A Community Response to Managing Trauma in Times of Disaster and Terrorism

Edited by Garret D. Evans & Brenda A. Wiens

The National Rural Behavioral Health Center

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Department of Clinical and Health Psychology
Department of Family, Youth and Community Sciences
Suwanee River Area Health Education Center

Supported through funding by the Center for Mental Health Services-
Substance Abuse and Mental Health Services Administration,
U.S. Department of Health and Human Services
Triumph Over Tragedy

A Community Response to Managing Trauma in Times of Disaster and Terrorism


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The NRBHC was established through funding by Grant #IH795M53468-01 from the Center for Mental Health Services - Substance Abuse and Mental Health Services Administration (SAMHSA), an agency of the U.S. Department of Health and Human Services. Continuing funding for the NRBHC is also provided by the Suwannee River Area Health Education Center (SRAHEC).
Acknowledgments

The creation of the Second Edition of the Triumph Over Tragedy manual has been an ambitious task that required the devotion of many authors, editorialists, and contributors. Triumph Over Tragedy, Second Edition represents a significant leap in disaster and terrorism education efforts at the National Rural Behavioral Health Center (NRBHC). While the writing and editing of a manual of such length and breadth can never be described as effortless, the contributions and support of those named below, as well as countless others, have made this project one of the most rewarding professional experiences in my career.

My most sincere thanks are offered to all of the co-authors listed on the title page. Our group of faculty, researchers, staff, and graduate students worked diligently to shape our ideas, and save me from the dangers of my penchant for grandiose planning, in order to provide what we hope is a useful and illustrative resource for those working in America's towns and cities on issues related to post-disaster stress.

Special thanks are offered to Michele Edwards, our Project Officer at the Center for Mental Health Services/SAMHSA, who offered endless encouragement and advice on topic areas, resources, and ideas for disseminating our work. Similar thanks go to Dr. Tom Belcore at the Alachua County Public Health Department. Tom's academic and practical expertise in managing the public health aspects of disasters and outbreaks of infectious disease provided us with invaluable insight into health responses to critical events.

Triumph Over Tragedy would never have occurred without the significant support of colleagues and administrators at the University of Florida. Thanks go to Dr. Carol Lehtola for being the first to encourage Dr. Sam Sears and I to create the First Edition of Triumph Over Tragedy in 1999. Drs. Ronald Rozenisky, Chairperson of the Department of Clinical and Health Psychology, and Robert Frank, Dean of the College of Public Health and Health Professions, have provided inestimable support for the mission of the NRBHC and have continually encouraged us to build a tent large enough to accommodate health professionals from all disciplines. Similar gratitude is extended to Drs. Nayda Torres, Chairperson of the Department of Family, Youth and Community Sciences, and Larry Arrington, Dean and Director for UF/IFAS Cooperative Extension, for their support of this project as a means for enhancing Extension's role in post-disaster public health education.

Finally, I reserve my most fervent thanks for Dr. Brenda Wiens, my lead co-author and editor of this project. For those of you who find this manual useful and worthwhile, it is Brenda that you should thank first. Her willingness to join us at the Center and take on the management of such an ambitious project is a testament to her character and skill. Her presence catalyzed and organized our work to create something of much greater value than I could have mustered alone. I wish you all my luck in finding a colleague as diligent and skillful as Brenda - she is a rare gem.

Garret Evans
Gainesville, FL
2004
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INTRODUCTION

What makes a disaster? By definition disasters are events that cause intense or immense destruction of property and human distress. That's an important distinction to make at the outset. We typically think of disasters primarily in terms of their physical impact – buildings damaged, reconstruction costs, and lives lost. On the other hand, sometimes we define disasters solely in terms of their personal costs. Layoffs, illness, a child suspended from school – these things are often labeled disasters by those who experience them. We interpret an event as disastrous based on the way that event affects us personally, as well as the way in which an event affects the community or nation in which we live. For the purposes of this manual, we will define disasters as those events that cause both physical damage and personal distress. We believe that a focus on post-disaster distress is central to the discussion of personal and community recovery. After all, the importance of a demolished home, damaged building, or loss of life is defined by the distress and grief that it creates.

In this manual, we provide an overview of psychological reactions to disaster from both an individual and community perspective. Our purpose is not to provide an all-inclusive academic overview, nor to provide specific training in psychotherapy for disaster victims. Instead, our goal is to provide training materials for community leaders and stakeholders who are involved in disaster planning and response in their communities. Many communities have experience handling natural or technological disasters and thus have some prior knowledge of human reactions to disaster. However, few communities have experience with terrorism, which is fundamentally a psychological weapon. The purpose of such events is to terrorize the population. Preparedness for terrorism and bioterrorism must include training in the psychological aspects of these types of disasters. Therefore, this manual includes topics ranging from the psychological reactions associated with more typical natural disasters to those reactions that might be seen following terrorist attacks.

Section Overview

The remainder of this manual is divided into six sections.

Section Two: Background

This section contains overviews of disaster statistics, features of natural, human-made, and terrorist disasters, the impact of disasters on

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Section Six: Long-term Recovery

The final section discusses long-term psychological recovery for both individuals and the community. Although strong psychological reactions may be prominent in the immediate aftermath of disaster, long-term mental health issues often arise during the recovery phase. Faced with the new reality imposed by the disaster event, some individuals may struggle with depression or symptoms of Posttraumatic Stress Disorder (PTSD). This section describes the community in the post-disaster recovery period and addresses the role of long-term changes, such as economic and social impacts, in individual and community mental health over the long term. We also include materials on coping with loss and survivor’s guilt, threats to belief systems, depression and anxiety, and PTSD.

Section Seven: Appendix

Additional information, including resources, publications, and website lists, are included in the Appendix to aid in accessing further information on certain topics.

How to Use This Manual

This manual is constructed so that readers can use it as a comprehensive resource for pre- and post-disaster response education (reading the entire manual front-to-back) or as a resource kit for immediate community response (using individual sections of the manual as needed). We recognize that many readers will choose this latter approach and will find themselves jumping from one section to another for specific information regarding some question of post-disaster recovery. We have attempted to cross-reference related topics throughout the manual in order to guide readers who are hopping from one section to another. Readers will find there is some amount of overlap and repetition in the materials. This repetition occurs deliberately, as not all users will be accessing the manual in its entirety. We intend for these materials to be used for disaster preparation, training, and response, and readers of this manual are free to distribute these materials for those purposes, provided that materials are maintained in their original format with an accompanying citation.

Should you wish to speak with a staff member of the National Rural Behavioral Health Center regarding these materials, you are welcome to contact us using the contact information provided in the front of this manual or at www.nrbhc.org.
EPIDEMIOLOGY OF DISASTERS

A vast number of natural and human-made disasters are declared every year. A governor or the President can pronounce a “disaster declaration” at the state and/or federal levels, respectively. An incident is usually declared a “disaster” when the scope of the event is either so broad, or its effect so devastating, that a community or state cannot provide adequate resources for an immediate response and long-term recovery.

This section provides an overview of the occurrence, frequency, and costs of disasters. Disasters inflict economic, social, and psychological effects. Very severe disasters may be classified as catastrophes. One indication of the magnitude of a disaster is the amount of funding provided for recovery efforts. The following tables display the Federal Emergency Management Agency’s (FEMA) record of the FEMA costs of the ten costliest natural disasters and FEMA expenditures for 1990-1999.

<table>
<thead>
<tr>
<th>Top 10 U.S. Natural Disasters Ranked by FEMA Relief Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Event</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Northridge Earthquake</td>
</tr>
<tr>
<td>Hurricane Georges</td>
</tr>
<tr>
<td>Hurricane Andrew</td>
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<tr>
<td>Hurricane Hugo</td>
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<tr>
<td>Midwest Floods</td>
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<tr>
<td>Tropical Storm Allison</td>
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<tr>
<td>Hurricane Floyd</td>
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<tr>
<td>Loma Prieta Earthquake</td>
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<tr>
<td>Red River Valley Floods</td>
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<tr>
<td>Hurricane Fran</td>
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<table>
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<tr>
<th>FEMA Disaster Expenditures From 1990-1999</th>
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</thead>
<tbody>
<tr>
<td>Year</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>1990</td>
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<td>1991</td>
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<td>1992</td>
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<td>1993</td>
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<td>1997</td>
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<tr>
<td>1998</td>
</tr>
<tr>
<td>1999</td>
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<tr>
<td>Total</td>
</tr>
</tbody>
</table>

*Amount obligated from the President’s Disaster Relief Fund for FEMA’s assistance programs, hazard mitigation grants, federal mission assignments, contractual services and administrative costs. Dollars are not adjusted for inflation. Figures do not include funding provided by agencies other than FEMA. (Source: FEMA, http://www.fema.org/library/df_8.shtml; http://www.fema.org/library/df_6.shtml)

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Personal Costs Associated with Disasters

In addition to economic impacts, disasters result in significant social and psychological costs. Many individuals will experience some type of disaster or traumatic event in their lifetime. One estimate suggests that 6-7% of Americans experience some type of traumatic event (ranging from natural disasters to accidents and crime) each year. With respect to natural disasters, estimates suggest that 13-30% of individuals are exposed to a natural disaster event in their lifetime, although there are few systematic studies of exposure. Statistics suggest that well over 2,000 disasters have occurred across the world since the beginning of the 20th century, with the majority occurring in developing regions of the world (statistics through 1988). Thus, disasters impact many individuals and communities.

Following disasters, common individual and community reactions may include: initial disbelief/denial, sadness over the loss of normalcy, and intense emotional reactions such as fear, depression, and anger. Positive reactions also occur, with agencies and citizens working together to help disaster victims and developing feelings of social solidarity. However, helpers eventually leave as a community rebuilds, and this can result in further strong emotions, as individual recovery may still be continuing. Studies of individuals and communities following disasters have looked at both immediate and longer-term emotional reactions following disaster events. A review of 36 disaster studies revealed that 7-40% of all people studied had some type of emotional or psychological reaction, with anxiety being the most common. This same review found a 17% increase in the prevalence of psychological disorders following a disaster event.

The personal costs of human-made disasters may be particularly widespread. For example, in a nationwide study conducted after the September 11, 2001 terrorist attacks, 17% of people outside the New York City area reported symptoms of post-disaster stress two months following the event, with 5.8% continuing to report symptoms at six months. In another post-September 11th study, 44% of a sample of U.S. adults reported at least one substantial stress symptom (related directly to the attack) in the week following September 11, with 90% reporting feeling at least one mild stress symptom. In yet another study conducted 1-2 months after the attacks, 11.2% of people surveyed in New York City (who were in the city at the time of the attack) reported symptoms consistent with a probable diagnosis of PTSD. Symptom levels were associated with direct exposure to the attacks and amount of television viewing in the days following the attacks, such that greater exposure and increased television viewing were related to greater symptoms. In addition to post-disaster stress, increases in cigarette, alcohol, and marijuana use were reported 5-8 weeks following

Included in hurricane costs for the 1990’s:

- 1998 - $2.5 billion
  Hurricane Georges
- 1992 - $1.8 billion
  Hurricane Andrew
- 1999 - $725.7 million
  Hurricane Floyd
- 1996 - $623.1 million
  Hurricane Fran
- 1995 - $491.3 million
  Hurricane Marilyn

(FEMA, 2003)

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With respect to children, estimates of PTSD following natural disasters range more widely than estimates for adults. Rates following human-made and terrorist disasters also range widely, as seen in the following studies:

- Symptoms consistent with a probable PTSD diagnosis were reported by 3 of 22 (14%) exposed children at three months following the 1993 World Trade Center bombing.  

- Approximately 6% of children (living in a 5-mile radius of the toxic waste storage site) reported high levels of PTSD symptoms five years following the Fernald nuclear waste disaster.  

- Approximately 37% of exposed children two years following the Buffalo Creek dam collapse met criteria for a probable PTSD diagnosis.  

- Data collected six months post-September 11 suggested approximately 11% of public school students (grades 4-12) had probable PTSD. Children with the highest exposure to the event had double the rate of probable PTSD, while children with very low exposure had a rate of probable PTSD similar to that of children from nearby communities tested prior to September 11.  

Rates of other disorders in children may also be higher following disasters. Initial data gathered six months following the 2001 World Trade Center attacks revealed elevated rates of eight disorders (PTSD, major depression, generalized anxiety, separation anxiety, panic, agoraphobia, conduct disorder, and alcohol use) for children in grades 4-12 as compared to pre-September 11 rates of disorder in children from nearby urban and suburban communities, with agoraphobia being the most prevalent disorder. Although rates of probable disorders were higher among New York City school children at 6 months post-September 11, only 16% of surveyed children reported receiving mental health services (34% of those with probable PTSD were receiving mental health services).

Discrepancies in rates of PTSD in children following disasters likely reflect differences in study methodologies, thus making it difficult to draw firm conclusions about how many children are likely to develop PTSD following a disaster event. Also, rates of PTSD prior to the disaster event usually are not known. Finally, rates of PTSD after disaster events also vary depending on factors related to the specific disaster and the child. Several factors that have been found to be related to greater post-disaster PTSD symptoms in children are:

For children, some of the social and psychological costs of disasters include:

- Missed school days
- Academic difficulties
- Loss of peer interaction
- Greater exposure to stressors such as family conflict and death or injury of someone they know
- Parents may be distracted by the disaster and thus less able to recognize stress in their children

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Individuals who experience physical injury, fear of death, or property loss as a result of the disaster may have more distress symptoms.  

References
DEFINING DISASTERS

Defining disasters is not necessarily an easy task, as the mechanisms behind disaster events vary widely. Disasters can result from weather events, technological malfunctions, and even human intent. Some common threads linking all disaster events are: (a) the resulting threat to and possible loss of life, health, and property, (b) disruption of social order, and (c) human systems subjected to extraordinary demands.\textsuperscript{1,2} In general, disasters fall into one of two main categories: natural or human-made. The table below includes examples of natural and human-made disasters.

<table>
<thead>
<tr>
<th>Natural Disasters</th>
<th>Human-made Disasters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earthquakes</td>
<td>Airplane/train/ship accidents</td>
</tr>
<tr>
<td>Volcanic eruptions</td>
<td>Factory explosions</td>
</tr>
<tr>
<td>Tornadoes</td>
<td>Nuclear power plant accidents</td>
</tr>
<tr>
<td>Hurricanes</td>
<td>Chemical/toxic waste dumps</td>
</tr>
<tr>
<td>Floods</td>
<td>Hazardous chemical spills</td>
</tr>
<tr>
<td>Tsunamis</td>
<td>Nightclub fires</td>
</tr>
<tr>
<td>Forest fires</td>
<td>Acts of mass violence</td>
</tr>
<tr>
<td>Drought</td>
<td>Terrorism</td>
</tr>
<tr>
<td>Ice storms/blizzards</td>
<td>Bioterrorism</td>
</tr>
</tbody>
</table>

The Interchange Between Nature and Technology

Natural and human-made disasters have a number of similarities but also differ in important ways. The distinction between natural and human-made events is not always clear-cut. A notable example was the 1972 Buffalo Creek dam collapse in West Virginia. It had been raining for several days when one morning the dam gave way, causing a flood of water and black sludge into the valley. In all, 125 people were killed and thousands were left homeless. In this event, natural (rain) and human-made (poor construction of the dam) factors combined to form a disaster of devastating proportions. In today's modern world there is often interplay between humans and nature with regards to disasters. In the case of hurricanes, widespread damage often occurs due to humans' desire to build on vulnerable coastline. The same is true of widespread building in flood plains.

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Southern Florida, especially in the Homestead area. More than 28,000 housing structures were destroyed, an additional 107,000 homes sustained major damage, and approximately 180,000 people were left homeless. Wind speeds during Hurricane Andrew were estimated to reach 165 mph in some locations, similar to what might be seen during an F3 category tornado. Other natural disasters can be similarly intense. Tornado wind speeds can reach 300 mph, droughts can continue for several years, and floods can devastate thousands of acres. Intense natural disasters result in significant economic damage. Until the September 11, 2001 terrorist attacks, Hurricane Andrew was the costliest U.S. disaster event.

Time of Onset, Warnings, and Signs of Danger

Some disasters occur suddenly (e.g., earthquakes, tornadoes), while others occur with some warning (e.g., hurricanes, droughts). A warning precedes most weather-related disasters, although the warning period may be very short in some cases. For earthquakes, there is typically no warning period. For many natural disasters there are often clear signs of danger: rain, smoke, high winds, and foreboding skies. These warnings allow for time to gather information, fortify property, save items of value, evacuate to safety, and prepare emotionally.

Duration

The duration of natural events can greatly differ. Tornadoes may pass by in minutes, whereas a hurricane may continue to cause dangerous conditions for hours (and the storm surge for days). In the case of earthquakes, aftershocks extend the duration of the event. After the 1994 Northridge earthquake in California, there were thousands of aftershocks, some up to 4.0-5.0 in magnitude, which caused further damage and increased anxiety among residents.

Low Point

The "low point" of a natural disaster is when the peak or worst part of the natural event has passed and recovery can begin. When a tornado strikes a town during a severe storm, a community can begin recovery efforts shortly after the storm passes. However, disasters with longer duration, such as droughts, typically have less clearly defined low points that occur later in the life cycle of the disaster.
health assistance to residents. These helpers in turn experienced stress as a result of their involvement in disaster recovery.

**Economic impact**
- Community-wide – Local businesses were severely damaged or destroyed. Some residents were without insurance to repair or replace their homes.
- Nationally – The federal government provided funds through FEMA to assist in disaster relief.

**Recurrence**

Notable examples of recurring natural disasters are hurricanes in Florida (peak month is September), earthquakes in California (random), and tornadoes in the Midwest (peak in spring). Residents of the Midwest can anticipate tornadoes to occur more frequently in the spring than other times of the year and raise their vigilance. In addition to yearly or seasonal recurrences, some natural disasters can strike multiple times in one season. During the 2002 Atlantic hurricane season, both Hurricane Isidore and Hurricane Lili passed over western Cuba within one month. Recurrence of natural disasters in a short period will obviously impede recovery efforts and prolong and expand physical and psychological devastation.

**Human Influence, Control, and Ability to Prevent**

Human influence and control are similar yet separate ideas. “Human influence” involves the degree to which human actions lead to the development of disaster situations or the possibility for disasters. “Human control” refers to the ability to affect these events once they begin to unfold. In the case of natural disasters, humans have some small degree of influence, in that decisions to change the course of rivers, soil erosion resulting from land misuse, and global warming can impact nature. Although humans likely have some degree of influence, individuals are unable to control the occurrence, strength, or location of natural events. People usually do not spend time thinking about how they could have stopped a tornado. However, after such an event they may second guess their choices to live in a certain area or be uninsured.

For some types of natural hazards, people may employ measures to prevent damages, such as attempts at flood control through the use of levees, dikes, and sandbagging. Even so, natural events cannot always be contained. In April 1997, the Red River crested at record highs (26 feet above flood stage) and could not be contained in Grand Forks, North Dakota, where 90% of the town was under water at one point during the flooding. Similarly,

**Fujita Scale Continued:**

- F5 - Incredible tornado. 261-318 mph. Strong frame houses lifted off foundations and carried considerable distances to disintegrate; automobile sized missiles fly through the air in excess of 100 meters; trees debarked; steel re-inforced concrete structures badly damaged.

- F6 - Inconceivable tornado. 319-379 mph. These winds are very unlikely. The small area of damage they might produce would probably not be recognizable along with the mess produced by F4 and F5 wind that would surround the F6 winds. Missiles, such as cars and refrigerators would do serious secondary damage that could not be directly identified as F6 damage.

(From: http://www.tornado-project.com/fscale/fscale.htm/#fiscale%20table)

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Disaster Characteristics Summary Table - Natural Disasters

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Natural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Predictability</td>
<td>Usually</td>
</tr>
<tr>
<td>High Intensity</td>
<td>Variable-can be extreme</td>
</tr>
<tr>
<td>Sudden Onset</td>
<td>Variable</td>
</tr>
<tr>
<td>Warning</td>
<td>Variable</td>
</tr>
<tr>
<td>Danger Signs</td>
<td>Usually</td>
</tr>
<tr>
<td>Duration</td>
<td>Usually short</td>
</tr>
<tr>
<td>Clear Low Point</td>
<td>Almost always</td>
</tr>
<tr>
<td>Evacuation</td>
<td>Variable</td>
</tr>
<tr>
<td>Scope of Effects</td>
<td>Usually local</td>
</tr>
<tr>
<td>Recurrence</td>
<td>Usually-seasonal</td>
</tr>
<tr>
<td>Randomness</td>
<td>N/A</td>
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<td>Human Influence</td>
<td>Rarely (floods, fire)</td>
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<td>Human Control</td>
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<td>Ability to Prevent</td>
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<td>Stereotyping</td>
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<td>Desire for Revenge</td>
<td>Rarely</td>
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<td>Closure</td>
<td>Usually</td>
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<td>Media Coverage</td>
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Human-made Disasters

In contrast to natural disasters, human-made disasters are the result of events within the realm of human control and influence. Examples include airplane crashes, nuclear power plant failures, toxic waste dumps, and major technological and industrial accidents. Terrorist events also fall under this category, although these events differ from other human-made disasters because terrorism involves deliberate attempts to harm humans. Terrorism and bioterrorism will thus be discussed in more detail in the next section. Devastating effects of human-made disasters intensify as technology advances, becomes increasingly complex, and leads to greater human dependence. The presence of nuclear power plants and facilities that manufacture dangerous chemicals invites the possibility of large-scale disasters should safety mechanisms fail. Human-made disasters are characterized by many of the same features discussed above for natural disasters, although they have some unique qualities that may not be seen in the case of natural events.

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- Department of Family, Youth & Community Sciences
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- Suwanee River Area Health Education Center

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occurred. Information from officials is often the first danger sign that a nuclear or toxic waste disaster has occurred.

Duration and Low Point

Some human-made disasters have no clear low point. This is especially the case for events such as nuclear power plant failures that result in radiation leakage and toxic waste dumps or releases. With such events, the possibility of damage extends well into the future (e.g., cancer, illnesses, unsuitability of drinking water or soil in an area). Examples of disasters with no clear low point are Three Mile Island, Chernobyl, and Love Canal.

Evacuation

Some human-made disasters result in the need to evacuate areas, especially in the case of radiation releases or toxic chemicals. In some cases, land may be sufficiently contaminated that individuals cannot return to their former homes. In the case of toxic waste dump discoveries (e.g., Love Canal), families may wish to leave but may find it extremely difficult to do so, as their homes suddenly lose value and they are not able to financially afford to leave the area.

Scope of Effects

Human-made and technological disasters differ in the range and type of effects. In some cases the effects go far beyond the initial disaster event. In the case of industrial or nuclear power plant disasters, the possibility for environmental contamination exists. In the days following the Chernobyl nuclear disaster, a cloud of radioactive material moved over the Scandinavian countries. Combined with the prevailing weather conditions at the time, the clouds led to radioactive fallout across this area. In today's high technology, interconnected global environment, it is increasingly likely that human-made disasters will affect people in multiple countries and perhaps even multiple continents.

Human-made disasters can include health and/or economic effects locally, nationally, and internationally. The 2003 space shuttle Columbia disaster will be used as an example to illustrate possible effects.

Mental and physical health

- Community-wide – Family members, friends, and co-workers grieved the loss of the astronauts.

Following human-made disasters involving contamination with toxic chemicals or radioactive waste, residents may want to move away from the area but are often unable to do so because their homes lose value due to the nature of the disaster. Thus, many residents may feel "trapped" in their homes. This situation adds to the stress level of these types of disasters.
Blame and Anger

Human-made disasters may be more psychologically harmful because they are unfamiliar, difficult to predict and control, and result from human factors. People may have thoughts such as, “this could have been prevented if people/government/industries were taking appropriate precautions.” Anger is commonly seen following such events and may be further provoked in cases of unknown or undisclosed causal factors. Accusations and blame may continue for years following these events. An excellent example is the crash of TWA flight 800 on July 17, 1996. Initial reports of the crash by the media included the possibility of a missile fired at the plane, as was suggested by some eyewitness reports. Later reports from the NTSB concluded that electrical arcing occurred in the center fuel tank. However, some families and individuals believe that the actual cause has remained hidden. This suspicion may lead to feelings of anger toward investigators or the potentially responsible parties.

Uncertainty and Ambiguous Risk

Following human-made disasters, there is often a period of uncertainty until clarifying information can be gathered and provided to the public, thus causing considerable frustration for communities and family members. This period of uncertainty and frustration prompts competing interpretations by experts and rumors that may last for years until the investigations conclude. This confusion was evident during the Three Mile Island nuclear accident. Initial reports of the damage and danger were inconsistent, with many experts weighing in with their opinions of the situation to fill time slots for the media. The presence of inconsistent information created an environment of confusion and doubt for nearby residents. In many cases investigations of the event may last for years and be revisited after decades, thus prolonging the period of uncertainty.

Following radioactive material, chemical, or toxic waste accidents, unclear or conflicting information can heighten fear, as citizens may feel powerless to determine their level of risk. It is often difficult to determine future health risks following these accidents, and rumors and ambiguous information are abundant.

Loss of Trust

Individuals may lose trust in government officials, industries, or technologies following human-made disasters because of missed warning signs, cover-ups, or insecurity about technologies. After the Three Mile Island and Chernobyl nuclear accidents, citizens protested the use of nuclear power and attempted to bar the reopening of damaged...
With a human-made disaster, businesses and government agencies have a tendency to hold information closely due to threats of public attack and legal action.

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Some key differences between natural and human-made disasters:

- **Possibility for closure**
  Following natural disasters, recovery usually begins immediately, with the main tasks usually involving rebuilding damaged structures and healing emotional losses. In the case of human-made disasters, there are often the additional tasks of amassing evidence and information, affixing blame, seeking reparations, or fighting for changes in technology and regulations.

**Terrorism**

Terrorism can come in many forms: car and truck bombs, chemical attacks, biological attacks, “dirty bombs” (i.e., conventional bombs containing radioactive material), suicide bombings, attacks that disrupt or damage infrastructure (e.g., power grids, computer systems, transportation systems), and even planes used as bombs to bring down buildings. Terrorist attacks result from the interaction of a wide range of social, political, ideological, and psychological forces and share most of the characteristics discussed above for other human-made disasters. These characteristics can be illustrated using the September 11, 2001 terrorist attacks in New York.

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than the damage inflicted on lives and property. Terrorists take advantage of human fears of death by launching attacks that lead the target population to believe no one is safe.¹⁴

Sudden Onset and Warning

Terrorist attacks usually occur suddenly with no warning, thus individuals do not have a chance to protect themselves. In the case of a biological terrorist attack, an attack may be underway for days or even weeks before the danger is realized. In many past cases of toxic waste or chemical contamination (non-terrorism related), residents received no warning that such contamination was occurring and lived in the area for long periods of time before realizing the potential danger. Likewise, during the anthrax mail attacks in 2001, postal workers and citizens did not know there was any danger until several cases were diagnosed. Additionally, officials may withhold information in an attempt to preclude public panic and in hopes of readily fixing the problem. Thus, individuals usually learn there is something to be concerned about well after the period for earliest warning has passed.

Danger Signs

Biological, chemical, and radiological terrorist attacks are unique in that there may be little visible sign of an attack. Viruses cannot be seen. Some gases may be colorless and odorless. Radiation is likewise undetectable by humans. Because there are no visible explosions, crashes, or observable signs of danger, it is difficult to know the level of threat, thus raising the ambiguity of the situation. Information from officials is often the only danger sign available. Unfortunately, some residents may not put trust in this information, especially if they believe that similar information was withheld during past events.

Duration and Low Point

Terrorist attacks may be short in duration, but the psychological impact may endure for years. In the case of bioterrorism, many biological weapons have the potential for continuing effects over an unknown period of time. For smallpox, new cases could continue to occur for years, depending on the success of vaccination and quarantine programs. In the case of chemical or nuclear attacks, long-term health effects could continue well into the future (e.g., cancer). In fact, the worst effects may occur months or years following the initial recognition of the attack. Given these factors, a clear low point may be difficult to define for an affected community following a terrorist attack.
Recurrence and Randomness

Although terrorists may specifically choose a certain site and time for an attack, this information is generally not available to the intended target. Thus, to individuals, it becomes a matter of being in the “wrong place at the wrong time.” The victims are usually random citizens that just happened to be in that location when the attack occurred (e.g., individuals on a plane that is hijacked). The idea that one could be the victim of a terrorist attack by being in the wrong place at the wrong time can produce considerable anxiety and fear in individuals, especially in countries that do not experience terrorism on a regular basis. During the Washington, D.C. area sniper shootings, citizens changed their routine behavioral habits due to fear that they could be the sniper’s next victim, as the victims were random citizens engaged in everyday activities. People drove out of their way to get gasoline, walked into service stations while pumping their gas, and stayed home more. The goal of terrorism is to instill fear, and recurrent attacks on random targets can produce considerable fear.

Human Influence and Control

Terrorist attacks are carried out deliberately with the goal of causing fear and terror in a population of people. Innocent people are intentionally targeted to instill greater fear. Because these attacks are deliberate, people may see terrorists as “evil” and may question the humanity of individuals that would carry out such acts of violence. The notion that terrorists are evil people was a common theme seen after the September 11, 2001 attacks, as many citizens, journalists, and government officials referred to the attacks as “acts of evil.” Terrorist attacks are an effective psychological weapon because they take away feelings of control and expose a community’s sense of vulnerability. Although countries can exercise their powers to limit terrorists, society is ultimately unable to control all forms of terrorism.

Ability to Prevent

While intelligence information is available and can avert much terrorism, it may be difficult to prevent all terrorist attacks. Terrorists may continue to persevere until they are successful in carrying out an attack. The deliberateness of terrorist attacks maximizes the surprise, thus limiting the effectiveness of efforts to anticipate, prepare for, and respond to an attack. While no single remedial step is likely to be effective in eliminating terrorism, a variety of peace-building actions (e.g., economic development programs in impoverished countries) may be useful in reducing the likelihood of future terrorist violence.
novel biological weapons and newly bioengineered substances, immediate and future risks may be highly ambiguous.

Loss of Trust

As in the case of other human-made disasters, terrorist attacks can lead to loss of citizen trust in government officials and in those people in charge of citizen safety. A notable example occurred following September 11, 2001 when individuals lost trust in the airlines and airline security and were reluctant to fly. Likewise, some citizens and media sources criticized government officials after media reports surfaced that an FBI agent had recommended investigation of Middle Eastern men taking flight lessons prior to September 11.

Stereotyping

Terrorist attacks may result in an increase in stereotyping and hate crimes. Following terrorist attacks, citizens fear for their lives. This fear of death may lead to increased prejudice towards people who are different than oneself. In an attempt to gain some control, individuals may heighten their suspicion towards people whom are believed to have some association with the terrorists, however slight this association might be. Some individuals may advance their suspicion to the level of committing hate crimes. For instance, hate crimes against people of Muslim faith and Middle Eastern heritage increased following the September 11, 2001 terrorist attacks.

Desire for Revenge

Following the September 11, 2001 attacks, the desire for revenge among many Americans was fierce. Although non-terrorist human-made disasters result in blame and anger, they usually do not result in retaliatory attacks. The desire for revenge is more intense in the case of deliberate human attacks. Non-terrorist human-made disasters more frequently result in lawsuits. Although legal actions are also pursued in response to some terrorist events, retaliatory attacks are additionally launched in many cases.

Closure

Closure may be hindered by criminal investigations, governmental inquiries, the presence of classified information not available to the public, and difficulty apprehending and bringing the perpetrators of the terrorist act to justice. Foreign relations and political issues often play a central role in the quest to bring terrorists to justice. Victims and families may never feel that justice was fully achieved as governments negotiate terms for surrender, extradition, trial, and punishment. With regards to
Although terrorist attacks using conventional weapons (bombs) share some features with attacks using unconventional weapons (biological or chemical agents), the latter are likely to result in heightened feelings of fear, uncertainty, and loss of control.
localized agricultural terrorism could threaten significant portions of the country. Additionally, many cities get their water from remote rural reservoirs or watersheds that have limited supervision. There continues to be a debate over the vulnerability of these water sources. Third, many power sources are located in rural areas providing the chance to disrupt the country's power grid. Finally, there are concerns that contaminants could be spread to cities by crop duster aircraft originating from rural airports.15

Many rural communities lack the resources and funding to prepare for terrorist attacks. Compounding this problem, most rural communities do not feel immediately threatened by a terrorist attack, resulting in less preparation.16 Furthermore, rural areas do not have the resources to protect such vast tracts of land. Preparedness is especially important for rural communities given the unique concerns stated above including economic hardship, limited healthcare response capacity, more severe disaster effects, inadequate preparation for disasters, and vulnerability to terrorism. Yet, fewer rural residents are prepared for disaster response, and there is an insufficient supply of resources and communication infrastructure.

For these reasons, rural communities are vulnerable to targeted economic or energy attacks. Although rural targets are not high profile targets like the World Trade Center, the Pentagon, or the Golden Gate Bridge, they are "soft targets," as they are less well-defended. Plus, attacks on agricultural goods or livestock could be carried out with less resistance. The result of such attacks would be severe economic impacts. For example, an attack of Mad Cow Disease could have severe impacts on the U.S. livestock industry, a major exporter of U.S. goods. Ramifications of such an attack would likely include a steep decrease in exports of affected goods, declining prices on the cattle market, and a gradual trickle-down effect in the economy.

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14 Office of Rural Health Policy. (2002, April). (See reference 4)

Rural terrorism threats:
• Contamination of food or water supplies
• Spread of disease through livestock (e.g., hoof and mouth)
• Attacks on nuclear or chemical plants
• Spread of contaminants using crop duster aircraft

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INTRODUCTION

Community preparation for disasters is a key factor in community response when an event occurs, as poor preparation can slow response, lead to confusion about what the roles of different agencies are in the response, and possibly even increase total damage. Some of the factors that influence community preparation include overall community functioning, a community's previous disaster experience, and whether local leaders consider disaster preparedness to be a priority. Although preparedness is essential, it is not always the first priority in a community, especially when there are competing needs such as poverty, unemployment, and budget deficits. Nevertheless, disaster preparedness should be a priority for communities. The following factors are important for the disaster preparation process.

Resources and Local Emergency Organizations

Effective disaster preparation and response is dependent on the availability of local and state resources and well-trained local emergency organizations. While local emergency organizations play key roles in disaster preparation (e.g., planning for available hospital space, conducting emergency drills, developing communication plans, conducting specialized training for hazardous materials), they often lack the ability to carry out optimal preparations because of funding issues, understaffing, and scarcity of resources for specialized training.

Governmental Approaches to Hazard Management

Due to the large number of federal, state, regional, and local agencies involved in disaster response and preparation, coordination of planning can be difficult due to differing priorities and motivations. Confusion results from inconsistent policies and regulations outlining the responsibilities of various agencies in disaster preparation. Additionally, government and local policies often place an emphasis on the response phase instead of the preparedness and prevention phases of disaster. Thus, preparedness for disasters may be underemphasized in communities, especially in rural areas that lack funding to carry out preparedness measures.

Public Awareness and Preparedness

Public awareness of hazards and preparedness for hazards go hand in hand. Citizens who do not perceive themselves to be at risk for certain hazards likely will not prepare for those hazards. However, public awareness does not

Factors that influence community preparation include:

- Overall community functioning
- A community's previous disaster experience
- Whether local leaders consider disaster preparedness to be a priority
- Economic resources for preparedness measures

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DISASTER RESPONSE PLANS

Disaster response plans contain the information that community leaders use during times of disaster to organize and keep the community running, provide assistance and resources to those affected by the disaster, and to coordinate the various agencies involved in disaster response. Anticipating and planning for emergencies can lessen the extent of physical, structural, and social damage and disruption from disasters. Response plans need to clearly set out the responsibilities of different community organizations in the event of a disaster. Community stakeholders and citizens who are not directly involved in developing disaster response plans may wish to learn more about their particular community’s response plan and whether they can provide unique contributions. To learn more about your community’s response plan, contact your local public health system, county, or city council, or visit your community or county website if one is available.

The inclusion of psychological and mental health considerations in community disaster response plans is crucial, as disasters involve incredible stresses for individuals and communities. Below is a list of suggestions for how to incorporate psychological considerations into disaster response plans.

Educate Planners

Educate disaster response planners regarding the common human behavioral and emotional responses to disaster. Additionally, planners need to be educated about how to develop contingencies for less common behavioral responses (e.g., panic, looting) without assuming these will be the primary behaviors seen after most disasters.

Plan Warning Strategies

Plan effective warning strategies that motivate the public to act without unduly raising fears and anxieties. For example, choose trusted officials to deliver warnings that include specific instructions for how to reduce individual and family risk from the expected hazard. Please see, “Educating Community Members” for a discussion of factors that are important to consider when planning warnings.

Develop Referral Lists

Develop a referral list of local mental health professionals who can provide services in the aftermath of a disaster. Although the Red Cross will provide mental health professionals in the immediate wake of many disasters, a
IDENTIFYING COMMUNITY RESOURCES AND BUILDING PARTNERSHIPS

Coordinating and Cooperating

An effective disaster response will require the efforts of multiple agencies and organizations, as well as strong ties among local officials, public health officials, medical professionals, emergency response personnel, and mental health professionals. Clear, well-established partnerships between local, state, and federal agencies help coordinate resources for recovery efforts and eliminate duplicated efforts. In order to build effective, long-lasting partnerships, individuals and groups need to respect one another’s interests in contributing and collaborate to build upon individual strengths.

Oftentimes disasters strike with little warning, and multiple groups converge on a community or area to aid in disaster relief. If these groups do not have preexisting relationships or agreements, conflicts can form over how to best provide services and who will be in charge of relief efforts. Offers of material items, monetary assistance, and volunteers often pour in faster than a community can arrange structures for organizing and distributing such assistance. Because the post-disaster period places many demands on local authorities and response agencies, they may not be able to organize and utilize all spontaneous volunteer resources effectively. Thus, if a community stakeholder or stakeholder group would like to be involved in post-disaster assistance, it is recommended that they work with community officials to set up these arrangements before disaster strikes. In this way, when a disaster occurs, interested stakeholders will be integrated into response efforts.

Identifying Needs

If community disaster planners perceive that they have resource deficits in certain areas, they may wish to search for those resources in their community or surrounding area in order to include those resources in disaster response plans. Identifying these resources prior to a disaster and clearly specifying their roles in the event of a future disaster response effort will help to avoid some of the chaos that can occur post-disaster. Potential resources include local religious organizations, local groups such as the Jaycees or Kiwanis, community mental health agencies, Cooperative Extension, and local volunteer groups.
EDUCATING COMMUNITY MEMBERS

Recently, community leaders have been called upon to answer questions such as: “What is the probability of a bioterrorism event happening here,” “To which kinds of biological agents is the community prepared to respond,” and “What is the community doing to enhance its preparedness for terrorism?” In light of these concerns, community leaders must plan how they will disseminate emergency preparedness information to the public and how they will do so without unduly raising anxiety in the community. Educating and communicating with community members before, during, and after a disaster plays a significant role in community and individual citizen response to disaster events. Thus, community leaders must determine how to keep the public informed and prepared. The role of community leaders in educating the public includes:

- Increasing citizen familiarity with city and county emergency management plans.
- Informing citizens about local and state preparations for disasters and terrorism.
- Educating the community about threats from natural disasters, terrorism, or bioterrorism. Ideally, communities should place the most emphasis on educating citizens about the most probable disaster or emergency risks in their area.
- Enlisting the help of citizens as part of an early detection network. Ideally, citizens play a role in local early warning systems by reporting health concerns and suspicious behavior.
- Designing education and communication strategies that address the needs of special populations, such as minority groups, the elderly, non-English speakers, and parents.
- Educating citizens about the procedures to follow before, during, and after a disaster event and the reasons for those procedures. Ideally, information regarding procedures will be specific, as will the reasons for those procedures.
- Preparing citizens to respond effectively and remain calm as they respond. Such preparation efforts should include education regarding anxiety symptoms commonly experienced following a disaster event.

The goal of public education efforts is to increase desired citizen behavior and decrease undesired behavior in the event of emergencies. For example, goals of providing public education prior to potential incidents of bioterrorism include: 1) increasing citizen knowledge and acceptance of preventive measures, 2) increasing citizen responsiveness to official advice regarding precautionary behavior in the event of a terrorist attack, and 3)
• Fear

Although fear can be a powerful motivator, developing educational messages that induce high levels of fear could lead to citizen avoidance and denial. Although educational efforts regarding hazards can raise public anxiety, specific information that emphasizes the ability of citizens to control their risks will lower anxiety and increase their investment in the educational message. In addition to these considerations, it is important to know what concerns citizens have so these can be addressed during education efforts (e.g., concerns regarding whether the local fire department is equipped to handle a hazardous materials emergency). This information can be gathered during community focus groups, surveys placed on a community's website, or questionnaires left at common community locations (e.g., churches, schools, places of business).

• Rarity

It is more difficult to motivate people to prepare for rare events, as people tend to deny the likelihood of rare events. While it is quite fortunate that disasters are relatively infrequent events, disaster educators must work to overcome the sense that, “this will never happen here,” in the minds of residents.

• Specificity

Whenever possible, educational efforts should include specific information about the danger posed by certain hazards, what citizens can do to prepare, and how citizens should behave in the event of an actual disaster. Specificity increases a sense of control over the situation.

• Targeting

Educational efforts should be targeted towards different community groups (e.g., elderly, minority groups, parents), as these different groups will likely have different concerns in the event of an emergency situation.

Let us look at a hypothetical example of a community plan to educate citizens about what to do in case of a hazardous chemical release in the community (either accidental or malicious). Although this example is very simplistic, it will help to highlight the factors we have discussed.
- Frequency was a weakness, as there were only several television spots and a one-time mailing.
- It is not clear whether citizens would see these messages as being relevant to their daily lives, as there was no explanation why residents should prepare, other than the events of September 11, 2001. However, the message did state that preparations were intended to protect residents, thus appealing to personal safety.
- This campaign might have created more fear in the community, as the Mayor stated the community should, “prepare for the worst.”
- Since there have never been any chemical accidents in this community, residents may see the likelihood of a future accident as being a rare event, thus not seeing preparation as a priority.

The weaknesses in this campaign were likely due to a combination of bad timing, poor planning, and not understanding all of the factors that are important when planning an educational effort. As you will see below, many of these same factors are important when planning how to provide warnings of an impending disaster.

Factors to Consider When Providing Warnings of an Impending Disaster or Terrorist Attack\textsuperscript{5,6}

- The warning has meaning

Frequent warnings that are not followed by the warned event could reduce the impact of future warnings. In other words, repeated warnings can lose their substance if nothing bad ever happens. The folk tale about the boy who cried wolf demonstrates this principle. When a warning is not followed by the warned event, people may begin to disregard the warnings. This factor is especially important to consider with regards to terrorism.

- Anticipate behavior

Structure warnings based on anticipated human behavior in the face of a warning. For instance, people will often try to locate or contact family members before following an evacuation order. Thus, evacuation orders should be given earlier if possible to allow people time to locate loved ones. Also, people usually seek out additional sources of information to verify warnings, thus warnings sent over multiple channels may decrease the tendency for people to seek verification.\textsuperscript{7}

Tip: Learn From Past Disaster Experiences

When trying to design education or warning strategies, consider past community experiences with disaster events. Look for strengths and weaknesses of previous strategies, and consider how citizen behavior may have been affected by the educational approaches used or warnings given.
downtown area is imminent for the following day (e.g., officials are 90% sure it will happen if they cannot locate the terrorists), then it would be conflicting to recommend that citizens go to work and about their daily business. In a situation where officials communicate a high and serious risk, recommended behaviors should be consistent with that level of risk. If recommended behaviors are not consistent, a reason for the inconsistency needs to be provided.

Let us consider another hypothetical example concerning the same Community X (5,000 residents and two chemical plants).

Three months after the education campaign in Community X, state officials are told of an imminent threat to chemical plants in the state, although no specific community is named. Officials believe an attack is highly likely within the next few days. The Mayor of Community X is notified of the information and decides to provide a warning to local residents. The Mayor presents a live message on both radio and television, informing residents that there is credible information of a threat to chemical plants in the state in the next few days. He stresses the need to prepare but be calm, as no specific community is targeted, and says, “It is always good to prepare in the face of credible threats, but at the same time please remember that we cannot live our lives in fear and we need to keep functioning as a community.” He asks citizens to continue their daily routines but notes that he requested the chemical plants to “run on minimal staff and increase security” for the remainder of the week. He also gives residents an “action plan,” which includes having an emergency supply kit, developing a plan to shelter in place at their homes or businesses, and checking with elderly neighbors to see if they need help preparing. Anticipating that residents will make a rush on local grocery stores for canned goods, the Mayor advises grocers to prepare for increased sales. Following the Mayor’s live message, the local television station airs an interview with the Governor, who recommends the same action plan (the Mayor had conferred with the Governor’s office prior to developing his message, thus both messages are consistent). Thankfully, an attack does not materialize and officials determine the immediate threat of an attack on chemical plants is over. The Mayor of Community X makes another televised statement indicating that officials have determined the threat has passed. He also stresses the importance of remaining prepared for any unforeseen future event.
Clearly the examples provided in this section are hypothetical and do not provide a high level of detail. However, they are meant to provide a broad illustration of some of the key features that should be considered when planning community educational strategies and warnings. Remember, citizen behavior will likely be influenced by the quality of any messages delivered, whether they are warnings, educational materials, or reports on community preparedness measures. For this reason, it is important to take into account how the factors discussed in this section will impact on the quality of pre-disaster messages to the public.

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SECTION FOUR
HELPING COMMUNITIES IN THE IMMEDIATE WAKE OF A DISASTER

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INTRODUCTION

In this section we cover several topic areas relevant to community response immediately following a disaster, including coordinating response efforts, information management, and issues relevant to disasters involving biological, chemical, and radiological weapons. Additionally, we briefly discuss some special circumstances that may occur following disasters: criminal investigations, civil unrest, and stereotyping of community members. It is important to remember that disasters do not just affect individuals. Disasters affect entire communities, as they threaten the normal, everyday way of life and community structure. In each of these topic areas we consider how disaster management decisions impact community reactions in the immediate aftermath of a crisis. In addition, we provide a number of strategies designed to minimize negative psychological reactions at a community level.

It is important to remember that disasters do not just affect individuals. Disasters affect entire communities, as they threaten the normal, everyday way of life and community structure.

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Center for Mental Health Services - Substance Abuse and Mental Health Services Administration, an agency of the U.S. Department of Health and Human Services
several weeks following the disaster) might be needed more than immediate assistance, as there are often more volunteers than are needed for the immediate response effort. With regards to immediate mental health response, the lead agency is often the Red Cross. Also, most State Mental Health Agencies have existing disaster response plans for their specific state. Long-term mental health responses are often coordinated by the local public health system, community mental health centers, school districts, and coordinated networks of local mental health professionals.

<table>
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<th>Following a disaster, changes often occur in community organizations. Changes in community organizations can be both useful and stressful for a community in a time of crisis. Common patterns of community and organizational response after a disaster include:</th>
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| **Community mobilization**  
Individuals and community organizations come forward to help with immediate needs, such as saving lives, caring for the injured, and removing debris. |
| **Community consensus**  
There is typically high community consensus and less conflict immediately following a disaster, as the community pulls together to restore community functioning. However, this consensus does not extend to all aspects of disaster response or continue indefinitely. For instance, it is common for responding organizations to be unclear about their roles, which can lead to disputes. |
| **Convergence**  
Immediately following a disaster, individuals and agencies converge on the disaster site. Managing these additional resources can become problematic for local emergency officials. |
| **Organizational adaptation and innovation**  
Existing community organizations and groups adapt their structure and functioning to respond to the disaster event. Examples include schools and churches holding recovery drives, businesses donating employee time to help with clean-up efforts, and mental health agencies creating hotlines. New organizations may also develop to meet unmet needs. New organizations and organizational structures complicate disaster response coordination, as many of these new organizational forms lack clear responsibilities. |

**References**


Because a number of community agencies are involved in disaster response, it is important for interested community stakeholders to identify those agencies involved and how they can coordinate their services in the event of a disaster. It is beneficial to coordinate with these agencies prior to the onset of a disaster if possible.

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provide timely information through local media channels to promote quick evacuations and protective procedures for residents. In addition, crisis communication experts have learned that residents often prefer receiving updates and warnings from local officials with whom they have built trusted relationships. In times of crisis, local spokespersons can provide a calming influence as compared to state and federal officials who often have little connection to the community. It is imperative to identify these local experts so that they can quickly establish relationships with state and federal experts in an effort to coordinate communication and provide reassurance to the public through statements from familiar faces.

- **Step 3: Set the Communication Ground Rules**

The Communications Team needs to establish rules and protocols for communicating in a crisis situation. These rules should provide detailed information about which team members take the lead in discussing particular aspects of the event and recovery efforts with the media. It may be helpful for the Communications Team to answer the following questions to help identify communication responsibilities:

- What is the topic (e.g., fire risk, contamination, threats to public health, mental-health, etc.)?
- Who is the designated expert?
- Who should they consult with before making public statements?
- Where will they make these statements?

- **Step 4: Identify the Communications Command Center**

More than likely, the Communications Command Center (often called the Joint Information Center) will be the place where most, if not all, public statements will be made. The Communications Team should identify a Communications Command Center that is large enough to house all of the necessary experts, as well as the large numbers of media and concerned citizens who will attend briefings. It is also important to conduct communications from the overarching Event Operations Center so that emergency and recovery officials can make public statements in a timely manner. Typical settings for a Communications Command Center may include: airport hangars, military installations, large school auditoriums, and other very large, centrally located facilities. It is generally unadvisable to attempt to set up Communications Command Centers in remotely located facilities or away from the Event Operations Center.
will occur (hourly briefings are often recommended while the event is unfolding and during initial recovery; daily or twice-daily briefings thereafter). Other tips for working with the media will be discussed later in this section.

- **Step 7: Establish Emergency Contact Procedures**

In this step, Communications Team members need to establish a protocol for quickly connecting with each other in the event of a disaster or terrorist attack. The simple creation of a “phone tree” (where one member calls successive members on the list until they establish contact with one of their colleagues and so on) that includes home and mobile phone numbers and e-mail addresses is usually sufficient.

- **Step 8: Update Plan Annually**

Communications Team members should meet annually to update the Communications Plan and contact information as needed. These meetings also provide an opportunity to reinforce the importance of sticking with the plan in the event that a crisis situation occurs.

**During an Event: Initial Response**

As with most high stress, high demand situations, success in implementing an effective communications strategy during a crisis event is largely dependent upon the time and energy that the Communications Team placed into developing a detailed Communications Plan. Let’s take a look at the priorities for communication as a critical event unfolds. The following procedures provide a general outline for steps to consider when carrying out a Communications Plan during the first hours of a crisis event.

- **Step 1: Activate Emergency Contact Procedures**

Activate the “phone tree” to contact all Communications Team members.

- **Step 2: Assemble Communications Team Members at the Command Center**

It is important to recognize that several local experts will have immediate responsibilities for responding to the crisis. Participation in the Communications Team may not be a high priority for them in the first moments of a crisis. However, it is important that available Communications Team members meet to establish the first phases of the Communications Plan. It is also vitally important that one member assume leadership for the team, at least during the initial phases of the event. Finally, assembled team
✓ Plans for establishing communications among displaced family members.
✓ Plans for sheltering displaced families past the first 24 hours of the event.
✓ Initial assessments of possible causes of the event.
✓ Gross estimations of damage.
✓ Establishment of a rumor control hotline and statements quelling any initial rumors that have surfaced.

- Step 6: Conduct Rumor Control Meetings with Hotline Staffers

It is important to monitor calls to the hotline and address rumors in the media as they surface. Some crisis response planners comment that they have concerns about addressing rumors publicly, believing that they will only serve to spread these rumors to other parts of the community. However, experience has shown that the best strategy is to deal with rumors aggressively, address them openly, and reassure the public that individuals in the Command Center are working hard to make sure that they are given accurate information in a timely manner. Conducting short pre-briefing and debriefing meetings with hotline staffers at the change of shifts is often an effective strategy for passing along information and monitoring rumors as they may spread.

During an Event: Intermediate Response

After the initial hours of a crisis, as the specifics of the disaster and response effort begin to take shape, it is important to start sharing descriptions of the event and rallying community support for taking part in the recovery plan. Consider these tips when formulating your Communications Plan for the 12-36 hours after the initial event.

- Tip 1: Outline Present and Future Steps in Response Plan and Best Estimate of Timeline

In this phase of the Communications Plan, it is important to make sure that spokespersons are beginning to dispense more detailed descriptions of the event and recovery efforts, and providing directions for the needs and continued safety of residents. Key information may include:

✓ Updates on rescue efforts.
✓ Initial assessments of damage and danger areas.
✓ Resources for coordinating communication among affected individuals (e.g., available phone lines, Internet sites, message boards, etc.).
personnel are likely to be placed in a host of situations where they have to make difficult choices between getting information to the public that they believe to be the best estimate at the time, or waiting until they know for sure that it is 100% accurate.

- **Tip 4: Give Citizens a Mission**

This tip is critically important when forming the content of the response and recovery message. After a disaster event, citizens often feel very vulnerable to forces that are outside of their control. Decades of psychological research have shown that this absence of “mastery” is a key ingredient for stress and anxiety in trying times. Effective recovery messages include suggestions for giving citizens a sense of “mission” in helping their community respond to this challenge. City, state, and federal officials were very effective at promoting this sense of “mission” after the World Trade Center and Pentagon attacks of 2001. Several political leaders stepped up to the podium time and time again and encouraged members of their respective communities to perform specific actions that would help with overall recovery efforts. Oftentimes, these actions do not need to be heroic or even extremely difficult. The important thing is that they give each affected resident the opportunity to participate in turning the situation around and regaining mastery over their lives. Some suggestions for promoting a sense of “mission” may include encouraging residents to:

- First check on their own safety and health and report injuries to health care authorities.
- Check on the safety and health of family, friends, and neighbors.
- Evacuate from dangerous areas and assist those who need help evacuating or seeking treatment for injuries.
- Monitor and report rumors to the rumor control hotline. Also, suggest to residents that they should help dispel rumors in their respective communities.
- Emphasize reports of peaceful and helpful responses by members in the community. This message will help quell fears of widespread panic, rioting, looting, and other criminal behavior.
- Assist with the coordination and implementation of recovery efforts (e.g., filling sandbags, conserving water, contributing electrical generators, giving blood, clearing small debris from roadways).
- Volunteer to assist in recovery and rebuilding efforts by offering special skills (e.g., construction, tree removal, health care services, mental health services, educational and childcare services).

Remember, in the absence of good information, or even in the absence of any information, people will make up their own information. And usually, their guesses are likely to be farther from the truth than your estimates.

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Section 4 - Helping Communities in the Immediate Wake of a Disaster
over these issues. It is important for the Communications Team to have a plan in place for encouraging the spread of success stories related to the disaster response to remind members of the community of strategies that worked well during response and recovery efforts. It is helpful to promote this message by developing and maintaining healthy relations with the news media even if investigations are ongoing, contributing to the editorial page of local and national newspapers, and conducting internal inquiries of response agencies to assess failures and successes of the recovery operation.

In terms of the Communications Plan, post-event debriefings allow the team to review and amend the response and Communications Plan as necessary. This is the perfect time to consider the addition or subtraction of members to the Communications Team as needed. For example, Team members may find that is important to add members of the clergy or the local school district if they found themselves scrambling to answer questions related to faith or talking to children during the event.

Finally, the tone of communications in this phase of recovery should include a focus on descriptions of the community as courageous and adaptive. Spokespersons should highlight common values shared among community members that were expressed during the crisis. It is also important to recognize that many members of the community are grieving over the loss of family members or a way of life. At the same time, it is important to point out that the community is now moving toward creating a new future for itself - a future that all residents can work to create together.

References
Quigley, C. (2001). Dual-edged sword: Dealing with the media before, during, and after a weapon of mass destruction event. Military Medicine, 166(Supplement 2), 56-58.
Reports of calm and collected exits from burning jetliners, as with the 1999 crash of American Airlines Flight 1420 in Little Rock, Arkansas, and the mostly calm descent and exit of thousands of people from the two World Trade Center attacks in 1993 and 2001, further suggest that most people will react calmly in times of crisis and attempt to behave in a manner that offers the best chance for survival for themselves and their colleagues. Perhaps more than any other factor, the tendency of an individual to constantly evaluate an unfolding event in terms of the risks to their health and safety, as well as the well-being of others around them, is what defines most individual responses in times of crisis.

Irrationality

The tendency to behave in an adaptive, purposeful fashion, even when under incredible stress, seems to contradict the notion that those affected by disasters are vulnerable to behaving in a dangerous, unregulated, irrational fashion. Movies depicting people running in a crazed fashion along the decks of a sinking ship or away from a tornado are far from the actual truth. The reality is that, when faced with such circumstances, the vast majority of individuals choose to act in a thoughtful, decisive manner (e.g., looking for a life preserver or finding low ground or shelter from the wind). Our experiences with victims of weather-related crises such as Hurricane Andrew (1992), the Upper Midwest and Red River Floods (1997), and various tornado and severe storm events suggest that, even when a crisis unfolds quickly, the tendency to behave in an adaptive, goal-directed fashion holds. We have witnessed countless instances of people calmly organizing and prioritizing personal effects in the face of an immediate, emergency evacuation.

- The benefits of training

Training for, and experience with, crisis situations appears to further advance an individual’s ability to respond to events in a calm, rational manner. The military emphasizes training in critical decision making in preparation for often-chaotic battlefield environments. Likewise, experience with disasters provides communities with “on-the-job” training in disaster preparation and recovery. For example, residents of the Caribbean, Gulf Coast, and Southeastern seaboard have become so accustomed to the threat of major hurricanes that most have developed a calm routine for preparing their families and property for possible evacuation and severe damage. The same could be said for residents of the West Coast in terms of their response to earthquakes. Experience and training appears to solidify a tendency for rational decision making in times of crisis by giving individuals an established set of procedures or decision steps that they can rely on when emotions and stress levels are running high.
London in World War II, and the observance of precautions among Americans after the Anthrax attacks in 2001 support this conclusion. However, the tendency of individuals to follow directions during a crisis event can be influenced by many factors including:

- The degree to which they perceive these instructions as being helpful.
- Their belief in the expertise of the communicator.
- Their perceptions of the potential consequences for following or disobeying these directions.

Consistent across each of these factors is the underlying theme of credibility. Namely, individuals will be more likely to follow the directions of experts and leaders if they perceive these communicators to be:

- Possessing accurate and detailed information of the situation.
- Fully aware of the potential dangers of the situation that they face.
- Genuinely concerned with protecting the safety of each of the affected individuals and their loved ones.

Lack of Altruism

Isolated stories of looting and self-serving behavior during and immediately after a crisis event often lead many to perceive individuals as likely to act in a self-serving manner in such times and even incapable of performing unselfish, heroic acts. In a review of research on individual reactions in times of disaster, Quarantelli points out that such antisocial behavior is, in fact, quite rare. Rather, the norm is better illustrated in the actions of victims of the crash of American Airlines Flight 1420. Many stopped to assist fellow passengers exit the aircraft by lifting passenger seats, pulling back metal bulkheads, and carrying victims to safety. All of this occurred despite the danger of fire engulfing the crash site, raising the risk that the plane’s fuel tanks would explode. Similar behavior was observed in a host of disasters including the September 11, 2001 terrorist attack on the Pentagon, the 1995 bombing of the Murrah Federal Building in Oklahoma City, and the 1989 Loma Prieta Earthquake.

Highly publicized incidents of looting and other antisocial behavior do occur, but are relatively rare in comparison to the altruistic, often heroic, acts during and after a crisis. Further, Quarantelli points out that such mob behavior is most often conducted by those outside the affected community, by individuals who travel to the disaster site seemingly with a mind to take advantage of the situation. Even so, these individuals are typically far
hundreds of sickened and frightened passengers rushed, stumbled, and fought their way out of the affected cars. As the invisible gas spread across the platform and up to the street level, hundreds of people began to cough uncontrollably, vomit, and in some cases, collapse. Twelve died and over 5,000 sought treatment as a result of this attack.

One of the interesting observations from this event is related to that last statistic (5,000 sought treatment). Only 1 in 5 of the individuals who went to local hospitals and clinics to seek treatment were actually casualties. Victors described being terrified by seeing other passengers become violently ill after inhaling the toxic vapors. However, these bystanders could not recognize the source of danger, as sarin gas is not visible. They simply witnessed the effects of the gas on others. This fear of the unknown, this inability to identify the source of the threat, seems to have led many to panic and assume the worst. The potential for panic behavior in the face of invisible chemical, nuclear, and biological threats is one aspect of mass destruction warfare that makes it potentially more effective than conventional warfare for producing panic.

Social Contagion

The impact of social contagion - defined as, “the spread of affect or behaviour from one crowd participant to another; one person serves as the stimulus for the imitative actions of another” - can further elicit panic behavior in crisis situations. This effect is again likely to be heightened under conditions that present unclear threats and few cues for steps a person can take to decrease their risk of harm. Bartholomew and Wessely point out that social contagion effects are often manifested in the spread of psychogenic illness - that is, physical illness that is brought on from anxiety, stress, fear, or some other psychological distress. However, the effects of social contagion are often more varied. When under high stress conditions where the threat to one’s safety is unclear, many individuals will look to their peers for clues regarding their risk level and what actions they should take to protect themselves. If they observe others behaving calmly, rationally, and without observable fear or panic, they are more likely to behave in a similar manner. However, the effects of even a small percentage of peers who begin to behave in an agitated or panicky manner can be a powerful catalyst for the spread of fear and panic among the entire group.

Social contagion introduces a whole new level of unpredictability when it comes to group behavior during a crisis. While it remains clear that most groups move together in an adaptive, rational, and mutually beneficial fashion during a crisis, there still exists the potential for one or two individuals to swing the group dramatically toward panic behavior. These individuals may possess poorer coping abilities under stress, may be viewed

Case Example: 1995 Tokyo Sarin Attack

Unclear Situation:
Bystanders saw people exit the subways coughing, vomiting, and in some cases collapsing. However, it was not clear where the threat was coming from, as the gas was not visible. This made it difficult for people to know how to protect themselves.

Outcome: For every 1 physical casualty, there were 4 more non-physical casualties who presented due to concerns about exposure.

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Sudden terror attacks promote fear among groups of people by striking with little warning and reducing perception that individuals can limit their risk for future attacks.

Terrorists attempt to promote fear in a population by serving notice that citizens are under attack. In this way, individuals affected by terrorist attacks differ from those who are victims of a natural disaster in terms of the sense of purposefulness of the event. Naturally occurring phenomena are typically interpreted as “once in a lifetime” events. Terrorist attacks typically insinuate that there are more to follow. Those directly affected, as well as those who are simply members of the affected community, may experience a heightened vulnerability for panic if they perceive themselves to be targets for unconventional warfare. It should be noted, however, that group panic is a relatively rare response in industrialized nations after a terrorist attack. To the contrary, communities in these well-developed nations often respond by rallying for community defense and resisting panic as a sign of nationalistic pride and cohesion. Similar responses may not always hold true for less developed or war-ravaged nations (as suggested by some of the experiences in places such as Somalia, Rawanda, and Bosnia) where the ability of the community to fend off further attack is in question.

The Role of the Media

Several sections in the Triumph Over Tragedy curriculum attempt to describe the interaction of media activity with the unfolding disaster event. Nowhere is this likely to be a more important issue than when describing the potential impacts of the media on public perceptions of a terrorist event and the risk for panic. The media controls much of the message that local officials and experts attempt to communicate to the general population. As was noted earlier in, “Myths of Crisis Reactions,” public officials often go to great lengths to present a calm and comforting message to the public in an effort to reduce the risk for panic. Professional journalists often report feeling a tension between promoting these efforts to reduce the risk of panic and uncovering the facts of the situation. Thus, public officials and members of the media often find themselves at odds after any disaster situation, especially those that involve a terrorist attack.

In American society, the press maintains a role of providing oversight investigation of government activity. Journalists often feel a responsibility to question officials about the preparedness of the community for such an attack and the likelihood that they can fend off further attacks. Members of the media are often left to question whether veiled or ambiguous responses by officials are truly efforts to reduce public anxiety or attempts to escape responsibility for allowing the attacks to occur. The natural tension that occurs between government and the press...
UNIQUE SOURCES OF STRESS IN THE FACE OF BIOLOGICAL, CHEMICAL, AND RADIOLOGICAL WEAPONS

Weapons of mass destruction include chemical and biological agents, radiological and nuclear weapons, and explosives. These weapons are referred to by the acronym CBRNE (chemical, biological, radiological, nuclear, and high-yield explosives). In the current section, we focus mainly on biological, chemical, and radiological (e.g., dirty-bombs) weapons. Although the term “weapons of mass destruction” implies that these kinds of weapons cause widespread physical devastation, many of these weapons would more accurately be called “weapons of mass disruption” for their significant psychological impact. These weapons would likely result in high levels of fear and uncertainty even if the physical impact from the weapon was minimal. As an example, a dirty-bomb may be relatively small, possibly resulting in little immediate physical damage to people. The bulk of the damage would lie in possible long-term health effects of any radioactive material released and the fear and uncertainty regarding exposure to those radioactive materials.

To date, our country has never experienced a large-scale attack using biological, chemical, or radiological weapons. Many experts have suggested that we have been extremely fortunate in this regard. However, events since September 11, 2001 require that we plan for a large-scale attack with biological or chemical weapons, even though we cannot entirely predict public reaction to such an attack. Fortunately, we can draw on examples of bioterrorist attacks in other countries (e.g., Tokyo subway sarin gas attack) and environmental accidents in our country and others (e.g., radioactive material releases from Three Mile Island and Chernobyl, toxic waste dumps such as Love Canal) to help us prepare for the possibility of biological or chemical attacks. Similar to nuclear accidents or cases of environmental contamination with hazardous chemicals, most biological or chemical agents would be undetectable by the public. The lack of physical cues regarding danger could lead to considerable levels of stress for many individuals. In fact, the psychological impact of such an attack would likely far outweigh the actual physical impact, as was the case following the 2001 anthrax mail attacks.

In the following sections we focus primarily on bioterrorism, as this potential threat has received a high level of attention with regards to preparedness measures. However, many of the concepts we discuss will apply to scenarios involving chemical or radiological agents as well, since these weapons share

The psychological impact of a biological, chemical, or radiological attack would likely far outweigh the actual physical impact, as was the case following the 2001 anthrax mail attacks.

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Lack of Control Over the Unknown

One of the reasons that bioterrorism is so threatening is that it involves an inability to control the unknown. If you are exposed to a colorless, odorless, "invisible" biological agent without warning, you have no control over your exposure to that agent. In contrast, in the case of a fire, the source of danger can be seen, thus allowing some control for escape from the danger. Because invisible hazards have no outward warning signs, individuals often find out well after the fact that they have been exposed. By the time they find out that they have been exposed there is no longer time to avert danger.

Although some forms of chemical terrorism may include noticeable warning signs such as distinct smells or eye irritation (e.g., sarin gas, chlorine gas), most forms of bioterrorism will come with no warning (e.g., anthrax, smallpox, and plague are "environmentally" invisible), thus it is impossible for an individual to know their exposure level and adequately protect themselves.1 During the anthrax mail attacks of 2001, the victims were not aware of their exposure until they became ill. By the time it was discovered that postal workers might be in danger, exposure had already occurred. Although postal workers were given antibiotics, they could not be given guarantees against illness. Possible bioterrorist incidents would likely have a number of unique characteristics that would contribute to citizens feeling they have little control over the situation.

Lack of Quality Information

There may be a lack of information regarding where a biological agent was released or the type of agent used. In the case of a viral or bacterial agent, the first signs of an attack may not be present until days or weeks after the initial release due to prolonged incubation periods, thus making it more difficult to assess the initial point of release and determine who else may have been exposed. Even though biological monitoring systems are now in place in some cities to rapidly identify an attack, they are not in place everywhere a potential terrorist may choose as a target. Terrorists also may provide misinformation about the agents and locations of release in a deliberate attempt to heighten fear. In addition to these issues, there is always the possibility of conflicting information from different sources (e.g., two scientists with different opinions about the level of danger associated with a particular agent) or false information distributed over the Internet. Lack of quality information contributes to an ambiguous situation that is difficult to control.
Fear of Repeat Attacks and Hoaxes

There is always the possibility of repeat attacks in the same or different locations. Repeat attacks could add to the lack of control felt by citizens. In addition, there would likely be numerous hoaxes that capitalize on people’s fear and anxiety. For example, many individuals received harmless white powders through the mail following the anthrax mail attacks of 2001. This contributed to a sense of lack of control, as it was difficult to distinguish between real threats and hoaxes.

The Impact of Fear on Behavior

When citizens are faced with situations in which they have relatively little control over their exposure to danger, they may do whatever they can to gain back some sense of control. Gaining some sense of control over a perceived threat is a basic human motivation. Individuals will often seek some perception of control even when reason suggests that their perception may be unrealistic. Some examples might be:

- Choosing to avoid people or places associated with the threat

In some cases people may chose to avoid individuals who were infected with a biological agent and have recovered, cities where the initial attack occurred, or products made/grown in areas where an attack occurred. Evidence of such avoidance has been seen following natural disease outbreaks in humans (plague in India, 1994)\(^5\) and in livestock (Mad Cow Disease in England, 1995).\(^\text{4}\) Additionally, people may choose to avoid attending public events. Following the 2001 anthrax mail attacks, 11% of adults surveyed stated they or someone else in their home avoided attending a public event due to fears of anthrax.\(^6\)

- Choosing to leave an area

Although total panic is unlikely, it is possible that people may attempt to evacuate an area in the case of a disease outbreak or radiological/chemical event. This phenomenon happened during the 1994 plague outbreak in Surat, India.\(^6\) It also occurred during the Three Mile Island accident, where 45 people evacuated for every 1 person actually asked to evacuate.\(^7\) Factors such as availability of treatment, perceived escape window in order to avoid infection/illness, or feeling that information provided by officials is untrustworthy, confusing, or contradictory may increase the likelihood of people leaving an area.\(^8,9\) Additionally, it is possible that individuals may not want to attend work or have their children attend school.

Case Example: 2001 Anthrax Mail Attacks

Fear of repeat attacks and hoaxes: Following the 2001 anthrax mail attacks, a number of individuals sent harmless powders through the mail labeled “anthrax.” These mailings led to heightened fear. In addition, people reported numerous “unidentified white powders” due to a concern that they might contain anthrax.

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responding to a bioterrorism event. If citizens believe that a plan is in place and that the health system has the capacity and skills to respond effectively, public fears will likely be lessened in the event of an actual attack. Following an event, the presence of a trusted spokesperson providing frequent, cohesive updates and specific information about how to protect oneself and one’s family can help to calm citizen fears. Messages should boost public confidence that official organizations are in control of the situation. Also, good communication lines help to squash rumors before they become too difficult to control. Citizens want to hear that officials are taking specific actions to handle the threat, and they also want to know what they can do. Providing specific instructions to citizens help them to take action. Finally, providing consistent information is extremely important. Inconsistent information during the initial stages of an event will heighten public concern. Please see, “Communicating With Citizens in a Time of Crisis” for a more in-depth discussion of communicating with citizens after a critical event.

- Educate citizens

People feel more in control when they have relevant information and have available some strategies for controlling their level of risk. For example, if citizens are educated about the risk factors for spread of a contagious virus, they can take appropriate measures to reduce their risk (e.g., wash hands, avoid being around others who are sick). Recent research reveals that many people have poor information about possible bioterrorism risks, such as smallpox. As an example, 78% of respondents in one study believed there is an effective medical treatment for smallpox, when in fact there is no specific treatment. Public information campaigns could help increase knowledge about biological threats. Plans for distributing such information during the height of an emergency situation should be developed prior to a biological event.

- Plan for citizen distress

Planning for bioterrorism should include strategies for addressing citizen fear and anxiety. This planning might include consulting with mental health professionals, compiling a list of referral sources, and educating the public. Planning also might include considering possible public response to emergency plans. For instance, the intensity of the official response to an event may increase citizen anxiety (e.g., a large ambulance, police, and HAZMAT presence). Alternatively, citizens may voice their disagreement with medical plans that prioritize who would receive treatments that are in limited supply. It is unlikely that these response activities could, or should, be modified in order to limit public anxiety. Rather, it is important for
Fear of Illness

In the event of a bioterrorist attack, history shows that concerned community members often overwhelm medical resources. For example, after the 1995 sarin gas attack in Tokyo the number of individuals reporting symptoms not linked to sarin exposure outnumbered truly affected individuals by a ratio of 4:1. Some authors feel that the number of individuals seeking care for symptoms not directly linked to a biological or chemical agent might exceed actual cases by a ratio of 5:1, or even 10:1, in the event of a large-scale attack involving a public release of an agent. Thus, if 100 people presented at a hospital with symptoms directly linked to a biological agent, up to 1000 more people could present with symptoms who are in fact not ill.

It is possible that this ratio could be even higher when the characteristics of the event are even less clear. For example, in Goiania, Brazil, a container filled with radioactive material was stolen from an abandoned medical clinic and subsequently sold to a junk dealer who opened it and discovered a glowing material, which he passed around to friends and relatives. This resulted in the deaths of several individuals who had been in direct contact with the material. Following discovery of this event, citizens demanded screening, which resulted in officials offering medical screenings for all people who felt they may have been exposed. At the screenings, for every one person who was actually exposed to the radioactive material, another 500 people were screened who were concerned but not exposed. This example suggests that considerable anxiety can result from a relatively small, isolated event.

Feelings of anxiety arise from our strong fears of infection and death from contagious or life-threatening diseases. Anxiety combined with uncertainty of exposure will result in many people seeking medical assistance following a biological attack. A surge of individuals seeking medical care could overwhelm local health systems, especially in rural areas. Indeed, a report by the Office of Rural Health Policy on rural emergency preparedness noted that rural public health units were overwhelmed with individuals concerned about anthrax following the 2001 anthrax mail attacks. Likewise, citizens in urban areas demanded testing and treatment for anthrax exposure. Because of this demand, the Centers for Disease Control issued recommendations against widespread testing and treatment. In the Washington, D.C. area where some of the letters were delivered, 11% of those surveyed reported using health services due to the anthrax attacks (e.g., talking with physician, getting antibiotics, and consulting someone about fears/anxieties). Although this percentage may seem fairly low, it translates into a large number of people seeking medical care or advice. The

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Anxiety combined with uncertainty of exposure will result in many people seeking medical assistance following a biological attack. A surge of individuals seeking medical care could overwhelm local health systems, especially in rural areas.

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agent even though they have only been exposed to someone who has complained of flu-like symptoms. As you can see, the effects of psychological conversion can quickly spread among a populace and contribute to the high rates of health care seeking behaviors by perfectly healthy individuals during a biological terrorism event. In some cases, health officials can counteract the process of psychological conversion by identifying the risk of exposure for the individual, discussing the low probability that they have actually been exposed, and educating the patient about the powerful connection between anxiety and symptoms under such conditions.

Heightened concern regarding physical symptoms may continue well past the initial terrorist incident, depending on the biological agent, chemical, or radiological material released. For example, individuals who know they were exposed to radiation or toxic chemicals may continue to have concerns over new physical symptoms for years, as they may believe new symptoms are a sign of cancer or some other problem caused by exposure to these “invisible” agents.15

Because many individuals will present for treatment due to anxiety about being ill, it will be important to include mental health professionals in response planning. Mental health professionals can play a key role by educating the public regarding anxiety following a bioterrorism attack, helping assess anxiety symptoms in individuals presenting for medical treatment, and providing emotional support for those concerned individuals that do not have symptoms attributable to the biological agent. Additional strategies for addressing anxiety following a bioterrorism event are listed below.

Develop Public Service Announcements and Educational Efforts

One reason that biological agents spark fear is because most individuals know very little about the symptoms, treatment, risk factors, and other characteristics of these agents. For example, when the public was first told about the existence of the AIDS virus, there was a considerable amount of fear associated with the disease, as people knew little about the new and unfamiliar disease, there was no cure and no effective treatments, and the ultimate outcome was early death. In addition, many people had incorrect information regarding how the virus was spread. Thus, it is important to provide the public with accurate information to increase their knowledge of the biological agent used in an attack.

Recent survey research suggests that many Americans have incorrect information about smallpox and smallpox vaccine. For instance, 78% of

Because many individuals will present for treatment due to anxiety about being ill, it will be important to include mental health professionals in response planning. Mental health professionals can:

- Help educate the public regarding anxiety.
- Provide emotional support for concerned individuals.

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symptoms are normal and provide appropriate support. Due care should be taken in utilizing an observation strategy, however, as some individuals could become angry if they feel they are being held but not treated.

Individuals presenting with symptoms that are not the result of the biological agent should be provided with appropriate support before they are sent home. Dismissing symptoms and telling people they have no reason to worry could actually result in an increase in perceived symptoms, as well as anger, for some individuals. Likewise, telling people they should see a psychiatrist or psychologist instead could also increase anger. Individuals may not trust that a “healthy but worried” diagnosis is accurate.

Considering the dangers associated with returning to their home and family with the potential for spreading a deadly virus, some patients may resist attempts to dismiss them as not needing further observation or care. Still, in any moderate-scale event, first responders are likely to be overwhelmed with requests for screening and treatment and will often be unable or unwilling to spend more time with individuals they have diagnosed as experiencing anxiety. Appropriate supports (e.g., mental health professionals, clergy) should be available to reassure individuals that their concerns and anxieties are normal and help educate people about the links between feelings of anxiety and physical symptoms. These supports should be provided in a seamless manner with healthcare interventions, such that potential stigma or anger associated with being referred to a mental health professional can be reduced.

Provide Training to Health Care Professionals and First Responders

Specialized training on the following topics should be made available for health care professionals and first responders:

- The relationship between anxiety and physical symptoms.
- How to evaluate anxiety symptoms following a bioterrorist attack.
- How to talk with patients about the relationship between anxiety and physical symptoms.
- When to consult with or refer to a mental health professional.

These topics are an integral part of bioterrorism preparedness for any health care professional or first responder who may be involved in a response to an actual event. This includes primary care physicians, who are often the point of first contact when individuals have health care concerns. A recent study conducted in Israel found that 64% of surveyed individuals would seek treatment from their family physician in the case of an anthrax attack.
Quarantine

Some bioterrorism incidents would require the use of isolation or quarantine procedures to reduce the spread of a biological agent. As the meaning of these two terms is often confused, we define both before discussing their relevance to a potential bioterrorism attack. Isolation involves separating individuals known to be infectious from healthy individuals. This may involve placing persons with illness in separate hospital rooms or wings to prevent the spread of infection. Quarantine refers to mandatory restriction of potentially exposed individuals to a designated area, which may include a hospital, sections or the whole of a city, or potentially larger regions such as a county. Quarantines have been used throughout history to curtail the spread of natural infectious disease outbreaks. Such procedures were utilized during the 2003 Severe Acute Respiratory Syndrome (SARS) outbreak, with affected individuals and people living in some high-risk areas being asked to remain in their homes or apartment buildings. An example of quarantine in U.S. history involved restricting immigrants from disembarking ships during the Cholera epidemic of 1892. Ships carrying passengers from European countries with Cholera outbreaks were detained at New York harbors in an attempt to prevent the spread of the disease to New York City residents. Thus, quarantine is more restrictive than isolation and usually involves some sort of enforcement by officials.

Quarantine and isolation procedures are two of the many options considered in the event of a highly contagious biological agent with limited or no available treatment or vaccine. However, health and government officials would likely spend considerable time deliberating the legal issues involved in imposing mandatory quarantines and limiting civil rights. In addition, there are a number of possible drawbacks involved with imposing quarantines including increased risk of disease transmission among those quarantined, mistrust in government recommendations, stereotyping of quarantined individuals, and the possibility of citizens disobeying quarantine orders. DiGiovanni and colleagues conducted a study where they gave people information about a simulated bioterrorist attack and asked how they would respond to rumors that residents could be quarantined. A small percentage of individuals (6% of residents, 13% of spouses of first responders) indicated they would attempt to leave the area regardless of consequences. Although this was a simulation study, historical examples reveal that resistance to imposed quarantine has occurred in cases of natural disease outbreaks.

Quarantines have been utilized in the past to control the spread of communicable diseases including:

- Severe Acute Respiratory Syndrome (SARS)
- Cholera
- Smallpox
- Ebola virus
- Plague

A historical example of quarantine will help to illustrate such drawbacks. During the fall of 1893, a smallpox outbreak occurred in Muncie, Indiana. Over the course of the outbreak, attempts to control the spread of disease

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made in the absence of public scrutiny or input could lead to mistrust of
government recommendations.

Give Citizens a Mission

For citizens that must remain under quarantine but are not ill, participating
in constructive helping tasks may help provide a sense of control and
purpose. For example, local officials could develop a list of tasks for which
interested citizens could volunteer. As was seen following September 11,
2001, large numbers of people are often looking for ways to help in times of
crisis. Allowing them to help in some way, even small ways such as donating
needed supplies, helps them maintain some sense of control.

Provide Specific Information

As much as possible, provide people with specific information about the
biological agent, its effects, and appropriate measures to decrease the
spread of the agent if it is contagious. Specific behavioral instructions
(e.g., wash hands for 30 seconds prior to eating) will be more useful
than vague recommendations. The public will likely need considerable
education and justification regarding a decision to impose quarantine,
vaccinations, or other restrictive measures following a bioterrorism
attack. However, most citizens will cooperate if given clear explanations
of the necessity for certain measures, as was seen following the anthrax
mail attacks in 2001. On the other hand, the use of force or threat of
punishment to enact quarantines or other health measures will likely
lessen cooperation and decrease public trust. Some evidence suggests
that citizens desire to receive information about an outbreak from their
local authorities and public health officials in addition to information
reported by national authorities (i.e., CDC) and government officials.

There are likely to be numerous rumors and inaccurate information in the
public domain. These rumors will need to be aggressively addressed by a
reputable source (e.g., local health officials, Surgeon General) to maintain
public trust. One common mistake that public officials make is in their
failure to publicly address rumors that they perceive are circulating
amongst only a small group of citizens, or rumors they view as so ridiculous
that no one really believes them. Officials may be concerned that they will
somehow give credulity to such rumors by simply denying them in a public
forum. However, the opposite is typically the case so long as the person
addressing the public possesses accurate and detailed information to refute
the rumors and is considered a trustworthy source. Once again, there will
likely be heavy media coverage during such an event, thus increasing the
need for frequent, consistent, and trustworthy messages from local officials
to help prevent and quell rumors.
Risk Perception and Communication

Many everyday risks become an accepted part of life, such as the risk of auto accidents or risks associated with eating fatty foods and smoking. Likewise, most people are aware that there are risks associated with technologies and industries. But to what degree do people understand the possible risks from bioterrorism? In the unfortunate event of a bioterrorist attack, how could information about risk be effectively communicated to the public? Why would it even be important to think about this issue?

We may not realize it, but knowledge or perceptions regarding risk influence behavior. For example, if we think it is highly likely that something bad will happen (plane crash), we may avoid certain behaviors (flying). Therefore, it is important to understand the relationship between risk perception (i.e., how dangerous we think a situation is) and behavior in situations involving disasters or emergencies where risk is an issue. A frequently cited example is the Three Mile Island nuclear accident in 1979. In the face of inconsistent and changing information from government officials, operators of the plant, and the media regarding the risks involved, over 140,000 people decided to evacuate the area, even though they were not advised to do so by authorities. Understandably, humans tend to fear substances or diseases that are associated with death. Examples are radioactive material, toxic chemicals, cancer, and AIDS.

Yet many people do not fully understand the risks involved with certain substances (e.g., radioactive material) or how certain diseases are acquired or spread. Misperceptions regarding risk have an impact on people's behavior and decision-making when confronted with those risks. Imagine for a moment what might happen if large numbers of people decided on their own to evacuate a city following a bioterrorist attack. Although outright panic is highly unlikely, such an evacuation would likely lead to a number of problems including clogged roadways, difficulty tracking those who might have been exposed to the biological agent, or potential spread of the agent to other areas. Thus, it is important to think about the impact risk perception has on behavior and what can be done to effectively communicate risk information to the public in emergency situations.

The U.S. Department of Health and Human Services has developed an excellent resource for risk communication during emergencies entitled, “Communicating in a Crisis: Risk Communication Guidelines for Public Officials.” Please see the Appendix for information on how to obtain a copy of this publication. Other resources exist as well. Our purpose here is not to recreate these resources, but instead to provide an overview of risk perception and communication and how these processes interact with the

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What Risks Concern Citizens?

Disaster situations can involve a number of potential risks. For example, buildings may be unstable following earthquakes, there may be a risk of fire spreading to populated areas during widespread forest fires, or there may be the risk of explosions or illness following chemical spills. Risks involving harm to health or life, or the threat of harm, are likely to cause concern for many people. For instance, exposure to high levels of radiation may invoke fear because people are concerned about the potential for illness or death. Likewise, there has recently been fear regarding a new illness, SARS (Severe Acute Respiratory Syndrome). With regards to bioterrorism, many people were worried about potentially contracting anthrax through the mail in late 2001. Overall, people will be most concerned with risks that pose significant and severe threats to their health and life.

Factors Which Increase Worry and Anxiety

Worry and anxiety will likely increase if there is substantial uncertainty regarding whether people may be at risk. For example, if a dirty bomb (i.e., conventional bomb designed to explode and spread radioactive material) were to explode in a subway system, there would be considerable uncertainty regarding the long-term risk for individuals using the subway system. Likewise, the level of personal control over a risk will impact public response. Risks that are “ticking time bombs” (e.g., future possible risk of cancer) also may be particularly distressing, as may be risks that are more personally relevant (e.g., if you live a mile away from a nuclear accident versus 1,000 miles away).

The availability of knowledge is also important, as people often overestimate the occurrence of events that are more publicized and thus more available to memory. As an example, people tend to overestimate their chances of dying in an airplane crash versus dying in an auto accident, in part because airplane crashes receive significant media attention and auto accidents generally do not. This phenomenon is often referred to as the “availability heuristic.” Basically, people tend to overestimate the likelihood of an event if information about that event is easier to access or more prevalent. Thus, events that receive heavy media attention appear to happen more frequently than statistics would suggest. In the case of biological threats, a heavily publicized outbreak could lead to people overestimating their chance of illness or death from that threat. For instance, every year people die from the flu, but emerging diseases like SARS and West Nile virus, which affect fewer people, capture more media attention.

Another important factor is government/agency response to the event. If the response appears competent, fears may lessen, but a response that the

Case Example: Three Mile Island

Strategies:

- Pre-plan a communication strategy for crisis events.
- Hold regularly scheduled press conferences.
- Funnel all media questions and press releases through a communications team to increase consistency of messages.
- Provide information in terms the public and media can understand.

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SECTION 4 - HELPING COMMUNITIES IN THE IMMEDIATE WAKE OF A DISASTER
Factors That Build Public Trust

Trust is a key variable in risk communication, as information conveyed to the public is only useful if the public trusts and believes the information to be sound. Research has shown several factors to be related to public trust in cases involving environmental risks, including showing care and concern, commitment, competence, and honesty.5

In times of crisis, people will be more likely to trust and follow recommendations if:

- They perceive instructions as being helpful.
- They believe the communicator is an expert.
- They believe the potential consequences for disobeying official instructions are worse than the consequences for obeying instructions that might later turn out to be unnecessary or incorrect.

People will be more likely to trust crisis communicators if they believe:

- The communicator possesses accurate and detailed information of the situation.
- The communicator is fully aware of the potential dangers of the situation that they face.
- The communicator is genuinely concerned with protecting the safety of each of the affected individuals and their loved ones.

Goals of Risk Communication in Emergency Situations

The main goals of risk communication include:

- Lessen public anxiety, fear, and concern.
- Give specific instructions to the public regarding what precautions they should take, if any, or what they should do in the case of questions.
- Deliver clear, accurate information in a timely manner (e.g., regular briefings).
- Handle uncertainty in a straightforward manner. It is better to publicly recognize the uncertainties of the situation and describe your levels of confidence in information rather than stand firmly behind incomplete information or unsubstantiated facts.
- The overall goal is to influence the public’s behavior. In other words, you are trying to convince people to take some specific action, stop doing something, or take no action at all depending on the situation.6

Case Example: Goinia, Brazil

Strategies:

- Plans for addressing citizen fear and anxiety are an essential part of planning for bioterrorism or any event involving uncertainty or health risk.
- Develop a detailed plan for screening concerned citizens.
- Have a plan in place to provide reassurance for the “worried well.”

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what people should do (e.g., where to evacuate, what self-protective equipment to use/not use, where to go for medical advice, or what to put in an emergency kit).

Address the Diversity of Opinion on Matters of Risk

Due to the inherent uncertainties involved in most risk situations, it can be difficult to convey information to the public. Estimates of risk may vary greatly depending on how those risks are calculated. This range of risk estimates often poses a problem for media outlets or others who are trying to provide the public with information. If experts differ in their assessment of risk, which source of information should be reported? The answer is ambiguous, which can lead to differences in information provided to the public through media and other sources. The media have a difficult job in emergencies involving risk information, as they are relying on experts for information, and these experts may have vastly different interpretations of the risk for a given situation. Additionally, experts may use scientific and technical terms that are unfamiliar to reporters. In many cases it may be necessary to gather information from a large number of sources to provide a complete assessment of risk, thus further complicating the job of reporters.

How should spokespersons handle this diversity of opinion? Media outlets pull for the dissenting opinion because it becomes the story. They see it as part of good investigative journalism. The best strategy is to sample a variety of opinions. Acknowledge some diversity of opinion but make your case that you have examined these opinions, and the data behind them, and have confidence in your estimates. Such a strategy reassures the public that you are sampling a variety of experts, looking at all the data, and are not trying to hide facts or opinions that you feel may be “unhealthy” for the public.

Address Stereotyping

In the event of a bioterrorist attack, people may attempt to avoid others who they believe have been exposed to the biological agent. This issue needs to be addressed with the public in order to prevent discrimination. Please see, “Protecting Vulnerable Citizens From Stereotyping and Discrimination” for further information.

Enhance Communication With Citizens

Below is a list of tips for enhancing communication with citizens in risk situations. As you will see, many of these tips overlap with tips for communicating with citizens following any number of emergencies. The key, as always, is to have open and honest communication lines with the public.

Case Example:
Anthrax

Strategies:

- Develop educational materials. Ideally, these materials will be ready prior to an attack and will be available in different languages.

- Provide citizens with specific steps to take to reduce their risk of exposure.

- Provide training programs to help physicians recognize and address patient anxiety in the wake of bioterrorism.

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know the results of these inspections. If no inspections occur, fear and anger would likely increase.

References
11 Slovic, P. (1986). (See reference 9)
12 Gray, G. M., & Ropeik, D. P. (2002). (See reference 8)

Clear, consistent, frequent, and trustworthy communications are very important during disasters involving health risks. Please consult the section entitled, “Communicating With Citizens in a Time of Crisis” for further information on developing communication plans and communicating with citizens during emergency situations.

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Dramatic Coverage

Media outlets compete for viewers, and they may look for dramatic aspects of a story to increase their audience or readership. However, these dramatic aspects can increase anxiety for some individuals. Dramatic aspects might include choice of words (e.g., “this killer disease,” “the only way to insure you will not die is to get vaccinated,” or “what every American needs to know”), choice of background music, or showing repeated pictures or footage of individuals killed or seriously ill with the biological agent. Additionally, reports often feature interviews with “experts” that increase the drama of the story. At times these experts may exaggerate the scope of a problem by discussing the “worst case scenario,” even if this scenario is highly unlikely. Discussing worst case scenarios may lead to more anxiety and fear than is necessary.¹

Timing

Media coverage may have different meanings for the public depending on the other news of the day. For instance, if a story on smallpox preparedness measures airs on the same day in which there is an increase in the nation’s security alert status, citizens may perceive a higher risk or feel more anxious regarding the possibility of a smallpox attack. Although public education and preparedness measures are very important, the timing of education efforts or news reports may influence the public’s interpretation of information.

Amount and Extent of Coverage

Continuous media coverage of a relatively localized event could lead to public fear in places that are far removed from the threat. Such was the case following the anthrax mail attacks of 2001. Although the attacks and subsequent illnesses were localized to only a few cities, people everywhere in the United States began to worry about handling their mail.² This phenomenon is the result of something psychologists refer to as the “availability heuristic.” Basically, people tend to overestimate the likelihood of an event if information about that event is easier to access or more prevalent. Take airplane travel as an example. Airline crashes often receive heavy media coverage, which can make it appear that airline travel is more dangerous than other forms of travel that receive less intense media coverage (e.g., automobile crashes). Likewise, extensive coverage of responders and healthcare professionals in protective gear also may raise fears. The mere presence of extensive media coverage could make the risk of danger appear higher than it actually is, as such coverage may make examples of the risk easier to remember.³,⁴

Extensive media coverage may make some risks appear greater than they actually are, as was the case during the anthrax mail attacks in 2001. This phenomenon is the result of something psychologists refer to as the “availability heuristic.” Basically, people tend to overestimate the likelihood of an event if information about that event is easier to access or more prevalent.

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pressures to attract the most readers/viewers, and conflicting information sources.

- Include members of the media when developing crisis communication plans

It is important to solicit media input when developing crisis communication plans in a community. Collaborating with the media helps community leaders learn about common media practices and priorities in a disaster situation. In turn, community leaders can help members of the media understand local priorities for response and recovery. This process can lead to the identification of potential areas of conflict. Collaboration on a crisis communication plan provides the opportunity to identify and resolve such conflicts before a disaster occurs. Please see, “Communicating With Citizens in a Time of Crisis” for further information.

- Develop a list of local experts

Develop a list of experts in the community that can provide information to the media during different types of crises. It is important to make sure these individuals work together, as well as work with local leaders, to provide consistent messages to the media in times of crisis. Oftentimes communities will establish a Joint Information Center following a crisis to provide a location for media representatives, community officials, and experts to gather so that the information provided to the media is consistent and up-to-date.

References


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**Strategies for working with the media:**

- Educate members of the local media about psychological reactions to bioterrorism.
- Develop strong media contacts.
- Include members of the media when developing crisis communication plans.
- Develop a list of local experts.

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support groups or informal support in family and friends. Community leaders can educate and inform individuals of the need for support services to facilitate healthy coping, as well as make public statements supporting the grieving families. To aid community members in locating sources of support, develop a list of local mental health professionals and support groups.

- Make public statements supporting grieving families and recognizing their losses

Public statements of support and acknowledgment can serve to strengthen a sense of community and provide support for community members. Community leaders should remind those affected by the event that justice might be a long process, despite vigorous efforts to find and punish those responsible. During this process community leaders can help families feel a sense of connectedness and give reminders that others recognize their losses are important. Community leaders should also acknowledge the positive and heroic qualities of those affected by the tragedy. Additionally, it is important to acknowledge public frustration with lengthy investigations.

- Keep people informed of progress on investigations

The public needs to be informed of progress on investigations, as well as be assured that resolution of these investigations is a priority. Just as it is important to keep citizens informed of pertinent information immediately post-disaster, it is important to maintain information flow with regards to long-term follow-up and investigations into the causes of a disaster.

References

are unguarded or unwatched homes or businesses. However, with the exception of the Oklahoma City Bombing and September 11, 2001, our country is relatively untested with regards to large-scale terrorist or bioterrorist attacks. Although there was some looting following the September 11, 2001, attacks, there was not widespread panic or civil unrest.

It is possible to envision a scenario where multiple terrorist or bioterrorist attacks could lead to a loss of social order and citizens feeling unsafe and perceiving that the government might not be able to secure their safety. If citizens begin to feel their needs are not being met, that authorities cannot guarantee their safety, and that their actions will not be sanctioned by law enforcement, the possibility for civil unrest could increase. Recall that terrorism and bioterrorism are fundamentally psychological weapons. Terrorists plan attacks in the hopes that fear, panic, and civil unrest will result. Several possibilities where civil unrest could become a factor include:

- Disasters that render the usual law enforcement agencies unable to perform more traditional law enforcement functions.
- A bioterrorist attack involving a biological agent for which known treatments or vaccines are in limited supply, and the public perceives that the plan for distribution is unfair.
- Terrorist attacks that result in a disruption of the normal social order and overwhelm community response capabilities, thus leading citizens to perceive that their local authorities cannot keep them safe and are unable to meet response needs.
- The existence of widespread rumors following a catastrophe that cannot be corrected due to complete destruction of normal communication channels.

Strategies to Prevent and Address Civil Unrest

The best strategy against civil unrest is thorough planning and preparation for disaster response in a community. If citizens feel that their local or national authorities are equipped and ready to handle a range of disaster situations, and continue to feel that authorities are in control at the time of a disaster, they are more likely to follow recommendations from authorities and perceive that something is being done to ensure their safety. Other strategies include:

- Show leadership

Following September 11, 2001, New York Mayor Rudy Giuliani appealed to citizens for calm and continually stressed the actions being undertaken by

---

Strategies to prevent and address civil unrest:

- Show leadership.
- Get the message out early.
- Appeal for altruism.
- Dispel rumors.
- Have a two-way dialogue with citizens.
- Develop a communication plan.
- Maintain law enforcement presence.

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Develop a communication plan

Develop a range of communication channels for reaching the public following a disaster. Have a plan in place for how you will communicate with citizens with regards to the fear and anxiety that is associated with terrorism and bioterrorism. Although panic is unlikely in most circumstances, fear, anxiety, and feelings of uncertainty are common experiences after a disaster or terrorist event. Please see "Communicating With Citizens in a Time of Crisis" for more information.

Maintain law enforcement presence

Law enforcement should attempt to maintain a continuous presence near potential “hot spots” for civil unrest including retail areas, hospitals and medical clinics, and government offices.

Remember that civil unrest, like panic, is a rare occurrence following disaster. Thus, disaster plans that are designed under the assumption that these behaviors are frequent following disasters may result in misguided planning efforts. However, in the face of terrorism and bioterrorism, communities need to consider how their standard disaster plans might be affected by these less frequent behaviors, as normal behavioral responses after disasters may breakdown under extreme conditions.

References
7 Quaranelli, E. L. (1989). (See reference 4)
Stereotyping Based on Ethnic Identity and Faith

Larger groups of people perceived as sharing common characteristics may also experience stigmatization following an event like the terrorist attacks of September 11, 2001. Many innocent Arab-Americans endured vandalism to their businesses, name-calling, verbal and physical threats, and threats to their civil rights in the months following September 11. As an example, in December of 2001, an Arab-American Secret Service agent was barred from boarding his flight to President Bush’s ranch in Crawford, Texas, despite having all the necessary documentation to fly with his coworkers.

What can community leaders do to protect vulnerable citizens?

To help protect citizens from stereotyping it is very important for community leaders to:

- Educate the public and address their concerns

Community leaders must aggressively educate the public about the real risks of the situation, whether it is a terrorist event, chemical spill, or nuclear accident. Fear of the unknown often evokes feelings of mistrust and betrayal in the community towards those in power. When those in power implement systematic plans for providing information about the real threats of a situation, they can calm feelings of mistrust. Please see, “Risk Perception and Communication,” and “Communicating With Citizens in a Time of Crisis” for additional information.

- Aggressively rebuke hate crimes and prejudice

In the days following the terrorist attacks of September 11, 2001, President Bush and New York Mayor Rudy Guiliani publicly addressed issues of prejudice. They stressed the importance of tolerance of racial and religious differences, coupled with level-headed awareness of potential threats. These leaders made it clear that crimes against the innocent would not be tolerated. They also urged Americans to continue interacting with others without prejudice or hate.

Politicians and law enforcement personnel need to assertively address the possibility of discriminatory behavior and hate crimes, especially following a terrorism event. Public statements of national values of diversity, inclusiveness, and liberty are particularly critical at this time. Community leaders should encourage people to come forward and report incidents. Also, aggressive policies towards arresting and prosecuting perpetrators of hate crimes are highly recommended.
SECTION FIVE
HELPING INDIVIDUAL
COMMUNITY MEMBERS

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INTRODUCTION

In this section we will discuss information designed to provide support to individual community members following a disaster or terrorism event. We begin by discussing common signs of post-disaster stress in adults and children. Our goal is to familiarize you with a number of emotions and behaviors you might encounter working with disaster victims. Next, we discuss the concept of secondary (vicarious) trauma, which refers to the trauma experienced by individuals who were not direct victims of the initial disaster event. These individuals might include rescue workers, family members of victims, fellow community members, people following media coverage of the event, or journalists. To aid you in your efforts to help disaster victims, we provide tips for talking with adults and children about their experiences and referring individuals for additional help from a mental health professional. Additionally, we discuss the importance of maintaining social support systems and the role of clergy members in helping individuals impacted by disaster. We end this section with a review of psychological debriefing. This review is designed for mental health professionals who wish to learn more about the issues involved with using psychological debriefing following disasters and trauma.

In Section Five you will notice variations in style between different subsections of material (some subsections are in second person, some in third person). These variations exist because some of these materials are written so that they can double as handouts/educational materials for individuals affected by a disaster. The following subsections can double as handouts:

- Disaster Stress and Warning Signs in Adults
- Disaster Stress and Warning Signs in Children
- Warning Signs for Suicide
- Stress Management for Adults
- Helping Children Manage Stress
- Coping With Anger After Terrorist Attacks
- Coping With Stress in Times of War
- Talking With Adults - 7 Supportive Communications
- Talking With Children About Disasters
- Talking With Children About Terrorism and War
- Referring Someone for Additional Help

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naturally lead to difficulties for all involved. Grieving the loss of people, property, and a "way of life" is a normal process for people exposed to disasters.

Age Matters

Children and adults may have similar problems after a disaster; however, the way in which these problems are expressed can be quite different. While adults may show signs of distress through their emotions, children, especially younger children, often reveal distress through their behavior. Children may not understand the nature of the disaster, its causes, and the scope of its effects, leaving them confused and often scared. Because younger children may have difficulty expressing their emotions through language, they may act out their emotions by refusing to do chores or schoolwork, arguing, or withdrawing from family activities. Children also may show signs of post-disaster stress through their play or through wanting to talk about the disaster frequently.

Individual Interpretations Matter

An individual's interpretation of the disaster event may have an impact on their level of post-disaster symptoms. For example, individuals who experience intense feelings of personal danger, or danger to family members, while waiting out a tornado may experience more post-disaster stress. This phenomenon has been shown in studies with children after Hurricane Hugo, as well as the Oklahoma City Bombing. Thus, immediate emotional response to the event may play an important role in later symptom development. Immediate emotional response may differ depending on an individual's personal history, cognitive development, personality factors, and whether they have prior experience with disasters. Individuals who have experienced previous traumas or disaster events may interpret the present disaster differently. For example, when New York City experienced a major blackout in 2003, some people wondered if it could be another terrorist attack given the prior events of September 11, 2001. Similarly, the experience of almost simultaneous disasters (September 11, 2001 and the anthrax mail attacks) will affect individual interpretations and reactions.

Those Severely Impacted Often Experience More Distress

Individuals may experience higher levels of post-disaster stress if they are more severely impacted by the disaster personally (e.g., loss of home, loss of loved one, in the location of highest damage, needing to relocate, loss of resources), although this is not always the case. Being exposed to death can result in significant distress, as can feeling like one's own life has been

The losses experienced after disasters naturally lead to difficulties for all involved. Grieving the loss of people, property, and a way of life is a normal process for people exposed to disasters.
concern for their children, especially concern for long-term health effects of exposure to radiation or toxic waste. Mothers also may be concerned about unborn offspring or future efforts to conceive when they become aware of environmental contamination with chemicals or radioactive materials.

Preexisting Emotional or Behavioral Problems are a Risk Factor

Children and adults with preexisting emotional issues (e.g., preexisting anxiety in children) may be more at risk for symptoms of post-disaster stress. It is thought that this vulnerability is primarily due to the concern that these individuals may not have the coping skills needed to handle the added stress of the disaster event. Individuals with a history of emotional and behavioral problems should be closely monitored following a disaster.

Disasters, Like Individuals, are Unique

No two disasters are exactly alike. Disasters can differ on many dimensions, including location and areas affected, economic impacts, sudden or anticipated impact, and possibility for recurrence. Likewise, no two people are alike. Factors such as previous disaster experience, presence of other life stressors, and economic security may influence a person’s response to disaster events. All of these factors may play a role in the way a person interprets a given disaster.

Disasters Have Secondary Effects

It is often the case that disasters result in secondary effects. Primary effects are damage caused directly by the disaster event, whereas secondary effects are problems that occur as a result of this primary damage. These secondary effects may increase the impact of the initial disaster and can range from living in temporary housing, having to permanently relocate, job loss, and economic hardship due to lack of appropriate insurance.

Individuals with fewer economic and social resources may need to utilize government or relief agency-funded temporary housing, while individuals with more resources may find other arrangements. Temporary housing can be a source of distress if families are clustered into one area (e.g., in temporary mobile home parks), have to move multiple times, or incur financial burdens as a result of the temporary housing arrangement. If families are never able to return to their original homes, they may lose key social supports in their old neighborhood and may lack control over choices of where to rebuild their homes. Job loss can be an additional stressor for

Secondary effects may increase the impact of the initial disaster. These secondary effects include: living in temporary housing, having to permanently relocate, job loss, and economic hardship due to lack of appropriate insurance.

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Disaster Stress and Warning Signs in Adults

An adult’s emotional reactions following a trauma can be quite varied and may range from very little distress to extremely debilitating stress reactions. Like any other trauma, a disaster can be a significant stressor and can lead to mental and emotional disruption for many individuals. This mental and emotional disruption is commonly referred to as post-disaster stress. Even post-disaster stress reactions that individuals find personally troubling are normal reactions to abnormal situations. Below is a list of potential symptoms you might encounter in your interactions with adults following a disaster or terrorism event.

Erratic Behavior

Some individuals engage in risky behaviors or even criminal activity in misdirected attempts to solve financial problems or deal with other matters. Anger may be especially likely following a terrorist attack or other human-made disaster. Irritability and rapid mood swings are also common, which often result in outbursts towards family, friends, and coworkers.

Changes in Mood

Nervousness, anxiety, depression, and other emotional reactions are common following a disaster. Feelings of guilt are also possible, especially if an individual lost a loved one in the disaster. Some people may wish they could have taken the place of their loved one or been there with them. Others may report increased crying spells or mood swings.

Increased Substance Use

Some adults abuse alcohol or other substances under such stressful situations. Substance abuse may in turn lead to further problems coping with the effects of the disaster at home and at work.

Physical Symptoms

Adults may report more physical symptoms (also referred to as “somatic complaints”) such as headaches, fatigue, and pains, and may request increased sick leave from work. Some of these physical symptoms may be related to increased anxiety. High levels of stress can weaken the immune system, which can in turn lead to increases in illness symptoms.

Like any other trauma, a disaster can be a significant stressor and can lead to mental and emotional disruption for many individuals. Even though individuals may find these reactions to be personally troubling, they are normal reactions under abnormal circumstances.

Note: Some material in this section was reproduced from Garret Evans and Sam Sears (1999), Triumph Over Tragedy: A Community Response to Post-Disaster Stress.

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Cognitive Problems

Individuals may have difficulty concentrating, paying attention, and remembering things. Concentration and focus may be impaired by recurrent thoughts of the disaster, fatigue, and worry concerning the future.

Impaired Work Performance

It is common to see poorer work performance and decreased productivity following a disaster. Occupational achievement may seem less important after suffering a tragedy. Cognitive problems such as impaired concentration, memory, and attention, combined with increased irritability and mood swings, take a toll on work performance and relationships.

Changes in Sleeping, Eating, and Daily Routines

Problems with sleeping, particularly difficulty in falling asleep or staying asleep, are common. Adults can have nightmares about the disaster. They may also experience daydreams that make them feel they are reliving the event in the middle of the day. Dramatic changes in appetite, especially a drop in appetite, are common.
it, such as, “Okay, but just for tonight. Let’s see if we can sleep in our own beds tomorrow.” This way, you can help avoid the situation where your child becomes dependent on sleeping with you. You can always extend your plan later if needed.

Strained Social Relationships

It is important to recognize that disasters not only affect how children cope within themselves, but how they react within social settings. The trauma that one person experiences ripples across families and communities. These effects are magnified if the disaster affected many families in the community. Since a disaster can trigger tensions among family members and everyone in the community, it is not unusual for kids to argue more with adults and friends.

Difficulties at School

Emotional difficulties and poor behavior following a disaster can contribute to difficulties at school. Children may have trouble paying attention in class, holding their concentration, and following directions for assignments when they are under great stress.

Changes in Routine

Changes in a child’s daily routine may signal difficulty coping with the disaster. Changes in sleeping and eating habits are common signs of stress, anxiety, and possible depression. Wetting the bed can occur in times of great stress, even in children who have been toilet-trained for years.

Physical Complaints

Complaints of pain or illness are common among kids experiencing feelings of anxiety. Frequent reports of stomachaches and headaches that last for several weeks may be a sign that a child is having difficulty coming to terms with his or her feelings after a disaster.

References


Following a disaster, parents, teachers, and other caregivers may be experiencing high levels of stress, which can cause them to be distracted and focus less on children’s functioning. Thus, children’s symptoms of distress may go unrecognized.

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### Early Adolescence (Ages 11-14)

<table>
<thead>
<tr>
<th>Normal Development</th>
<th>Possible Stressful Reactions</th>
<th>Consider Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sleep disturbance</td>
<td>Withdrawal, isolation</td>
<td>Disoriented, has memory gaps</td>
</tr>
<tr>
<td>Appetite disturbance</td>
<td>Depression, sadness, suicidal ideation</td>
<td>Severely depressed or withdrawn</td>
</tr>
<tr>
<td>Rebellion in the home, refusal to do chores</td>
<td>Aggressive behaviors</td>
<td>Severe oppositional behavior and disobedience</td>
</tr>
<tr>
<td></td>
<td>Depression</td>
<td>Unable to care for self (eat, drink, bathe)</td>
</tr>
<tr>
<td></td>
<td>Physical problems (aches and pains)</td>
<td>Suicidal statements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Substance abuse</td>
</tr>
</tbody>
</table>

### Adolescence (Ages 14-18)

<table>
<thead>
<tr>
<th>Normal Development</th>
<th>Possible Stressful Reactions</th>
<th>Consider Referral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor concentration</td>
<td>Confusion</td>
<td>Severely depressed or withdrawn, deep or unshakable sadness</td>
</tr>
<tr>
<td>Occasional headaches or tension, physical complaints</td>
<td>Withdrawal or isolation</td>
<td>Severe oppositional behavior and disobedience</td>
</tr>
<tr>
<td>Begin to identify with peers, need for alone time, may isolate self from family on occasion</td>
<td>Antisocial behavior (stealing, aggression, acting out)</td>
<td>Hallucinates, afraid will hurt self or others</td>
</tr>
<tr>
<td>Agitation, apathy, irresponsible behavior</td>
<td>Withdrawal into heavy sleep, night frights</td>
<td>Cannot make simple decisions</td>
</tr>
<tr>
<td></td>
<td>Sadness</td>
<td>Excessively preoccupied with one thought</td>
</tr>
<tr>
<td></td>
<td>Changes in appetite</td>
<td>Suicidal statements</td>
</tr>
<tr>
<td></td>
<td>Fatigue</td>
<td>Substance abuse</td>
</tr>
<tr>
<td></td>
<td>Suddenly nervous, easily startled</td>
<td></td>
</tr>
</tbody>
</table>

All tables were adapted from Stress and Coping With Disaster: A Handbook Compiled Following the Midwest Flood of 1993 for Extension Professionals, compiled by Marty Baker and Ami O'Neill.
Supportive Communications.” You also can refer the individual to a mental health professional. Sometimes people may be afraid to talk with someone who is suicidal and fear their conversation with that person may be detrimental. It is almost never the case that a person can be “talked into” committing suicide by a person just trying to help. However, if you have any concerns about talking with an individual, you can always consult with or refer them to a mental health professional.

References


Note: Parts of this section were reproduced with minor edits from Garret Evans and Sam Sears (1999), Triumph Over Tragedy: A Community Response to Post-Disaster Stress.

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terrorist attacks, people who watched large amounts of media coverage reported a variety of distress symptoms, including symptoms of anxiety. It is normal to want to stay updated on the events surrounding the disaster. However, you may be able to lessen your feelings of distress by limiting the amount of time you spend watching or listening to media coverage of the event.

Seek Trusted Sources of Information

During any disaster event, but especially during disasters involving chemicals or biological agents you are not familiar with, seek out accurate sources of information. These sources may include materials from the Centers for Disease Control, information provided by your local government officials, or information provided by your family doctor. By educating yourself you can help provide some feelings of control over the situation. As is the case with media exposure, spending excessive amounts of time seeking out information could potentially increase feelings of distress for some individuals. When seeking information, you should be aware that there will probably be more sources of misinformation than sources of accurate information. For example, many Internet sites contain inaccurate information. It can be difficult to determine what information is correct. Searching sites maintained by local, state, or federal governmental agencies will likely provide the most accurate information in times of emergency.

Avoid Using Substances

Individuals should avoid the use of drugs or alcohol to cope with feelings of distress. Substances only provide a temporary “numbing” for feelings of distress and can lead to additional problems. Frequently, the use of substances as a coping mechanism can lead to difficulties in family relationships, job performance, and recovery from the disaster.

Take Care of Yourself

Taking care of yourself is very important because you will be better equipped to cope with the stressors following a disaster event. Taking care of yourself means eating healthy foods, getting plenty of rest, taking some time to relax each day, and knowing your personal limits. You also may find it helpful to learn relaxation techniques, meditation, or yoga. Many people would like to help their families and friends following a disaster. However, you will be less helpful to others if you are tired and stressed.

Consider Participating in Recovery Efforts

Helping others can be a great source of stress relief for some people. You can

Many people would like to help their families and friends following a disaster. However, you will be less helpful to others if you are tired and stressed.

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Helping Children Manage Stress

There are a number of strategies you can use after a disaster event to help children manage their distress.

**Maintain Normal Routines**

First and foremost, it is a good idea to maintain as much of a normal routine as possible for your child. Routines help children feel safe and secure. They also provide a sense of normalcy. If your child is not able to attend school due to the disaster, attempt to maintain as much of the child’s routine as possible, such as keeping mealtimes and bedtimes the same.

**Limit Children’s Exposure to Media Coverage and Talk with Your Child About the Event**

You also can help children by reducing or eliminating their exposure to media coverage of the event and providing a safe environment in which children can express their feelings about the disaster. Your child may want to talk about, or “act out” through play, their feelings about the disaster. This should be encouraged because it will allow the child to cope with the disaster experience in a way that is more comfortable. More tips for talking with children about disaster events and the images they see on television can be found in the sections, “Talking with Children About Disasters,” and “Talking with Children about Terrorism and War.”

**Promote Positive Helping Behavior**

Some children may want to help in disaster preparation or recovery efforts. Allowing children to help in age appropriate ways can give them a sense of importance and control. For example, it may help them feel better to deliver a box of food to a family who lost their home, make cards for people affected by the disaster, or do other small acts of kindness. Try to focus your child towards positive behaviors that will help others as opposed to feelings of anger and blame. This shows your child how they can work with others to gain some control over the situation. It often helps children to build a sense that the community is “fighting back” after the disaster.

**Monitor Your Personal Level of Distress**

Children often become more distressed when they see adults who are distressed, so it is important for parents to be aware of their behavior around their children. Using personal stress management may help lessen your child’s distress. Talk to your child about how you are managing stress in

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**Stress management strategies for children include:**

- Maintain routines
- Limit media exposure
- Promote helping behavior
- Monitor parental stress
- Provide support and affection
- Seek extra help
- Address grief reactions

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General guidelines for helping children cope with death:\(^1\,^2\)

- Provide information on a level the child can understand.
- Be truthful.
- Assure children that the distress they see in others is normal. Let them know it is okay to be sad.
- Allow children to ask questions.
- Accept a child’s feelings about death.
- Keep children involved in normal activities.
- Try to avoid euphemistic explanations for death (e.g., death is similar to sleeping).
- Find out what a child already knows about death.
- Remember that talking to a child about death does not guarantee that the child will immediately develop a mature, adult understanding of death.
- Ages 0-5 – Do not try to explain too much but instead focus on reassuring the child that everyone is safe now. Answer questions truthfully using simple language.
- Ages 6-12 – Answer questions truthfully and talk with the child to help clear up their misconceptions.
- Ages 13 and up – You will need to talk more thoroughly with adolescents. Adolescents may begin to question the meaning of life.
- Seek outside help if you feel your child needs further assistance coping with a death.

**References**


For further guidance on helping children cope with death, visit the following two links on the Hospice website:

⇒ www.hospicenet.org/html/child.html

⇒ www.hospicenet.org/html/talking.html

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- Practice stress management

In the sections, "Stress Management for Adults," and "Helping Children Manage Stress," we discussed stress management strategies for adults and children. These stress management strategies are also helpful for decreasing angry feelings. Bottling up angry feelings will only lead to further anger and higher levels of stress.

- Seek help

If angry feelings persist and are interfering with work, relationships, and other life activities, it may be time for individuals to seek extra help. Seeking help for anger can be very difficult for some people, as they may believe they are admitting they have a problem by seeking help. Indeed, most people who are angry believe the person they feel anger towards is the real person with the problem, and not themselves. However, continuing to feel angry is not likely to change the situation. Remember, intense feelings of anger are normal following an abnormal event like a terrorist attack. When these feelings interfere with a person's life, anger is no longer healthy. Seeking help is a healthy decision, for both the individual and for those around them.

- Avoid alcohol and other substances

Alcohol and drugs often increase the intensity of emotions in those who are already angry. Also, these substances can lower a person's inhibitions and cause them to act impulsively, and they may end up doing something they will regret later. If you are concerned about someone harboring angry feelings about a disaster event, encourage them to avoid alcohol and drugs for at least awhile. Talk to them about the importance of using clear judgment and a strong mental focus as you work together to recover from the event.

- Promote constructive group activity

Sometimes angry individuals gather together in quickly organized community groups that are bound by common belief systems. Many times, these groups come together to perform marvelous acts to help a community get reorganized. However, in the case of a terrorist attack or human-made disaster, some groups gather together to blame certain segments of the community, ethnic groups, government officials, or others. Encourage friends and neighbors to find constructive groups to join. Talk openly in your community about the pitfalls of using anger as the sole rallying point for a community group or organization.

Tips for coping with angry feelings:

- Turn angry feelings into healthy behaviors
- Encourage tolerance
- Practice stress management
- Seek help
- Avoid alcohol and other substances
- Promote constructive group activity
- Express anger constructively

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Coping With Stress in Times of War

In the years immediately following the September 11, 2001 terrorist attacks, the United States entered armed conflicts against Afghanistan and Iraq. As the fight against terrorism is likely to continue for several years, it is possible that other armed conflicts could occur. Although many of the stresses associated with a country going to war are similar to stresses that result from disaster events, there are some unique characteristics to consider. Although war is a comprehensive topic in and of itself, we mention it here because the armed conflicts over the past few years have raised citizen’s anxieties about further terrorist attacks happening in our country.

Common Sources of Stress During Wartime Deployment

Adults serving in the military, reserves, and emergency associations are deployed to the area of conflict during times of war. Stressors associated with deployment include:

- Separation

Individuals may be leaving behind families and friends. This can be stressful for the spouses, children, and families, as well as for the person being deployed.

- Difficult communication

Friends and family have difficulty communicating with deployed loved ones given the concealment of destinations and military operations for strategic reasons and the long distances between them. Those who are deployed may be forbidden to contact loved ones in order to maintain operational security, while friends and families at home may not know how or where to contact those who are deployed.

- New responsibilities

New demands and responsibilities may arise from these situations. For instance, a parent who either cared for the family and home or worked may be required to both work and care for the family while the spouse is deployed and unable to carry out their usual responsibilities at home.

- Uncertainty and fear

Families and friends experience uncertainty regarding length of deployment, location of deployment, and when or if the service person will

Although recent armed conflicts have taken place outside of the United States, such conflicts can still lead to considerable anxiety for many individuals. For some people, they may be anxious because they have friends or family members in the armed services or living abroad. For others, the recent conflicts have raised anxieties about further terrorist attacks happening in this country.

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Because there is some overlap between stress management strategies and strategies for improving resilience, we focus here on strategies that were not discussed earlier in the section, "Stress Management for Adults." Please visit the American Psychological Association's Help Center website (http://helping.apa.org/) to access the complete materials on resiliency in a time of war.

- Have a plan

Develop an emergency plan for your family so you will be prepared for unexpected events and know how to reconnect with family members in the event of an emergency. You may also wish to develop a neighborhood emergency plan with your neighbors. The Red Cross has information on making family emergency plans on their website and at their local offices. This information can also be found at http://www.ready.gov. Established emergency plans are important because they increase feelings of control over unexpected events.

- Prepare a security kit

Include items in your emergency kit that bring you comfort and security. Examples include books you or your children like to read or family pictures.

- Remember positive times of strength

Recall past times when you have coped successfully with stressful situations. You can often use similar strategies to cope successfully with current stressors. Plus, recalling these successful coping efforts can increase positive feelings about your ability to cope in difficult times.

- Keep things in perspective

It can be easy to focus all your thoughts on the war or other negative events in the world. However, it is important to step back and take a long-term perspective, as well as remember that there are many positive events happening in the world.

- Maintain a hopeful outlook

Think about the positive aspects of your life, as this can help you maintain a positive frame of mind. Try to balance your thoughts about the war with positive thoughts and memories.

Please visit the following websites for further information about making a family emergency plan:

⇒ www.redcross.org
⇒ www.ready.gov
⇒ www.fema.gov/rrr/prep2.shtml

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health center, public health office, or public school system to see if support groups have been organized in your area.

- **Seek outside assistance**

People who find themselves unable to successfully cope with the stresses of war on their own may benefit from speaking with a clergy member, mental health professional, or other trusted individual.

- **Tips for talking with children about war**

Please see the sections, “Taking With Children About Disasters,” and “Talking With Children About Terrorism and War” for information on discussing war and traumatic events with children.

**References**


## Secondary Trauma in Mental Health Professionals

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<td>Hodgkinson &amp; Shepherd, 1994</td>
<td>Piper Alpha oil rig explosion Clapham rail crash-Britain</td>
<td>60% of disaster social workers reported significant mental health symptoms 4-9 months post-event</td>
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<td>Wee &amp; Myers, 1997</td>
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<td>Wee &amp; Myers, 2002</td>
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<td>57% reported increased work-related stress 3-4 months after the attacks, work-related stress was higher for those working closer to Ground Zero</td>
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In the sections that follow we discuss the concept of secondary trauma with respect to media viewers, rescue and recovery workers, and mental health professionals involved in treating disaster victims. For each of these groups we discuss factors that may contribute to secondary trauma, as well as tips for supporting those individuals.

### References


### References From Table

It is important not to discount a person’s symptoms simply because they were not directly impacted by a disaster. Disasters are often shared by entire communities, sometimes even entire countries, so there can be many people who experience secondary trauma.

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**SECTION 5 - HELPING INDIVIDUAL COMMUNITY MEMBERS**

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Vivid Coverage

News cameras broadcast images of death and destruction that can be extremely anxiety provoking. Consider again the example of September 11, 2001. Images of people jumping from the World Trade Center were broadcast, as were continuous images of the towers collapsing. Similarly, coverage of the 1995 bombing of the Murrah Federal Building in Oklahoma City and the May 2003 series of tornadoes that devastated areas in the Midwest showed vivid depictions of destruction and grieving families. Media outlets compete for viewers, and there is often a temptation to look for the most dramatic aspects of a story to make it more interesting to the public. However, these dramatic aspects could increase anxiety for some individuals.

Amount and Extent of Coverage

In a sense, people are forced to relive a tragedy every time disaster images are rebroadcast. Repeated images serve as a reminder of the painful emotions associated with an event. Additionally, continuous media coverage of a relatively localized event could lead to public fear in places that are far removed from the threat. Such was the case following the 2001 anthrax mail attacks. Although the attacks and subsequent illnesses were localized to only a few cities, people across the United States began to worry about handling their mail.9 The mere presence of extensive media coverage could make the risk of danger appear higher than it actually is, as such coverage may make examples of the risk easier to remember.10 In other cases, extensive coverage could decrease anxiety if this coverage provides answers to questions that people have been asking.11

Increased Knowledge of Risks

Everyday when we turn on the television or search the Internet we become aware of new threats to our well-being. Media coverage of disasters increases our awareness of the fragility of life. In a world where terrorism, bioterrorism, and other serious disasters are increasingly likely, exposure to media coverage may heighten anxiety about possible future attacks.

Coping With Extensive Media Coverage

Because exposure to media coverage of an event can be distressing, it is often a good idea for adults to limit their daily exposure to news coverage of events. While it may be healthy to wish to stay informed of unfolding events, it is not healthy to watch nonstop news coverage to the extent that it interferes with daily life. Adults who continue to experience distress after cutting down their media viewing may benefit from stress management.
Risks to Rescue and Recovery Workers

Although in most cases rescuers are not actually at the scene of a disaster when it first occurs, they are directly exposed to victims of the disaster. In many cases they are also exposed to personal danger, as the rescue scene may involve hazards. For example, dangerous rescue scenes are frequently seen following earthquakes, as many buildings and structures may be unstable. Following the 1989 Loma Prieta earthquake in the San Francisco Bay area, rescue workers faced dangerous conditions trying to rescue people trapped underneath the I-880 freeway collapse. Several injuries occurred as rescuers worked feverishly to try to locate and free victims pinned under rubble. In some cases it also is possible that as a result of the primary disaster, some secondary traumatic event may occur following the arrival of rescue responders. This occurred during the World Trade Center attack on September 11, 2001. Although rescue workers were not on site for the initial impact of the first plane, they were on site when the second plane hit and when the towers collapsed. Rescue workers may be especially likely to experience post-disaster stress due to a number of factors.

- **Exposure to death and injury**

Rescuers are often exposed to grisly scenes of human death and injury. In some disasters, bodies may not be intact or could be badly disfigured. Exposure to child victims can be particularly distressing to rescue workers. In some situations rescue workers face the possibility of trauma from the death or injury of fellow rescue workers, thus compounding the distress associated with disaster work. Again, September 11, 2001 is the most vivid example, as many firefighters and police lost their lives during the rescue efforts.

- **Exposure to hazards and long work hours**

Workers may be exposed to multiple hazards such as falling debris, unknown chemicals or environmental toxins released during the disaster, fire, smoke, or unstable structures. They may be exposed to poor weather conditions such as extreme heat or cold, rain, or snow. Rescue workers often spend long hours on a rescue site and may get little sleep or rest. Immediately following the September 11, 2001 attacks, many rescue workers talked about spending 10-20 hour shifts at Ground Zero, often getting only a few hours of sleep per day.

Disaster rescue and recovery workers are exposed to a number of physical and emotional hazards including:

- Encountering deceased victims, some of whom may be badly disfigured
- Encountering child victims
- Poor conditions at the recovery scene
- Long work hours
- Finding victims' personal belongings

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In many cases of disaster, community members or surviving individuals at the scene become involved in initial rescue efforts. Their assistance in the rescue effort may continue even after the arrival of formal rescue personnel. As is the case for formal rescue personnel, these individuals are at risk for post-disaster stress due to their contact with injured or deceased disaster victims. These people are similarly exposed to many of the other hazards that exist for formal rescue personnel. Research has shown that, in general, disaster workers with previous disaster experience report less distress, thus, these non-professional rescue workers may be especially vulnerable if this is their first rescue experience. Logically, it would seem that repeated exposure to disasters through rescue work would result in cumulative symptoms. However, this conclusion has not been definitively supported by research.

Helping Rescue and Recovery Workers

Because of the considerable stress associated with disaster recovery efforts, it is important to provide emotional and physical assistance to rescue workers. Support may include limiting hours at the disaster site, rotating work assignments, providing avenues for talking about the experience, getting frequent breaks and proper rest, and working together in small teams. The stress management techniques described earlier for adults can be utilized (Please see, “Stress Management for Adults”). Pre-disaster training also has been found to help decrease distress symptoms as part of disaster work. Pre-disaster training should include education on the physical and psychological impact of trauma, as well as specific stress management techniques. The presence of support for disaster workers is critical given that workers may not be able to share their experiences with their families or other normal social supports back at home, either because they do not want to share the information or because they believe it will make their families and friends uncomfortable.

The following list provides strategies for helping disaster workers prior to, during, and after an event.

Interventions before exposure to disaster work:

- Conduct a stress audit in the workplace to determine preexisting levels of stress.
- Train and educate personnel regarding the psychological effects of disaster work.
- Develop clear policies to be followed when responding to disasters.
- Arrange for mental health referral sources.
Risks to Mental Health Professionals Working With Disaster Victims

Mental health professionals are at risk of trauma by virtue of the therapeutic relationship between therapist and client. Disaster victims recount their stories to therapists, thereby exposing the therapist to trauma, although indirectly. The distress experienced by therapists as a result of their work has been referred to by a number of terms including: burnout, secondary victimization, vicarious trauma, and compassion fatigue. Compassion fatigue and burnout refer to the emotional exhaustion that therapists may experience when working with clients who have experienced trauma. Secondary and vicarious trauma are terms that refer to a process whereby the therapist experiences many of the same symptoms as the victim, including possibly symptoms of Posttraumatic Stress Disorder (PTSD).

Disaster mental health workers are susceptible to both compassion fatigue and secondary traumatization. In fact, the percentage of disaster mental health workers reporting significant symptoms is higher in many cases than the percentage of rescue and recovery workers reporting significant symptoms. During disaster work, compassion fatigue can be a significant problem. Of those therapists surveyed who worked with victims of the Oklahoma City bombing, 23.5% were in the moderate-risk group, 29.4% were in the high-risk group, and 20.6% were in the extremely high-risk group for compassion fatigue.

Disaster mental health workers may experience many of the same symptoms discussed earlier for adult disaster victims (Please see, “Disaster Stress and Warning Signs in Adults”). The concept of Secondary Traumatic Stress Disorder (STSD) is used to define a syndrome of symptoms experienced by helpers that is essentially similar to PTSD symptoms experienced by people directly exposed to an event. If secondary traumatic stress is not addressed, mental health professionals may be at risk for many of the same problems seen in rescue and recovery workers including emotional problems, substance abuse, and leaving their jobs. In addition to the stressors associated with helping disaster victims, mental health professionals also may struggle with their own losses if they were personally affected by an event (e.g., damage to home, loss of a loved one, or threat to personal safety). For example, psychologists providing services after the September 11, 2001 attacks reported increased work-related stress in addition to struggling with their own personal reactions to the event.

Some mental health professionals may be at higher risk than others, although there are mixed findings regarding risk factors. For instance, therapists with a personal history of trauma may be at higher risk for

Many therapists experience mixed emotions when working with victims of trauma and disaster. Although therapists may report feelings of satisfaction as a result of helping others, they may also feel frustrated that there are often limits to the help they can provide.

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• Satisfaction

Despite the potential stressors involved with disaster work, many therapists report feelings of satisfaction as a result of helping others overcome trauma.

Helping Mental Health Professionals

Helping disaster mental health workers involves many of the same strategies discussed earlier for rescue and recovery workers (Please see, “Risks to Rescue and Recovery Workers”). The following list provides strategies for each phase of disaster work: before, during, and post.9

Interventions before exposure to disaster work:

• Have a well-designed disaster mental health program.
• Select staff for different roles before a disaster event occurs. Select a pre-designated team that draws on strengths of different staff members.
• Conduct routine assessments of therapist stress and compassion fatigue so that those at highest risk are not given high-risk assignments.
• Provide support for new therapists.
• Provide specialized training to therapists who will be working in disaster assignments.
• Provide education on compassion fatigue and self-care.
• Give an orientation to the specific disaster assignment.

Interventions during disaster work:

• Brief therapists on any changes throughout the assignment.
• Provide on-scene supervision.
• Assess therapist functioning regularly throughout the assignment.
• Rotate therapists between high, medium, and low stress assignments.
• Limit work hours and provide breaks.
• Provide in-depth training on different topics as needed (e.g., PTSD treatment).
• Provide access to personal psychotherapy for therapists.
• Conduct defusings and debriefings.
• Utilize teamwork to provide support within the organization.

Interventions following disaster work:

• Plan ahead for how the disaster mental health program will end and then prepare staff in advance.

Working long hours is a common problem encountered with disaster work. Because there are many people to help, therapists may try to fit more work hours into the day, thus neglecting the need for personal time to rest and recover. Working long hours may result in fatigue, irritability, and poorer work performance.
SUPPORTING COMMUNITY MEMBERS

Supporting community members following a disaster event can involve providing food and shelter, assisting victims in completing forms and navigating sources of disaster compensation, rebuilding damaged homes and businesses, and providing emotional and social support. Here we focus on some ways to provide emotional and social support through the conversations you have with individuals affected by the disaster. Specifically, we provide some pointers for talking with adults and children. With regards to children, we also give some suggestions for approaching the topics of terrorism and war, as many adults may feel uncomfortable or unsure of how to talk with children about these issues. In addition to suggestions for communicating with those affected by a disaster, we explore the role of faith and religious institutions in the immediate wake of a disaster. Finally, we touch on the importance of supporting community social structures and maintaining community continuity following a disaster or terrorism event.

We are not attempting to train you to do formal psychotherapy with disaster victims. Instead our objective is to provide you with some useful guidelines for talking with and supporting individuals you may encounter in your work following a disaster. Sometimes disaster victims do not feel comfortable speaking with mental health professionals whom they have never met. Our experience tells us that this phenomenon is especially true in rural communities. Victims may feel more comfortable speaking with known individuals from the community, such as their coworkers, neighbors, Extension workers, or pastors. Thus, our goal is to help people in these social support networks learn basic skills for talking with disaster victims.

Oftentimes disaster victims do not feel comfortable speaking with mental health professionals whom they have never met. Our experience tells us that this phenomenon is especially true in rural communities. Victims may feel more comfortable speaking with known individuals from the community, such as their coworkers, neighbors, Extension workers, or pastors.

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to prevent the need for additional specialized care. Sometimes, more formal psychological help is needed.

Below is a list of important concepts of supportive communication. We have broken them down into “7 Things to Say to a Person Who Has Experienced a Disaster.”

1) Empathy - “How are you holding up?”
2) Normalization - “You are having a normal reaction to abnormal events and situations.”
3) Recognition of efforts to cope - “Everyone copes in his or her own way.”
4) Self-care - “Make sure you are doing things to keep yourself healthy.”
5) Tolerance for change - “You will find a new normal after all this is over.”
6) Instilling hope - “You have made it through some tough times, and you will make it through this, too.”
7) Accepting help - “It is okay to take some help when you need it.”

Remember that any conversation with a disaster victim doesn’t have to include every element described here. Furthermore, there is no firm order to these elements. The concept behind the “Seven Things to Say…” is that effective communications that help people affected by disaster do two things: 1) sort through the emotions and experiences related to the disaster, and 2) organize their response into a plan that helps them recover as efficiently as possible.

**Empathy: Sharing Someone’s Pain**

“How are you holding up?”

This question can be a difficult one for some people to ask. You are not always sure that the disaster victim is going to be very accepting of it. You may say to yourself, “Maybe he wants to be left alone on this? Is this really any of my business?” Actually, it is. When you ask a supportive question, you are showing that you recognize that it is very difficult to cope with the effects of a disaster. You need to understand that a supportive question often opens the door for someone to “tell his or her story.” That is very important. Having victims tell their story from their own perspective is the active ingredient in any type of supportive communication. Research in psychotherapy has shown that empathy is an important factor in healing.
good to anyone if you are passed out on the floor. It is the same principle here. We do not like to admit that we all have our limits. Our minds and bodies need to be maintained, just like a car engine, to keep working properly. We are not bottomless pits of energy and strength. There are a variety of things that we can do to renew our energy, including regular exercise, good diet, recreation, time alone, muscle relaxation, and meditation. These are all staples of any good stress management program.

Tolerance for Change: People Will Find a New Normal

“You will find a new normal after all this is over.”

Disasters demand a tremendous amount of tolerance for change. It is important to encourage a disaster victim to recognize that things have indeed changed but that he or she will find a “new normal” after the shock of initial change passes. Accepting these changes and beginning to look away from what was and to what will be is a critical step in the recovery process. It is also one of the hardest steps. It is like grieving the loss of a loved one, and it takes time. There is no time limit for how long it should take someone to begin making this step toward the future. It is important to recognize that everyone must move at his or her own pace.

Instilling Hope: There Will Be Better Days Ahead

“You have made it through some tough times in your life, and you will make it through this, too.”

Most people responding to the experience of a disaster have coped with some type of loss or event that was difficult for them in the past - a time when they became afraid that they would never be happy again, that things would never be as good as before. While almost all of us have had experiences that made us feel hopeless, almost all of us have been proven wrong. Things inevitably get better. By reminding disaster victims that they are new to disaster but are experienced in coping with significant challenges, you will help to reassure them that they have the ability to cope with the event and see another good day in the future.

The search for hope and a return to normalcy is a recurrent theme in the thoughts of disaster victims. They will seek any kind of forecast for the future, anything that seems like a road map that can describe their life ahead as a way to regain a sense of control over their lives. Not knowing what tomorrow will be like can be one of the most stressful aspects of recovering from a disaster. By acknowledging their uncertainty about the specifics of their future through the expression of confidence in their
Talking With Children About Disasters

The principles of supportive communication apply very similarly to children as to adults, but there are a few key exceptions. When talking with children, you want to pay attention to a child's developmental level. We have provided some general tips below for different age levels.

Children Under Age 5

Children under age 5 are probably going to lack much of the insight and many of the verbal skills necessary to understand the consequences of the disaster and how it is impacting them emotionally. Young children may also have difficulty understanding the finality of death or that images of the event on television are actually from the same event as opposed to multiple events. For young children especially, parents might want to focus on maintaining their own emotional control while keeping their children active and in a structured routine as a way of promoting their recovery.

Children Ages 5-10

Children between the ages of 5 to 10 often need more discussion of the event and how it has affected them. Answer any and all questions that children have about the impacts of the disaster. Reassure children that things will work out fine in the end but be careful not to lie or bluntly minimize what has happened. Focus on the positive aspects of the recovery and how much help is available. Finally, make sure that you address any rumors or fears that they may be getting from their friends.

Children Ages 11 and Older

Children ages 11 and older are likely to need more in-depth discussion. Most of them can fully understand that the disaster means a big change in many people's lives. Unfortunately, they have even less control than adults do over events during the recovery effort. This lack of control can lead to a great deal of stress and a real need for constant communication from their parents and others. We suggest that you use the "7 Supportive Communications" described earlier in this section as your guide (Please see, "Talking With Adults: 7 Supportive Communications"). However, if you are their caregiver or parent, remember that your child is not your confidant. Avoid conversations in which you vent many of your fears or frustrations. Your child can do little to help impact these situations, and you probably will just upset them even more.
ages may be able to express ideas through art that they cannot put into words, and reading books may make topics less threatening.

Seeking Additional Assistance

During times of stress, children looks to their parents and other adults for help coping. If you feel overwhelmed when talking with your child about distressing topics, your child is likely to recognize your stress. If you find it is too difficult to talk with your child, seek assistance from other adults who your child relates well to, such as a grandparent or teacher. If talking with your child does not seem to decrease their stress, and your child is having significant trouble at home or school, then it may be helpful to speak with your physician, a clergy member, school guidance counselor, or a mental health professional for additional help and advice. Seek advice whenever you feel it may be helpful.

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discussing America's history as the "melting pot" of various cultures can help your child appreciate the importance of diversity and tolerance as national ideals. Support children's caring attitudes towards children in other countries.\(^3\)

When discussing war, be careful about using terms like "the enemy" to describe the country or people that are the target of conflict. It may be helpful to frame the discussion in terms of "bad actions" rather than "bad people," such that children learn that people choose their behaviors.\(^4\) This strategy helps prevent children from forming prejudicial attitudes toward other groups. After all, history teaches us that yesterday's enemies often become tomorrow's friends.

Give Your Child Appropriate Assurance

Assure your children you will try to keep them safe and that the chances of them being harmed are very, very small. However, do not promise them you can keep bad things from happening in the world. Emphasize that adults are doing what they can to keep people in our country safe. Talk with them about safety measures you can implement at home (e.g., a family plan of how to locate one another should a disaster event occur).

It is important to reassure your children that military actions are not taking place in the United States. However, do not ignore the terrible aspects of war and terrorism, especially when talking with middle and high school-aged children. They are likely to see and hear accounts of death, destruction, and atrocities associated with these events. Take a proactive stance toward preparing your child for such revelations and helping them cope with these difficult experiences of growing up in a world with war and terrorism.

Do not Avoid Speaking to Your Child

Do not avoid talking with your child about difficult issues such as terrorism, as that will send a message to your child that it is not okay to talk about these topics. If you feel you are not able to talk with your child, perhaps a relative or teacher can talk with your child. Avoiding the topic will not make it go away and may actually increase your child's anxiety, as they might interpret your silence as fear on your part. Although adults may feel scared and unsure about how to talk with children about terrorism, wars, and other violent events, these conversations can serve as important opportunities to teach your child peaceful values.
The topic of war can be confusing and difficult for adults and children alike. Children will react differently to discussions of war, so pay attention to your child’s individual reactions and requests for information. Children might not understand that Afghanistan is halfway around the world. They may wonder if scenes of death and destruction that they glimpse on television have happened, or soon will be happening, down the street from their home. Other children may view the situation as not affecting them directly, and they may be more concerned about their own life, which is fairly common in preschool and elementary school-aged children. While younger children may not have a full understanding of the events taking place or may appear to be unaffected, older children and adolescents may be grappling with the diverse opinions of parents, teachers, coaches, and other adults they know and respect. It is thus important to remain open to discussions of war with your child. When discussing war, parents should explain their personal views while encouraging their children to express their own personal views, even if these differ from those held by parents.

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American Psychological Association, American Psychiatric Association, and the National Association of Social Workers have referral systems to help people locate mental health professionals in their area.

It is possible that a person may be reluctant to seek help because they are not sure what to expect. They may have visions of therapy that consist of lying on a couch and telling a therapist about their childhood. It may help to reassure that individual that the therapist will be working with them to develop effective coping strategies and healthy methods for handling post-disaster stress. There are a number of effective treatments for symptoms of anxiety and depression, two common reactions following a disaster. Some of these treatments are referred to as cognitive-behavioral interventions. This term refers to the focus of treatment on a person’s thoughts and behaviors surrounding an event or emotional state. The therapist works with an individual to develop healthier thoughts and behaviors to improve a person’s emotions. In many cases these treatments are as effective as medications and often produce longer-term improvements in symptoms. Please see, “Treatment for Long-term Reactions to Trauma” for more information on therapy.

References

Often, referral is best approached as part of additional “stress management” strategies related to the changes and losses following a disaster.

Note: Parts of this section were reproduced with minor edits from Garret Evans and Sam Sears (1999), Triumph Over Tragedy: A Community Response to Managing Post-Disaster Stress.

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possibly seeking a need to establish a sense of mastery and control in an otherwise uncontrollable event. The desire to help is likely even stronger for those in the helping professions. As people in a service-oriented profession, the clergy are often called upon or may wish to volunteer to help out at disaster sites. This type of service may include general assistance, providing spiritual comfort, or just being present to offer supplemental emotional support. Additionally, they will likely provide enhanced services to members of their congregation if appropriate. These efforts may include intensive counseling, adding additional church services, organizing vigils, rallying congregation members to action, and helping to provide for the physical needs of congregation members. Finally, members of the clergy may be called upon to work with the larger community, providing leadership to interfaith events, granting interviews to the media, and organizing community support projects (such as fundraising, volunteer efforts, etc.).

Reactions the Clergy Might Expect

People react very differently under circumstances of great stress (Please see “Disaster Stress and Warning Signs in Adults” for further information). In addition to standard mental, emotional, and behavioral issues, clergy are apt to come across reactions specific to their profession. During times of trauma or disaster, people may attribute events to “the will of God,” or even view bad events as a sort of punishment. Other people might express anger at God, and view events as an example of the unfairness of God’s work. In some instances people might even behave in a hostile way toward clergy members, who serve in the roles of “ambassadors” of God. Finally, some people may be unable to reconcile the realities of the disaster with their view of the world and belief system, causing a crisis of faith. Although these types of reactions are commonplace, without resolution these issues can impede progress in working through the emotional trauma. If people are unable to resolve the inconsistency between events and beliefs in a healthy way, they may linger in a state of confusion, anger, and fear, thus finding it difficult to concentrate and generally perform daily activities.

For example, a continuing fear of the “wrath of God” may lead to side-effects associated with severe anxiety (e.g., nightmares, high blood pressure), and may lead people to behave in ways that are not productive (e.g., superstitious behavior, activities done to “appease” God). Furthermore, for those who were previously religious, the crisis could lead to a sense of loneliness and isolation, which could be further compounded by no longer attending religious groups and activities.
prepared for these tasks than others. An important issue to keep in mind is that this is an opportunity to emphasize similarities among groups, and to provide the message that the community is working together.

- Community leadership

Finally, clergy may be particularly helpful as leaders of their congregations during times of disaster. A member of the clergy is an ideal person to spread helpful messages, such as passing on information, calling for volunteers, providing messages of faith, comfort, patience and/or ethical behavior. For example, sermons can be used to encourage positive social behavior among congregation members.

Considerations for Clergy

As with any provider of services during a disaster, members of the clergy should be mindful of the common pressure to perform activities outside their specific training and education. Great needs and demands may be placed upon members of the clergy during times of disaster, and like disaster workers they are vulnerable to burn-out. Long hours of tending to spiritual need, particularly to large volumes of strangers, can be extremely taxing. Efforts should be made to encourage members of the clergy to recognize their own emotional and physical limitations, and emphasize that their own physical, emotional and spiritual well-being will need attention in order for them to successfully continue their work.

Nearly every religious denomination provides at least some degree of information about disaster work to clerical trainees. However, most programs do not provide extensive training in this topic area. In order to obtain more specialized training, clergy may seek training in disaster counseling, Red Cross Disaster training, or other privately sponsored disaster-related trainings. Very few agencies provide specialized training in disaster services, and even fewer provide specialized training experiences that target members of the clergy. One of the few agencies to provide specialized disaster training to members of the clergy is Church World Services (http://www.cwserp.org/training/). In addition to providing online information, this agency also conducts seminars and classes on disaster training for all clerical denominations. Please see the Appendix for a listing of religious relief organization websites and websites providing information helpful to clergy involved in disaster relief.

One of the agencies that provides specialized disaster training to members of the clergy is Church World Services. Their website is:

⇒ http://www.cwserp.org/training/

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of school facilities to continue publishing a version of the newspaper for residents still in the area. The presence of the daily newspaper helped maintain a sense of continuity in the community during the disaster. Following the 2001 World Trade Center attacks, New York City Mayor Rudy Giuliani encouraged city residents to continue their normal activities as much as possible. In addition, many businesses that had been housed in the World Trade Center set up help centers for employees and families of the affected businesses. These examples highlight several strategies for maintaining community social networks and continuity, which are discussed in more detail below.

Encourage Citizens to Maintain Normal Business and Routines

Community spokespersons (e.g., mayor, other community leaders) can help maintain continuity by encouraging individuals to continue attending work (as long as their place of employment is still open) and going about their normal business as much as possible, provided that it is safe to do so. Return to normal community routines promotes a sense of familiarity that is helpful in post-disaster recovery.

Provide Alternative Sources of Support

Guiding affected citizens to alternative sources of social support is particularly important when there has been disruption of support networks. Alternative sources of support may include the Red Cross, local mental health providers, local churches, informal support groups, or services arranged by individual businesses affected by the disaster.

Maintain Familiar Elements in a Community

Familiar community elements might include the community newspaper, television station, scheduled community-wide events (e.g., concerts, festivals), or local areas of recreation and congregation (e.g., parks). When possible, maintaining these familiar elements provides a feeling that the community continues to exist and will be able to cope with the tragedy. Organizing local volunteers to assist in re-establishing these community supports is often a good idea. After a large scale disaster, many residents, as well as those outside the affected community, want to participate in recovery efforts. However, often the number of volunteers exceeds the need for immediate and direct recovery efforts. Consider organizing these surplus volunteers to assist in community support activities.
Psychological debriefing is a form of early intervention used after disasters or trauma. It was originally developed during World Wars I and II to help soldiers deal with the stress of combat; commanders "debriefed" their troops following a significant battle. The belief was that these sessions gave troops a chance to share their combat stories, thus improving morale and preparing soldiers for further combat. More recently, a form of psychological debriefing referred to as Critical Incident Stress Debriefing (CISD) has been developed. The original intent of CISD was to help emergency response personnel cope with the aftermath of "critical incidents." Such incidents may include natural and human-made disasters, as well as road accidents or homicides. Since its development, use of CISD has spread nationally and internationally to include individuals other than emergency workers. It is now widely used in programs such as disaster counseling projects and the American Red Cross disaster mental health training program. A form of CISD was used in the aftermath of the terrorist attacks on the World Trade Center on September 11, 2001.

Format of CISD

Today, CISD is the most popular form of psychological debriefing and will be the focus of this review. The format of CISD is a loosely structured, facilitator-led, group intervention with educational components that is held within days of the incident and typically lasts 3–4 hours. The goals of CISD are to: 1) educate participants about stress reactions and ways of coping with them, emphasizing that such reactions are normal and to be expected; 2) encourage emotional processing of the trauma; and 3) provide information regarding available resources should participants desire further intervention. The group is typically conducted in a series of seven stages:

- **Introduction** - The facilitator explains what is going to happen, answers questions, and emphasizes confidentiality of what is said during the intervention.
- **Fact Phase** - Participants are asked to describe what happened.
- **Thought Phase** - Participants describe their thoughts during the event.
- **Reaction Phase** - Participants discuss their emotional responses during the event, as well as their current emotional responses. The facilitator emphasizes the normality of such experiences.
- **Symptoms Phase** - Typical stress reactions are discussed.

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Goals of CISD:

- Educate participants about stress reactions and coping strategies.
- Encourage emotional processing of the trauma.
- Provide information regarding available resources should participants desire further intervention.

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depression, and PTSD-like symptoms) at baseline than the CISD group. Despite this, there were few differences between the groups at follow-up, suggesting that even without CISD, the no intervention group improved. The only noteworthy finding was a reduction in self-reported alcohol use in those who received CISD.

The studies that have used randomized, controlled methodologies have not shown strong benefits from CISD. For instance, one study of over 100 road traffic accident victims did assign people randomly to receive psychological debriefing or no intervention, and the two groups were equivalent on important variables such as demographics, previous psychological history, and factors related to the accident. This study found the group that received psychological debriefing had worse outcomes three years later in terms of stress-related symptoms, travel anxiety, pain, physical problems, overall functioning, and financial problems, when compared with individuals not receiving the intervention.

On the other hand, Everly and Boyle combined the results of five studies on CISD, and concluded that CISD is an effective crisis intervention. These studies were conducted with a variety of emergency workers, adult victims of disaster, and police personnel. In all but one study, participants who received CISD were compared to a control group, although it is not known whether participants were randomly assigned to groups, nor what constituted the control group (i.e., no intervention or some kind of placebo). Outcomes were measured using various surveys assessing anxiety, depression, anger, and stress. Each of the five studies showed that those who received CISD improved more than those who did not, either immediately after the trauma or up to 3 months post-trauma. While these studies do support the short-term effectiveness of CISD, and included a large number of participants (over 300 participants across the five studies), long-term outcomes were not assessed.

The conclusions of the above review are inconsistent with the Cochrane Collaboration Review of randomized controlled trials of one-session psychological debriefing. Cochrane Reviews are designed to provide overviews of the effects of interventions for prevention, treatment, and rehabilitation in healthcare settings. The Cochrane Review suggested that there is no strong evidence for the efficacy of one-session psychological debriefing provided soon after a trauma and recommended that, "compulsory debriefing of victims of trauma should cease." However, Everly and Boyle criticized this review for combining several different kinds of psychological debriefing rather than including only those studies that used pure CISD, as they did in their review. Other researchers have suggested that psychological debriefing, perhaps in a revised form, may be useful for early intervention. It is clear that indiscriminant use of single-

Although evidence for or against CISD is mixed at the current time, it does appear that single-session psychological debriefing is used too frequently without considering whether it is an appropriate intervention.
of trauma - for example, threat to life. However, loss, dislocation, separation, and many other stressors are often involved in trauma, and these stressors may all require different interventions.21 Because many studies have found an increase in stress and anxiety symptoms after psychological debriefing, some researchers have concluded that the emotional processing is premature and does not include follow-up that would assist in therapeutic processing.22 This argument supports the notion that CISD should not be used as a "stand alone" intervention but that it may have value when delivered as part of the full range of CISM techniques. Others propose that the reason psychological debriefing does not appear to work is that it calls attention to participants' symptoms, thus making it more likely that they will report increased symptoms, but this does not necessarily mean more impairment.23,24 This possibility has yet to be investigated in controlled studies.

Perhaps the biggest criticism of the CISD approach is the assumption that experience of trauma is the only factor that needs to be considered. In other words, the approach does not take into account that many complex factors determine whether a person recovers naturally from trauma or develops serious problems, such as Posttraumatic Stress Disorder (PTSD). Although the CISD training guidelines emphasizes that direct victims of the traumatic event, family members of people seriously injured/killed, and rescuers seriously injured trying to respond to an event should receive more extensive intervention and not attend CISD, how such victims are handled is not clearly specified.25 Also, in practice, it appears that application of CISD is not restricted in this way.26 For example, CISD was administered to thousands of office workers and others directly impacted by the September 11, 2001 terrorist attacks.27 Yet, the literature to date suggests that most people recover from acute stress reactions to a trauma by approximately 3 months after the event. Only roughly 8-9% of such individuals go on to develop PTSD. Thus, critics of CISD have pointed out that a better approach would be to target those individuals who appear most at risk for developing PTSD, while at the same time not interfering with the natural healing process that works for most people.

Screening for PTSD

Several risk indicators for PTSD have been identified. Among those that can be screened for are:28

- **Prior trauma history** - previous exposure to trauma (especially interpersonal violence) increases risk of PTSD.
- **Severe acute stress reactions** - highly disturbing symptoms soon after the event (especially dissociation) increase PTSD risk.
Final Thoughts

Finally, it is important to keep in mind that despite lack of scientific support for its efficacy, CISD and other psychological debriefing interventions have been largely accepted as standard practice for emergency workers and many organizations. Moreover, the CISD approach has been well received when applied to mass disasters such as the terrorist attacks on September 11, 2001. An obvious question is, “why is CISD so popular despite limited evidence to support its effectiveness?” Debriefing may be popular because it meets many needs, such as the need of those not impacted by the disaster to overcome their guilt for surviving and their sense of helplessness; the need of those directly affected to talk about what happened as a way to understand it and gain some feeling of control, and the need of workers and management to assist those affected and to show concern.

It is possible that one main effect of psychological debriefing is an increase in morale and cohesion in the face of catastrophe, rather than the prevention of PTSD. Thus, the benefit of psychological debriefing may be that it gives people a chance to feel validated, de-stigmatized, and empowered by their peers, and that this group-based approach contributes to better functioning in work environments after stressful incidents. Clearly, those involved in trauma and disaster recovery cannot wait for conclusive proof of the effectiveness of psychological debriefing, and generally speaking, most interventions are developed from anecdotal evidence. Nevertheless, despite the difficulties in conducting sound research, particularly in relation to disasters, future studies should examine how psychological debriefing interventions can be improved. As with all interventions, such improved versions should be subjected to rigorous scientific testing prior to their widespread adoption.

For further information on current recommended practices in the area of psychological debriefing, please refer to the National Institute of Mental Health report entitled, “Mental health and mass violence: Evidence-based early psychological intervention for victims/survivors of mass violence.” This report is available online at http://www.nimh.nih.gov/research/ massviolence.pdf.

References
3 Litz, B., Gray, M., Bryant, R., & Adler, A. (2002, May 28). (See reference 1)

The controversy over psychological debriefing is likely to continue. Clearly, more research is needed to determine if these interventions result in clinically meaningful symptom improvement and a lower likelihood of long-term problems such as PTSD, as well as to identify what components of the intervention are most effective.

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SECTION SIX
LONG-TERM RECOVERY

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INTRODUCTION

Disasters can have long-term effects on both communities and individual citizens. Some of these impacts are highlighted below.

Changes in Social Structures

Disasters frequently result in temporary changes in the social structure of a community. Some of these changes occur at the individual level, while others occur at the community level. At the individual level, people may have to temporarily relocate while their homes are being repaired or rebuilt. During this time, they may have less contact with members of their usual social support system, including neighbors, friends, and family. Other social support structures, including places of employment, church groups, and social groups may be disrupted by disaster events. Changes in individual social support structures can lead to additional stress, as people commonly turn towards family, friends, and coworkers to discuss problems.

Political Impacts

There are a number of long-term political consequences associated with disaster events, especially human-made disasters and terrorist attacks. For instance, following the September 11, 2001 terrorist attacks new legislation was enacted, the Department of Homeland Security was created, and federal money was allocated for recovery efforts. Citizen dissatisfaction with government responses to disaster may lead to scape-goating and activist political movements. In other cases, citizens may come to distrust governmental agencies or officials if they feel information was withheld or the response to the event was inadequate. Scape-goating, loss of trust in agencies and officials, and crisis political decisions can all add to the stress level in a community after a disaster.

Economic Impacts

Disasters often result in far-reaching economic effects that can delay community recovery. These economic consequences include lost revenue from unemployment and lost production, reduced public services and resources, the disruption and redirection of economic growth, reconstruction costs, individuals capitalizing on public crisis for economic gain, disputes over who pays for new preparedness measures, damage and recovery costs, economic instability, and costs of environmental clean-up. Some economic impacts are a direct result of the disaster, while others are an indirect result. Direct economic

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individuals impacted by a disaster. The long-term economic impacts of a disaster have an effect on both individual and community mental health. At the individual level, individuals and their families may experience stress and anxiety over how to pay for repairs or rebuilding, confusion and frustration over the paperwork needed to file insurance claims or obtain state or federal relief funds, and uncertainty regarding income and job status. At the community level, community members may collectively feel the stress of a loss in business that could result in lost jobs and income for many community members, the possibility that local taxes may need to be increased to cover costs of reconstruction, or cut-backs on other vital community services due to recovery costs. The economic loss and uncertainty following a disaster is thus a powerful stressor for the entire community.

Mental Health Impacts

Even if individuals cope effectively with the immediate aftermath of a disaster, subsequent anniversaries of the disaster and decisions about disaster memorials can bring post-disaster emotions back to the surface. Anniversaries and memorials may be especially difficult following large-scale tragedies, such as the September 11, 2001 attacks and the 1995 Oklahoma City bombing. Long-term reactions related to anniversaries and memorials are discussed in greater detail in, “Anniversaries and Memorials.”

Other long-term mental health impacts include depression, anxiety, Posttraumatic Stress Disorder (PTSD), and substance abuse. Survivors may also face difficulties coping with loss of loved ones, anger, survivor’s guilt, and threats to belief systems. Sometimes individuals who appear to cope relatively well in the immediate aftermath of a disaster will develop symptoms several months or maybe even years after the event. Delayed-onset symptoms or immediate post-disaster symptoms that persist for months following the event may signal the need for more formal intervention. A number of long-term emotional reactions are discussed in further detail in the section, “Recovery for Individuals.”

In the sections that follow, we discuss long-term recovery for communities and individuals. Many of the sections on individual recovery can be used as handouts for community members affected by a disaster, and thus contain a number of tips for coping with specific emotional responses.

References

disaster, aid from local groups formed after the disaster may weaken, conflict begins to surface over recovery strategies, and recovery resources may be shifted elsewhere. Feelings of anger, bitterness, and discord are common in this phase. Also, scape-goating occurs during this stage, often directed at individuals believed to be responsible for permitting the disaster to occur or for failing to respond adequately to the crisis.

This phase may result in significant mental health impacts, as community stress levels are at their highest and people are struggling to adjust to their post-disaster reality. Sources of stress include the need to adapt to the changes caused by a disaster, financial fallout, lack of support from unaffected family and friends, and unfulfilled expectations of community, state, or federal assistance. Also, individuals may be coping with PTSD, depression, or substance abuse. It is thus important to continue to provide mental health resources for a community during this phase.

Recovery and Reconstruction: Finding a “New Normal”

During the Reconstruction phase, damaged homes and businesses are repaired, the economy begins to recover, and community routines return. People realize that they need to find ways to recover despite the withdrawal of resources, and they desire to return to their normal way of life as soon as possible. Some individuals may even experience feelings of empowerment from having lived through the experience. However, it may not always be possible to return to the pre-disaster way of life. In this case, individuals and communities must establish a new sense of normality.

This stage may be experienced only after a significant amount of time has passed, perhaps more than a year in extreme cases. Recovery and reconstruction may be hampered by poor pre-disaster preparedness and planning, community and political conflicts, and lack of economic resources. In some cases (e.g., nuclear or environmental contamination, destruction of dams) communities will not be able to rebuild or recover, and individuals may have to relocate elsewhere. Delays in recovery or decisions not to rebuild can have significant impacts on mental health. Continued mental health resources are needed at this time to address these long-term mental health impacts, as well as continuing cases of PTSD, depression, and substance abuse.

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RECOVERY FOR INDIVIDUALS

In this section we present materials that can be used by community leaders and professionals who are responding to a disaster event, as well as individuals who are affected by that event. As such, the following subsections could be used both as training tools and as resources for individuals who present to physicians, public health departments, or mental health providers following a disaster event. We discuss a range of long-term emotional reactions, including guilt, grief, and Posttraumatic Stress Disorder (PTSD). In addition, we talk about the significance of anniversaries and decisions about memorials, as well as how belief systems are often threatened by disaster events. Remaining vigilant for these long-term reactions is essential, as some individuals in a community may have delayed reactions following a disaster event.

Remaining Vigilant for Warning Signs

During the reconstruction and recovery phase of disaster, community focus and attention naturally shifts towards trying to restore aspects of the community that were destroyed or disrupted as a result of the disaster. While the community is focused on reconstruction and moving forward, some individuals may continue to experience post-disaster stress symptoms and may even have developed more severe problems such as Major Depression or PTSD. Additional long-term psychological reactions to remain vigilant for include anger management problems and substance abuse. Stress reactions may even continue after reconstruction is completed, as the secondary effects generated by a disaster may continue to linger in a community. For example, even when buildings are reconstructed, the local economy may move very slowly towards a complete recovery, leaving some without jobs or with lower incomes. The resulting financial strain can contribute to continuing post-disaster stress.

Thus, it is important for those who have contact with individuals following a disaster to remain watchful for signs that a person may be having trouble recovering. Keep in mind that recovery is an individual process; not everyone recovers in the same way or at the same pace following a traumatic event. As with short-term post-disaster stress reactions, the key is to be watchful for individuals who continue to struggle with their daily activities and do not appear to improve even after several months have passed since the disaster. Again, a good rule of thumb is to assess whether the person is having trouble functioning in their normal environment (e.g., work, school, home), whether the person's symptoms are interfering with their normal activities, or
Anniversaries and Memorials

Although the passage of time may bring closure and recovery for the majority of the community, anniversaries of the disaster event can bring post-disaster emotions back to the surface. Increased feelings of distress around the anniversary of a traumatic event, known as anniversary reactions, can range from feeling distraught for a day to significant psychological or medical symptoms. Individuals who have lost loved ones may experience intensified feelings of grief and depression. The anniversary of an event serves as a time cue, which is a strong reminder that is associated with many of the initial thoughts and feelings experienced by victims and communities at the time of the disaster. An anniversary time cue includes not only the date of the disaster, but also potentially a season of the year or a time of day. It is possible for people to experience anniversary reactions even when they are not directly aware of the time cue.¹

Many individuals also report anticipatory stress in the weeks and days leading up to an anniversary. These individuals may feel intense worry about their ability to cope with the stress and grief of the coming anniversary. In a sense, their anxiety about the coming anniversary serves as a self-fulfilling prophecy that they will have emotional difficulty as the date approaches.

Individuals who were most affected by the disaster event are at risk for being more affected by the anniversary, especially individuals with PTSD. Anniversary reactions are also influenced by:²

- The scope of the disaster, or the number of affected individuals and deaths.
- Media attention that reviews the disaster.
- Memories of personal losses, such as deaths, lifestyle changes, or financial losses.

In addition to anniversaries, decisions regarding community memorials also bring to the surface strong emotions. The primary function of a memorial is, “to preserve remembrance, of or relating to memory.”³ Memorials may commemorate individuals lost in a disaster or the disaster event as a whole. For many people, memorials are a key part of the grieving process, as they symbolize a community’s shared grief. Although communities build memorials to remember and honor victims of disaster, community members often have different ideas about how a memorial should be constructed, thus leading to controversy and disagreement on the design, location, content, and funding of the

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The anniversary of an event serves as a time cue, which is a strong reminder that is associated with many of the initial thoughts and feelings experienced by victims and communities at the time of the disaster.

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Coping With Threats to Belief Systems

Disaster has the potential to destabilize personal belief systems of both victims and witnesses. While loss in general can lead a person to question important aspects of their life, including what they believe about the world, exposure to large-scale tragedy can shake the belief systems of nearly all victims and witnesses. People struggle as they examine their belief systems in light of the disaster. Belief systems potentially affected by tragedy include spiritual or religious beliefs, but could also include other beliefs systems. For example, a belief system that includes notions about the safety of our communities might be shaken substantially after a terrorist attack. Other beliefs also might be challenged under these circumstances, such as faith in the government to care for citizens after an attack.

During the initial period of tragedy there is shock and distress. Once the initial trauma has passed, there is an opportunity to integrate the experience with the current belief system. For those who find that the event does not fit with their belief system, there are several possible reactions.

Altering Perceptions of the Event

People might attempt to change their perception of the event in order to keep the current belief system intact. For example, if a person believes that bad things happen only to bad people, that person might view large-scale tragedy as a punishment for bad things each victim had done. Rather than changing the belief system, the perception of the event is altered so that the belief system can remain unchanged.

Altering Belief Systems

People may alter their belief system to accommodate the events. For example, if one believes that bad things happen only to bad people, and a family member or friend who is viewed as good experiences misfortune or tragedy, there might be a need to revise the belief system. However, other parts of the belief system, such as belief in God, may remain intact.

Abandoning Belief Systems

It may be necessary to abandon the belief system entirely. Completely changing one's belief system can be difficult and frightening. This fear can be heightened if there is not another belief system into which one
financial security, and even beliefs about the strength of friendships could be challenged during a tragedy.

Helping Others

It will take time for people to come to terms with tragic events, and the amount of time necessary will vary for each individual. As an employer, colleague, friend, or relative it is helpful to provide emotional support to people experiencing tragedy by allowing them to freely express their thoughts and feelings. It is not necessary or helpful to tell people what to think or feel. Rather, it is better to reassure them that their thoughts and feelings are natural, and provide a non-judgmental ear to listen to what they are experiencing.

References

8, 9 Toch, H. H. (1955). (See reference 3)

It is good to reassure people that their thoughts and feelings are natural, and provide a non-judgmental ear to listen to what they are experiencing.
include preoccupation with the deceased, intense sadness, loneliness, withdrawal, fear, anxiety, guilt, and anger. Eventually, the bereaved person begins to re-engage in life and find ways to remember the loved one while continuing forward with their own life, thus leading to an improvement in grief symptoms.³

The amount of time it takes to experience symptom relief varies based on the individual, their previous experiences with grief, and the nature of the loss. Typically, bereaved individuals experience an increase in depressive symptoms for the initial 6-12 months following the loss. Thus, people who lose loved ones will experience sadness and loss of interest in things they usually find pleasurable, as well as symptoms such as loss of appetite, trouble sleeping, and difficulty concentrating. These symptoms are entirely normal. Most of these symptoms improve by the second year following the loss, although approximately 20% of individuals remain depressed.⁶ Those who experience clinical levels of depression following the death are at risk for continuing to have long-term depressive symptoms. Other risk factors for complicated bereavement include:⁷

- Age – Younger and elderly individuals may be at higher risk for complications than other age groups.
- Sex – Men may have more health difficulties in response to bereavement, especially if they lose their spouse.
- Guilt – Feelings of guilt for having survived may contribute to complicated bereavement.
- Sudden/violent death – When a death is sudden and unexpected, individuals may experience greater symptoms of loss. Also, violent death (such as death resulting from terrorism) may result in feelings of helplessness and loss of faith in the safety of the world. These reactions contribute to complicated bereavement.
- Coping style – Those individuals who avoid coping with the loss may experience unresolved grief.

Survivor's Guilt Following Disasters

When a loved one, friend, co-worker, or fellow community member dies or loses someone they loved in a disaster, those individuals who survived may experience feelings of guilt for being alive. Guilt may also be experienced if a survivor manages to keep his or her home, valued possessions, or other financial assets when many others lose these due to the disaster. Survivors may wish they themselves had died or feel guilty for not being able to save someone who died in the disaster event. These feelings of having survived, when others have not, are referred to

When a loved one, friend, co-worker, or fellow community member dies or loses someone they loved in a disaster, those individuals who survived may experience feelings of guilt for being alive. These feelings of having survived, when others have not, are referred to as "survivor's guilt."

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Coping With Anxiety and Depression

Two of the primary emotions people experience after the immediate crisis period of a disaster has passed are anxiety and depression. These emotions are normal and expected, as disasters can lead to significant losses and changes in a person’s way of life. Feelings of fear and anxiety may be triggered by specific reminders of the disaster event such as a certain place, sound, or even smell. Sadness and depression may occur when an individual thinks about the way life “used to be” and mourns the loss of loved ones and family possessions. For some people, these feelings come from out of the blue.

Why do People Feel Fear and Anxiety?

Fear and anxiety are natural responses to danger and trauma. When a person encounters danger, there is an automatic system that kicks into gear to prepare the body for physical confrontation or escape. This automatic system (sympathetic system) is known by many people as the “flight or fight system.” It helps protect us when we encounter danger by preparing us to take action. As the name suggests, the purpose of the “flight or fight” system is to prepare a person to either stay and fight, or to quickly leave a dangerous situation. As part of this preparation, chemicals are released and other reactions occur in the body. Some of the main reactions that occur are:

- A release of adrenaline, which results in the body becoming aroused so it is ready for action.
- An increase in heart rate to quickly pump more blood to the muscles.
- An increase in the rate of breathing to get more oxygen to the body’s tissues.
- An increase in sweating to prevent the body from overheating.
- An increase in muscle tension to prepare the body for action.

There is an opposite system (parasympathetic system) that helps the body wind back down after the danger or trauma is over. This system helps to ensure that the “flight or fight” system does not continue un-ended. However, the parasympathetic system does not kick in right away, as it takes a while for the adrenaline and other substances unleashed by the “flight or fight” system to leave the body. Thus, the parasympathetic system is different because it operates slowly, whereas the “flight or fight” system turns on instantly. The parasympathetic system operates slower because the body tries to stay primed in case the danger returns.

Many people experience symptoms of anxiety and depression following a disaster event. However, if your symptoms are severe and are interfering with your daily routines, it is important that you see a mental health professional (psychologist, psychiatrist, social worker, licensed mental health counselor). Only a qualified mental health professional will be able to determine if you have a mental health diagnosis.

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- Department of Family, Youth & Community Sciences
- College of Health & Health Professions
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To make sure you are not breathing from your chest, put your left hand on the diaphragm and your right hand on your chest. Try breathing in so that your left hand rises but your right hand does not. When you breathe out, your left hand should fall. For some people, they may find it helps to lie down and put a tennis ball or a lightweight book on their diaphragm so that they can watch it rise and fall as they breathe. Another trick is to say the word “huh” as you breathe out. This will help activate your diaphragm.

Step 2: Remind yourself to relax as you breathe

Once you have practiced taking slow, deep breaths, try saying the word “relax” or “calm” to yourself (in your head, not out loud) every time you breathe out. Take a slow, deep breath in, then breathe out and say the word “relax.” Practice this whole exercise breathing at a normal rate until you feel comfortable with the exercise.

Step 3: Slow down your breathing

Once you are comfortable with deep breathing, try gradually slowing down the pace of your breathing. Do not hold your breath or slow down your breathing so much that you feel like you do not have enough air. For some people, counting (in your head, not out loud) as they breathe in and out helps them breathe more slowly and evenly. Try counting to 5 as you breathe in, and then count to 5 again as you breathe out.

Step 4: Add deep breathing to your daily routine

To get the best results from deep breathing, it is best to practice at least twice a day (good times are in the morning and at night before bed). Try practicing for at least 5 minutes at a time in a quiet, private place. You can also practice deep breathing at other times during the day when you feel stressed or anxious, as this exercise works in pretty much any location where you can sit down. If you catch yourself breathing too fast, stop and take a moment to breathe slowly and deeply.

• Progressive muscle relaxation

Like deep breathing, progressive muscle relaxation helps the body calm down. Progressive muscle relaxation is a fancy term describing a process of alternating between tensing and relaxing the muscles in your body. When people are anxious, they often tense their muscles, usually without even thinking about it. The result is increased muscle tension.
Step 4: Practice this exercise a few times a week if possible

If you are able to practice this exercise several times a week, your body will start to associate the word “relax” with the way your muscles feel when they are relaxed. Repeating this exercise many times helps the word “relax” become a cue or trigger for your muscles to relax. Research shows that repeated practice of this exercise over time can help decrease anxiety symptoms.

- Other things that can help

General stress management strategies can help ease symptoms of both anxiety and depression. Please see, “Stress Management for Adults,” for more information. Exercise can also be very helpful in reducing anxiety, as it has been shown to help boost the parasympathetic system, thus helping the body relax. Other relaxation techniques that can be helpful include yoga and meditation.

Why do People Feel Sadness and Depression?

Sadness and depression are normal emotions that people experience when they suffer a loss, such as the loss of a loved one, family possessions, employment, or pets. While most people recognize that sadness is common following the loss of a loved one or a family pet, some people may not realize that prolonged sadness is also common after the loss of possessions or a job. However, people commonly lose items of personal and historical significance in disasters, including family pictures, family heirlooms, and homes. Although possessions can be replaced, family treasures are often irreplaceable. For this reason, these losses can be difficult to accept. These types of losses are common after natural disasters, single-family fires, and some human-made disasters. Job loss can also be a trigger for depression, as it can be difficult to cope with the loss of income, as well as the loss of social support provided by co-workers. Also, many people gain self-esteem through their job. Thus, losing a job can mean a loss in self-esteem, which is possible trigger for depression.

Feelings of sadness and depression are often triggered by the thoughts that people have about the disaster event. For instance, a person may think, “I lost everything in the disaster. My life can never be the same again.” Such thoughts may lead a person to believe that they will not be able to rebuild their life to the life they had pre-disaster, thus leading to feelings of sadness and depression. For most people, these feelings begin to subside as they rebuild their lives in the months after the disaster.
Posttraumatic Stress Disorder (PTSD)

What is Trauma?

A trauma is any kind of stressful, potentially life-threatening event such as an accident, assault, natural or human-made disasters, rape, combat, or seeing someone badly injured or killed. A trauma is like an emotional shock. During the trauma, the person typically feels extreme fear, and/or a sense of helplessness, or horror.

What are Typical Reactions to Trauma?

Each person responds in his or her own way to a trauma, including natural or human-made disasters. However, there are also some common reactions that most people experience.

Common reactions include:

- Anxiety and fear
- Flashbacks (feeling as though you are re-living the trauma)
- Nightmares
- Having trouble concentrating
- Feeling irritable
- Feeling overly alert or easily startled (e.g., by a phone ringing)
- Avoiding people, places, or things that remind you of the trauma
- Feeling emotionally detached or distant (feeling “numb”)
- Feeling sad or down and depressed
- Feeling guilty or full of shame
- Feeling angry
- Difficulties in getting along with other people
- Loss of interest in sexual relations
- Being reminded of past traumatic experiences
- Increased use of alcohol, cigarettes, and other drugs

These stress reactions are understandable responses to a dangerous and life-threatening event and thus are normal reactions to an abnormal situation. Some people will experience a number of these stress reactions, while others may experience only one or two. Even if two people experience the exact same trauma, each person will respond differently to that event.
- Having greater exposure to the trauma, especially if injury is sustained, one’s life is threatened, and/or one has experienced an extreme loss - The more a person is directly impacted by the disaster, the greater the risk of future psychological problems.

- Living in a highly disrupted or traumatized community - Living in such a community increases stress and makes it difficult to get one's life back in order after a disaster.

- Having previous traumas unrelated to the disaster (e.g., childhood trauma) - Almost like having prior infections, having earlier traumas seems to "weaken" the system and make a person more vulnerable.

- Experiencing other stressors in one's life (e.g., marital stress) - Having a lot of stress taxes the body and mind, making a person less able to deal effectively with yet another crisis situation.

- Experiencing the loss of important resources as a result of the disaster - Losing one's primary source of income, for example, can severely limit a person's options and can lead to loss of self-esteem.

Although these risk factors give us some idea, when all is said and done, we cannot predict exactly how quickly each person will recover. However, on average, most people recover fully from moderate stress reactions within 6 to 16 months after the trauma.²

What is Posttraumatic Stress Disorder (PTSD)?

What happens if after a few weeks or months a person still does not feel better? In this case, it is possible that the person may have a condition known as Posttraumatic Stress Disorder, or PTSD for short.

PTSD is not a new condition. Historical accounts of PTSD-like conditions originate from the Civil War. Soldiers who were severely traumatized during World War II were said to have "shell shock," a condition we now know is PTSD. Most of what we know about PTSD came from research conducted after the Vietnam War. One of the most important findings was that civilians who were never exposed to war can still develop PTSD. Thus, any trauma, including a disaster, can result in PTSD if the stress reactions listed in the beginning of this section do not go away on their own.

For more information on PTSD, please visit the National Center for PTSD at:

⇒ www.ncptsd.org
Where Can I Find a Mental Health Professional for PTSD Treatment?

There are several resources you can use to find a qualified mental health professional in your area. When you contact these resources, make sure to ask for a professional who has experience treating people with a history of trauma.

- Call the American Psychological Association at 1-800-964-2000 for a referral to a psychologist in your local area.
- Call your insurance company for a list of providers in your area.
- Call your local community mental health center.
- Call your area United Way or Red Cross chapters for information about resources in your local area.
- If you are concerned that your child has symptoms of PTSD, contact one of the above resources or speak with your child’s school guidance counselor about any additional resources that might be available in your child’s school or community.

For more information on treatment please see, “Treatment for Long-Term Reactions to Trauma.”

References


Additional References

- Some of the material in this section was derived from work by Edna Foa, Ph.D., and colleagues, who have conducted extensive research on the etiology and treatment of PTSD. Sources include: E.B. Foa, E.A. Hembree, & C.V. Dancu – Prolonged Exposure (PE) Manual, University of Pennsylvania; Foa & D.S. Riggs (2001) – Brief Recovery Program (BRP) for Trauma Survivors, University of Pennsylvania.

Like adults, children can develop PTSD following a disaster. However, children may exhibit symptoms in different ways. For example, young children may show distress through their behavior. If you suspect your child is having difficulty recovering from a disaster, you can consult with your child’s physician, a mental health professional, or a guidance counselor/psychologist at your child’s school.

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changing thoughts and behaviors related to the trauma. Also, the person is taught more effective coping strategies to use when faced with memories of the trauma. With regards to PTSD, research to date has found that psychotherapy can be very effective for reducing symptoms, especially CBT that involves an exposure component or stress inoculation training. Roughly 90-95% of people with PTSD who participate in prolonged exposure therapy improve significantly, while only 10% do not respond to this treatment.

- **Group therapy**

Group therapy involves working in a group setting with other individuals who have similar concerns and one, or possibly several, therapists. Often, survivors of trauma feel isolated and may feel that others do not understand their experiences. One advantage of group therapy is the presence of other individuals who have had similar experiences and stressors. Many techniques used in individual therapy are also used in group therapy, such as teaching more effective coping strategies and examining thoughts and behaviors related to the trauma event. Although group therapy offers the advantage of working with other people who have shared similar traumatic experiences, some people find it more anxiety-provoking to discuss their concerns in front of a group of people. In this case, individual therapy may provide a more comfortable treatment setting.

- **Medication**

There are a number of medications available that have been shown to have effectiveness in decreasing symptoms of depression and anxiety. Many medications used to treat anxiety and depression have some effect on both kinds of symptoms, although symptoms may return when a person stops taking the medication. Although research on the use of medications for treating PTSD is in the early stages, studies have shown that medications can reduce symptoms of depression, anxiety, and insomnia for individuals with PTSD. Commonly used medications for depression, anxiety, and PTSD include the selective serotonin reuptake inhibitors (SSRIs; Prozac is one such medication). You can talk with a health professional about whether medications may be helpful for you. All medications have side-effects (e.g., jittery feelings, loss of appetite), so it is important to tell your health provider about any side-effects you experience while on a medication. Often, medications are prescribed in combination with psychotherapy. For individuals with severe PTSD or depression, it may be helpful to begin with medication to help ease symptoms before starting a course of psychotherapy.

Often, survivors of trauma feel isolated and may feel that others do not understand their experiences. One advantage of group therapy is the presence of other individuals who have had similar experiences and stressors.
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RESOURCES

Agricultural Safety and Disaster Preparedness and Recovery Program
Institute of Food and Agricultural Sciences, University of Florida
P.O. Box 110570, Gainesville, FL 32611
1-352-392-1864
E-mail: clehtola@agen.ufl.edu
http://it.ifas.ufl.edu/FDM/

American Association of Marriage and Family Therapy (AAMFT)
http://www.aamft.org

American Red Cross
2025 E. St., NW
Washington, D.C. 20006
1-202-303-4498
E-mail: infor@usa.redcross.org
http://www.redcross.org/
http://www.redcross.org/services/disaster

American Psychiatric Association
1-703-907-7300
http://www.psych.org

American Psychological Association (APA)
750 First Street, NE
Washington, DC 20002-4242
1-202-336-5500
1-800-374-2721
http://www.apa.org

Centers for Disease Control and Prevention (CDC)
1600 Clifton Rd.
Atlanta, GA 30333
1-888-246-2675
http://www.cdc.gov

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National Child Traumatic Stress Network  
http://www.nctsn.org

National Climactic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, NC 28801-5001  
1-828-271-4800  
http://lwf.ncdc.noaa.gov/oas/ncdc.html

National Emergency Management Association  
1-859-244-8000  
http://www.nemaweb.org/index.cfm

National Organization for Victims Assistance (NOVA)  
http://www.try-nova.org/

National Voluntary Organizations Active in Disasters  
1-301-890-2119  
http://www.nvoad.org

Office of Homeland Security  
http://www.dhs.gov  
Be Ready:  
1-800-BE-READY  
http://www.ready.gov

SAMHSA Disaster Technical Assistance Center (DTAC)  
1-800-308-3515

U.S. Department of Education  
1-800-USA-LEARN  
http://www.ed.gov/index.jsp

U.S. Department of Energy  
1000 Independence Ave, SW  
Washington, DC 20585  
1-800-dial-DOE  
http://www.energy.gov

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HELPFUL PUBLICATIONS

Children and Disasters/Terrorism


Helping children prepare for and cope with natural disasters: A manual for professionals working with elementary school children. (An abridged version relevant to all disasters is also available. Available by writing to: Annette La Greca, Department of Psychology, P.O. Box 249229, University of Miami, Coral Gables, FL 33124)

Disaster Planning


Providing Disaster Mental Health Services


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Secondary Trauma in Disaster Workers and Mental Health Professionals


*All of the publications preceded by an asterisk are available free of charge for printing/ordering on the Internet at http://store.mentalhealth.org/default.aspx. You can also order them free of charge by calling 1-800-789-2647.*
University of Virginia Library: Disasters and natural hazards research guide.

Preparedness

http://www.ces.ncsu.edu/disaster/
Natural disaster preparedness.

Disaster response: principles of preparation and coordination.

http://yosemite.epa.gov/oswer/ceppower.nsf/content/index.html
EPA: Chemical emergency preparedness and prevention.
http://www.sweb.uci.edu/faculty/vaughan/
    Cultural differences of environmental risk perception and assessment.

http://www.Adopting.org/wsdepres.html
    When normal grief becomes clinical depression.

http://www.ag.uiuc.edu/~disaster/facts/famdist.html
    University of Illinois @ U-C: How to be a good listener.

http://www.ag.uiuc.edu/~disaster/facts/refhelp.html
    University of Illinois @ U-C: How to refer a person for help.

http://www.ag.uiuc.edu/~disaster/facts/emotion.html
    University of Illinois @ U-C: Emotional reactions to disasters.

http://www.trauma-pages.com/
    Emotional trauma and traumatic stress.

http://www.nimh.nih.gov/anxiety/ptsdmenu.cfm
    PTSD, trauma, disasters, and violence.

http://www.mentalhealth.org/publications/allpubs/KEN-01-0094/default.asp
    SAMHSA: A guide for older adults.

**Children and Disasters/Terrorism**

    SAMHSA: How to help children after a disaster.

http://www.mentalhealth.org/publications/allpubs/KEN-01-0093/default.asp
    SAMHSA: After a disaster: A guide for parents and teachers.

    SAMHSA: What teens can do.

    SAMHSA: Mental health aspects of terrorism.

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http://www.disastertraining.org
  Helps adults learn to prepare children for disasters.

http://www.teachervision.com/lesson-plans/lesson-15413.html
  Understanding September 11th: Answering Questions About the Attacks on America (a elementary/middle school lesson plan).

http://askeric.org/cgi-bin/printlessons.cgi/Virtual/Lessons/Health/Mental_Health/MEH0200.html
  Responding to Social Crisis: A Lesson Plan.

http://specialed.about.com/library/weekly/aa091201a.htm
  Talking to traumatized kids: How do you explain a tragedy to a child who has special needs?

http://www.schwablearning.org/articles.asp?g=2&c=355
  Talking to your child with LD about the WTC tragedy.

http://www.nasponline.org/NEAT/specpop_alt.html
  Coping with Terrorism – Helping Children with Special Needs.

http://www.schwablearning.org/articles.asp?g=2&c=353
  Helping kids cope with tragedy: Differences in kids with learning disabilities.

  A guide for helping children cope - the Oklahoma City bombing.

http://www.talkingwithkids.org/television/twk-news.html
  Talking with children about what they see on the news.

  Hospice websites discussing tips for talking with children about death.

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http://www.adventistchaplains.org/
  Adventist Chaplaincy Ministries

http://www.adra.org/
  Adventist Development and Relief Agency

http://www.nazarenedisasterresponse.org/
  Nazarene Disaster Response

http://www.mds.mennonite.net/
  Mennonite Disaster Services

http://www.act-intl.org/
  Action by Churches Together

http://www.churchworldservice.org
  Church World Service

http://www.disaster-relief.net/mavoad/mafds.html
  Friends Disaster Relief
Bioterrorism Websites

General Information

http://www.cdc.gov/
  Centers for Disease Control and Prevention

http://www.bioterrorism.slu.edu/index.html
  St. Louis University School of Public Health: Center for the Study of Bioterrorism

  NYC Department of Health: Questions and answers about bioterrorism.

http://wfebmc.edu/intmed/id/links_biot.html
  Collection of bioterrorism links.

http://www.cidrap.umn.edu/cidrap/content/bt/bioprep/btwatch/index.html
  University of Minnesota: Center for Infectious Disease Research and Policy - Bioterrorism watch.

http://www.nap.edu/shelves/first/index.html
  The National Academies: Responding first to bioterrorism.

Biological Agents

http://www.bt.cdc.gov/
  CDC: Index of biological agents.

http://www.promedmail.org/pls/askus/?p=2400:1000
  International Society for Infectious Diseases: Collection of articles on anthrax.

http://www.health.state.mo.us/BT_Response/BT_Response.html
  Collection of articles, mostly on smallpox.

http://www.aap.org/terrorism/index.html
  Biological agents of terrorism.

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