it is hard to determine how many crises an organization avoids by being prepared or how well it might respond to any given situation, most experts of crisis management believe that it *is* possible to create an organization that can prevent and respond more effectively to organizational crises. The literature contains a plethora of case studies that make suggestions for actions that companies could have or should have taken prior to an event that would have aided in the early detection of the event or would have greatly enhanced the subsequent response efforts and minimized the negative outcomes. Health departments are not immune to organizational crises yet no one has studied what situations have occurred in local agencies or how well prepared these agencies are to prevent or respond to these situations.

This study is the first attempt to look at local health departments and determine how prepared they are to deal with a variety of organizational crises. This chapter briefly reviews the purpose, the main assumptions, the conceptual model and the research methodology used to determine organizational preparedness. This is followed by a discussion of the key findings of the study, with particular attention to the specific questions posed at the beginning and a brief description of the research limitations.

8.1. Purpose, Model and Methodology

8.1a. Purpose and Assumptions

The purpose of this research was to determine the level of preparedness within local

North Carolina public health departments to prevent and respond to a variety of

organizational crises. Specifically, the study attempted to answer the following questions:

- What types of organizational crises might be experienced by a local health department?
- Can these scenarios be categorized to form a useful framework to aid in crisis management?
- How well prepared are health departments to prevent and respond to the various types of crises?
- What gaps exist in crisis preparedness for local North Carolina public health departments?

To gain benefit from this study, it is necessary to believe that an organization can

influence the occurrence and impact of a wide variety of institutional crises. Even in

instances where it is impossible to prevent an event from happening, such as a natural

disaster, individuals must believe that there are things they can do to limit the potential harm

or destruction that can result from a crisis. In addition to the belief that preparedness is

achievable, this study is built upon the assumption that health departments are like other

business organizations; they are multi-dimensional. They are an integrated system of people,

culture, structure and technology, and policies and procedures.

8.1b. Model

The DTP Model of Crisis Preparedness was used to determine organizational

preparedness levels in this study. The DTP Model, as described in Chapter 3, is an expansion

of the Onion Model developed by T. Pauchant and I. Mitroff. This model supports a multi-

layered approach to organizational crisis readiness, focusing attention on the Dimensions of

an organization, the Types of crises and the Phases of crises.   Health departments considered

crisis-prepared have human, cultural and structural characteristics that support crisis

management. This includes a mindset and a set of skills within the leader and the employees

that support preparedness and an organizational structure that promotes crisis prevention and

response activities in an integrated and efficient manner. In addition, a crisis-prepared health

department must also have written strategies, such as crisis plans and media relations

procedures, which provide a systematic framework for responding to a variety of crisis types.

These plans should reflect thoughtful consideration of all phases of a crisis and the impact of

a situation on the various dimensions of the organization. Also, the plans must be easy to use

and accessible to employees both on site and off campus. They should be routinely updated

and understood by employees throughout the organization.

8.1c. Methodology

This study was conducted in two phases. In Phase I, a list of potential worst-case

scenarios was developed and focus groups were used to sort these situations into families for

the formation of a crisis typology useful to public health agencies. Phase II then used multiple

methodologies to obtain data on the level of crisis preparedness of local health departments.

These methods included key informant interviews and document reviews from five local

health departments in North Carolina and a written survey of local public health directors in

the state. The various types of data were necessary to provide insight into the very complex

nature of organizational crisis preparedness.

8.2. Key Findings

This study offers some key insights about crisis preparedness in local health departments. In this section the data collected from the written survey, interviews, document reviews and academic literature will be merged to identify the key findings for each of the four research questions. These findings will be compared to what is known about organizational crisis preparedness as written in the literature.

8.2a.What types of organizational crises might be experienced by a local health department?

This question was answered by asking public health leaders to generate a list of potential organizational crises and by asking local public health practitioners what kinds of crises their agencies have experienced or might experience. A list of potential worst-case scenarios was generated during this study. In the process of creating this list, two key findings emerged. First, local health departments experience many negative events which they label as crises. Second, despite reporting that they have experienced many such events, health directors have given very little thought to the variety of worst-case scenarios that their organization and employees may face. These two findings are explored in greater detail below.

Like other corporations and businesses, health departments have experienced organizational crises. Eighty-four percent of health departments had reported experience with an organizational crisis during a five-year period. Over 50% of local health directors claimed that their agency had experienced four or more such events during this time period. The most common types of crises experienced were either political in nature or related to

facilities or equipment. During the same time period (1995), ICM reports (ICM Report, 2006) the most commonly reported organizational crises in private corporations were mismanagement, white-collar crime and labor disputes. Data sets from the years 2005 and 2006 show a drop in the number of incidents related to mismanagement but an increase in the number of crises related to catastrophes and class action lawsuits. These increases might be due to the increased efforts by consumers to demand compensation for dangerous products, such as tobacco, and to the significance of major disasters, such as hurricane Katrina on businesses. Health directors reported some experience with legal issues and disasters at the time of this study. One might suspect, however, that they would also be influenced by these national trends and report larger numbers of these types of crises now as compared to ten years ago.

The ability to think creatively about the problems one might face is a critical skill for crisis leaders. The lack of imagination in government officials has been cited as a key reason for the failure to anticipate the tragic events of 9/11 (9/11 Commission Report, 2004; McConnell & Drennan, 2006) Executives and researchers from many industries are bounded in their creativity and often only make links to what they already know. For example, when asked what types of crises they may face, banking executives most often cited events such as white-collar crime, hostile takeovers and poor public image as potential crises for their organizations (Reilly, 1989). Public health officials involved in this study were also limited as to their ability to anticipate a variety of worst case scenarios that could impact their organizations. They too, tended to list only industry-specific situations, such as infectious disease outbreaks and budget cuts, or crises that have been previously experienced either by their organization or a similar organization in close geographic proximity.

Data from both the interviews and the document reviews show that for some health departments there are significant barriers to "thinking the unthinkable." First there are a number of individual employee-held beliefs that certain situations could not happen or will not occur in their agency. Similarly, there are beliefs that spending time thinking about or preparing for situations that may or may not occur is time wasted. Finally, even for those with the belief that anything could occur and that crisis readiness is important, there tended to be limited organizational structures in place that allow for dialogue and actions to occur.

Existing lists of potential crises developed for other private or not-for-profit organizations can aid health leaders in thinking about the unthinkable. Crisis preparedness scholars such as Mitroff, Zdziarski and Spillan generated lists of potential crises for studies of private corporations (2001), universities (2004) and not for profit organizations (2002). While there are many similarities between the list of potential worst-case scenarios generated for this study and lists used by other researchers, there are some differences as well. Lists vary both in the number and the types of scenarios included.

Lists of potential organizational crises found in the literature contain between five (Fowler et al., 2007) and over one hundred separate events. The Managers Crisis Index developed by the Lukaszewski Group, (Appendix A) is the longest list found, with 119 separate events. Most lists include natural disasters, product failures, inappropriate employee behavior or deliberate evil acts of outsiders. Some lists, however, appear to use a broader definition of crisis including long-term business threats such as mergers and decreasing budget revenues. This is true of the ICM Crisis List (2006). Other lists vary in their specificity. Some include situations that are broadly defined, such as "employee misconduct", while others include more specific situations that might be included under this particular

heading, such as "employee accepting bribes" or "employee making racial slurs." A useful list is one that includes enough variety to help with creative thinking, but is not so long that it is useless as a tool for improving organizational preparedness.

The two other differences between the list of potential crises generated for this study and other lists reflect the differences between public health agencies and other industries. First, some situations listed may be relevant to only certain types of businesses. For example, the Lukaszewski Managers Index contains "airport security" and "international accidents" as potential situations. Since local health departments tend to function at the city or county/district level, these situations were not identified as relevant to this study. However, with the events of 9/11 and the subsequent anthrax threats, perhaps a newer version of a list for public health agencies might include global events. Another difference between lists can be found in the wording used to describe particular scenarios. For example, "takeovers and mergers" may be found on crisis lists used by private corporations. These events occur in public health but may be instead labeled by public health leaders as "privatization". Similarly, problems related to products, such as product tampering and product recall, may be described as "service failures" within the public health system.

Prior to this research study, public health leaders in general had spent little-to-no time thinking of the variety of worst-case scenarios that may be experienced by their agencies. When given an opportunity to think about the unthinkable and aided in their brainstorming by seeing other lists of worst-case scenarios, they were able to identify a list of potential organizational crises for public health agencies. The list generated for this study contained 46 situations and was felt to reasonably represent the types of events that health departments could face.

8.2b Can these scenarios be categorized to form a useful framework to aid in crisis management?

A crisis typology of potential organizational crises was created during this study. Below is a description of the final crisis typology categories, how these typology groupings are different from crisis groupings created by other researchers and why a crisis typology is a useful tool for public health practitioners.

A crisis typology or framework in which crises are categorized is a useful tool for both researchers and practitioners. By grouping crisis events into categories, one can follow the trends in organizational crises. For example, ICM has been tracking 16 different types of newsworthy corporate crises since1990 (ICM Report, 2006). Each year they publish statistics on what types of crises are occurring in businesses, how these numbers compare to previous years and which industries have experienced the most crises over a ten-year period. Mitroff, et al. (2003) also used their research data on organizational crises to show a disturbing trend in the types of crises that are occurring. They demonstrated that man-made organizational crises are now increasing in occurrence and are rivaling the destruction caused by natural disasters. The chemical gas release from the Union Carbide facility in Bhopal, India, the bombing of the Alfred P. Murrah Federal Building in Oklahoma (1995) and the tragedies of 9/11 are but just a few examples of significant man-made crises.

Grouping crises into categories is also useful to practitioners as a tool for prevention and response planning. Typologies can be used to expand the thinking by public health officials as to what could happen. A typology highlights the wide variety of kinds of events that pose threats and reflects the similarities and differences in these events. The ability for

crisis leaders to understand the common traits in situations can aid in response planning. A typology of events can also make the level of effort needed to improve preparedness feel more achievable. No organization has time to prepare for every possible worst-case scenario, particularly if the events seem unlikely. Pauchant and Mitroff suggest that organizations prepare for at least one crisis scenario from each category or family in the typology. Using a framework with a limited number of crisis categories as a guide for preparedness efforts may make the work feel less daunting for an organization.

The usefulness of any typology, however, will be dependent on the mindset of the public health leaders that use it. No crisis occurs as planned. Preparing for one specific situation in a family of crises should be used to build particular skills and answer specific questions that would be useful in preventing or responding to both the specific situation but also to other similar, but different crisis situations. The efforts to prepare for one worst-case scenario will assure that the agency has answered as many questions as possible up front and will allow staff an opportunity to build skills and test strategies for a quicker response to any real situation. Public health practitioners who are unable to see how their preparations for one scenario can help them respond to similar situations have lost the value of the typology and of their preparedness efforts.

In the current research, the task of sorting the forty-six worst case scenarios into categories based on similar response strategies was accomplished with remarkable consistency by three focus groups with public health practitioners. The result was a crisis typology of seven different "types" of organizational crises. These categories or families were labeled as Disasters, Personnel, Public Relations, Legal, Quality Assurance, Plant / Equipment and Political.

The typology categories were formed by placing scenarios together based on the need for similar response strategies. For example, events which destroy an organization's facility were placed into the same category because they share the need for similar actions (such as relocating services, securing the premises, protecting employees and clients from injuries, recovering lost or damaged equipment or information) despite having different causes. In reality, the focus group participants charged with the creation of the crisis typology found it difficult to exclude the perspective of causation in their deliberations. Therefore, an event such as a building fire was placed in the "Disaster Family" if caused by a lightening bolt but in the "Legal Family" if the cause was arson. Causation can affect the response strategies that are needed, particularly in terms of the communication strategies and messages that will be needed for an effective response. It was felt that the inclusion of causation in the creation of the crisis typology, in the end, did not disturb the usefulness of the final product.

The actual categories that emerged for this study are different from other typologies. The simplest typology is that which divides situations based on the distinction of causation: man-made versus natural. Other typologies (Fowler et al., 2007) include only a very limited set of worst-case scenarios. These typically include only situations caused by the evil acts of outsiders or by nature. They neglect other categories of crises such as tragedies that we can bring upon ourselves. Examples of these types of events might include acts of misconduct or incompetence. Many of the differences found in other organizational crisis typologies however, relate to the language used in different industries (such as public health versus private businesses) or true differences between the goals and work of these organizations.

A typology can allow for better research around the nature and trends in organizational crises, but it should also be a useful tool for organizational leaders. It is only

useful, however, if it is used to think out and plan for the variety of situations that could occur.

8.2c. How well prepared are health departments to prevent and respond to the various types of crises?

A critical finding of this study was that public health departments are not crisis-prepared organizations. In general, health departments have created some structures and policies which should aid in the prevention or response to some types of crises but health officials overestimate their overall preparedness abilities. Practitioners feel most prepared to prevent and respond to crises related to quality of services, legal issues or personnel tragedies. They perceive their agencies to be least prepared to deal with high-stake emergencies which fall into the category named "Disasters." Mitroff, Diamond and Alpaslan (2006) found that university officials felt most prepared for fires, lawsuits and crimes. They felt least prepared for terrorism, data tampering or loss and ethical issues. Similarly, Zdziarski (2001) found that 92% of the universities, in his study, had plans for fires but only 60-62% had plans for acts of terrorism and kidnapping. Personal beliefs about crises, prior crisis experience, reliance on existing structures or people and lack of knowledge of crisis preparedness all appear to have a role in the inaccurate perceptions of preparedness held by health directors. .

All sources of data confirmed the existence of some structures and policies for crisis prevention and response in local health departments. Community disaster teams, epidemiological response teams, and county safety teams exist in most health departments as do community disaster plans, medical emergency plans, personnel policies and fire

evacuation procedures. These tools typically are limited in their focus and scope but could be used to model best practices for preparedness efforts aimed at a variety of crisis situations. Unfortunately, there was little evidence that public health officials have been able to build on these limited efforts to create crisis-prepared organizations.

Public health directors rated their agencies more prepared than they actually were to prevent and respond to organizational crises. This finding is consistent with findings from other research. Sarah Kovoor (1991) found the same to be true with managers in technical organizations. When comparing manager's beliefs of preparedness to actual levels of organizational preparedness, she found that the managers of less-prepared organizations believed their organizations to be more prepared than they actually were. Pauchant and Mitroff (1992) interviewed over four hundred executives from businesses, not for profit organizations and governmental agencies and found a discrepancy between perceived preparedness levels between the crisis researchers and the executives. The researchers found 90% of their organizations to be unprepared while 50% the executives felt that their company's efforts at preparedness were sufficient. Fowler et al. (2007) found a discrepancy in perceptions of readiness between senior managers and other employees. Executives and managers perceived their organizations to be more prepared than employees at lower positional levels. An unrealistic view of the current level of organizational preparedness can be a barrier to creating a truly prepared organization. This is particularly true if the perception is that the organization is more prepared than it actually is. This belief is a faulty rationalization held by some leaders in crisis-prone organizations.

Public health practitioners reported that their perceptions of preparedness were higher for particular events when they had experienced or practiced an event, when they felt

adequately trained or felt someone else was skilled, when they felt that existing policies or plans were available and when they only needed to respond internally versus externally. These feelings impacted their sense of preparedness. Perceptions of preparedness however, do not always match reality.

There are three themes from the data that support the conclusion that health officials overestimated their level of preparedness. First, the comments made during the interviews demonstrate that public health officials are not fully aware of the wide array of potential crises that could occur nor are they aware of the various activities that would be needed for an effective response. Second, a comparison of the data from the survey and case studies highlight a number of inconsistencies about the strength of each of the dimensional layers of the crisis-preparedness model including gaps in the types and comprehensiveness of existing written plans and documents. Finally, even those health departments that were rated as highly prepared to prevent and respond to organizational crises through the survey identified significant gaps in their readiness abilities.

Health officials have limited knowledge of what types of situations could occur within their organizations and are unaware of the multitude of activities that are needed to both prevent and respond to these events. This became evident through the one-on-one interview sessions with public health employees. Initial comments from the interviewees were often positive about their agencies ability to deal with crises. However, within minutes of the start of the interviews, this assumption was proven wrong. Many of the 46 crisis scenarios presented to those interviewed had never been discussed or thought about. Equally apparent was their lack of knowledge about what activities must occur for an effective response. They were unprepared to conduct many of the actions needed for an effective

response even for the events that respondents claimed to be ready to handle. This was particularly true for dealing with issues around psychological and emotional needs, communication needs, and equipment and facility needs. Health officials were just unaware of the vast array of decisions that need to be made and needs that arise during a crisis.

Discrepancies between the results of the survey and the in-depth health department studies also support the conclusion that health directors have a distorted perception of organizational preparedness. Survey results indicated that, overall, health departments in North Carolina fall within a "safe" scoring range for impact of human beliefs and organizational cultures on crisis preparedness. Layers 3 and 4 averages fell within the "questionable" range. Themes that emerged during the interviews and the document reviews, however, suggest that the survey results should be viewed with caution. The qualitative portion of the study suggests a more disturbing picture of the levels of preparedness. The discrepancies between the data sources are described below.

Qualitative results suggest that health directors may not be modeling a mindset and organizational culture that support crisis preparedness. Comments made by health directors and other members of their staff imply that not only are their beliefs and cultures "not safe" but they may be more accurately described as "dangerous." As highlighted in chapter 7, public health employees repeatedly made statements which reflected at least ten common crisis-prone beliefs in their agencies. These common beliefs included that preparedness efforts are a luxury, that others will save us, that some events are very unlikely to happen to us and that someone in the agency will know what to do. The interviews also revealed worrisome general themes about organizational culture within health departments. Survey results indicate that health directors felt that they work in a flexible organization. They also

felt that their employees would work well as a team in the event of a crisis, that they have a history of sharing resources and that they are involved in sharing ideas and making decisions. These results are inconsistent with the statements made by employees within the health departments. Specifically the health director's beliefs about how business is conducted and how he or she leads the organization were not always consistent with the views of other employees. An example of this can be seen through the following comments made by one health director and one of his employees:

> Health Director – *"I would not penalize staff for getting involved – even it they take the wrong action."*

> Employee – *"Some people do not like the health director. His style is 'my way or no way.' He will be hard on you if you screw up."*

While each health director has a different leadership style, the health directors seem to be more likely than other staff members to think the organizational culture supports effective staff performance. Since they are the ones who completed the survey, this might explain why the survey results indicate that the organizational cultures within health departments support crisis-preparedness efforts. The interviews however, appeared to be much more illuminating in terms of organizational culture. Aspects of culture that might make health departments more crisis-prone can be found in how decisions are made, how difficult topics are discussed, how information is shared, and how learning is accomplished. In addition, there was little evidence to support the notion that people would work well together in a multi-disciplinary fashion, that resources would be shared if needed or that employees feel safe to discuss problems both internally and externally.

Scores from the survey data for dimensional layers 3 and 4 of the model were lower than overall scores for Layers 1 and 2. However, differences found between the survey results

and the interview and archival data from the health departments suggested that these scores were still higher than they might actually be. Those interviewed described very little in the way of structure for crisis preparedness within local health departments. Their comments supported the survey results which identified weaknesses in crisis-preparedness structure such as the lack of services for dealing with stress, the lack of incentives for whistle-blowers and the lack of adequate opportunities to practice drills and simulations. But, the results which suggested that crisis teams were in place, that there were strong relations with the media and that trained spokespersons were on staff were not supported by the interview data. In fact, the interviews suggested that quite the opposite is true. Specifically, the interview data highlighted that there were no agency-wide crisis teams that work to handle a variety of crisis situations, that relations with the media were more adversarial than collegial and that very few people were trained to be competent public spokespersons for the health departments.

The interviews and document reviews also don't completely support the survey results regarding the breath and depth of existing policies and plans which address crises. While there may be some health departments that have a comprehensive crisis plan which addresses a variety of worst-case scenarios, none were found in this study. Even the health department with the most extensive set of documents for crisis prevention and response had gaps in efforts. An over-estimation of what procedures exist and their level of comprehensiveness may be due to the fact that health departments do have some policies in place that address specific potential public health crises. However, there are gaps in the scope of what is included in these existing documents, there are gaps in the topics that are covered, there are gaps in who knows about the policies and there is an overall lack of integration of

what exists and who is accountable.

The final piece of evidence that supports the claim that health directors in general over-estimate their agency's level of organizational crisis preparedness comes directly from the survey. There were four health departments that were rated as crisis-prepared. All four dimensional layers of the model were scored in the safe range for these four organizations. However, results from other sections of the survey for these agencies suggest a different story. This is also true if you look at the ten health departments with the highest overall preparedness scores from the survey. Specifically, the survey respondents from all of these agencies indicated some gaps in their organizations readiness to perform ten critical activities of crisis response. Arrange for back up communication technologies, treat medical emergencies, offer services at a new location and obtain psychological counseling were the activities that health directors felt least ready to handle. The health director's perceptions that their organizations are not prepared to perform key crisis response activities suggest that they are not as totally prepared as they might believe.

The public expects that leaders are preparing for worst-case scenarios (Boin & Hart, 2003). Since public health agencies have recently received large sums of money for preparedness one might assume that leaders are preparing and therefore, feel more prepared to handle crises. A study conducted by Fowler et al. (2007), found that governmental officials perceive themselves as being more prepared for crises than other business executives. Are they prepared or are they overestimating their preparedness levels? At the time of this study, public health directors also felt relatively prepared for most crises. But this study identified many gaps in organizational preparedness efforts. This suggested that local health departments were more crisis-prone than crisis-prepared.

8.2d. What gaps exist in crisis preparedness for local North Carolina public health departments?

It was once believed that all it took to be prepared for a crisis was having a crisis management plan in place. Recent research by crisis and disaster-response scholars indicates that there are many factors, in addition to having a plan, that are needed to create a crisis-prepared organization. Pauchant, Mitroff and their colleagues were the first to propose a model of crisis preparedness which integrates the organizational factors deemed important to effective crisis prevention and response. All dimensional aspects of an organization are equally important to crisis preparedness.

This study found significant gaps in each dimensional layer of the preparedness model. Areas of weakness in crisis preparedness structure and written plans were identified by the survey and supported by the interview and document reviews. Concerns about individual beliefs and about organizational cultures were identified most so from the interviews and document reviews than the written survey. Below is a list of the seven most significant gaps in the crisis-preparedness efforts of local health departments in North Carolina. These gaps are presented in order of the four layers of the crisis-preparedness conceptual model.

Dimensional Layer I – Human / Individual Beliefs
Gap#1 – Health officials have not thought about the unthinkable

This study found that local public health officials have a limited imagination with regards to the types of potential crisis situations which could impact their organizations. The

worst-case scenarios that health officials identified were often related to previously

experienced situations, mostly industry-related, such as staffing problems, political attacks or

building failures.

Ian Mitroff (personal communication, 9/2004) claims that after 9/11, various

corporations and industries increased the time and effort put into crisis preparedness but that

their efforts focused primarily on preparing for particular crisis scenarios, ones that had been

experienced directly or by like-organizations. Very few organizations, in his estimation, had

used 9/11 as an opportunity to improve their level of preparedness for a broad range of

scenarios. Nor had they re-organized, to any significant degree, their infrastructure to create a

more crisis-prepared organization. Drs. Kristine Gebbie (personal communication, 12/04) and

Steven Keener (personal communication, 3/05) , two public health leaders known for their

interests in public health preparedness, feel that Mitroff's assessment of businesses holds true

for public health agencies, as well. The events of 9/11 and the subsequent anthrax threats

motivated public health agencies throughout the nation to put more time and resources into

preventing and responding to potential acts of bio-terrorism. Dr. Gebbie feels that while local

public health departments are more willing to believe that a terrorist event could occur and

affect the functioning of their agency, public health officials are still unwilling or unable to

imagine the potential for other types of crises, particularly those that would be internal in

origin such as acts of employee misconduct.

Gap #2 – Health officials see crisis preparedness as a luxury or as an additional program

A significant gap to preparedness for local health departments appears to be the

mindset that preparedness efforts are an additional program that requires additional resources.

The interviews with health officials suggested that it is common to believe that crisis-preparedness efforts are somewhat different from other health department work and that to become more prepared would require more resources, including time and personnel.

Comments made about existing crisis-related activities, such as community disaster planning and infectious disease outbreak control, also provided evidence that public health employees believe that not all employees share preparedness responsibilities, but that someone else in the agency does "it." Kristine Gebbie (personal communication 12/04) claims that this continues to be the case post 9/11, as many health departments have identified particular people to work on preparedness efforts. For some public health leaders this has led to frustration and fear. In particular, some fear that preparedness efforts are taking away from the resources and focus of the real mission and work of public health, health promotion and disease prevention (Guidotti, 2004.) Preparedness continues to be seen as a separate program and not as a mindset for doing all public health work.

Dimensional Layer II – Organizational Culture
Gap #3 – Leadership and management styles create organizational cultures in some health departments that weaken preparedness efforts

It is generally believed that the organizational leader has a significant role in setting the culture for the organization. The way in which decisions are made and information is gathered, analyzed and discussed is indicative of the organization's culture. Organizations with crisis-prepared cultures (Wise, 2003; Alpalsan, 2004; Reilly, 1987; Grenny, 2007) have been found to be more successful at avoiding and responding to organizational crises.

In this study, there were no health departments with survey scores in the danger zone

for crisis-prone cultures. However, the interviews with public health employees at the five case sites highlighted some general themes about the cultures within health departments which might make them less prepared for crises. Particular concerns include the way in which decisions are made, the way in which information is processed and communicated with internal and external stakeholders and the inability (as seen by some but not all employees) to talk about controversial topics, such as race. Unless public health leaders create cultures within their organizations which empower staff to be involved, they will continue to see preparedness as someone else's work, they will be silent when they see crisis warning signals flashing and they will circle the wagons when a crisis hits.

Gap #4 – Organizational learning is haphazard; employees are not reaping the total benefit from each other's knowledge

In many states, the belief that 40-60% of the public health workforce will retire in the next five-to-ten years is of considerable concern to public health leaders. Given the potential for significant losses of organizational memory and skills, health departments should be investing time and resources towards finding ways to capture the lessons of experience from each and every employee. Organizations that are skilled at transferring knowledge between employees will have a significant advantage over others in finding and developing new public health leaders within the ranks. Unfortunately, this study found weaknesses in the transfer of knowledge between employees within local health departments. This is a particular problem for those wishing to build a crisis-prepared organization. As stated by George Santayana (1905), "Those who cannot remember the past are condemned to repeat it."

Robert and Lajtha (2002) suggest that continuous learning processes designed to equip key managers with the capabilities, flexibility and confidence to deal with sudden and unexpected problems/events is the key to being a crisis-prepared organization. This study highlighted a gap in formal learning structures within local health departments. While individuals stated that they feel like they learn from real work, there was little evidence that health departments have a culture that supports learning. For example, there was no evidence that health departments had structures in place which would facilitate learning from key events or for cross-disciplinary learning between employees. Regularly scheduled debriefing sessions, team work using action learning skills, and employee training programs on how to have difficult conversations are examples of activities that might help public health agencies promote a culture of organizational learning.

Thousands of dollars are being spent on the creation and implementation of disaster drills and exercises. To maximize learning from these experiences both individuals and organizations have to know how to learn and how to share the lessons of experience with the next generation of public health leaders.

Dimensional Layer III – Organizational Structure

Gap # 5 – Existing Infrastructure for Crisis Preparedness is very limited and not well-integrated

While the written survey and key informant interviews identified some fragments of crisis-preparedness structure within local health departments, what exists is very limited in scope and not at all integrated. The five most glaring gaps include the lack of a core crisis-response team with clear roles and expectations, the lack of skilled spokespersons and communication strategies, the lack of practice using drills or simulations, the inadequate

structure for emotional or trauma related services and the lack of coordination of all crisis prevention, response and learning efforts.

The existence of a core multi-disciplinary team to lead and manage crisis-related activities within an organization is critical to crisis readiness. Health departments tended to have teams that respond to specific kinds of events such as infectious disease outbreaks, but there was little evidence in this study, that health departments had a multi-disciplinary core team that was ready for any event or that such a team could be created in the heat of chaos. Research on team effectiveness (King, 2002) suggests that the lack of prior interactions between members could have a significant impact on how well people will work together in a crisis. Prior interactions between team members may promote a greater understanding of individual skills, perspectives and interpersonal styles. This group familiarity may influence the effectiveness of a crisis team by allowing for a more open style of communication and may allow team members to be better able to resolve problems (King, 2002). Creating more opportunities for multi-disciplinary problem-solving, learning and team work would greatly support the beliefs held by health department employees that they would work well together if needed.

The lack of effective organizational structures to support both internal and external communication was also a significant finding in this study. While the survey results showed that health directors felt ready to quickly communicate with employees, Board of Health members and the media in the event of a crisis, most health departments had no formal structures in place that would allow for the vast array of communication needs that arise in a crisis situation. No health department appeared to have a system for rapidly alerting potential victims to dangerous situations (Seivold, 2007), for systematically communicating with key

individuals off campus in ways other than telephone or for quickly developing communication strategies and materials. There was also little evidence of structures, other than possibly a phone tree, that would allow for frequent and deliberate communications with all stakeholder groups during an event or during the long process of crisis recovery. Training of staff for communication roles was also limited. While some employees had participated in short workshops on working with the media there was no strategic expectation that key individuals would maintain a high level of proficiency at working with the media, communicating difficult messages or understanding the message needs of diverse populations. Organizations will never know ahead of time the exact crises that will occur and which communication channels and systems will be working when they hit.

To be crisis-prepared, organizations must have in place fully trained communication specialists with access to information and with abilities to share appropriate information in a timely fashion with all stakeholders. Health departments should develop Message Action Plans (Springston & Lariscy, 2005) which identify message elements, stakeholder audiences, communication channels and timelines, evaluation methods and roles of key staff. This study identified the infrastructure for all aspects of crisis communications to be weak in local health departments.

Drills and simulations are also an essential component to an organization's preparedness strategies (Mitroff, Pearson & Harrington, 1996). They are used to build skills and to assess system deficits as well as individual or team strengths and weaknesses (Yusko & Goldstein, 1997). One of the most common drills held in organizations including elementary schools is the fire drill. Because of the frequent practice of evacuation from a building most people feel confident that they can escape a fire. In this study, responding to

fires was the only crisis from the category of "Disasters" that respondents felt competent to handle. This study revealed that there were very few drills or exercises other than fire drills that were routinely practiced. This has been reported to be a problem in other businesses as well. A study by the Industrial Society of UK reported that just after 9/11 (Personnel Today, 2002) 48% of businesses with disaster plans had never practiced a drill. A year later, the American Management Academy reported that 58% of US businesses had not conducted any drills since the 9/11 tragedy (Galiflanakis, 2003). The use of drills and simulations can be a powerful aspect of an organization's crisis preparedness strategies and should be conducted more often and in a systematic manner by local health departments.

Due to the chaotic nature of crises and the significant potential for loss, many people experience cognitive limitations and negative psychological outcomes during and after an event (Pearson & Clair, 1998). Distress resulting from trauma can cause intense soul-searching (Dutton et al., 2002) and a reassessment of core beliefs and assumptions (Pearson & Clair, 1998). Failures to assess and deal with the emotional impact of crises on workers could result in decreases in organizational productivity, increases in legal action by employees who develop post-traumatic stress disorders and increases in health care costs (Conte et al., 2007). This study found that public health officials felt ill-prepared to handle the emotional sides of crises. While some reported that they may refer traumatized staff to county personnel resources, they also claimed that no other organizational discussions had occurred to determine how the emotional needs of stakeholders would be identified, treated or compensated. Rowitz (2006) in his book, *Public Health for the 21st Century: The Prepared Leader*, presents a sample strategy for preparing and responding to the mental health needs of victims of one type of crisis; terrorism. Perhaps this model can help

organizations prepare for other types of events.

Organizational structures, such as training programs, crisis teams, chain of command, practice drills, and mental health services, should support crisis preparedness instead of weaken it. Health departments have given little thought to what systems are needed and how existing structures should be coordinated and managed. Mitroff (2005) suggests that crisis preparedness activities be integrated with other crisis and strategic level structures such a Total Quality Management, Safety and Issues Management and Strategic Planning. Public health agencies should also coordinate their preparedness efforts with activities related to disaster preparedness, public relations and knowledge management. Integration and synergy between structures is needed for effective organizational preparedness.

Dimensional Layer IV – Policies and Plans

Gap # 6 – Crisis-preparedness portfolios in local health departments are limited

As mentioned previously, health departments have created plans and policies to address the occurrence of some types of crises. Despite this, none of the health department in this study had created an organizational crisis portfolio which included preparations for a wide variety of worst-case scenarios. The most common types of crises addressed in these documents were fire / building evacuations, infectious disease outbreaks, natural disasters or civil disobedience, chemical / hazardous material exposure, medical emergencies, professional standards and expectations for employee conduct. Crisis-preparedness portfolios which are limited in the types of situations addressed are a common issue across industries. Zdziarski (2001) found that less than half of the universities he surveyed had a quality crisis portfolio. Reilly found that banks limited their crisis preparedness efforts to crises related

specifically to the banking industry. Ian Mitroff stated in a personal interview (2004) that

even after the events of 9/11, corporations that put resources into preparedness efforts did so

only for industry-related events or specific tragedies that were recently experienced by other

corporations. A recent event can serve as a motivator for crisis planning (Barton, 1993;

Kovoor- Misra, 1996; Kovoor-Misra & Nathan, 2000.) This is particularly true for planning

for like-events. A prepared organization, however, should be routinely thinking out

prevention and response strategies for a variety of situations. Health departments do not have

diverse crisis portfolios in place.

Gap #7– Existing policies and documents are limited in scope and scattered throughout the
agency

In addition to the limited types of crises that health departments prepared for, the

plans and policies that do exist are limited in their scope and comprehensiveness. Kovoor

(1991) found that the technical organizations in her study did not plan for the non-technical

aspects of crisis preparedness. Zdziarski (2001) found the content of most crisis plans in his

study of major universities was focused primarily on just one phase of a crisis, the immediate

response phase. He found that ninety-eight percent of crisis plans addressed the actions

needed at the time of the crisis, while only 64% contained information about the pre-crisis

phase. Documentation of how and what constitutes an early warning sign, how

communication efforts will be implemented and how employee stress and mental health

issues will be dealt with were often missing in the health department plans reviewed in this

study.

The process of obtaining and reviewing key documents during the onsite visits also

illuminated the lack of coordination and oversight of what does exist. Kovoor-Misra et al.

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(2000) stated that if an organization is functionally structured, crisis management plans within it are likely to be functionally segmented with little or no integration. That assertion was supported by this study. Written documents for preparedness efforts were scattered through out each agency visited and no employees were able to identify the location of all existing crisis-preparedness or crisis related documents. Shaw and Harrald (2004) propose a new framework for organizations which links the numerous functional units, such as business recovery, incident command, safety and security management and risk management, into an integrated crisis management and continuity program. Their framework could serve as a model for public health departments.

8.3 Limits to the research

While there is much to learn from a study of this nature, the results need to be viewed with an understanding of the limitations of the research design. Many of the weaknesses of the study design came about from the difficulty of studying the complex phenomenon of organizational crisis preparedness and the lack of theoretical and empirical literature in this area, particularly relating to small, governmental agencies. In addition, the value of the results to the practice community is limited by the extended time it took to complete the study. These limitations are discussed here.

One of the most obvious weaknesses pertains to the construct of crisis preparedness. Crises are complex, chaotic events that may impact all dimensions of an organization. A full assessment of an organization's level of crisis preparedness requires a thorough understanding of all of these dimensions. Organizational culture, human beliefs and systems integration are difficult to study in a broad-brush manner. Therefore, you will observe that

this study was limited in its ability to go beyond the surface layer of understanding for any one dimension of a public health organization. Important skills such as the ability of public health workers to lead multi-disciplinary teams, to learn from past experiences or to mobilize resources were examined only superficially. It is difficult to study the complex phenomenon of crisis in the complex world of an organization.

The fact that crises are seen as rare and stressful events makes it difficult to study preparedness in real time. Identifying an organization that is about to experience a crisis is obviously impossible and gaining access to an organization during an event would be difficult, particularly for an outside researcher. Ideally, one would want to evaluate the response and outcomes of a current crisis on an organization that was pre-assessed to be prepared (or not) using our theoretical model of crisis preparedness. The health departments in this study were not actively responding to a current crisis. It is not far-fetched to believe that some health departments, right at this minute, might be missing the warning signals of a crisis which is lurking around the corner.

The inability to assess preparedness in real time also limited the ability to check the validity of the tools and methods used in this study. To address this concern, two things were done. First, multiple data sources and collection methods were used. The use of both quantitative and qualitative research methods provided a way to check the accuracy of the data collected by any one method. A second strategy used to increase the validity of the tools used in this study was to use instruments that had been previously developed and tested in other research studies of organizational crisis preparedness. For example, the survey tool was modified from a tool developed by Pauchant and Mitroff for their work with private companies. The interview guide and audit tool were developed from reviews of interview

guides and record audit tools used by Pauchant & Mitroff (1992), Pearson & Mitroff (1993), Reilly (1989), Kovoor (1991), Wisenblit (1989) and More (1994). Discrepancies found when the survey results were held up to the results from the interviews and the document reviews highlight the need for more complex study designs for research that assesses preparedness.

Despite the use of triangulation of data sources and research methodologies, the quality of data may be limited by the fact that all data collection and analysis was done by a single researcher. Patton (1990) states that multiple investigators or analysts can help to reduce the potential bias that comes from one person. In this study, using a single researcher may have contributed to the collection of incomplete or inaccurate data. For example, if the key informants did not find the researcher credible or trustworthy, they may have limited the information they provided or changed their viewpoints to share what they thought the researcher wanted to hear. The limited number of study analysts may have also biased the way in which the data was viewed and analyzed. This one researcher may have been biased in the way in which she viewed some of the qualitative data. Two or more persons independently analyzing the same qualitative data set and comparing their findings would have strengthened the research design (Patton, 1991).

The value of this research is also limited by the fact that it focused on only one type of organization small, community-based public health departments in North Carolina. This prevents the findings from being generalizable to other types of organizations, including other state or federal public health agencies. In addition, the limited number of health departments in which qualitative data was collected also limits the inferences one can make about other North Carolina health departments and other types of public agencies. While some of the factors influencing preparedness, such as the types of crises experienced and the

types of barriers to preparedness, may be unique to the sample studied, the model used to examine crisis preparedness can be used by any organization. The need to search for early warning signals is important to any public or private agency. Also, the recommendation of preparing for a limited number of potential crisis situations that vary in their focus is a realistic and valuable goal for any organization.

Finally, it is important to recognize that this study was conducted over ten years ago and much has changed in both the world and in the field of public health in North Carolina. Since 1995, the United States has experienced several significant community-wide disasters, such as the terrorist attacks in 2001 and the gulf coast tragedies from Hurricanes Katrina and Rita. There has also been a re-emergence of infectious diseases and an increase in concern for potential evil, intentional acts using biological, chemical or radiological agents. These events have catapulted public health into a role of first responder and have changed the field of public health in significant ways. Given these trends, public health disease surveillance and public health disaster preparedness have become central to health department planning and operations.

Other events or trends have also occurred which have had an impact on the functioning and efficiency of local health departments in North Carolina. Two such changes warrant particular attention. First, it is worth noting that in 2002, North Carolina became the first state in the country to require that all local health departments become accredited. This process requires that all agencies review their mission, operations, policies and strategic issues. It is expected that such a process will improve overall performance of these agencies including how these organizations are managed and how they provide the essential services of public health. Second, the demographics of the state have been changing to include a more

ethnically diverse population. The demographic trends are influencing the skills needed by health workers and services offered by health departments, particularly the need to have culturally competent staff and programs that can serve a multi-lingual and multi-cultural population. Related to the demographic changes is the growing concern over a potential leadership gap in the local and state public health workforce due to the impending retirement of senior public health officials and the lack of emerging leaders to fill these positions. Successful recruitment of new public health workers and the development of a skilled leadership pipeline for each health department has become an important priority for the state.

Over the last decade there have been many changes in the world and in the NC public health system. These changes have undoubtedly influenced the way in which public health organizations function today. Because of this, it is also likely that if this same study were conducted now it would lead to different results than those found twelve years ago. Therefore, the findings from this study should be used with an understanding of the more recent events and trends affecting public health and public health agencies.

8.4 Recommendations

While the field of organizational crisis preparedness is still developing, past research has identified a number of actions organizations should take to improve their abilities to prevent and respond to crises. Pearson and Mitroff (1993) have listed twenty-nine steps that characterize key elements of the best crisis management programs. These actions include strategic, structural, diagnostic, communication and cultural efforts. To successfully implement these crisis preparedness strategies, an organization may need to first develop a positive polarity to crisis management (Robert and Lajtha, 2002). For local health

departments this might mean finding a senior level champion who can assure that

preparedness is discussed and supported at strategic levels. Table 8.1 includes a list of some

other actions that local health departments can take to strengthen different aspects of their

preparedness efforts.

Table 8.1 Suggested activities to improve organizational crisis preparedness

ORGANIZATIONAL CULTURE AND MINDSET

- Assess the culture of your organization for crisis preparedness
- Integrate crisis preparedness into strategic planning processes

ORGANIZATIONAL STRUCTURE

- Create a "core" agency crisis team and identify specific responsibilities for each member
- Create structures and training for knowledge management and shared learning
- Create an infrastructure for crisis communication e.g. develop a media relations policy, identify and train key spokesperson, review agency values for telling bad news, develop specific message maps and sample letters for key stakeholder groups for a variety of situations
- Identify training needs for crisis preparedness; use didactic and action-learning models
- Assure psychological support services are available for individuals affected by key events

STRATEGIES AND PLANS

- Create a crisis portfolio by developing a comprehensive crisis-preparedness plan for at least one worst-case scenario in each of the seven crisis families.
- Assure integration of crisis-preparedness efforts throughout the agency, including an integration of documents and activities

8.5 Summary

The purpose, assumptions and methodology for this study were summarized in this section. Following these brief descriptions, the major findings were presented, the limitations of the research design were discussed and a list of recommendations for enhanced preparedness was made. Major findings include the following:

- Local Health Directors are not thinking about the variety of crisis situations that could impact their organizations.

- A list of potential crisis scenarios for local public health departments can be created and those situations can be categorized to form a seven-family crisis typology which can be used as a tool for organizational preparedness.

- Health departments do have fragments of crisis prevention and response structures in place which should be built upon for a higher level of crisis preparedness.

- Local public health directors over-estimate their organization's level of preparedness because they under-estimate what could happen, what responses are needed and what resources will be available in the event of a crisis. They also over-estimate the usefulness of past experience and the thoroughness and effectiveness of existing structures or procedures for a variety of crisis situations.

- Local health directors feel most prepared to both prevent and respond to situations related to quality assurance, legal issues or personnel concerns. They feel least prepared to deal with high stakes emergencies such as terrorist acts, workplace violence or kidnapping.

- Public health departments in North Carolina have, in general, significant gaps in their preparedness capabilities, including gaps in all dimensions of the DTP Model of Crisis Preparedness. Many public health employees have beliefs about preparedness that make their agencies more crisis-prone. Also, the way in which real work is done as illustrated by methods of making decisions, communicating information and

dealing with workforce tensions make health departments more crisis-prone. There are gaps in the organizational structures for crisis prevention and response, including lack of skills training, emotional support structures and workforce integration and relationships that would support preparedness. Finally, while there are some crisis-related procedures and documents, few, if any, demonstrate a systems approach, including the recognition of the dimensions of an organization and the phases of a crisis. The documents that do exist are typically scattered throughout the agency and are seen as unrelated to each other and under the responsibility of separate individuals or teams.

CHAPTER 9

IMPLICATION AND DIRECTIONS FOR THE FUTURE

Organizations have experienced crises since the beginning of time. But only in more recent years has the world gained a respect for the devastation that a crisis can have on institutions, people, nature, and communities. The argument for enhanced preparedness is further supported by the predictions of futurists who claim that changes in technology, population, medicine, terrorism, global connectedness and world climate will produce "inevitable surprises" which we should now anticipate (McConnell & Drennan, 2006). Local health departments have not been immune to crises and will undoubtedly suffer the consequences from future events if they don't find ways to prevent them or respond quickly to them. How prepared are our local health departments for future crises?

This study takes a comprehensive look at the levels of organizational crisis preparedness in local health departments in North Carolina. While it is meant to be exploratory and descriptive in nature, it undoubtedly generates more questions than answers. Some of the questions that it brings forth would make interesting topics for future research. Those ideas for future study will be discussed in this section, as will the value of this study to public health practice and other areas of academic interest.

9.1 Contributions of this study

Organizational crises have become a significant problem with implications for both organizations and society at large. Despite the severe consequences of crises, the literature has demonstrated a lack of common definitions and theoretical models. Testing of existing models and studies which reflect application of these models to practice is an even bigger gap, particularly in small organizations (Boin, 2000). The few empirical studies that have been conducted to assess organizational preparedness have generally been targeted towards large, private corporations. Research that helps to address some of the gaps in our understanding of crisis preparedness would benefit all organizations as well as society as a whole.

This study contributes to the existing literature of crisis preparedness by adding to the knowledge of conceptual frameworks for organizational crisis preparedness, but more importantly it can contribute to the practice of public health. How it contributes to these two areas is described below.

9.1a Contributions to Crisis-Preparedness Literature

The study contributes to the crisis preparedness literature in three significant ways; it adds to the conceptual models of organizational crisis preparedness, it uses a more comprehensive approach to studying organizational preparedness than most studies and it explores preparedness in a different type of organization: local, governmental public health agencies.

This research begins by proposing a new categorization system of crises, one that is appropriate to public health departments. The significance of this is twofold.

First, the methodology used for forming the crisis categories or families was different than that used by others crisis researchers. Second, the resulting typology is different from previous models found in the current crisis literature. As described earlier, most of the existing crisis typologies have been developed based on the viewpoint of the researcher (Reilly, 1989; Zdziarski, 2001; Fowler, 2007). These scholars have typically sorted crises into groupings based on certain dimensions that they felt were important. This study developed a crisis typology by asking public health managers to form crisis groupings based on how the situation should be resolved. The benefit of creating the typology in the method described is that it allowed the practice community a voice in the development of a tool which is meant to aid them in their work. This methodology resulted in a 7-family categorization system that can aid public health administrators and practitioners in building crisis-prepared organizations.

The crisis typology was one aspect of the overarching conceptual model used in this study. This model also adds to the existing literature because it is an expansion from other preparedness frameworks. As described in Chapter 3, the DTP Model of Crisis Preparedness merges three preexisting models into one useful visual framework. This includes the Onion Model which promotes the understanding of the core dimensions of an organization that impact preparedness, the Crisis Typology which identifies seven crisis families and Crisis Phases which outlines the phases all crises go through. This new model not only provides a more accurate picture of the depth to which crises affect an organization, it also provides a structure by which an organization can improve its level of preparedness. The DTP model, while it is generous in its applicability, is not a step-by-step prescription to what an organization should do to prevent or manage a specific crisis. There are plenty of crisis

management checklists in the literature. It is best to use this more comprehensive framework as a way to create an organizational mindset for preparedness.

The comprehensive nature of the theoretical model suggests that the methodology for studying preparedness must be equally comprehensive in its approach. This research used methodologies that provided a greater level of breadth than most studies. Most of the other studies which attempt to assess the level of preparedness within an organization or within several organizations from a single industry use a written survey to obtain the perceptions of a single individual, typically a senior staff member. The survey instruments used in many of these studies tend to be narrow in focus, asking only questions about the existence of organizational structure, such as a crisis team or written documents such as a crisis plan. Investigation of the core beliefs of leaders and the culture of the organization as they relate to preparedness is a step beyond what most studies take. This research, however, used quantitative and qualitative data as well as archival documents to study this complex phenomenon. It also assumed that the perceptions and understandings of crisis readiness may vary from person-to-person within an organization, leading to the decision to seek perspectives from multiple people within a single agency. The comprehensive approach to studying crisis preparedness used in this study may be a model for future research.

The final contribution of this work to the literature is that it adds to the types of organizations that have been studied. At the time of this research, there were no other studies documented in the literature on organizational crisis management that focused on local, governmental agencies. Still today, it is the only study that can be found in the literature with this specific focus. The dearth of studies of crisis preparedness in public health agencies is remarkable given the challenges facing them today. Not a single article adding to theoretical

models or providing assessments of organizational crisis preparedness in health departments has appeared in either the Journal of Public Health Management & Practice or in the American Journal of Public Health in the last three years (2004-2006). Lou Rowitz's book, The Prepared Public Health Leader, (2005) appears to be the first published work to share concepts and models of organizational crisis preparedness with the public health community. The only other published studies or commentary that relate to the theme of organizational crisis preparedness focus on crisis communication in public health agencies (Wise, 2003; Springston & Lariscy, 2005) or on the devastation a natural disaster can have on a public health agency such as the effects of Katrina on the New Orleans City Health Department (Stephens, 2007).

In the last five years, however, some other studies have been published that are worth noting. First, there have been a few studies focusing on preparedness levels in small businesses or not-for-profits (Spillan et al., 2002; Runyan, 2006; Fowler et al., 2007) and some which have looked at preparedness in schools or universities (Zdziarski, 2001; Mitroff, Diamond & Alpaslan, 2006). While the types of organizations studied in these papers are more similar to public health agencies than the large, private organizations investigated in past studies, they are still different in their missions and levels of resources. These studies also suffer from the same limitations of many studies; they are limited in scope, methods and applicability.

During this same five-year time period, there have also been a number of articles or commentaries written in scientific journals about specific issues or skills related to public health preparedness, such as strategies for mass vaccination, epidemiological surveillance, quarantine or isolation measures and risk communication. National assessments of the public

health system's level of disaster preparedness have also been conducted. These assessments of preparedness, however, also focus primarily on the existence of indicators found in layers three and four of the DTP preparedness model: structure and plans. For example, the 2005 Trust in America's Health report on federal and state public health readiness, assessed levels of readiness by using ten indicators of preparedness, including the existence of trained lab scientists, adequate hospital beds, a CDC-compatible electronic disease surveillance system and skilled registered nurses. These studies are very limited in the comprehensiveness of their methodology and of the indicators used to assess preparedness. The yearly evaluation of preparedness by Project Public Health Ready does start to identify cultural and relationship barriers that impede preparedness in a community, but it does not specifically examine the mindset, internal structure and capabilities of the local health department. More studies which focus on the capabilities of health departments to lead or assist in disaster response are needed. But the public health academic community must also recognize that the effectiveness of the public health agency in a community-level response is based on the assumption that the local agency is also not in crisis itself.

What happens when the public health agency IS the crisis? What happens to the abilities of a health department to be a bio-terrorism response leader when the health director has been fired for public drunkenness or embezzlement? Large-scale community crises have motivated the country to invest more resources in public health agencies for crisis preparedness. Unfortunately, the links between community preparedness and organizational preparedness have not been made to the fullest extent. This study can be the start of a more thorough understanding of overall crisis preparedness in public health departments.

9.1b Contributions to Public Health Practice

In addition to its theoretical contributions, this study also provides practical applications for public health administrators. It provides a framework by which public health managers can assess and improve their organizations level of crisis preparedness. Specifically, this study focuses attention on how organizational characteristics promote or impede a health department's ability to prevent or respond to various types of crises. While it is not a checklist for what should be done, the theoretical model of preparedness can help public health leaders find realistic solutions for improving preparedness. For example, identification of potential situations, conducting organizational culture surveys, developing crisis plans, providing staff trainings in crisis management and conducting routine crisis-scenario drills are sound tools of preparation.

The identification of potential areas of weakness in levels of preparedness in local health agencies can contribute to improvements in public health practice. It is very easy to observe whether or not an organization has a disaster plan or an organizational crisis plan. It is possible to create a plan if one doesn't exist; any agency can hire a consulting firm to create a crisis manual that accomplishes this goal. But the goal of having a "plan" is the wrong goal. Public health leaders need to create a "preparedness mindset" that begins with their own beliefs and leadership abilities. This study identifies some of the gaps that might exist within public health organizations at a level that is not easy to see but which can result in effective infrastructures, abilities and plans.

This study contributes to public health practice beyond crisis preparedness. The framework provided in this research may also be a useful model for public health professionals dealing with other controversial or urgent public health issues, such as tobacco

use, AIDS and bio-terrorism. The multi-dimensional approach provides a method by which an organization can systematically think about strategies for preventing and responding to the systems barriers and conflict inherent in these issues. In addition, it forces thinking about the impact various interventions have on various dimensions of the organization and on the community. The public health issues of today are complex and multi-dimensional. Dealing with them in a systemic manner often seems impossible. The framework provided in this study may provide some order and guidance to dealing with the many controversial public health problems our communities face.

9.2 Future areas of study

Over the last six years there have been several tragic events of state or national significance. Since crises can be motivators for change, one might wonder what impact these events have had on organizations both in terms of the changes they have made and in their level of commitment toward continued crisis planning.

Kovoor-Misra and Nathan (2000) have suggested that the opportunity for post-crisis learning is time sensitive. Others have also highlighted the fact that there are a number of barriers, including the need for normalization (Roux-Dufort, 2000) and a range of political realities, that interfere with meeting the ideal crisis preparedness planning goals in real-life (Boin & t'Hart, 2003; McConnell & Drennan, 2006). Research conducted by M. Alpaslan and colleagues of the preparedness efforts of Fortune 1000 companies demonstrates the difficulties in maintaining a focus on preparedness in the face of these barriers (Alpaslan, 2004). A survey sent to companies prior to the events of September 11th, 2001 and each year since, show an initial increase in preparation for terrorist events. However, just two years

after 9/11, preparation activities for these events had fallen to where they were before the attacks.

A repeat of this study would provide valuable insights into the ability of health departments to transfer knowledge and skill from one situation of crisis to others. It would also provide a wealth of information on the usefulness of the recent crisis experiences as a motivator for long term changes in organizational culture, structures and skills in these organizations. If such a study found that very little has changed with regards to preparedness levels in local health departments, the value of these events and the recent investments into public health preparedness will be minimal. It would be a tragedy if the public health community is not improving their capabilities with each crisis event that is experienced.

Given the limitations of the current literature on organizational crisis preparedness and the absence of literature and studies of public health agencies, there are many questions that still need to be answered. The gaps in this study suggest that there are many opportunities for future study. Questions which could be addressed in other studies can be group into three categories: those which focus on a better understanding of the conceptual models and definitions of organizational crisis preparedness, those that allow for an expansion or change in the study methodologies and those that provide a better understanding of preparedness efforts in public health departments. Included in Table 9.1 is a list of potential research topics that would aid in our understanding of organizational crisis preparedness.

Table 9.1 Potential future research topics on organizational crisis preparedness

Research to Advance Conceptual Models and Definitions

- Define organizational crises as opposed to disasters and emergencies
- Investigate the need for an additional typology for other urgent public health crises
- Test the typology with crisis preparedness experts and academics
- Test the usefulness of the DTP model with Community Disaster Preparedness
- Examine in more detail how the specific organizational characteristics (such as size, culture, leadership) impact preparedness efforts

Research to Advance Methodologies for Studying Crises

- Further test the usefulness of the survey instrument with an n>1 for each organization
- Expand the study sample; include other states, larger health departments, state or federal agencies
- Include other stakeholders in the study to examine their perceptions of the organization's level of preparedness and their own role in crisis prevention and response (with the health agency)
- Post-mortem case-study reviews of particular crisis events

Research to Study the Application of Crisis Preparedness in Public Health Practice

- Determine the impact of nationally-recognized crises (9/11, Anthrax, Katrina) on the current preparedness levels in local health departments
- Identify the most common types of organizational crises experienced by a larger sample of public health agencies
- Clarify the role and competencies of the crisis leader in prevention and response activities
- Investigate the response and recovery strategies used by various health departments that have experienced organizational crises
- Investigate the reasons that some agencies are more prepared than others
- Assess the organizational crisis-preparedness levels of health departments of those that have been identified by Project Ready as Prepared
- Examine in more detail the impact of real experience and simulated experience (drills, exercises) on crisis preparedness

The complex nature of crises, both in terms of their causes and their outcomes,

necessitates that a comprehensive approach be used when studying levels of organizational

preparedness. This study contributes to the literature but also highlights the many gaps in our

understanding of preparedness at an organizational level, particularly in local health

departments. The results can serve as a useful set of baseline measures for tracking

improvements in preparedness levels of local North Carolina health departments. Given the

nature of work for public health agencies as crisis/disaster responders, it is critical that health

departments always function at the highest level. Assuring that they are able to prevent and

respond to their own organizational crises is necessary so that they may carry out their

important work. Public health leaders need to understand that crisis preparedness is not the

business of exceptions (Roux-Dufort, 2007). It is exceptional business!

APPENDIX A: THE LUKASZEWSKI CRISIS LIST

Abortion	Divestiture	Multiple use issues
Accidents	Downsizing	New product failures
Acquisitions	Drug/ Chemical abuse	New product
Activist action	Embezzlement	No Comment
Acts of God	Employee injury	Noise
Adverse govt. action	EPA hearings	Nuclear emissions
AIDS	Equipment malfunction	Odor emissions
Aircraft crashes	Extortion	OSHA
Aircraft safety	Falling reputation	Political problems
Airport security	False accusations	Premature disclosure
Ambush interviews	Falsification	Product recalls
Analyst presentations	Federal investigation	Product tampering
Annual meetings	Fiberglass	Proxy testing
Anonymous accusers	Fire	Public testimony
Asbestos	Foreclosure	Quote out of context
Bad debts	Government intervention	Rationalization
Bankruptcy	Govt. spending accidents	Rumors
Chapter 11	Grand jury investigation	Sabotage
Chapter 7	Grassroots demonstration	Scandal
Chemical abuse	Hazardous material accidents	Security Leaks
Chemical dependency	Hostage taking	Sexual addiction
Chemical spills	Image distortion	Sexual harassment
Civil unrest	Inaccessibility	Shifts in value
Competitive misinformation	Inconsistency	Sixty minutes
Congressional testimony	Indictments	Special interest groups
Contamination	Insider activities	Attacks
Corporate campaigns	International accidents	Strikes
Corporate control	International competition	Takeovers
Corporate governance	International issues	Technology transfer
Cost overruns	Irradiation	Television interviews
Counter-espionage	Irritated reporters	Terrorism
Crashes	Judicial conduct	Transplants
Customer misuse	Labor Problems	Transportation accidents
Death-customer	Landfill siting	Unethical behavior
Death - employee	Lawsuits	Vandalism
Death - key executive	Layoffs	Visual pollution
Demographic changes	Leaks	Whistle blowers
Depositions	Leveraged buy-outs	
Deregulation	Liquidation	
Discrimination	Lying	
Disparagement	Mergers	

Source: Pauchant, T. & Mitroff, I., (1992). Transforming the Crisis-Prone Organization, San Francisco: Jossey-Bass. Reprinted with permission from John Wiley & Sons.

Crisis Typology Focus Group Guide

Estimated time: 1.5 - 2 hours
Participants: 5 Public health professionals

Objectives:
1. To sort crisis situations into categories based on the criteria listed below.
2. To create a name for each grouping of situations that is descriptive of the type of crises found in that category.
3. To understand the reasoning behind categories; including the similarities of situations placed in the same category and differences between the different categories.

Sorting Criteria:

The situations should be sorted based on similarities and differences of how the situation should be responded to, such that if an organization plans for one crisis situation in a particular category it is relatively prepared for other situations in the category.

TIME	DISCUSSION	MATERIALS NEEDED
10 minutes	Introductions • Welcome/ Thank you • Introductions -researcher & participants • Purpose of Meeting/ Objectives • Format of Meeting	Tape recorder, cassette tape, pencils
10 minutes	Definition of 'Organizational Crisis' Discussion of Sorting Criteria Discussion of possible responses	Handout- definition, criteria, sample responses
20 minutes 45 minutes	Individual Sorting of Crisis Situations Naming of Categories & Group sorting	Crisis situations - list and grid Index Cards
5 minutes	Conclusion - Discussion & You will receive follow-up letter - Please return	

An **organizational crisis** is defined as any situation that:

- is sudden, acute and demands a timely response,

- requires responses that are outside of the organization's typical operating frameworks, and

- is perceived as a serious threat to the ability of the agency to be effective

Sorting Criteria:

The situations should be sorted based on similarities and differences of how the situation should be responded to, such that if an organization plans for one crisis situation in a particular category it is relatively prepared for other situations in the category.

Sample Crisis Management Responses:

- Press Conference

- Rapid formation of a crisis team to think out responses

- Installation of telephone lines, fax lines for rapid communication

- Change in how facility used or need to find new space, evacuation

- Temporarily - stop providing service

- Protective equipment needed

- Legal advice needed

- Special communications with public, board, media, families, etc.

- Assistance from other agencies

- Extended work hours

- Psychological Counseling for stress and/or grief

Donna R. Dinkin, MPH
6206 Clarkwood Circle Greensboro, NC 27410

November 6, 1995

Dear Health Director:

I am writing to ask for your assistance in completing the attached survey on "Crisis Preparedness". This survey is being conducted as part of a research study which will assess the extent to which local health departments in North Carolina are prepared for various types of organizational crises. In return for your assistance you will receive a confidential summary of how your results compare to the state as a whole at the April Health Director's meeting. Please complete this survey by Friday, **November 17th** and mail it to me in the enclosed envelope.

Organizational crises are rare events which focus on the "organization". Well known examples of organizational crises are the mismanagement of funds at the United Way, the oil spill from the Exxon Valdez, the explosion of the Space Shuttle Challenger and the contamination of Johnson & Johnson's tylenol. Other examples of these kinds of crises include: bribery of a worker, workplace violence, terrorism, unethical staff behavior and massive loss of computer records. For this study an *organizational crisis* is defined as any situation that:

- is sudden, acute and demands a timely response,
- requires responses that are not part of the organization's typical work and
- is perceived as a **serious** threat to the ability of that agency to be effective

The following survey asks for your perceptions of your health department **as it is, not** as you think it should be. Your responses to this survey will be completely **confidential** and they will be aggregated so that individual identification is not possible.

Thank you for your cooperation.

Donna R. Dinkin, MPH
Doctoral candidate - Public Health Leadership
UNC-CH, School of Public Health

Crisis Preparedness Survey

Health Department: _____

Job Title: _____ Years at this organization: _____

Total Number of Employees in agency (include full and part-time/contract): _____

Total Number of Facility sites: _____

Directions: Indicate (√) on the table below which crisis management activities your agency has a plan for and would be most prepared to do **immediately** if you were to experience a crisis like the bombing of the Oklahoma Federal building:

❏	Communicate with the media & the public (including families of victims)	❏	Set up back up communication technologies, i.e. radio, extra phones
❏	Mobilize a multi-disciplinary crisis management team	❏	Obtain assistance from other agencies, e.g. FEMA, police, hospitals, security
❏	Obtain psychological counseling for those traumatized	❏	Obtain electrical generators, flash lights and other equipment
❏	Treat medical emergencies	❏	Evacuate the building
❏	Offer services at new locations	❏	Communicate with staff & Board

Directions: Please answer the following questions by circling the appropriate numbers.

	Not at All			Somewhat in the process			Well – Established	
1. Do you have a multi-disciplinary team established to handle crisis situations?	1	2	3	4	5		6	7
2. Do you have the resources needed to be able to quickly respond to a crisis?	1	2	3	4	5		6	7
3. Do you have support services for employees under stress?	1	2	3	4	5		6	7
4. Are "whistleblowers" formally rewarded in your agency?	1	2	3	4	5		6	7
5. Does your agency make a special effort to look for potential problems?	1	2	3	4	5		6	7
6. Have relationships with the media been established?	1	2	3	4	5		6	7
7. Are backups in communication technologies available?	1	2	3	4	5		6	7
8. Is there a person in your agency trained as a media spokesperson?	1	2	3	4	5		6	7
9. Is there an explicit communication plan to be used in times of crisis?	1	2	3	4	5		6	7
10. Are crisis simulations conducted in your organization?	1	2	3	4	5		6	7
11. Does the organization have a history of sharing resources across divisions/units?	1	2	3	4	5		6	7

Directions: Please evaluate to what extent _most of the managers_ in your health department believe in each statement by circling the appropriate numbers.

		Very true		Neither true nor false			Not true At all	
1.	We don't have time to think about crises	1	2	3	4	5	6	7
2.	If a crisis happens, other agencies in the country or state government will assist us	1	2	3	4	5	6	7
3.	We are too small to experience a large crisis	1	2	3	4	5	6	7
4.	Nothing good is served by mulling over past crises	1	2	3	4	5	6	7
5.	Our services are not dangerous	1	2	3	4	5	6	7
6.	Our employees are so dedicated we can trust them without question	1	2	3	4	5	6	7
7.	We focus on preventing crises instead of responding to them	1	2	3	4	5	6	7
8.	If you've managed one crisis you've managed them all	1	2	3	4	5	6	7
9.	Only bad agencies have crises	1	2	3	4	5	6	7
10.	We can handle any crisis	1	2	3	4	5	6	7
11.	Crises happen by the wrong doing of a few rotten apples	1	2	3	4	5	6	7

Directions: Please evaluate to what extent, in general, _most managers and employees_ in your organization believe in each statement by circling the appropriate numbers.

		Very true		Neither true nor false			Not true at all	
1.	Rumors are common in our agency	1	2	3	4	5	6	7
2.	Employee suggestions are typically not useful because employees have a narrow view of the organization	1	2	3	4	5	6	7
3.	We are more reactive than proactive	1	2	3	4	5	6	7
4.	Crisis management or crisis prevention is a luxury	1	2	3	4	5	6	7
5.	The most effective way to make major agency decisions is to have a small number of key managers make them	1	2	3	4	5	6	7
6.	We are not a very flexible organization	1	2	3	4	5	6	7
7.	The most important thing in crisis management is to protect the good image of the health department	1	2	3	4	5	6	7
8.	Each crisis is so unique, it is impossible to prepare for it	1	2	3	4	5	6	7
9.	Most crises resolve themselves. Time is our best ally	1	2	3	4	5	6	7
10.	We know how to manipulate the media	1	2	3	4	5	6	7
11.	Crises are solely negative in their impact.	1	2	3	4	5	6	7

We cannot learn from them
12. We would not function well as a team   1   2   3   4   5   6   7
    during a crisis

Directions: Please answer the following questions by circling the appropriate numbers.

	Not at all		Somewhat Established			Well Established	
1. Is crisis management integrated into the overall strategic planning process?	1	2	3	4	5	6	7
2. Has the organization created procedures to handle a variety of different crisis situations?	1	2	3	4	5	6	7
3. Does your organization have a written policy on media relations?	1	2	3	4	5	6	7
4. Does your organization have a set procedure on how to handle complaints?	1	2	3	4	5	6	7
5. Do you have a routine method of updating policy manuals?	1	2	3	4	5	6	7
6. Are all staff well informed of the policies you have in place to prevent or respond to crisis situations?	1	2	3	4	5	6	7
7. Do you have a routine schedule for maintaining and updating equipment?	1	2	3	4	5	6	7
8. Do crisis plans include technical, economic and legal considerations?	1	2	3	4	5	6	7
9. Are all policies and procedures related to crisis management put together in a comprehensive crisis plan?	1	2	3	4	5	6	7
10. Are there specific procedures in place for your staff to learn from past experiences and mistakes?	1	2	3	4	5	6	7

Directions: Below is a list of 7 different categories of organizational crises. Please indicate in the space provided the total number of times your organization has experienced **Crises** from each category over the last 5 years **(DO NOT INCLUDE MINOR INCIDENTS)**. Please also indicate on a scale (1-5) your perception of how prepared your organization is to prevent and to deal (in a timely & effective manner) with the kinds of situations in each category.

PLEASE FILL OUT THE <u>ENTIRE</u> TABLE EVEN IF YOU HAVE NOT EXPERIENCED ANY CRISES.

(Scale: 1 = not at all prepared, 3 = moderately prepared, 5 very prepared)

Crisis Types	Total number of CRISES in last 5 years	Prepared to Prevent (Scale 1 -5)	Prepared to Respond (Scale 1-5)
1. **Disasters**: Life or death situations requiring multiple responses (e.g. internal/external communication, facility evacuation, security, psychological counseling for staff) e.g., terrorism, workplace violence, natural disaster that affects building, bombing, etc.			
2. **Personnel**: Situations involving staff but not necessarily caused by the agency, e.g., death of key employee, HIV infected worker, mass illness in staff, etc.			
3. **Political**: Situations caused by political forces external to the agency, e.g., privatization of health dept., severe budget cuts, lack of support from politicians, etc.			
4. **Quality Assurance**: Situations that focus on the delivery of poor or inadequate services (the organization's product) e.g., wrong meds. to client, death of client due to incompetence, poor response to public health problem, etc.			
5. **Legal**: Situations caused by either a staff member or client breaking the law, e.g., embezzlement of funds, rape of employee/ client, bribery of health worker, Unethical behavior of staff, etc.			
6. **Public / Public Relations**: Situations which focus on the relationship of the health dept. to external groups, e.g., Mass media criticism, public anger at health dept., Board of Health member arrested, etc.			
7. **Plant/ Equipment:** Situations which focus on buildings and/or essential equipment, e.g., Computer or telephone failure, Poor security in building, unsafe building structure, outdated equipment, etc.			

Thank you !

Modified version of survey by Pauchant, T.C. & Mitroff, I.I., Transforming the Crisis-Prone Organization, San Francisco, Jossey-Bass. Copyright © 1992.

APPENDIX D: INTERVIEW GUIDE

Date: _____

Name: _____

Title: _____

Agency: _____

Number of Employees (Individuals & FTE): _____

Number of sites: _____

<u>Introductions</u>: Introduce self and purpose of project.

Thank you
Name
Doctoral program/ purpose of visit
Process of research/ how this data will be used
No wrong answers
Reason for Tape Recorder
Feel free to turn off recorder at any time

Could you help me to understand your responsibilities in your position?
Number of years in this position?/with this agency?/ in public health?

CRISIS DEFINITION
How would you define "crisis"? (**CHARACTERISTICS**)

Define Organizational Crisis / Share Typology

PAST EXPERIENCES/ LEARNING
Could you give me some examples of crises that have occurred within your organization in the past? How did the agency respond? What was your role? How did the staff feel during this situation? How did <u>you</u> learn about the crises? How did the agency learn about the crises ? Overall, how do you think the agency responded? What does the agency do differently now (if anything)? How could the agency have improved it's response?

PREPARATION

Do you think it is possible to prepare for crises? How important do you think it is to prepare ahead of time for crises?

Which of the following crises is your agency most/ least prepared to prevent? to deal with? Why? What are the barriers to being more prepared? Which do you believe are likely / unlikely to occur? Why?

CRISIS STRATEGIES

Does your agency routinely look for potential crises or threatening situations? How do they do this? (ex. TQM, Strategic planning, audits, review of complaints)

Does your agency routinely monitor the peformance of equipment? of staff? How is this done? How would you find out if something was not working well?

Does your organization have any written plans/ procedures that tell employees what to do in case of a crisis? Who has access to these plans?

Do these plans cover a variety of potential crisis situations?

Do you have a crisis management team? Who is on it?

Do you ever have any kinds of drills to prepare for emergency situations?

How does this agency handle the media? Do you have a policy or procedure on how to work with the media? Who would be the spokesperson in the event of a crisis?

Does this agency provide media spokesperson training?

How is information shared in this organization? Give examples of times when all staff need to receive a particular piece of information - how is this information communicated to them? What are the channels of communication?

How would the individuals in each of these groups get their info. in the event of a crisis? Who would be the first group informed?

       County Commissioners
       Board of Health
       Employees (mgrs vs staff)
       Clients
       Media

How quickly do you think your agency would be at responding to a crisis?

Do you feel comfortable that there are people in this organization that have a clear understanding of the steps that are needed to effectively deal with a crisis? Are you one of these people?

Overall, how would you evaluate the crisis management efforts in your health department? (too little, sufficient, too much) What part of handling a crisis do you feel that your agency is least prepared for? (Why? not enough resources, not enough training, haven't thought out the strategies before hand?)

CULTURE
In your agency, is it fairly easy to talk about difficult subjects (things that might be disturbing to you or others)?

How do people relieve stress? In what ways does the organization help people relieve stress?

What would happen to a whistleblower in your organization?

Describe top managements leadership style (authoritative, participatory?). Would it be effective in the time of a crisis?

Does this agency seek feedback from others (staff, clients etc) and incorporate this feedback into strategies for improvement? Why? Why not?

Do different units/ divisions/ professionals work well together?

Do you feel that this agency makes an effort to learn from past mistakes/ successes? How do you do this?

Would you say that generally this agency is proactive or reactive?

Thank you for your time

Crises in Public Health Departments

Please indicate (√) those situations which you feel your agency is prepared for and those (if any) you feel would never occur.	Prepared	Will not occur
Terrorism		
Bombing of building		
Wrong medicines given to client		
Dismissal of employee		
Mass Media criticism of Health Department		
Bribery of health worker		
Staff participating in unprofessional activities (unethical behavior)		
Sexual harassment		
Staff molesting client or other worker		
Staff stealing supplies, pharmaceuticals		
Client stealing supplies/ equipment		
Equipment malfunction		
Mismanagement of funds		
Destroying files under investigation		
Staff exhibiting Racism		
Staff promoting political agendas unrelated to health		
Employee death		
HIV Infected Health professional		
Workplace Violence		
Rape		
Sabotage		
Poorly maintained building, unsafe building		
Asbestos in building		
Chemical gas release in building		
Poor security in facility		
Computer failure, Loss of telephone lines		
Outdated/Inadequate equipment, i.e. autoclave, defective condoms		
Privatization of public health services (externally driven)		
Lack of support from Politicians		
Gov't action to require new services without funds		
Public anger over public health policy/action		
Infectious Disease Outbreak in staff		
Kidnapping/ Hostage Taking		
Fire in building		
Inadequate resources to deal with situation (e.g., Not enough vaccine, not enough appt. times for people in need)		
Poorly skilled staff / unqualified staff		
Death of client		
Rumor of poor response		
Natural Disaster that affects building: Hurricane, tornado, flood		
Budget cuts		
Board of Health member arrested		
Breech of confidential information		
Poor response to public health problem resulting in injury/death		
Activism action		
Accidents		
Violation of law (e.g. open meetings law, Fair Labor Standards Act)		

APPENDIX E: DOCUMENT AUDIT TOOLS

Agency: _____

Specific Crisis Planned For:	Documents Reviewed (Updates / Authority)
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	

Document Review – Data Collection Sheet #1

	CRISIS TYPE						
	1	2	3	4	5	6	7
Method of Signal Detection							
Method of Identifying that a crisis has occurred							
Identifies a checklist of things to do or a sequence of steps that need to be taken under specific circumstances							
Identifies members of a CMT & roles							
Includes a chain of command							
Specifies a crisis control center							
Specifies materials/ equipment needed and where to get it, i.e. extra phones							
Identifies a single spokesperson & phone access							
Includes list of media contacts/ phone numbers							
Identifies other stakeholders & steps to communicate with each of them • Employees • BOH/ County Commissioners • Clients • Public • Media • Other agencies • Other/ Family members							
Identifies how phone inquiries will be handled							
Includes contingency plans for other facilities or replacement services							
Includes counseling/ stress reduction services for employees							
Has plan for follow up/ learning							

Document Review – Data Collection Sheet #2

CRISIS TYPE:		
	Name of document with needed information	**Comments**
Method of Signal Detection		
Method of Identifying that a crisis has occurred		
Checklist of things to do or a sequence of steps that need to be taken under specific circumstances		
Members of a CMT & roles		
Chain of command		
Location of crisis control center		
Materials/ equipment needed and where to get it, i.e. extra phones		
Spokesperson & phone access		
List of media & contact info		
Other stakeholders & steps to communicate with each • Employees • BOH/ Co. Commissioners • Clients / Public • Media • Other agencies • Other/ Family members		
Plan for handling phone inquiries		
Contingency plans for other facilities or replacement services		
List of counseling/ stress reduction services		
Plan for follow up & learning		

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