Disasters and Vulnerable Populations

Evidence-Based Practice for the Helping Professions

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Loretta A. Cormier, PhD

Offers the most current, evidence-based information for helping specific populations affected by disasters

Vulnerable populations such as children, older adults, and people with disabilities are disproportionately affected by large-scale disasters. This hands-on resource for students and professionals in social work, counseling, nursing, mental health, and other helping professions encompasses the best and most current evidence-based interventions for effectively responding to the needs of vulnerable populations following disasters. Using an all-hazards perspective, the book provides dedicated sections containing population-specific personal preparedness considerations and discusses the role of preparedness in mitigating negative consequences. The resource is unique in its provision of vital information for locating requisite assessment tools, preparedness checklists, and mobile applications offered through national organizations.

This book addresses the specific psychosocial needs of vulnerable populations after a disaster. It delivers best practices for crisis intervention with specific populations including children, older adults, people with disabilities, people with mental health issues, and people with substance abuse issues. The authors present a theoretical foundation for understanding disasters, response systems, common guidelines for preparedness, and basic crisis theory. This is a resource that will be valuable not only to practitioners in a great variety of health disciplines, but also to volunteer professionals and paraprofessionals involved in disaster preparedness and response. Case vignettes are included in each chapter to illustrate issues particular to each population.

Key Features:
• Offers the highest quality, best available evidence for choosing appropriate interventions
• Focuses on vulnerable populations including children, older adults, and people with disabilities, mental health issues, and substance abuse issues
• Comprises a practical, hands-on manual for mental health and medical professionals and volunteers regarding disaster preparedness and response
• Provides assessment tools and preparedness checklists and forms
• Includes case vignettes to illustrate issues specific to each population
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For the helpers
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Introduction

When I was a boy and I would see scary things in the news, my mother would say to me, “Look for the helpers. You will always find people who are helping.” To this day, especially in times of “disaster,” I remember [those] words.

—Rogers (2003)

WHY THIS BOOK?

As a social work professor, I often tell my students that responding to someone at a point of vulnerability is a privilege. Being with someone when he or she is hurt, afraid, or alone requires a defined skill set, a capacity to be near human suffering, and a desire to make things better. Nowhere else is this more true than in the field of disaster preparedness and response, where “helpers” abound. Preparedness involves helping individuals, groups, and families take an active role in preventing harmful effects. Response means stepping in when preparedness was not enough, or the effects were too devastating to be handled on one’s own. Both require a defined skill set and an appreciation that no disaster goes as planned.

Disasters affect millions of people each year across the globe, indifferent to age, race, socioeconomic status (SES), or level of preparedness. Ranging from small to large, they inhibit people’s ability to function in their daily life due to physical and emotional damage. Disasters may be naturally sourced, such as tornadoes, hurricanes, tsunamis, or earthquakes, or man-made, such as bombings, nuclear disasters, and shootings. Responders are faced with the task of helping pick up the pieces, whether that be physically in the form of medical aid, psychologically in the form of psychosocial support and therapeutic interventions, or even in concrete ways such as providing a meal, restoring electricity, or rebuilding a community. However, responding to a diverse population means
recognizing important differences when considering the best way to intervene. Some populations, for varying reasons, tend to be at greater risk than others. We call these populations vulnerable.

The purpose of this book is to provide a tool kit for helping professions responding to vulnerable populations and preparing populations prior to a disaster. The intent is a compilation of the best available evidence for working with these populations. This book is not meant to be an exhaustive manual, although we try to gather as much available evidence as possible to provide guidelines grounded in empirical research. When empirical evidence is not available (which can be most of the time), we move to evidence that is guided by empirical principles, or is put forth by those known to be experts in the field, all in the hope that the information we gather is useful in the field.

**DEFINING VULNERABLE**

Disasters, whether man-made or natural, can affect anyone, but the effects are not always equal. Some populations are more vulnerable to the effects of a disaster than others, making it more difficult for them to prepare, evacuate, shelter, respond, and recover in the event of a disaster or emergency. Providing assistance to such populations post-event consumes a greater amount of resources than those required by the general population, or those without special needs and circumstances. Considering the needs of these groups requires special knowledge essential to preparedness, response, and recovery planning.

But just who makes up a vulnerable population? There are different lenses through which to frame the answer. The Centers for Disease Control and Prevention (CDC) broadly defines vulnerable populations by SES, geography, gender, age, disability, and risk status related to sex and gender (Office of Minority Health and Health Equity/CDC, 2014). One estimate reports that over 49% of the population has some sort of special need requiring specialized planning and response (Kailles & Enders, 2007). These categories broadly include children aged 15 and younger, adults aged 65 and older, non-English-speaking or little-English-speaking people, and persons with a disability. However, even these broad categories do not paint a complete picture.

In circumstances where there is mass evacuation, such as during Hurricanes Katrina and Sandy, there is always frequent media coverage of large-scale evacuations, including evacuation of medical facilities and nursing homes. Those with chronic medical conditions and older adults are two of the many categories worthy of consideration. Vulnerable populations also include pregnant women, prisoners, the homeless, those with functional mental health issues or addiction issues, those with transportation issues, persons in poverty, minorities, persons who are obese, and those who have special supervision needs (Hoffman, 2008; Murray & Monteiro, 2012; Zoraster, 2010). Population variability results in complex challenges in planning and service provision, including legal issues. For example, while the needs of persons with disabilities are often protected under civil rights laws, unfortunately these laws make little provision for how to address such needs during a disaster situation (Hoffman, 2008).
SES has recently been recognized as a significant vulnerability factor. Persons of a lower SES are highly susceptible to negative sequelae. They often have greater health and medical needs, suffer from lack of resources to engage in personal preparedness planning, have transportation issues that can hinder evacuation, have limited support systems, and often live in areas with dense populations. Their homes may be overcrowded, housing is less secure, and construction quality inferior to those in higher SES neighborhoods, amplifying the effects of damage and safety (Zoraster, 2010).

Evacuation can also be an issue for those of a lower SES due to limited financial resources. A person from a middle or higher SES may be better able to absorb the effects of temporary loss of income or the expense of having to locate alternative housing arrangements. Those living with less financial means will need to depend on temporary government assistance or the generosity of others to help bridge the financial gap. Even when assistance is available, the application process may be complicated and difficult to navigate, delaying receipt of assistance. Persons of a lower SES may have lower education levels, affecting their ability to know what avenues to pursue to obtain aid. English may not be their primary language, increasing the communication barrier and compounding cultural issues.

Previous large-scale disasters such as Hurricanes Andrew and Ivan demonstrated the significance a lack of personal transportation can have for helping those of lower economic means to evacuate (Zoraster, 2010). However, transportation in large cities can also be an issue for those without economic difficulties. Flooding from Superstorm Sandy created transportation issues for people from all SES levels, as public transportation was cut off from those who had the financial means to obtain alternative transportation but relied on the public system for convenience and economy.

**SUMMARY**

Meeting the needs of diverse and complex populations requires both a general perspective and specific knowledge guiding the responder. Effective resource utilization, unity of response, and shared understanding begin with acknowledging the special requirements of those populations most vulnerable. Those who engage in disaster preparedness and response with vulnerable populations should be aware of the characteristics that make those populations vulnerable and make special considerations during planning, response, and recovery. This book aims to highlight some of those characteristics, providing responders with necessary guidelines to assess and intervene with those who are especially vulnerable.

**REFERENCES**


PART ONE

Overview of Disaster Preparedness and Response
CHAPTER 1

When Disaster Strikes: Disaster Response

CASE STUDY: Heeding the Warning

Elizabeth, a 26-year-old mother of two, kissed her husband and young sons goodbye as they loaded into the car to head to her parents’ house 75 miles away. The family had been hearing reports on the radio that bad weather with possible tornados was coming; however, the blue sky did little to support the urgent warnings. Anxious for a little quiet time before heading out, Elizabeth stayed behind to finish the dinner she was taking to a family friend, intending to join her family in a couple of hours. As she lost track of time, Elizabeth noticed that the weather outside was beginning to take a more threatening turn. The sky was becoming darker and the wind was intensifying. She turned on the television and was met by scrolling warning information and meteorologists pointing to threatening pockets of color on the radar. As she reached for her cell phone to call her husband, she noticed several missed calls and wondered whether she should leave immediately to try to join him. Her question was answered as she heard the ominous cry of the warning siren and the unnerving quietness outside. She quickly went to the basement and waited in panic as the EF-4 tornado descended on her neighborhood. Her house groaned and cracked under the strain of the winds. When the noise was replaced with silence, Elizabeth made her way out of the basement and entered the kitchen where she had been only moments earlier, now the only room remaining.

Hurricane Sandy, one of the most devastating and destructive hurricanes in U.S. history, slammed into the northeast coastline in October 2012. Estimates as of summer 2013 assess the amount of damage to be over $68 billion, a number that to date is only surpassed by damage estimates of Hurricane Katrina in 2005 (U.S. National Oceanic and Atmospheric Administration, 2012). Developing as a tropical wave in the Caribbean Sea, the storm travelled through the warm waters
and made initial landfall near Kingston, Jamaica, as a hurricane. The storm spread destruction throughout Cuba as a Category 3 hurricane on the Saffir–Simpson Hurricane Wind Scale, moving through the Bahamas, and weakening to a Category 1 storm. Sandy spent days in the water of the Atlantic as it moved its way up the northeast coast of the United States before making landfall near Brigantine, New Jersey. At this point, the storm was classified as a post-tropical cyclone with hurricane-force winds. The effects of the storm intensified as it merged with a winter storm system traveling from the west, warranting many to nickname the storm “Superstorm” Sandy (Nolan, 2012). As early as October 26, governors from across the northeast began declaring states of emergency and requesting pre-disaster declarations from President Obama days before the October 29 landfall in New Jersey (Campbell, 2012; Federal Emergency Management Agency [FEMA], 2012c; The White House Office of the Press Secretary, 2012). In spite of pre-positioning of resources, the negative effects of the storm impacted millions. At least 117 deaths were reported from the American Red Cross (ARC) tracking system. The majority of the fatalities involved older adults, as many who were unable to escape the floodwater drowned (Casey-Lockyer et al., 2013). The response for Superstorm Sandy was tremendous, although much different from another devastating storm that occurred 7 years earlier.

In August 2005, one of the deadliest hurricanes in recent history, Hurricane Katrina, made landfall on the Louisiana–Mississippi border as an extremely dangerous and extraordinarily large Category 3 hurricane, at times reaching Category 5 status. Hurricane-force winds stretched over 75 miles from the center, impacting 90,000 square miles and over 15 million people (The White House, 2006; Zimmerman, 2012). Although not the deadliest storm in U.S. history, Hurricane Katrina claimed 1,836 lives, with 705 people still reported missing. In contrast to similar Category 3 storms, Louisiana not only dealt with the direct impact, but received a double dose of disaster when levees designed to keep water from New Orleans and surrounding areas failed under the unprecedented storm surge. In spite of a significant flood protection system, including 350 miles of levees, flooding destroyed New Orleans, leaving surrounding areas 80% underwater and thousands stranded and in need of evacuation (The White House, 2006). News reports in the weeks and months that followed cited numerous errors in the response, culminating in what many refer to as one of the greatest failures of the George W. Bush presidency (Ahlers, 2006; Hsu, 2006; Walsh, 2008). However, the nature of the storm and the special circumstances of the area impacted created another “perfect storm” in the response effort. While each storm, and corresponding response, is truly different from the next, Hurricane Katrina presented responders and officials with challenges not present in previous events. The response was unique, providing information that would change the future of disaster response across the United States.

AFTER THE DISASTER

It is said that all disasters begin locally and end locally. Local and community first responders establish initial incident command (the system used to control
and oversee the response effort) in or nearby the impacted area. The incident command system is responsible for providing coordination and execution of the response effort for any one incident or disaster. In most cases, this occurs through local fire and police jurisdictions or emergency managers. However, leadership of the system may change as the dynamics of the response change and as higher level resources (state and federal) are called in to assist. In the case of Hurricane Katrina, local response was significantly impacted when fire and police departments suffered total destruction, resulting in a lack of clear incident command. The communication infrastructure was essentially nonexistent for days due to the extent of the storm damage. Emergency personnel were unable to receive information or report to work as a result of the inability to establish local incident command structures. Loss of the capability to establish incident command hindered coordination of effort and the ability to assess resources required for the response. Federal search-and-rescue response, including that from the Coast Guard, FEMA Urban Search and Rescue Task Force, and the Department of Defense, was available; however, resources were mobilized only after a significant delay caused by lack of communication on multiple levels. The initial deployment of military support was hindered in part by a resulting breakdown in the chain of command.

Hurricane Katrina posed problems that were different from those presented in previous disasters such as Hurricane Andrew in 1992. The large-scale evacuation effort was complicated first by geography and second by the impact of the storm surge. Tens of thousands of citizens self-migrated or were evacuated to the Superdome post-impact; however, it was soon evident that floodwaters were making it difficult, if not impossible, to resupply basic necessities and coordinate a large-scale evacuation (The Associated Press, 2005). At the time, the magnitude of the Hurricane Katrina response exceeded the capability of FEMA and resulted in fragmented and disorganized service delivery (The White House, 2006).

In the months that followed, the federal government used a critical eye to review the response, making recommendations for improvement in numerous areas. Clarifications in the process were implemented. Roles were delineated and restructured, providing a more efficient system for distribution and assignment of resources. State and local governments were recognized as being in the best position to respond and assess the needs of their communities.

When needs exceed the available resources, responsibility shifts to the federal government to supply local and state forces to handle the response. A successful response is the result of a clear, unified effort that involves suitable integration of services and resources. The investigation after Hurricane Katrina resulted in the creation of a system of national preparedness that integrates the federal, state, local, and private sectors, including the use of Voluntary Organizations Active in Disaster (VOADs) to achieve a unified response (The White House, 2006).

But how does the response work? Who is in charge? Who makes decisions, and ultimately, who determines the success or failure? These are all questions
that need to be answered in order to fully understand the complexities of disaster response. The truth is that disaster response is initiated well before an actual event. Processes are pre-established utilizing a response framework comprising federal, state, local, and private resources to meet the unique needs of the population. These processes not only take into account how to proceed after an event, but also look at ways to prevent and lessen the effects of an event. This cyclical approach of considering all aspects of a disaster, referred to as the disaster life cycle, allows for multiple points of intervention.

The Disaster Life Cycle

The disaster life cycle highlights phases of a disaster (Figure 1.1). As a cycle there is no clear beginning or ending point, with each phase influencing the next. It is a continuous loop illustrating the relationship among phases and allowing room for overlap. Interventions intersecting at any point in the cycle influence the entire chain. While there are slightly varying elements to the cycle, the most recent edition of the National Response Framework (NRF; FEMA, 2013) outlines five distinct areas in the cycle, including Prevention, Preparedness, Response, Recovery, and Mitigation.

Prevention

In a perfect world, all disasters could be prevented. However, we know that at least with natural disasters this is rarely the case. Prevention capabilities, being able to prevent an event from happening, are in a constant state of development as more is learned about disaster etiology. Advances in meteorological technology and weather tracking systems greatly improved the warning time for certain natural disasters, enabling pre-positioning of resources and implementation of preparedness plans, preserving life and property; however, not every disaster is predictable.

**FIGURE 1.1** The disaster life cycle.
In spite of technological advances, some natural disasters, such as earthquakes, are more difficult to predict, and very few man-made disasters are predictable. The terrorist attacks on multiple cities on September 11, 2001, the Deepwater Horizon oil spill in April 2010, and the bombing of the Alfred P. Murrah building in Oklahoma City in 1995 are just a few examples of large-scale disasters that had little or no warning (Call & Pfefferbaum, 1999; Young, 2013). However, improved national and local security enabling the targeted prevention of man-made disasters such as bombings and acts of terrorism has influenced the occurrence of events. Heightened security and vigilance at local and community levels may have also prevented local acts of mass violence such as school shootings (Gallardo, 2012).

**Preparedness**

As we know that most disasters are not preventable, the next identified phase in the life cycle is *preparedness*. Preparedness consists of individuals, families, and communities anticipating personal needs in the event of a disaster and acting on ways to meet those needs by increasing awareness; establishing a plan; obtaining physical supplies such as food, water, and health-related items; and identifying shelter options. Federal, state, and local governments have provided vast resources to assist individuals and communities to become prepared. Personal preparedness builds response capacity, helping individuals to meet their own needs without the assistance of external resources. Plans and preparation activities conducted prior to an event allow for a more efficient use of resources post-event, and contribute to saving lives and property.

**Response**

Prevention and preparedness activities can only go so far in anticipating needs. Since each disaster is unique, each *response* to a disaster must also be unique, dependent upon information that is only fully understood after the event occurs. Disaster response involves post-event activities aimed to limit loss of life and property, assisting a population in regaining a pre-event level of functioning. The scale of the response varies greatly but is in direct proportion to the magnitude of the disaster, the geographic and population vulnerabilities of the region, and the availability of resources. Response efforts (as opposed to recovery efforts) are generally short term and receive the most attention in the media. Immediate response efforts center on providing crisis intervention services and stabilizing the community. The general public oftentimes confuses response activities with longer phase work that occurs in recovery. While there is some overlap, the goal of response is stabilization as opposed to restoration of pre-event functioning, the goal of recovery.

**Recovery and Mitigation**

*Recovery* activities commonly receive less attention in the media even though such activities can take place months or years after the event, depending on the level of devastation. The recovery period includes damage and risk assessment by authorities, resulting in plans for *mitigation*, or actions taken in order to lessen...
the effects of future events. Recovery and mitigation go hand in hand as efforts made to restore communities involve changes that make areas less vulnerable to future risk. For example, the lengthy recovery process in New Orleans following Hurricane Katrina has left the region better prepared against future storms that bring accompanying storm surges. Houses are rebuilt with more stringent building codes and the public becomes better informed about its role in securing homes and safeguarding families from possible effects. Communication and command infrastructures are strengthened and system gaps are identified.

The National Incident Management System

Since disasters begin and end locally, it would be logical to initiate a discussion of response by beginning at the local level. But in fact, when most people think of disaster response they think about the federal level, with organizations such as the FEMA and the Department of Homeland Security. While these organizations do in fact play a pivotal role in response, they do so only at the request of the lower levels of government.

The National Incident Management System (NIMS) is a framework implemented by departments and agencies at all levels of government, including nongovernmental organizations (NGOs) and the private sector. NIMS employs key concepts of disaster response in an effort to manage incidents of any scale. The concepts are as applicable to small-scale events, such as community fires, chemical exposures, or ice storms, as they are to larger scale events such as widespread tornado outbreaks or mass shootings. The approach was developed by applying known best practices from previous experience to develop a unified framework applicable for any level of jurisdiction.

By applying the principles set forth by NIMS, responders can be assured that everyone is working from the same viewpoint. For example, since communication is key in any response effort, NIMS provides a common set of terminology and standardized organizational structures to allow responders to work from a shared set of objectives. When objectives are established in advance, post-event efforts are coordinated and streamlined. Components of the NIMS framework include specifics about preparedness, communications and information, resources, command and management, and ongoing maintenance. NIMS functions under the larger umbrella of the NRF, a directorate from the federal government providing guidance and structure to incident management. Components of NIMS support response and standardize incident command and management across all levels, resulting in coordinated, flexible, and adaptable efforts (Department of Homeland Security [DHS], 2008).

The National Response Framework

The NRF is a set of guidelines developed by the federal government that identifies current best practices for managing incidents. These guidelines can be scaled to fit disaster events of any size, from small to catastrophic. The NRF was developed
in order to clearly define the principles, roles, and responsibilities of responders at all levels. In addition, it defines how these roles and responsibilities are integrated among responders. For example, an incident response could involve local municipalities such as fire and medical response, state resources such as the National Guard, and local and regional private organizations and NGOs such as the ARC, the Lutheran Disaster Response network, and the Salvation Army. In order to maximize the acquisition and distribution of different types of resources, and avoid duplication of effort and resources, these responders need to follow the same rules and guidelines for response. The NRF provides such standardized guidelines utilizing principles from NIMS.

As mentioned earlier, the post-event phases of disaster response and recovery are very different in spite of overlapping at points. The NRF provides guidance during immediate response and in the recovery phase, addressing what is needed to save lives, protect personal property and surrounding environment, stabilize the area, and restore basic community services. Restoring basic services is a necessary component of establishing area safety and security in order for communities to move forward in recovery with a solid foundation.

The federal government is highly involved in providing guidance to aid the disaster response and recovery process. In March 2011, Presidential Policy Directive 8 (PPD-8): National Preparedness was signed by President Barack Obama in order to establish priorities and policies to be addressed at the federal level. PPD-8 defines five areas to be addressed by national policy guidelines: Prevention, Protection, Mitigation, Response, and Recovery (Obama, 2011). These areas may sound familiar and are delineated above as components of the disaster life cycle. The NRF is a major component of PPD-8 identifying key roles and responsibilities of persons at multiple levels involved in response. Identifying roles and delineating responsibilities enable integration of resources and allow multilevel support of response at all levels, including local, state, tribal, and federal governments.

One of the key elements of the NRF is its ability to consider the different levels of support and recognize that resources may be generated from multiple sources. Lessons learned from responses such as those after Hurricane Katrina stress that the private sector and other NGOs such as volunteer agencies can provide tremendous assistance in meeting the needs of a community or region. Previously such resources were not integrated in the national response plan, a miscalculation that was corrected in subsequent disaster plans.

Guiding Principles of the National Response Framework
There are several guiding principles of the NRF outlining necessary factors evident in any response effort. Such principles include maintaining an engaged partnership, creating a tiered response, exhibiting scalable and flexible operational capabilities, demonstrating unity of effort, and establishing readiness to act. These principles guide response efforts and ensure an integrated and efficient plan of action. These principles are not mutually exclusive, but rather build upon and complement each other.
There are countless agencies—governmental, nongovernmental, and private—that provide services to aid in response. An engaged partnership assesses and recognizes capacity for all members of the community to provide services that are unique and integral components of the response process. These resources vary greatly from service to service and may include medical and mental health support, sheltering and feeding, housing and infrastructure support, long-term recovery, and so on. In order to effectively and efficiently utilize these resources, they are “layered” with services from other organizations to provide a supportive network. An engaged partnership recognizes that services may be unified with services from other sources while respecting individual agency governance and objectives. Much like pieces of a puzzle, each resource fills a specialized need that contributes to the whole. These resources include individual efforts, community efforts, the private sector, volunteer special interest groups, and all levels of the government. Working within a supportive network provides an opportunity for agencies to build a web of resources that does not drain or deplete any one entity.

A tiered response (see Figure 1.2) is also imperative to coordinate well-delivered effort. The foundation of a tiered response begins at the local level. Whenever possible, local agencies and organizations take the lead in response tasks. Comprising the lowest and most substantial tier, local agencies provide the basis for the response. The vast majority of disasters can be handled at the local

**FIGURE 1.2** A tiered response. Most disasters are resourced adequately at the local level. A small portion of disasters require assistance from the state government and neighboring jurisdictions, while an even smaller proportion require the full resources of the federal government.

NGO, nongovernmental organization.
level. City and county infrastructure are generally equipped to handle the needs of response and recovery; however, when the need is greater than the capacity of local resources, assistance is requested from the next higher level. Neighboring communities, state, and tribal territories comprising the second tier may be approached when local and community resources are deemed insufficient. In rare circumstances, both local- and state-level resources are not enough. In the case of catastrophic or extremely large-scale disaster, resources are requested at the federal level. These resources comprise the smallest top tier; however, due to the magnitude of the precipitating event, greater attention is given when they are employed.

With the multitude of agencies and organizations from all levels providing resources, it is imperative that any response possesses flexible, scalable, and adaptable operational capabilities. Resources vary and can include concrete service delivery, materials and supplies, food and basic necessities, shelter capabilities, transportation, rescue and recovery operations, health care services, utility restoration, and so on. With such a variance in the type, amount, and source of resources, there must be uniformity in the plan and delivery of those services. Responses adapt to the changing needs of an incident, whether that means scaling up to obtain more resources or scaling down as the response moves into recovery. Regardless, resources need to be able to expand or adapt as needed. Some resources are only needed during the response, while others may bridge response and recovery or only be necessary during the recovery phase. Throughout this process, it is critical that resources are utilized efficiently and are not duplicated or wasted. Having an engaged partnership is one way to safeguard against duplication or waste in resources.

One of the most important concepts to consider is unity of effort. Working together and delineating mutually developed and unified objectives requires unity of effort among responders. The incident command system (a component of NIMS) clearly outlines the chain of command during an incident and discusses how organization of command is to be maintained throughout an event. Individual agencies and organizations contribute to the response effort while maintaining their own individual authority and responsibility, preserving the integrity of their own mission. Unity of effort guided by the incident command system allows the local government, private sector, NGOs, and other agencies to consolidate resources and maximize response.

However, none of these agencies would be able to effectively respond if they did not heed the final principle of the NRF, readiness to act. The principle of readiness to act stipulates that all responders, agencies, and organizations need to be responsible for anticipating and managing their response efforts while appreciating their own level of risk. Risk must be anticipated and a plan for managing risk must be in place prior to the initiation of a response. As with any good response plan, a great deal of work is completed before the actual event. Training, planning, and organizing resources prior to deploying them for a response are critical to ensure smooth service delivery and integrated response.
Roles of Key Players

The NRF recognizes that there are key players in disaster response and recovery at every level. These players range from individuals and families to large government organizations. In learning from past events, the NRF seeks to identify the roles of players and stakeholders in order to streamline resource delivery and optimize response.

Individuals, Families, and Households

While it may seem like there is little an individual can do in light of a large-scale disaster, there is actually a great deal that individuals, families, and households can contribute to disaster response. As mentioned earlier, a key element of the disaster life cycle is to intervene prior to the event through preparedness efforts. Individuals, families, and households that are prepared lessen the burden on response resources by ensuring self-sufficiency and resiliency, reducing the drain of limited resources. Families can do their part to reduce hazards in their households that may make them vulnerable in a disaster. For example, they should be aware of natural gas and water main emergency shut-off valves. Flammable liquids and materials should be placed in a safe location and escape routes from their home, neighborhood, and communities identified. Individuals, families, and households should be aware of the types of natural disasters that are prevalent in their areas and plan accordingly. For example, families living in southern coastal regions may need to prepare for weather disasters such as flooding and hurricanes, while northern households should be aware of potential risks from snow and ice.

FEMA and the ARC encourage an “all-hazards” approach to preparedness that includes general preparedness activities suitable for a variety of disasters. The all-hazards approach recommends that people be able to be self-sustaining for a period of 3 days following an event without the assistance of outside help or resources (FEMA, ARC). The 3-day rule is the general guideline for how long it may take for emergency personnel and rescue workers to enter an area in the event of a large-scale disaster. Households should be familiar with emergency plans that include communicating with family members in case of separation or if mechanisms such as telephone and electronic transmissions are compromised. Emergency plans should include stipulations for reunification if household members are separated from their homes, neighborhoods, or communities during evacuation. All household emergency plans should include provisions for members who are more vulnerable, such as those with special health or mental health needs, physical challenges, mobility challenges, children, older adults, and pets. Whenever possible, households should be aware of neighbors who have similar high-risk factors that may make them more vulnerable during a disaster. Neighbors are the true first responders in any emergency scenario.

In addition to preparing their household, individuals may also wish to volunteer at a larger level by becoming a trained disaster volunteer. There are numerous opportunities for individuals to maximize their skills through joining a VOAD (Box 1.1) or other disaster response organizations. For instance, those
with medical training may decide to volunteer their time as a member of the Medical Reserve Corps. The Medical Reserve Corps utilizes specialists such as physicians, nurses, therapists, pharmacists, and public health professionals to respond to disasters and emergencies in a given community. Members of the Medical Reserve Corps provide not only crisis services but also long-term support services to local clinics and shelters (Office of the Surgeon General, 2013). Community Emergency Response Teams (CERTs) are another example of an avenue that individuals can take to become involved. CERT members are trained in basic disaster preparedness and response skills and use those skills to respond in their community (FEMA, 2013). Like other responders, CERT members are a valuable part of an integrated response.

Every individual, however, can assist in the response by paying careful attention during the disaster. This includes monitoring situations closely for any significant changes in status that require action on the part of the individual, and following the guidance of authorities when given instructions about preparing, evacuating, and resuming activities post-event. Whatever avenue individuals decide to take, it is critical that they participate in training. Box 1.2 outlines the importance of becoming a trained responder and how unsolicited or “untrained”

Voluntary organizations are key players in disaster response and recovery. Voluntary Organizations Active in Disaster (VOADs) are local-, state-, and national-level nonprofit, faith-based, advocacy-based, and social community groups and organizations that provide a variety of services for disaster victims and communities impacted by disasters. National VOAD (NVOAD) has over 100 members, including organizations such as the American Red Cross (ARC), All Hands Volunteers, AmeriCares, Catholic Charities U.S.A., Churches of Scientology Disasters Response, Habitat for Humanity, HOPE Animal-Assisted Crisis Response, The Jewish Federation of North America, Samaritan’s Purse, and Save the Children, to name a few. These organizations are recognized as an integral part of the National Response Framework and National Disaster Recovery Framework. Working from their key principles of cooperation, communication, coordination, and collaboration, they provide a multitude of services such as food and shelter, family reunification, medical and mental health services, spiritual support, financial assistance, and rebuilding and recovery services. Organizations are present at the local, state, and national levels to provide support to government response and recovery efforts. Comprising mostly volunteers, VOADs are able to participate in national responses while maintaining their own authority, responsibility, and accountability within their specific mission and objectives. To find out more about VOADs, visit www.nvoad.org
The news of a disaster, especially one that is local, generates the need to help among others in a community. While the use of trained volunteers is critical to the response and recovery effort, unsolicited or untrained volunteer responders often pose a greater hazard and can actually impede efforts. Large-scale disasters such as the Loma Prieta earthquake, the 9/11 attacks, Hurricane Katrina, and Superstorm Sandy saw tens of thousands of unsolicited volunteers show up on the disaster site (Fernandez, Barbera, & van Dorp, 2006a). While the efforts and willingness to help were appreciated, a surge of untrained volunteers can bog down an already compromised response system and demand a shift in attention from those in command.

Being able to respond effectively requires advance training and preparation in order to maximize the efficient use of resources and work in conjunction with larger organizations and volunteer agencies. This training is not only important to streamline a coordinated response, but also to protect the volunteer from the physical dangers and possible psychological issues that arise in a response scenario. Unsolicited volunteers can quickly overwhelm agencies and result in resources being pulled away from the response effort in order to manage and “crashtrain” volunteers. In addition, such volunteers at the disaster site often place themselves in risk of physical danger, drawing resources away from response to actual victims (Merchant, Leigh, & Lurie, 2010).

Citizens and neighbors are often the true first responders to a local crisis, merely helping those in their community (Fernandez, Barbera, & van Dorp, 2006b). For the volunteer, such efforts can reduce stress, and impart a sense of purpose and connection to those dealing with the effects of a disaster. However, volunteers who have not received prior training can often place themselves in physical danger, suffer health consequences due to conditions and circumstances, and be unprepared to handle the emotional consequences of being in the midst of profound suffering (Harman & Pinto, 2007). Even trained professionals who have not had prior disaster experience can find themselves unsure as they provide services in austere conditions, find disruption in provision of their own basic needs, and suffer compassion fatigue (Adams, 2007; Bartley, 2007).

Persons interested in responding should first register with an existing volunteer organization through local, regional, or government avenues. Second, persons should participate in training opportunities provided by those agencies to heighten skills in disaster response and prepare volunteers to function within the boundaries of those organizations. Once training is complete, volunteers are placed on rosters for resourcing specific needs during a disaster period. Volunteers deployed as a part of a larger organization structure will be an asset, not a liability in the disaster field. In addition, volunteers will find that it will be easier to engage in response work and receive the support they need to be a health responder (Merchant, Leigh, & Lurie, 2010).
volunteers can hinder the response effort. Training ensures that all individuals who choose to help others can do so in a secure and effective manner, aiding instead of jeopardizing the safety of themselves and others.

Communities

In 1996, the then first lady of the United States Hillary Rodham Clinton wrote a book *It Takes a Village*. This book was a discourse on the concept that children are raised by more than just exposure to their immediate families and households. That indeed there are many other people such as extended family, friends, social and religious groups, and community organizations that influence and shape the children of today. If you have not noticed by now, the same can be said about disaster response. Indeed, it does take more than one agency or organization to deliver a comprehensive response that meets everyone’s needs. In fact, it often does take a “village” full of responders to address the multitude of concrete and psychosocial needs following a disaster.

While often presented in the framework of a VOAD, faith-based and community organizations provide a tremendous service to meet the needs of individuals following a disaster. Affiliation with a religious or social organization eases the way for individuals to seek help and essential services. Churches and civic organizations provide sheltering and concrete services as well as long-term mental health and recovery opportunities. Schools, universities, and academic groups can also provide resources unique to their setting. After Hurricane Katrina, students at Tulane University found support through partnering campuses that were able to provide access to courses, assisting students in maintaining their academic progress in the midst of recovery. The response of these universities filled a specialized need that may have otherwise been unrecognized as an integral part of recovery.

Faith-based and community organizations can not only provide concrete services but also help through advocacy, organizing community response, training volunteers, and providing people with a sense of connection to others. Communities often combine resources and respond independent of formal mechanisms, initiating the healing and recovery process along with trained responders. The momentum and energy of people joined together for a common purpose should never be underestimated.

Nongovernmental Organizations

By now you should be sensing that identifying the key players in disaster response is a little like trying to decipher alphabet soup. One of the common terms used in disaster response is NGOs. NGOs can take the form of many different types of organizations including faith-based, race- and ethnicity-based, nonprofit, and social organizations. VOADs fall under the category of NGOs. NGOs are a critical component of disaster response and are recognized as such under the NRF.

While NGOs are driven by their own priorities and objectives, they work in partnership with all levels of disaster responders including local, state, and federal resources. NGOs may provide services to victims in general or they may
target certain populations. Regardless, NGOs provide essential services that reduce the resource burden for other entities and engage in collaborative efforts to ensure comprehensive services. Some of the services provided include sheltering, immediate and longer term food supplies, clothing, temporary housing assistance, medical and mental health services, family reunification, and assistance with boarding and caring for pets. NGOs can provide assistance with transportation, search and rescue operations, and communications. Organizations targeting minority racial and ethnic groups may provide assistance with translation as well as provide pre-event training on delivering disaster services in a culturally competent manner. In fact, the provision of trained volunteers in general is a significant resource of NGOs, reducing the resource burden on government organizations to train, organize, and deploy volunteers.

Private Sector
The private sector is also a key player in response. Comprising large and small private businesses, commerce, private cultural and educational institutions, and a multitude of different types of industry, the private sector is critical to help support the local economy, which can take a devastating hit after a disaster. In 2010, the Deepwater Horizon/BP oil spill disaster delivered a significant blow to the economy of the coast of the Gulf of Mexico. It was a man-made disaster that spanned the months from April, the time of the initial explosion and beginning of the oil leak, to July 2010, the month that the defective oil well was capped and leaking ceased. The effects of the oil contamination were devastating to the ecosystem, fish, and wildlife of the Gulf, with the oil covering 68,000 square miles of water (Norse & Amos, 2010). There was extensive damage to marine and other wildlife habitats as well as to the fishing and tourism industries of the Gulf coast. In the years immediately preceding the spill, tourism in the Gulf region exceeded $34,000 billion annually and was responsible for the provision of over 400,000 jobs. The estimated impact of the oil spill on the tourism industry in that region is over $22.7 billion for the 3-year recovery period (Oxford Economics, 2009). The private sector response in the Deepwater Horizon oil spill was significant. Unlike natural disasters, which can elicit responses from utility companies, health care facilities, and communication operations, the Deepwater Horizon disaster generated response from universities, scientists, and private corporations that provided insight, expertise, and manpower to stop the spill and aid in the cleanup. The private sector supports local response, local economy during recovery, and community and local infrastructures necessary for preservation of life and property.

Local Government
Perhaps the most critical players in any disaster effort are local governments. As the first-line responders, they are responsible for immediate assessment of needs and evaluation of resources. The local government, composed of elected officials, emergency managers, and mid-level organizations, is responsible for overseeing the day-to-day operations of the response. Emergency managers are tasked with coordinating efforts of all participants during a response. As
we know, this can comprise efforts by individuals, community organizations, NGOs, private-sector agencies, and others. In most circumstances, efforts are coordinated from a central hub known as the emergency operations center (EOC). An EOC provides a central location for representatives from key players to meet, receive information, and coordinate efforts.

The local government is also responsible for overseeing communication to all parties and coordinating public awareness. Decisions are made about what information is essential to provide to the public and how that information should be disseminated. This oftentimes takes the form of news briefs, public service announcements, websites, and radio broadcasts. Fire, emergency, and emergency medical services (EMS) take the lead in many instances under guidance from local authorities.

The local government determines when additional resources are needed to supplement efforts. These decisions are made by collecting information and assessing needs and resources at the time of and immediately following an incident. As a part of a tiered response system, the local government initiates the chain of requests to higher authorities to access state and potential national resources.

State Government

If the local government determines that its resources are not sufficient to handle the response, they may request additional assets from the state government. In these circumstances the local resources are either depleted, or anticipated to be depleted as the response effort continues. State resources are available to supplement local efforts when needs exceed local capabilities and resources.

Resources at the state level may come from many different avenues and include state-level branches of national agencies. For example, states may receive resources from not only the office of the governor, but also the State Homeland Security advisor, the State Emergency Management Agency director, and the National Guard. Agencies and organizations at this level may provide national response capabilities that are otherwise not accessible at the local level. Included at the state level are also higher level branches of NGOs such as the ARC and VOADs.

Federal Government

While it is the responsibility of the local government to respond first and provide emergency services, in many instances the local and state governments are not able to meet the capacity or anticipate not being able to meet the capacity of a major event. In those circumstances, assistance may be requested from the federal government. Figure 1.3 outlines the steps involved when a governor determines that the combined resources of local and state governments are not sufficient to accomplish the tasks of the response and recovery. At this point, the governor may request a Presidential Major Disaster Declaration. A Presidential Disaster Declaration requests an assessment from the federal government of the exhibited or projected impact of an event for the purpose of soliciting government
fundings. While most declarations occur after the incident, in some circumstances, a declaration may be requested prior to an anticipated disaster if the disaster is expected to exceed the resources of the state. This occurs more often in natural disasters where weather patterns and climate conditions are able to be tracked and monitored prior to land impact, as in the case of hurricanes and other large-scale storms.

Federal assistance is established through the Robert T. Stafford Disaster Relief and Emergency Assistance Act. The Stafford Act is activated and coordinated through FEMA (McCarthy, 2011). States do not relinquish their role when the Stafford Act is initiated. They must continue to commit their full use of resources and validate that state funds will be contributed to the effort.

In 2012, there were over 200 natural disaster events in the United States, including floods, wildfires, tornados, ice storms, and minor earthquakes, with 47 major disaster declarations and 16 emergency declarations (FEMA, n.d.). Both major disaster declarations and emergency declarations result in federal assistance; however, emergency declarations are shorter in duration and more limited in the scope of services provided than a major disaster declaration. A major disaster declaration institutes significant resources to fund response as well as long-term recovery (FEMA, 2012a, 2012b). The economic impact of disaster response and recovery alone for 2012 in the United States was $85.7 billion and the number continues to grow (Center for Disaster Philanthropy, 2013).

**SUMMARY AND CONCLUSIONS**

Disasters are complicated events, requiring a comprehensive and interconnected response and recovery effort. The disaster life cycle highlights the cyclical nature of prevention, response, recovery, and mitigation, illuminating how intervention at any point has the capability of influencing the entire life cycle. The coordinated efforts of private, local, state, and federal organizations and agencies demonstrate that the assessment and delivery of needs is multifactorial and requires a collective response from all stakeholders.

As each disaster unfolds, we are able to reassess preparedness guidelines, response frameworks, and integrated recovery efforts. Each disaster brings a different set of challenges, but also provides the opportunity to strengthen our knowledge of the nuances that lead to successful response and recovery. Responders and key stakeholders should continue to study response mechanisms in order to implement the most effective and efficient procedures and policies.
REFERENCES


