Standing Together

An Emergency Planning Guide for America's Communities

Joint Commission
on Accreditation of Healthcare Organizations
Setting the Standard for Quality in Health Care

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The Joint Commission is proud to acknowledge its partnership
with the following organizations
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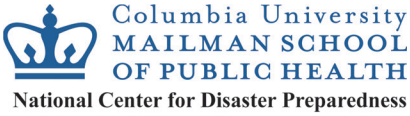

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Executive Summary

Despite the passage of four full years since September 11, 2001, many small communities in the United States are struggling to meet the mandate for emergency preparedness and response that would enable them to function on their own in the hours or days before help arrives from regional, state, and federal sources. Readiness barriers include lack of clarity about who is responsible for preparedness and response planning, what elements of the planning and response processes are critical, how to coordinate with state and federal emergency management programs, and how to obtain and sustain funding. Whenever or whatever disaster or mass casualty event occurs, community and local response will be key to survival; communities must look to themselves and adjoining communities for answers.

This planning guide provides expert guidance on the emergency management planning process that is applicable to small, rural, and suburban communities. Its goal is to remove readiness barriers by providing all communities with strategies, processes, and tools for coordinated emergency management planning. The target audience is local leaders—including elected or appointed officials, health care providers and practitioners, public health leaders, and others who are responsible for initiating and coordinating the emergency management planning effort in towns, suburbs, and rural areas throughout the United States.

To develop this planning guide, the Joint Commission partnered with the Illinois Department of Public Health, the Maryland Institute of Emergency Medical Services Systems, and the National Center for Emergency Preparedness at Columbia University and convened two expert roundtable meetings in May and October of 2004. These roundtables addressed the issue of emergency management planning in small, rural, and suburban communities; synthesized the challenges; and framed potential solutions. This document reflects the extensive input received from roundtable participants.

Although no one planning tool or template can provide the breadth of guidance needed, this planning guide is offered as a multifunctional tool or template. It outlines 13 essential components of an effective community-based emergency management planning process and provides multiple planning strategies addressing each component. The components include the following:

1. Define the community.
2. Identify and establish the emergency management preparedness and response team.
3. Determine the risks and hazards the community faces.
4. Set goals for preparedness and response planning.
5. Determine current capacities and capabilities.
6. Develop the integrated plan.
7. Ensure thorough communication planning.
8. Ensure thorough mental health planning.
9. Ensure thorough planning related to vulnerable populations.
10. Identify, cultivate, and sustain funding sources.
11. Train, exercise, and drill collaboratively.
12. Critique and improve the integrated community plan.
13. Sustain collaboration, communication, and coordination.

Each of the 13 sections includes supporting tools and provides links to Web sites that offer up-to-date information. The planning strategies are summarized at the beginning of each component section for ready reference. Thus, this guide can be used in a modular fashion to address discrete areas of interest to particular planning team members. Or it can be read cover to cover as a comprehensive guide to community emergency management planning.

This guide emphasizes two planning strategies that are of particular significance to small, rural, and suburban communities. The first is to enable people to care for themselves, and the second is to build on existing relationships.

Enable people to care for themselves

Planning that prepares the community to help itself can serve to reduce the potential surge in demand for services experienced during an actual emergency. The emergency plan needs to include a well-defined risk communication plan that contains information on the guidance that will be provided to the public and how that guidance will occur (for example, through distribution of fliers or other written material, or public service announcements on local radio and television stations). Some types of emergencies can be managed in homes if proper information, such as how to prevent and treat influenza in low-risk individuals during an outbreak in the community, is made available. For certain kinds of chemical exposure, the instruction to stay at home and take a shower rather than go to the hospital to be decontaminated is appropriate. Other types of emergencies will require mass evacuation, which is best supported by ongoing public communication, education, testing, and drills. Hurricane plans in Florida provide an excellent example of proactive, multilingual, and pervasive preparedness; evacuation signs are well recognized throughout communities in Florida.

Community awareness, education, and engagement can be supported not only through formal public health and public safety mechanisms and the local media, but also at a "grass roots" level through a range of community groups, such as civic organizations, religious groups, Boy/Girl Scout troops, and high school sport teams, among others. These groups provide not only information, but also social support for participation in the planning and response effort that will help individuals stay engaged over time, even during times of perceived "low risk" when apathy about preparedness can become pervasive.

Highly organized community preparedness efforts should also be supported. Communities whose residents have not yet experienced Community Emergency Response Teams (CERTs) may wish to consider offering this program. CERTs are funded by Congress through Citizen Corps program grants, which are made available to local communities. A key component of Citizen Corps, the CERT program trains citizens to be better prepared to respond to emergency situations in their communities. When emergencies occur, CERT members can give critical support to first responders, provide immediate assistance to victims, and organize volunteers at a disaster site.

The CERT program is a 20-hour course, typically delivered over a seven-week period by a local government agency, such as the emergency management agency or fire or police department. Training sessions cover disaster preparedness, disaster fire suppression, basic disaster medical operations, light search and rescue, and team operations. The training also includes a disaster simulation in which participants practice skills that they learned throughout the course.

Build on existing relationships

The time and resource requirements associated with emergency management planning, response, and recovery are considerable. Communities should carefully and creatively examine their current assets and expand upon them to best capitalize on their investment in preparedness. A key asset is the relationships that already exist among potential planning partners in the community; these relationships can serve as an important platform for building response capability.

Small communities located near military installations, nuclear power plants, hydroelectric dams, and other large-scale industrial entities are familiar with the extensive public education and collaboration required to maintain general public safety. Periodic joint meetings involving the local utility company, telecommunications company, water bureau, public health department, hospital, fire department, police, and emergency medical services (EMS) are not unusual in such communities, but in other communities there are long-standing walls that must be breached to facilitate collaborative planning. In such situations, it may be advisable to begin with natural allies who can quickly identify common ground. The following examples illustrate how to "call the first meeting" over a focused issue, then expand the work group into a broader, integrated community planning team:

- EMS leadership partners with the local hospital around first responder/first receiver communication issues, pulling in fire and police to initiate discussions about potential improvements. Further planning discussions expand the dialog and include the risks associated with certain types of communicable disease outbreaks. For additional expertise and operational information, the local health department, state laboratories, and bureau of primary health care clinics are brought to the table. The integrated community planning team builds from here to include broader areas of risk and response expertise respecting potential issues facing the community.
- A local municipality, in responding to the need to establish special-needs shelters, has—through its department of human services and local nursing homes—identified all the vulnerable disabled and elderly residents in institutions but has not identified all those living in the community. The municipality establishes a work group that includes representatives from human services, nursing homes, the largest home health agency serving the community, the largest retail pharmacy serving the community, and the local postal service. They establish a preliminary plan for locating the vulnerable disabled and elderly in the community and, on the basis of this preliminary plan, are able to pull in representatives from local police, the 911 call facility, EMS, county mental health agency, and others to help refine the plan and address issues of service needs, communication strategies, transport, and medical equipment and supplies. Problem solving around this specific issue leads to collaboration on broader issues of emergency management planning in the community, and the integrated community planning team builds from there.

Finding dual uses for existing or emerging capabilities is also particularly critical for resource-strapped small, rural, and suburban communities. A reverse 911 call system established by a community for law enforcement emergencies could also be used to communicate information about other types of emergencies. Motels and college dormitories can be utilized to provide additional bed capacity. Investments made by local public health departments in upgrading laboratory services for smallpox, sudden acute respiratory syndrome (SARS), anthrax, and other specialized testing can buttress routine laboratory services in the community. Boats or school buses can provide alternative means of emergency transportation. Businesses with call-center capabilities, such as telemarketing and airline operations, can support community communication needs during a disaster.

By creating an informed and empowered citizenry, and by bringing to the table the full range of assets within the community including planning partners perhaps not previously considered, small, rural, and suburban communities can deepen and extend their capability to plan for and respond to all types of natural and man-made disasters.

Introduction

We cannot live for ourselves alone. Our lives are connected by a thousand invisible threads, and along these sympathetic fibers, our actions run as causes and return to us as results.

Herman Melville

It would seem to take more than a village to respond to the catastrophic events witnessed in recent years. Terrorists, tsunamis, tornadoes, and other threats affect whole cities, countries, and continents. Yet most disasters and mass casualty events are experienced locally; in this country, incidents are generally handled at the lowest possible jurisdictional level.[1] When significant events occur, the "intrusive reality" is that small, rural, and suburban communities in the United States may be on their own for 24 to 72 hours before help arrives from regional, state, and federal sources. Community and local response will be key to survival; communities must look to themselves and adjoining communities for answers. The invisible threads that connect individuals, as described by Melville, must be pulled together to create a surviving community fabric.

The goal of and need for this publication

The goal of this publication is to provide small communities with strategies, processes, and tools for coordinated emergency management planning. To be fully effective, such information must stimulate and sustain linkages among the individuals and agencies composing a small community's fabric. Rural areas may be particularly vulnerable to terrorist threats and they also may be least prepared to respond. Because nuclear power plants, uranium and plutonium storage facilities, and all U.S. Air Force missile launch facilities are located in rural areas, these communities represent potential terrorist targets.[2] In addition, the interstate transit of hazardous materials through small communities nationwide and the location of agricultural chemical facilities make chemical threats a reality as well. Moreover, following a terrorist event, residents fleeing large urban areas and in need of food, shelter, clothing, and health care could very well "land on the doorsteps" of small communities and overwhelm community resources.

Terrorists, of course, are not always the cause of "events" that overwhelm local resources. Every community is vulnerable to an influenza pandemic—an event considered by most infectious disease specialists to be long overdue. According to a recent report from the Institute of Medicine, experts believe that "the world stands on the verge"[3(p. 1)] of such a pandemic.[4,5] Its estimated impact in the United States is 89,000 to 207,000 deaths, 300,000 to 700,000 hospitalizations, and 18 million to 42 million individuals requiring outpatient care. Every community must face the possibility of responding to influenza with minimal or no external resources or support.[3] Many small communities with already seriously burdened and limited health facilities simply will not be able to care for the surge of patients.

Despite the passage of four full years since September 11, 2001, many small communities are struggling to meet the mandate for preparedness and response that would "return" the desired "results," as described by Melville. Challenges abound (Sidebar 1), but perhaps the most threatening of these challenges is complacency. "The feeling of relative safety brought on by the belief that rural areas are at a lower risk for terrorism may reduce rural communities' sense of urgency and limit preparation and responsiveness," notes one government report.[2(p. 4)] Studies published in 2002 and 2003 indicate that public health emergency preparedness at the local level may be improving, but that gaps persist even in larger communities.[6–8] In reality, many of America's

small communities are still "waiting for someone to call the meeting."[9(p. 11)] Readiness barriers include lack of clarity about who is responsible for preparedness and response planning, what elements of the planning and response processes are critical, how to coordinate with state and federal emergency management programs, and how to obtain and sustain funding.

SIDEBAR 1. COMMON EMERGENCY PREPAREDNESS CHALLENGES IN RURAL AREAS

- A limited public health infrastructure
- A short supply of health providers
- Lack of hospital bed surge capacity
- Seasonal surge capacity and surge capacity from nearby urban areas
- Mostly volunteer first responders
- Limited mental health services
- Limited access to hazardous materials units, recognition capability and decontamination training
- Lower Medicare payments to health care organizations than to urban counterparts for equivalent services
- Difficult access to needed emergency services due to geography; residents may face greater transportation difficulties reaching needed services
- Complacency based on the belief that rural areas are at a lower risk for terrorism than urban areas

Sources: Robert M. Gougelet, M.D.; National Rural Health Association: What's different about rural health care? http://www.nrharural.org; U.S. Dept. of Health and Human Services, Office of Rural Health Policy (HHS): *Rural Communities and Emergency Preparedness.* Washington, DC: HHS. Apr. 2002.

The audience

This planning document seeks to help remove these barriers by providing expert guidance on the emergency management planning process that is applicable to small, rural, and suburban communities. The target audience is local leaders, including elected or appointed officials, health care practitioners and providers, public health leaders, and others who are responsible for initiating and coordinating the emergency management planning effort in small towns, suburbs, and rural areas throughout the United States. These leaders bear responsibility for creating the interconnectedness that will help ensure the safety and well-being of individuals in their communities.

This publication builds on a white paper published by the Joint Commission in May 2003 entitled *Health Care at the Crossroads: Strategies for Creating and Sustaining Community-wide Emergency Preparedness Systems.*[9] That white paper framed the issues that must be addressed in developing communitywide preparedness and noted that "public-private sector partnerships offer the best overall prospect for research on and development of relevant, scalable models that will meet local community needs in a variety of urban, suburban, and sparsely populated settings. There is considerable urgency to move this work forward."

No community is exactly like another. Structures, governance, resources, and capabilities vary widely. Development of a one-size-fits-all emergency *plan* thus is neither doable nor desirable. The model or template offered in this planning guide is a community-based *planning process* that contains 13 components essential to the development and implementation of effective emergency preparedness and response. Strategies, tools, case studies, and "how-to" material provide local leaders with ways to make this planning process happen. Tools or templates can guide operational planning in organizations, agencies, and communities and can outline functional relationships across such entities and within a state or region. By their very nature, tools and templates can help community leaders overcome resistance to change and political barriers by maintaining focus on shared goals rather than narrow agendas. Over

time, by fostering focus, perseverance, and trust, planning templates and tools can facilitate change within the community and can help to sustain linkages with mission-critical partners in other communities.

Developmental process

Since 2000, the Joint Commission has expanded its traditional disaster preparedness requirements for health care organizations into a community-based emergency management framework. Health care provider organizations are now *expected* to be at the community planning table. However, they cannot possibly manage alone a mass casualty event of the proportions proved possible by 9/11; it takes a whole community to do so.

To develop this planning guide, the Joint Commission partnered with the Illinois Department of Public Health, the Maryland Institute of Emergency Medical Services Systems, and the National Center for Emergency Preparedness at Columbia University and convened two expert roundtables in May and October 2004. These roundtables addressed the issue of emergency management planning in small, rural, and suburban communities; synthesized the challenges; and framed potential solutions.

This document reflects the extensive input received from roundtable participants (page 90). It also incorporates selected emergency preparedness lessons learned and recommendations appearing in seminal publications. These include the final report of the National Commission on Terrorist Attacks Upon the United States—*The 9/11 Commission Report*—published in July 2004[10] and the *National Incident Management System*[11] and *National Response Plan*[1] published by the U.S. Department of Homeland Security (DHS) in March and December 2004, respectively. The examples, tools, strategies, and other information provided in this document cannot by their very nature be comprehensive, but rather are offered as representative of the many excellent planning efforts under way in various domains.

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Emergency Management Leadership

Local jurisdictions of all sizes, including towns, cities, counties, and tribal governments, are responsible for saving lives, protecting property, protecting the economic base of the community, and preserving the environment.[1] Most emergency "incidents" are managed locally, yet because small communities are structured and governed differently, "incident management"—the response to a major event or emergency—may be coordinated by individuals with many differing roles. Some communities have a mayor; others have a city or county manager. The chief leader may be elected or appointed, may have direct control over public safety and health, or may work through a council or manager.

This planning guide uses the term *chief executive* to indicate the elected or appointed leader of the small, rural, suburban, or tribal (when a tribal nation exists in the area) community who is held accountable for the safety and well-being of the population and community. To fulfill this role, the chief executive typically works closely with leaders of fire, law enforcement, emergency medical services (EMS), public works, public health, health care organizations, and other agencies and groups. Coordinated emergency management planning and decision making requires the chief executive to assume a leadership role in some circumstances (for example, within his or her own community) and yield the leadership role, assuming a team-player role, in other circumstances (for example, when participating in multicommunity or regional planning efforts). Sidebar 2 outlines the responsibilities of the local chief executive, as defined by the U.S. Department of Homeland Security (DHS).

Responsibility for the development and coordination of emergency management planning is often assumed by the chief executive. However, in some communities, a fire chief, police chief, EMS coordinator, or administrator of the county health department or health system (through the efforts of emergency department physicians, local hospital associations, and so forth) initiate and coordinate the planning effort. This planning guide uses the term *local planner* to refer to the individual who initiates the emergency management planning process for the community, and uses the term *planning team* to refer to the group of individuals that conduct emergency management preparedness and response planning, as described in Section 2. Sidebar 3 describes three emergency management planning roles often assumed by local elected officials.

Sidebar 2. Responsibilities of the Local Chief Executive

- Coordinates local resources to address the full spectrum of actions to prevent, prepare for, respond to, and recover from incidents involving all hazards, including terrorism, natural disasters, accidents, and other contingencies.
- When necessary, uses the extraordinary powers of the position (depending on state and local law) to establish a curfew, direct evacuations, and/or, in coordination with the local health authority, to order a quarantine.
- Provides leadership and plays a key role in communicating to the public, and in helping people, businesses, and organizations cope with the consequences of any type of domestic incident within the jurisdiction.
- Negotiates and enters into mutual aid agreements with other jurisdictions to facilitate resource sharing.
- Requests state and, if necessary, federal assistance through the governor of the state when the jurisdiction's capabilities have been exceeded or exhausted.

Tribal chief executives can elect to deal directly with the federal government (although a state governor must request a presidential disaster declaration).

Source: U.S. Dept. of Homeland Security (DHS): *National Response Plan*. Washington, DC: DHS, Dec. 2004.

Sidebar 3. Possible Roles of Local Elected Officials in Local Emergency Planning

Coordinator: A local elected official serving in this role coordinates critical local services such as law enforcement, emergency medical services, and social services. As the community prepares and tests its emergency plan, the official can make a point of clarifying and defining the roles of each local agency and each agency head to prevent gaps or overlaps of function. During an emergency event, the local elected official will meet regularly with agency heads so that he or she can continuously monitor the work of the agencies and adjust functions and responsibilities, as necessary.

Liaison: Local elected officials will also find themselves in the role of liaison among various federal and state agencies, community agencies, the business community, and the public. To perform this role effectively, local officials must maintain regular contact with state and federal entities, such as the state police and the regional FBI office. The liaison must understand the roles of these state and federal agencies, as well as their needs in an emergency situation, and must communicate these roles and needs to local agencies. Similarly, local elected officials act as a link to local government for both the business community and the public, working to ensure that needs and concerns are met.

Representative: Local officials act as representatives of their communities in the wider regional emergency planning effort. Most regions and metropolitan areas, regardless of size, have some kind of regional coordination effort in place, such as mutual aid agreements or transportation plans. If no regional entity exists, local officials can work to convene one.

Source: Adapted from National League of Cities (NLC): *Homeland Security: Practical Tools for Local Governments*. Washington, DC: NLC, Nov. 2002.

Reference

1. U.S. Department of Homeland Security (DHS): *National Response Plan*. Washington, DC: DHS, Dec. 2004.

Essential Components of the Planning Process

The 13 essential components of an effective community-based emergency management planning process are outlined here and provide the structure for the rest of the planning guide. These components can be considered steps, with the caveat that the sequence of the activities may need to be varied or repeated based on the community's unique needs. The components are as follows:

1. Define the community.
2. Identify and establish the emergency management preparedness and response team.
3. Determine the risks and hazards the community faces.
4. Set goals for preparedness and response planning.
5. Determine current capacities and capabilities.
6. Develop the integrated plan.
7. Ensure thorough communication planning.
8. Ensure thorough mental health planning.
9. Ensure thorough planning related to vulnerable populations.
10. Identify, cultivate, and sustain funding sources.
11. Train, exercise, and drill collaboratively.
12. Critique and improve the integrated community plan.
13. Sustain collaboration, communication, and coordination.

These components are similar to those described in the Joint Commission's March 2003 white paper. However, the strategies and examples that follow here for each component are geared specifically to small, rural, and suburban communities, rather than the nation as a whole.

1. Define the Community

Recommended Planning Strategies:

- **Identify key stakeholders in defining the community.**
- **Consider geopolitical and other definitional factors.**
- **Consider impact of federal definitions.**

Webster's, which provides a starting point, defines *community* as follows: "A social group of any size whose members reside in a specific locality, share government, and often have a common cultural and historical heritage."[1] This definition embraces both the *functional* and *structural* realm of community as described by sociologists[2]:

- A *functional* community can be defined as the associations that are required by groups of people living together within a specific geographical area.
- A *structural* community can be defined as the types of interconnectedness that individuals choose to make with one another, such as through social organizations.[3]

This planning guide focuses on functional community while recognizing the critical importance of structural community to the emergency preparedness and response process. Strategies to help achieve an accurate definition of the community follow.

Identify key stakeholders in defining the community.

The effectiveness of planning is dependent on the ability of communities nationwide to determine the appropriate functional planning and response unit for emergencies.[4] As the chief executive will be accountable for the safety and well-being of the population during a disaster, his or her first task is to collaborate with key stakeholder groups in the community to define the community for the purposes of emergency management planning. Collaboration ensures that the scope of services provided and the populations served by each entity are well understood early in the planning process. Integrated, comprehensive planning reflects associations between the stakeholders who are providing basic societal functions based on identified

Sidebar 4. Key Stakeholders in Defining the Community

- Public safety and security (fire, law enforcement, emergency medical services)
- Public works (roads, bridges, dams, transportation, sanitation, post office)
- Public health (immunizations, food safety, animal safety, epidemiology/disease surveillance, laboratory services)
- Schools, colleges, and universities
- Housing agencies
- Utilities (energy, water, communications)
- Health care providers (including, among others, hospitals, skilled nursing facilities, ambulatory and rural health clinics, rehabilitation centers, mental health facilities, and home care agencies)
- Private industry (for example, chamber of commerce, local industries, corporations)
- Service (for example, Scouts, Lions Club) and religious organizations (for example, churches, synagogues)
- Federally funded local response initiatives (for example, Metropolitan Medical Response System, Medical Reserve Corps, and Community Emergency Response Teams)

The effectiveness of planning is dependent on the ability of communities nationwide to determine the appropriate functional planning and response unit for emergencies.

roles and responsibilities. Sidebar 4 lists the stakeholders that provide key services in most communities.

Consider geopolitical and other definitional factors.

Small, rural, and suburban communities will be able to define themselves as distinct geopolitical units (village, town, county, parish) under the leadership of a mayor, manager, council, or other governing entity. Other definitional elements that can be considered include the following:

- Specific aspects of the geography (for example, mountains, valleys, flatland, rivers or other bodies of water)
- Residential patterns
- Highways and other infrastructure
- Employment type (farming, industry, corporate)
- Culture and language
- Climate

Geography is a significant factor in access to essential services during and following a disaster, but essential services such as health care providers, fire, law enforcement, emergency medical services (EMS), public health planning districts, schools, utilities, and water supplies do not necessarily conform to the same geopolitical boundaries. For example, health care providers may draw patients from several towns across one or two counties; public health services may not be under the jurisdiction of a mayor.

In addition, because disasters occur across geographic and political boundaries, the chief executive may need to consider legal jurisdictional lines and assemble planning partners who can address certain types of emergencies across various boundaries. "In many states, there are multiple preparedness regions for different functions. Law enforcement regions may not be contiguous with EMS regions or hospital catchment areas, which in turn, may not line up with emergency management planning regions. Political jurisdictions may no longer have much to do with population patterns. Each community must be able to assess its capacity as part of many different functional regions," notes one region's planning white paper.[4]

Consider impact of federal definitions.

The federal government has many different methods for defining *urban* and *rural* or *metropolitan* and *nonmetropolitan* America, largely for purposes of administering federal programs.[5] These definitions are not likely to provide local chief executives with much help in defining the community, except in the area of funding resources.

For example, the Census Bureau's new classification system, released with an update of the Census 2000 data, indicates that *rural* includes open country and small settlements of fewer than 2,500 persons. Small towns and cities that have adjoining towns or suburbs and collectively exceed 2,500 persons, regardless of political boundaries, are considered *urban*. A small town of 2,000 people with an adjacent densely settled suburb of 800 people would be designated as an *urban* cluster with a population of 2,800.[6] The Census Bureau's definition notwithstanding, such an "urban" community is one addressed in this planning guide.

Because disasters occur across geographic and political boundaries, the chief executive may need to consider legal jurisdictional lines and assemble planning partners who can address certain types of emergencies across various boundaries.

2. Identify and Establish the Emergency Management Preparedness and Response Team

Recommended Planning Strategies:

- **Build on existing relationships.**
- **Identify appropriate planning partners.**
- **Consider start-up logistics.**

The process of identifying who must be at the table for successful and sustained community-based emergency management, which includes four phases (prevent, prepare, respond, and recover), is a critical one. A team approach brings increased creativity, knowledge, and experience to each phase of emergency management planning. A team-developed plan, which includes multiple viewpoints and reflects shared goals, is more likely to be successfully implemented in the community. Closer professional and personal relationships among the team members should translate into better coordination and teamwork in emergencies.[7]

In small communities, the team identification process is often about bringing together neighbors who work and live together routinely. These individuals assume that their communities need to be self-sufficient and frequently do not expect the state or federal government to provide resources quickly in the event of a large-scale disaster. However, they do expect that representatives of local government and emergency response providers will be there for them immediately following a major event. In addition, they often expect to be involved in the response themselves. In small communities, emergency response frequently revolves around neighbors helping neighbors.

Strategies to help ensure the best-possible emergency management preparation and response team follow.

Build on existing relationships.

Rather than beginning a planning process from a blank page, the chief executive or local planner, as appropriate and available, can build on effective existing relationships and patterns of communication between community stakeholders as a foundation for emergency management planning. Natural pre-existing relationships and mutual aid agreements—for example, between the police department and the mayor's office, local pediatricians and the public health department, and EMS and the county hospital—are found in virtually every community. Many communities view their fire department and EMS (and its link to area hospitals) as the backbone of emergency response. Thus, linkages between fire departments, EMS, hospitals, and various other community constituents may already be well established.

- *Example: Following 9/11, a small community of 5,500 in Ohio formed an auxiliary force modeled on the former civil defense system for the community. The goal was to meet community needs during the first 72 hours after a disaster. The force, which now includes 31 individuals, is working with the county in order to dovetail with county efforts and obtain needed funding.*[8]

A team-developed plan, which includes multiple viewpoints and reflects shared goals, is more likely to be successfully implemented in the community.

Efficient and effective processes also may be in place to handle local emergencies (for example, dam overflows, chemical spills from a train derailment). Some communities have citizens watch groups; others have formed or are forming Community Emergency Response Teams (CERTs), a program sponsored by the Federal Emergency Management Agency (FEMA) (*see* page v.). These existing relationships can provide the foundation of the emergency management planning team. In addition, the Metropolitan Medical Response System (MMRS) was created in 1997 to build a system that enhances the local community's ability to respond. Although MMRS is primarily based in urban areas, the Northern New England MMRS, formed in 2003, has a rural base and multistate jurisdiction.

Most communities have some form of emergency preparedness planning group, so "reinventing the wheel" may not be necessary. It is important to review the groups' constituents to ensure that all key players are at the table.

- *Example: An emergency department physician in the major hospital in a small community in the Midwest built relationships and connections critical to integrated emergency management planning. Working first with infection control nurses in his own hospital, he linked to the county health department's communicable disease specialist and health director, and subsequently to the emergency services directors. These individuals now exist as a medical/public health subcommittee within a regional emergency planning team established under the authority of the council of governments.*

Where no relationships seem to exist, or where relationships are not functioning effectively, the chief executive or local emergency management planner will need to solicit interested parties to create a working group to begin the planning process.

- *Example: In Texas, hospital leaders across the state brought together emergency management, law enforcement, and other community stakeholders to conduct emergency preparedness planning at the local level.*[9]

Leaders and participants can emerge from many different places, as described in the following planning strategy.

Identify appropriate planning partners.

Sidebar 5 lists key areas from which to draw participants to the planning table. The emergency support functions as defined by the U.S. Department of Homeland Security (DHS) (Sidebar 6) can provide another means to identify appropriate representatives. Individuals who live in the community may already serve in countywide or regional emergency management initiatives and might be willing to play a dual role. This is particularly true with health care providers who often have full-time health care jobs and also volunteer with the local EMS or are members of state national guard units. If not available in the community, representatives from nearby communities or counties can be invited to join the team. In addition, to expand the community's capability to respond to and recover from a disaster, partners and resources outside the community will be essential. These partners should be brought to the table so that collaborative planning can occur and mutual aid relationships can be defined.

Representation from each area identified in Sidebar 5, as available in the community or surrounding communities, is important, but several warrant further explanation, as follows.

Hospitals and other health care organizations are critical to a community's ability to prepare for and respond to an emergency and must be at the

Sidebar 5. Participants at the Planning Table

Representatives from the following areas should be brought together as planning partners:

- Local government (mayor, village manager, or other elected official)
- Fire
- Law enforcement
- EMS
- Search/rescue agency
- Transportation
- Public health
- Public schools
- Housing agency
- Utilities (gas, water, electric, telecommunications)
- Local or regional FBI office
- Health care (ambulatory care, rural health clinic, hospital, long term care, rehabilitative, mental health, home care, laboratories)
- Private industry (e.g., chamber of commerce, local industries, corporations)
- Special needs populations (children, elderly, non-English-speaking, disabled)
- CERT
- Citizen Corps/Medical Reserve Corps
- Colleges and universities
- American Red Cross
- Media and communications (print, radio, TV)
- Mutual aid partners outside the community
- Civilians

planning table. Hospitals can work collaboratively with all community health care organizations to plan for and respond to a surge in patients or a facility-disabling disaster that could overwhelm any single health care organization. Home health agencies can supplement a community's surge capacity by providing trained health care personnel and medical equipment and supplies. Long-term care facilities have the bed capacity, supplies, and skilled staff to care for non-acutely ill or injured disaster victims. Ambulatory care clinics and surgical centers can provide trained personnel and equipment and can triage disaster victims so that hospitals receive only the most severely ill or injured patients.

Local colleges and universities are an important element of the infrastructure in many communities. They can often offer a variety of critical resources, such as facilities appropriate to emergency needs; pharmacy, nursing, and medical students who have some health-related training; staff with expertise in various areas of interest to emergency preparedness and response; and medical and transportation vehicles. Numerous academic institutions are attracting funding, generating valuable research, and developing innovative processes related to emergency preparedness.

Sidebar 6. Emergency Support Functions

ESF #1. Transportation	■ Federal and civil transportation support ■ Transportation safety ■ Restoration/recovery of transportation infrastructure ■ Movement restrictions ■ Damage and impact assessment
ESF #2. Communications	■ Coordination with telecommunications industry ■ Restoration/repair of telecommunications infrastructure ■ Protection, restoration, and sustainment of national cyber and information technology resources
ESF #3. Public Works and Engineering	■ Infrastructure protection and emergency repair ■ Infrastructure restoration ■ Engineering services, construction management ■ Critical infrastructure liaison

continued

Sidebar 6. Emergency Support Functions (continued)

ESF #4. Firefighting	■ Firefighting activities on Federal lands ■ Resource support to rural and urban firefighting operations
ESF #5. Emergency Management	■ Coordination of incident management efforts ■ Issuance of mission assignments ■ Resource and human capital ■ Incident action planning ■ Financial management
ESF #6. Mass Care, Housing, and Human Services	■ Mass care ■ Disaster housing ■ Human services
ESF #7. Resource Support	■ Resource support (facility space, office equipment and supplies, contracting services, etc.)
ESF #8. Public Health and Medical Services	■ Public health ■ Medical ■ Mental health services ■ Mortuary services
ESF #9. Urban Search and Rescue	■ Life-saving assistance ■ Urban search and rescue
ESF #10. Oil and Hazardous Materials	■ Materials Response ■ Oil and hazardous materials (chemical, biological, radiological, etc.) response ■ Environmental safety and short- and long-term cleanup
ESF #11. Agriculture and Natural Resources	■ Nutrition assistance ■ Animal and plant disease/pest response ■ Food safety and security ■ Natural and cultural resources and historic properties protection and restoration
ESF #12. Energy	■ Energy infrastructure assessment, repair, and restoration ■ Energy industry utilities coordination ■ Energy forecast
ESF #13. Public Safety and Security	■ Facility and resource security ■ Security planning and technical and resource assistance ■ Public safety/security support ■ Support to access, traffic, and crowd control
ESF #14. Long-Term Community Recovery and Mitigation	■ Social and economic community impact assessment ■ Long-term community recovery assistance to states, local governments, and the private sector ■ Mitigation analysis and program implementation
ESF #15. External Affairs	■ Emergency public information and protective action guidance ■ Media and community relations ■ Congressional and international affairs ■ Tribal and insular affairs

Source: U.S. Dept. of Homeland Security (DHS): *National Response Plan*. Washington, DC: DHS, Dec. 2004, p. 12.

Regional academic medical centers can identify best practices in the current medical literature and be valuable planning and response partners (for example, by providing resources such as diagnostics capabilities, personnel, equipment, and supplies).

Local private industry represents key elements of a community's infrastructure and resources, and disruption of their business operations may have major community or regional impact. For example, utility and telecommunications companies have a vested interest in interoperability and emergency preparedness and therefore can be particularly helpful at the planning table.

The federal government is encouraging the private sector to create emergency response plans and information-sharing processes and protocols that are tailored to their needs but that also map to regional, state, and local emergency preparedness plans and information-sharing networks.[10] Participation at the community-based planning table is one way to ensure congruence between community-based and industry-based plans and to help obtain needed resources when disasters occur.

- *Example: Caterpillar, one of the largest industries in the Peoria, Illinois, area, was invited to the region-wide planning table. Caterpillar participated extensively in plan development and offered specific response help in the form of heavy construction equipment that might be needed in the event of a disaster. In a collaborative spirit, the area's public works office indicated that its staff members would assume responsibility for driving the equipment.*

Where they are active, *Citizen Corps* representatives should be at the local planning table. The U.S. Citizen Corps brings together leaders from law enforcement, fire, emergency medical and other emergency management services, volunteer organizations, local elected officials, the private sector, and other community stakeholders to help make communities safer, stronger, and better prepared to address the threat of disasters of all kinds.[10] It works through a national network of state, local, and tribal Citizen Corps councils.

The *American Red Cross* plays an integral role in the federal emergency response plan and has available nursing and mental health resources, and, as such, a local or regional representative should be at the table for local planning as well. This humanitarian organization, led by volunteers and guided by a Congressional charter, provides relief to victims of disasters and helps people prevent, prepare for, and respond to emergencies. It functions independently of the government but works closely with government agencies, such as FEMA, during times of major crises. The American National Red Cross (as distinct from the International Red Cross) is one of a very few national disaster relief agencies specifically cited in the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 2000.

Civilian representation at the planning table is critical. One of the key lessons learned from the World Trade Center attacks of 9/11 was that the "first" first responders during an emergency typically are private-sector civilians. "Because 85 percent of our nation's critical infrastructure is controlled not by government but by the private sector, private-sector civilians are likely to be the first responders in any future catastrophes," noted the National Commission.[11(p. 317)] Civilians that could address special needs populations should also be considered; recommendations from state task forces could assist in identifying knowledgeable planning partners. For example, Missouri has a state Special Needs Population Task Force that has brought together more than 17 organizations, agencies, and consumers to address this area.

In considering media and communications, it is vital to identify someone in the community who is well recognized, respected, and trusted to serve in the role of communicating with the public before, during, and following a major event. The chief executive or local planner might also wish to consider an individual who could engage the public and professionals as volunteers; this person may be involved with the Citizen Corps/Medical Reserve Corps, a CERT, the American Red Cross, or other organizations.

Consider start-up logistics.

Start-up logistics can be complex and include such mundane but essential tasks as who should send the invitational letters for the first meeting, where and when meetings are to be held, and so forth. When the chief elected official or another community leader calls the meeting, it may be helpful to have someone such as the state commissioner of public health generate the invitation letters.

Initial decisions will need to be made regarding the leadership structure of the team and how communication will take place. The local planner who "calls the first meeting" is not necessarily the leader who coordinates the ongoing emergency management processes after they have been established. In many communities, this leader is the mayor or another chief elected official, hospital administrator, city manager, public health director, emergency management director, fire chief, or police chief. Means to ensure effective collaboration across political and organizational barriers will need to be negotiated and implemented.

Throughout the start-up and ongoing process, the chief executive or local planner will want to be conscious of the need to build a common language among planning participants. Different types of professionals speak different languages, which may require explanation. For example, the term *surveillance,* commonly used by public health officials and health care professionals, may not be known or may come across negatively in the business community, or it may mean something entirely different to law enforcement agents.[12] Professional terminology can be defined or explained during meetings and in key documents.

The local planner who "calls the first meeting" is not necessarily the leader who coordinates the ongoing emergency management processes after they have been established.

3. Determine the Risks and Hazards the Community Faces

Recommended Planning Strategies:

- **Use an "all-hazards approach."**
- **Acknowledge the potential for a catastrophic event.**
- **Compile a list of potential hazards.**
- **Recognize the problems inherent in hazard lists.**
- **Assess and prioritize the listed hazards.**
- **Fine-tune the list by conducting a "gap analysis."**

When the team is in place, the emergency management planning team's first task is to conduct a hazard vulnerability analysis (HVA). An HVA identifies potential threats, risks, and emergencies and the potential impact these emergencies may have on the community. It is a formal assessment of the risks that could potentially affect the community or an agency within the community and move it to implement its emergency management plan. Specific strategies for determining the risks and hazards faced by the community follow.

Use an "all-hazards approach."

An all-hazards approach enables communities to be prepared to manage any number or type of emergencies. It facilitates prevention, preparation, response, and recovery, based on the broad scope of what could happen within and beyond the community. Conducting a risk assessment involves proactively identifying what might affect the community and its surrounding area.

In addition to other documents such as written analyses of capabilities and capacities, an HVA can help to overcome communitywide or stakeholder-specific resistance to emergency preparedness. It offers an objective information source and requires a cross section of expertise and perspective from the community to construct, implement, and analyze. The process of performing an HVA requires commitment to accuracy and thoroughness and continuing expertise and motivation.

Communities can perform an HVA in many ways; there is no right or wrong way. Any methodology or approach that works effectively should be used and referenced in the emergency management plan. Some systems use a quantitative scoring method to rank the potential emergencies, but this is not essential. The key is that each community's emergency management planning team identifies the events for which preparation is necessary and that the evaluation is conducted through a collaborative approach.

Whether the full extent of emergency preparedness is possible given the community's resources is, of course, a critical issue. The Secretary of the U.S. Department of Homeland Security, Michael Chertoff, recently announced that even the U.S. government, with all its resources, cannot protect the American public from *all* possible terrorist attacks and instead must focus on trying to prevent more serious or catastrophic strikes. In comments made in March 2005, Chertoff advocated adopting a risk-based approach: "Risk management must guide our decision-making as we examine how we can best organize to prevent, respond, and recover from an attack. For that reason, the Department of Homeland Security is working with state, local, and private sector partners on a National Preparedness Plan to target resources where the risk is greatest."[13] For more information on focusing and funding community emergency preparedness efforts, *see* Sections 4 and 10.

Acknowledge the potential for a catastrophic event.

If this acknowledgment has not occurred previously and has not served as the motivator for emergency management planning, the acknowledgment must occur at this point. Team members must dispel all notions that "a catastrophic event is not going to happen to us."

A study recently conducted by the Joint Commission indicates that significant progress in this area needs to be made. When asked whether their communities were at increased risk of experiencing catastrophic events, such as an act of terrorism, respondents from urban and rural hospitals had differing perceptions: Respondents from urban hospitals reported slightly more hazards or threats on average per hospital than respondents from rural hospitals, who were most concerned about events such as hazardous materials accidents, tornadoes, winter storms, and floods.[14]

Compile a list of potential hazards.

The list of hazards can be generated during something similar to a brainstorming session, where every idea is written down without censorship or editorial comment. A review of community historical data may provide additional items for the list.

When assembling this list, the team should be careful not to limit it only to incidents that the community has traditionally thought of as "disasters"—hurricanes, earthquakes, tornadoes, and other natural disasters. Mass casualty events, such as transportation accidents, that may be more commonly experienced should be listed. The 9/11 attack has forced Americans to "think outside the box" about the realm of possible man-made incidents. Aircraft used as guided missiles, nuclear, chemical, and biological weapons, and other acts of terrorism have become a reality and have forced emergency management teams to think broadly. Insidious events, such as those that could occur from an emerging infectious disease outbreak, either intentional or unintentional, have also expanded the realm of possible emergencies.

Teams must exercise imagination and challenge their assumptions about likely threats. The extent to which the community may be at risk for terrorist-induced events should be assessed by the team as seriously as the risk of natural disaster, industrial accident, or pandemic disease outbreak. The team should consider the risk to their community as a primary target of terrorism due to sensitive installations (industrial plants, military bases, federal office buildings) or as a secondary target of terrorism due to larger neighboring towns needing a destination to which they can evacuate residents or from which they can borrow assets.

Sidebar 7 lists examples of community-based emergencies. Teams will also want to consider the threats recently identified by the U.S. Department of Homeland Security (Sidebar 8).

Teams must exercise imagination and challenge their assumptions about likely threats.

Sidebar 7. Examples of Community-Based Emergencies

- Extremes of weather/climate/geography
  - earthquake
  - hurricane
  - flood
  - tornado
  - blizzard
  - drought
  - volcanic eruption
  - mudslide or avalanche
- Dam failure
- Regional power outage
- Civil disturbance
- Terrorism and weapons of mass destruction
  - bombs (conventional or nuclear)
  - biological/chemical agents
  - cyberterrorism
- Public health emergencies (such as an outbreak of SARS or pandemic influenza)
- Wildland or community-based fires
- Commercial transportation accidents
  - train derailments
  - air crashes
  - multiple highway casualties
- Hazardous materials release
  - radiation
  - toxic chemicals
- Sudden influx of residents with health care and other basic needs (food, water, shelter, clothing) from neighboring communities

Recognize the problems inherent in hazard lists.*

Hazard lists pose two problems. The first problem is the possibility of exclusion or omission: There is always a potential for new and unexpected hazards, which is part of why maintaining an all-hazards capability is important.

The second problem is that such lists involve groupings, which can affect subsequent analysis. A list may give the impression that hazards are independent of one another, when in fact they are often related (for example, an earthquake might give rise to dam failure). In addition, lists may group under one category very different causes or sequences of events that require different types of response. For example, "flood" might include dam failure, cloudbursts, or heavy rain upstream. Lists also may group a whole range of consequences under the category of a single hazard. "Hurricane" might include not only high winds, storm surge, and battering waves, but even the weakened, post-landfall tropical storm system that can cause inland flooding.

It may be necessary, as the hazard analysis evolves, to refine the list of hazards to ensure inclusion of newly identified hazards (for example, a new chemical plant in the region) and elimination of previously listed hazards that no longer pose a hazard (for example, rerouting trucks carrying toxic substances).

Assess and prioritize the listed hazards.

The hazards and potential emergencies identified in the HVA must be assessed and prioritized so that appropriate prevention, preparation, response, and recovery activities can be undertaken. One place to start this process is with the *likelihood* or *probability of occurrence*. Very likely, data on the frequency of given incidents already exist. Disasters that have occurred before in the community or its surrounding area will move toward the top of the list of issues to be addressed, while those with essentially no possibility of occurrence will migrate to the bottom. A pandemic flu outbreak and other occurrences identified as priority disaster planning events (Sidebar 8) should appear near the top of the list.

* The section was excerpted from Federal Emergency Management Agency: *State and Local Guide (SLG) 101: Guide for All-Hazard Emergency Operations Planning*. 1996, pp. 2–5. http://www.fema.gov/pdf/rrr/2-ch.pdf (accessed Feb. 2005).

For example, a major earthquake or chlorine tank explosion would be high on the list of potential emergencies for small communities in southern California, but snowstorms and nuclear detonations would be low on the list. Power failure and flood might be somewhere in between. An explosion in a chemical factory, groundwater contamination from agricultural runoff, or a gas main break near the local high school are other examples of occurrences that may need to be assessed, depending upon the community. Risk may change if there are major construction projects under way or seasonal events, such as local fairs or the ski season. Location may influence risk, such as whether a community's industrial plant is on a floodplain or near a fault line. Maps will be needed to assess location-related risk. Risk assessment matrices can be found on state and regional agency Web sites (*see* Tools).

Tools are available to help local officials identify and compare potential hazards. For example, the Center for Infrastructure Expertise, which is part of the National Infrastructure Institute and operates under a grant from the U.S. Department of Commerce's National Institute of Standards and Technology, has developed a software tool, CARVER2.™ Offered free of charge, the tool enables local, state, and national planners to identify and compare potential critical infrastructure terrorist targets and assists government officials in the allocation of grants and protective resources (*see* Tools).

Severity is the next factor in the analysis to be considered by the team. If the event occurs, the team should consider how it will impact the community. Could lives be lost or the health and safety of individuals be threatened? If the answer is "yes," the hazard moves up on the list. If the answer is "no," the team can consider other ways in which the community may be impacted, such as disruption of services or damage to infrastructure. The team then adjusts the ranking of the potential hazards according to the answers.

The final factor that merits consideration is the *community's level of preparedness*. This represents the vulnerability portion of the HVA. If one of the high-ranking incidents on the list took place tomorrow, how well would the community manage the incident? Would other neighboring communities be able to provide assistance? Do mutual aid agreements exist? For each hazard, the team develops an assessment of the community's current susceptibility to the hazard.[15] If the community is not prepared for the incident, that potential hazard will need more attention than the ones covered by well-established plans and agreements.

TOOLS:

- Map sources include Federal Emergency Management Agency (http://www.fema.gov), U.S. Geological Survey (http://www.usgs.gov), state geological surveys, National Weather Service (http://www.nws.noaa.gov), Federal Insurance Administration (http://www.fema.gov/about/fedins.shtm), the Local Emergency Planning Committee Database (http://www.epa.gov/ceppo/lepclist.htm), and the Multi-Hazard Mapping Initiative (http://www.hazardmaps.gov/atlas.php).
- The Center for Infrastructure Expertise's CARVER2™ software is available at http://www.ni2cie.org.
- Pennsylvania Emergency Management Agency offers an online introduction to hazard mitigation planning that includes hazard risk matrices. http://www.pema.state.pa.us/pema/CWP/view.asp?a=198&Q=179259&pemaNavDLTEST=%7C4715%7C4749%7C4752%7C4028%7C (accessed Jun. 21, 2005).

Fine-tune the list by conducting a "gap analysis."

A gap analysis of the vulnerabilities helps to identify incidents for which the community is not prepared. The analysis identifies the key components of each vulnerability, determines components that are common across multiple hazards, identifies issues that create high-impact weaknesses, and compares the relative costs and benefits of the steps needed to rectify the situation.[15] If community resources could *not* be called on for assistance in addressing the incident, the team should move the incident up on the list. This analysis may result in some less-probable events being moved up on the list due to the fact that the most anticipated events are usually those for which the community is most prepared.

The completed list of potential hazards will now have those events that merit the most attention near the top, whether because of probability of occurrence, impact on the community, or level of preparedness. Hazards that are less serious and not as likely to happen should be near the bottom. All of this ranking is dependent on judgment and evaluation of the various considerations discussed previously. There should be some rationale for general placement on the list, although it may be difficult to distinguish the placement of two events that are sequenced consecutively. Because of varying factors and judgment, two similar communities in the same region may have differing analyses.

The hazard vulnerability analysis will help drive consensus within the planning team about the risk of specific hazards to the community. However, the community itself will have its own priorities related to perceptions of risk that the planning group will have to understand in order to develop preparedness goals and plans, to communicate effectively with the public, and, ultimately, to sustain the public's cooperation with planning and response activities. These topics are addressed in Section 7.

TOOLS:

- Federal Emergency Management Agency: *State and Local Guide (SLG) 101: Guide for All-Hazard Emergency Operations Planning.* http://www.fema.gov/preparedness/state_local_prepare_guide.shtm.

The hazard vulnerability analysis will help drive consensus within the planning team about the risk of specific hazards to the community.

4. Set Goals for Preparedness and Response Planning

Recommended Planning Strategies:

- **Ensure that planning covers basic societal functions.**
- **Make the planning process as doable as possible.**
- **Address the four phases of emergency management.**
- **Address human resources requirements.**
- **Plan for convergent responders.**
- **Involve the public in community preparedness efforts.**
- **Enable people to care for themselves.**
- **Plan for layered preparedness and response.**
- **Ensure compatibility with unified command functions and the incident command system.**
- **Link the community's plan to the *NIMS* and the *NRP*.**
- **Consider linking to the Joint Field Office.**
- **Link to county and state plans and planning initiatives.**
- **Establish mutual aid agreements.**

Given scarce resources, small, rural, and suburban communities must set goals for emergency planning and response efforts. The basic questions planning teams consider are What do we need to prepare for? Are we prepared? and At what cost? "Tilting at all the windmills"—trying to do everything—represents an impossibility for most small communities. The cost is just too great. "*Preparedness* represents the 'right place' on the continuum between blind complacency (and bureaucratic inertia) and overwhelming paranoia," notes Irwin Redlener, M.D., associate dean and director of the National Center for Disaster Preparedness. Preparedness must be based on a real assessment of hazard risk conducted through the hazard vulnerability analysis (HVA) process. Risk can never be totally ameliorated through the planning process; some level of ongoing risk will always be present.

The emergency management planning team will develop specific goals and objectives based on its HVA. However, for any emergency management plan, the general goals are as follows:

1. Save lives and protect health.
2. Protect and sustain the critical infrastructure, property, and the environment needed to save lives and protect health.
3. Find dual uses for existing or emerging capabilities.

Goals 1 and 2 are inherent to emergency management planning; goal 3 is a strategic goal that will help communities broaden the usage of existing or emerging capabilities and investments.

According to the U.S. Department of Homeland Security's (DHS's) *National Response Plan,* local communities develop local emergency preparedness plans "to provide a framework for understanding vulnerability to and risk from hazards, and identify the pre-disaster and post-disaster mitigation measures to reduce the risk from those hazards."[10(p. 62)] Much effort is under way in numerous government agencies to identify preparedness goals and thresholds in an empirical manner. Because smaller communities have more limited resources, planners in these communities will need to derive their planning goals primarily from their HVAs and rely on objective thresholds as a secondary reference tool rather than a primary planning tool.

Specific strategies that can help communities meet the three goals mentioned in this section follow.

Ensure that planning covers basic societal functions.

Prioritizing the hazards as described in the previous sections will support a planning effort that is more relevant, cost-effective, and engaging for the planning team and the community as a whole. It will support planning around very real crises (for example, pandemic flu may receive a higher planning priority than smallpox) and their potential impacts on the basic societal functions. Preparedness and response planning starts with the assumption that basic societal functions are critical and must be assured during and following an emergency. Societal functions include the following:

- Public health
- Medical care
- Public works
- Energy supply
- Environment
- Economy
- Water/sanitation
- Shelter/clothing
- Food
- Communication
- Security
- Logistics/transport
- Search/rescue

For example, loss of power, whether due to technology failure (as with the blackouts on the East Coast, fires on the West Coast), or hurricanes on the eastern seaboard, has a ripple effect on access to communication systems, water, fuel, and other basic utilities that support societal functions.

Make the planning process as doable as possible.

To get a jump start on emergency preparedness and response planning, teams in small communities can consult available planning resources. The Federal Emergency Management Agency (FEMA), the National League of Cities, and state municipal leagues provide in-depth guidance through their publications and Web sites.

TOOLS:

- Federal Emergency Management Agency: http://www.fema.gov/preparedness/state_local_prepare_guide.shtm.
- The National League of Cities, which represents 49 state municipal leagues, and through them more than 18,000 cities and towns nationwide, offers links and tools through its Web site. http://www.nlc.org/state_municipal_leagues.

Planning teams will want to review the federal government's *Universal Task List (UTL),* which defines what tasks need to be performed by federal, state, local, and tribal jurisdictions and the private sector to prevent, protect against, respond to, and recover from events defined in the National Planning Scenarios.[16] Version 2.1 identifies approximately 1,600 unique tasks. According to that document, "The purpose of the *UTL* is to list 'what' tasks need to be performed, while reserving the flexibility to determine 'who' should perform them and 'how.' No single jurisdiction or agency is expected to perform every task. Rather, individual jurisdictions will need to assess and select the tasks based on their own specific roles, missions, and functions."

TOOLS:

- U.S. Dept. of Homeland Security: *Universal Task List:* Version 2.1. May 23, 2005. http://www.ojp.usdoj.gov/odp/docs/UTL2_1.pdf.

In addition, the DHS released a list of 15 hypothetical terrorist attacks, disease outbreaks, and natural disasters that is being used to set DHS spending priorities and to focus emergency planning efforts (Sidebar 8).

Sidebar 8. National Planning Scenarios

The U.S. Department of Homeland Security (DHS) released this list of 15 hypothetical terrorist attacks, disease outbreaks, and natural disasters that is being used to set DHS spending priorities and to focus emergency planning efforts.

1. Nuclear detonation
2. Pandemic flu disease outbreak
3. Aerosolized anthrax biological attack
4. Pneumonic plague biological attack
5. Food contamination biological attack
6. Foot and mouth disease biological attack
7. Blister agent chemical attack
8. Toxic industrial chemicals attack
9. Nerve agent chemical attack
10. Chlorine tank explosion chemical attack
11. Major earthquake
12. Major hurricane
13. Dirty bomb radiological attack
14. Improvised bomb explosives attack
15. Cyber attack

Source: U.S. Dept. of Homeland Security. http://www.dhs.gov/dhspublic.

Address the four phases of emergency management.

Planning should address each of the four phases of emergency management, which are *prevention, preparation, response,* and *recovery*. The labels and sequence used for these four phases vary slightly in government and agency documents. At times, *mitigation, preparedness,* and *protection* appear instead of, or in addition to, one of the previously mentioned terms.* This planning guide uses the phrases appearing with greatest frequency in the *National Response Plan*.

Prevention involves, according to the *National Response Plan,* actions taken to avoid an incident or to intervene to stop an incident from occurring. Prevention involves actions taken to protect lives and property. Prevention actions related to terrorism threats and incidents include law enforcement activities and protective activities. Initial prevention efforts include, but are not limited to, actions to do the following:

- Collect, analyze, and apply intelligence and other information
- Conduct investigations to determine the full nature and source of the threat
- Implement countermeasures such as surveillance and counterintelligence
- Conduct security operations, including vulnerability assessments, site security, and infrastructure protection
- Conduct tactical operations to prevent, interdict, preempt, or disrupt illegal activity
- Conduct attribution investigations, including an assessment of the potential for future related incidents
- Conduct activities to prevent terrorists, terrorist weapons, and associated materials from entering or moving within the United States

The majority of initial actions in the threat or hazard area are taken by first responders and local government authorities and include efforts to protect the public and minimize damage to property and the environment.[10(p. 53)]

The closely related concept of *mitigation* involves activities that attempt to lessen the severity and impact a potential disaster or emergency may have on a community. Mitigation activities may reduce, or even eliminate, the possibility of disaster occurrence. Often they are required by other

*The Joint Commission uses *mitigation, preparedness, response,* and *recovery*. Other presentations will put mitigation or prevention at the end of the process, recognizing that what is learned in response and recovery should inform future mitigation activities. The *National Response Plan* uses six terms—*prevention, preparation, response, recovery, mitigation*, and *protection*—but predominantly refers to *prevention, preparation, response, recovery*.

codes and standards. For example, compliance with the National Fire Protection Association's *Life Safety Code*® will mitigate the impact of a fire in a facility.*

Preparation (or *preparedness*) is defined as those activities a community undertakes to build capacity and identify resources that may be used should a disaster or emergency occur. Preparedness involves planning how to respond if a disaster occurs. This activity has been the foundation of emergency planning for many years. Some important preparation steps include the following and are outlined in this planning guide:

- Creating an inventory of resources that may be needed in an emergency, including prearranged agreements with neighboring communities and bordering states
- Maintaining an ongoing planning process
- Training community members in basic response actions
- Implementing communitywide and regional exercises and drills

Response refers to the actual emergency management. Response involves identifying and treating victims, reducing secondary impact to the community (for example, the spread of disease in the community), and controlling the negative effects of emergency situations. The *National Response Plan's* definition of *response* follows:

> *Response* is those activities that address the short-term, direct effects of an incident. These activities include immediate actions to preserve life, property, and the environment; meet basic human needs; and maintain the social, economic, and political structure of the affected community. Response actions also include immediate law enforcement, fire, ambulance, and emergency medical service actions; emergency flood fighting; evacuations; transportation system detours; emergency public information; actions taken to minimize additional damage; urban search and rescue; the establishment of facilities for mass care; the provision of public health and medical services, food, ice, water, and other emergency essentials; debris clearance; the emergency restoration of critical infrastructure; control, containment, and removal of environmental contamination; and protection of responder health and safety. During the response to a terrorist event, law enforcement actions to collect and preserve evidence and to apprehend perpetrators are critical. These actions take place simultaneously with response operations necessary to save lives and protect property, and are closely coordinated with the law enforcement effort to facilitate the collection of evidence without impacting ongoing life-saving operations.[10(pp. 53-54)]

The *recovery* phase involves the restoration of the community's functions and activities following a disaster. Recovery involves how the community will get back to business as usual when the incident is over, including how the public will be reassured that it is safe to return to normal activities, such as work and school. Recovery aspects of an emergency management plan depend, of course, on the nature of the incident, whether the emergency is ongoing, and whether the local area or region is still affected. The recovery section of emergency management plans generally specifies recovery steps or stages. The *National Response Plan* defines *recovery* as follows:

> *Recovery* is the development, coordination, and execution of service- and site-restoration plans and the reconstitution of government operations and services through individual, private-sector, nongovernmental, and public assistance programs. Recovery involves actions needed to help individuals and communities return to normal when feasible.[10(p. 54)]

Address human resources requirements.

When an emergency occurs, small, rural, and suburban communities often face significant human

* *Life Safety Code*® is a registered trademark of the National Fire Protection Association, Quincy, MA.

resources challenges because their populations are smaller than those of cities. The availability of first responders and medical personnel often presents a particularly significant problem. For example, the already limited number of community members who are volunteers in the National Guard or Community Emergency Response Team (CERT) may not be available because they may already be activated and overseas or helping in a different locale. Double-counting of available resources often occurs. Whenever possible, lists of possible first responders and medical personnel in the community should be de-duplicated.

- *Example: The emergency planning team of a small suburban community approximately 30 miles outside Cleveland recognized that the community was totally dependent on its volunteer firefighters and volunteer paramedics as first responders. Most of these individuals had full-time jobs in other communities, so any sense of comfort that the individuals would be available to the community as first responders during an areawide disaster was a false sense of comfort. The team's preparation and response efforts focused on how to prepare the community to respond without the full benefit of its all-volunteer first responder force. This involved consideration of appropriate training programs for community residents.*[17]

For agencies and other employers in hurricane-prone areas and surrounding communities, a range of staffing-related issues requires consideration before, during, and after a major storm. For example, as part of its annual hurricane preparedness activities, Health First Health System in Melbourne, Florida, maintains and updates extensive human resources policies, procedures, and communication plans. These policies address the following:

- Storm staffing and communications
- Requirements and exemptions for reporting to work
- Childcare enrollment forms for storm volunteers
- Sleeping arrangements
- Facility safety
- Sheltering for patients and their families
- Sheltering for employees and their families
- Preparing and securing work areas (personal computers, telephones, miscellaneous desktop items)
- Payroll and compensation arrangements during and after the storm
- Leave of absence policies
- Securing pets and livestock

Plan for convergent responders.

In any disaster, the initial search and rescue is usually done by laypeople in the immediate area. The phenomenon known as convergence—people gathering quickly at a disaster site—is well documented.[18] It is part of human nature to want to help. Contrary to popular belief, people do not panic in the first phases of a disaster; most behave in a rational manner and take what seem to them logical steps to save themselves and others at a disaster site.[19]

As a result, the actual first responders are likely to be not professionals or specially trained personnel but local school teachers, parents, business executives, teenagers, or other "convergent volunteers" who are there at the time of the disaster. "The people who spontaneously come forward to volunteer following a major disaster genuinely want to help disaster victims. But from the perspective of first responders and relief agencies, their generosity looks quite different. From their perspective, convergent volunteers can be liabilities, not assets. They physically get in the way of people doing vital work, they divert resources away from serving victims to processing the volunteers, and they raise serious questions of liability, both if the volunteer is injured and if the volunteer does injury," notes one report from California.[20]

Some observers indicated that convergent response following the Loma Prieta earthquake

in 1989 was "the disaster within the disaster" in some communities. To minimize risks associated with convergent responders, communities should take steps to prepare its citizenry to participate effectively in emergency response efforts. Medical volunteers also are very likely to arrive at disaster scenes "ready to help." Community response plans must address such an influx so that valuable attention and resources are not diverted unnecessarily from response coordination to managing excess unplanned volunteers.

- *Example: In the Oklahoma City terrorist bombing of the federal building in 1995, the many laypeople that converged on the scene following the blast performed a great service to the victims they helped. However, they were also a concern to the trained rescuers. Convergence can be used to advantage if it is organized. In Oklahoma City, hospital emergency rooms and clinics that were overrun by volunteers sent medical teams to the bombing site.*[21] *This increased risk to the trained fire department rescue teams who become responsible not only for the victims but also for extra medical personnel. In more than one case during this disaster, fire department personnel removed their own protective gear and placed it over volunteer medical personnel who found themselves in dangerous situations.*

Strategies for managing volunteers include the following:

- Developing volunteer professional registries
- Developing a system to register other volunteers and provide baseline and "just-in-time" training
- Training volunteers based on emergency preparedness and response competencies (*see* Section 11)
- Developing a system to do background checks and credential checks on volunteers (*see* information on the federal government's credentialing initiative, Emergency System for Advanced Registration of Volunteer Health Care Personnal (ESAR-VHP), on page 49)
- Developing a system to identify registered professionals at disaster scenes
- Developing a tracking system to account for volunteers at disaster scenes
- Addressing legal/liability related to credentialing and other issues

Some communities are also considering establishing a "personnel processing point" or location for registering and tracking medical volunteers who report to a disaster scene. Robert M. Gougelet, M.D., assistant professor of medicine and medical director, disaster response, at the Dartmouth Hitchcock Medical Center, recommends that medical volunteers be divided into two distinct groups:

- Individuals who are members of an established response team, such as a Disaster Medical Assistance Team (DMAT), Medical Reserve Corps (MRC), or Metropolitan Medical Response System (MMRS) strike team, or who are registered before an event occurs
- Individuals who arrive spontaneously at the scene

"The on-scene incident command should have a process to verify the identification and the credentials of responders. This process should include checking a government-issued identification card and a professional identification card such as a hospital identification card. In addition, this process should include independent third-party veri-

The on-scene incident command should have a process to verify the identification and the credentials of responders.

fication, such as confirming with the state's medical professional database," says Gougelet.[22]

Sponsored by the Office of the Surgeon General, the MRC program, a component of the Citizen Corps, provides an organized way for medical and public health volunteers, such as practicing, retired, or student physicians, nurses, other health professionals, and citizens interested in health issues, to offer their skills and expertise during local large-scale emergency situations.[23] The MRC provides surge capacity personnel by pre-identifying, training, and credentialing supplemental personnel to assist with emergency operations, such as mass antibiotic dispensing or mass immunization campaigns.

- *Example: In Connecticut hospitals, each specific discipline, such as nursing, diagnostic imaging, respiratory therapy, and physicians, has a representative that helps to recruit and organize fellow practitioners to serve in the MRC. The momentum has been considerable and the state has been selected by the Health Resources and Services Administration as one of the 10 advanced credentialing demonstration projects.*

Involve the public in community preparedness efforts.

Teams should consider plans to educate the public about the existence of community preparedness plans and should communicate with the public about how to prepare for and respond to an emergency situation. This involves targeting the family-unit level (including individuals living alone) for educational initiatives related to emergency equipment, training, and preparedness. This also involves identifying and planning to meet the needs of particularly vulnerable populations, including children; the elderly; non-English-speaking people; individuals with mental health issues, chemical dependencies, or developmental disabilities; those who are speech, hearing or mobility impaired; institutionalized populations; the homeless; and those individuals who are significantly geographically isolated.

The Redefining Readiness Study conducted by the Center for the Advancement of Collaborative Strategies in Health indicated that the American public has had little or no role in developing terrorism preparedness plans and that half of the American people (55%) say their community is not at all or only a little prepared to deal with the kinds of terrorist attacks addressed in the study (a dirty bomb and a smallpox outbreak).[24] "An important finding of our study is the documentation that a large proportion of the American people are interested in community-level planning—not just in learning more about plans, but in being actively involved in developing plans," note the study's authors.[24(p. 44)] Similarly, a study by Columbia University's National Center for Disaster Preparedness indicated that only 35% of Americans think their community has an adequate emergency response plan currently in place.[25]

Such studies indicate that communities must be better prepared to handle the more frightening aspects of disasters, about which they often are "in the dark." For example, the process could address how to handle unknown hazardous agents, how to manage an unanticipated influx of victims at the local hospital's emergency department, and how to decontaminate or isolate contaminated victims. Public education and information dissemination about isolation and quarantine for infectious diseases are critically important inclusions in planning efforts. The public must know that they may be isolated at the hospital or quarantined at home, and significant preparations will need to be made in advance. Laws may need to be enacted on state or local levels, and law enforcement and court system personnel must be educated about their roles during an event requiring isolation or quarantine.

Basic needs for those living under quarantine must be addressed, such as health services provided at home or the ability of children in the household to attend school.

- Planners should work directly with community residents throughout the planning process. Some segments of the community may be prepared, but U.S. communities as a whole are not prepared and not involved in preparedness planning. Citizens can also be part of actual events or drills that test emergency plans (*see* Section 11).

Enable people to care for themselves.

The community must be informed and prepared. The emergency plan needs to include a well-defined risk communication plan that contains information on the guidance that will be provided to the public and how that guidance will occur. For example, the plan could indicate that in the event of widespread exposure to a certain chemical agent, the public will be educated through distribution of fliers, other written material, and public service announcements on local radio and television stations, that it is better to stay at home and take a shower than to go to the hospital to be decontaminated. Planning that prepares the community to help itself can reduce the potential surge in demand for services experienced during an actual emergency.

Ultimately, the ability of a community to survive a major incident is dependent on its residents' ability to provide self-care. Education and risk communication at a "grass roots" level through all kinds of community groups, such as high school football teams, Boy/Girl Scouts, and the local civic organizations, are critical to effective self-care. Community awareness, education, and engagement are essential. Hurricane plans in Florida provide an excellent example of proactive, multilingual, and pervasive preparedness. Evacuation signs appear throughout the state and are well-recognized in all communities.

Public concern about emergencies has not necessarily translated into appropriate protective actions in personal preparedness. "There is strong baseline data that support efforts to increase the public's awareness of the need and necessary steps to prepare themselves for a disaster. Only 20 percent report being prepared for a terrorist-related disaster, and only 13 percent report having a neighborhood plan for disasters," notes a DHS Office of Citizen Corps report.[26] Less than half of survey respondents have both an emergency plan and at least one emergency supply kit.

- *Example: Consider what might be involved in educating the public to respond to an influenza pandemic. In most cases, influenza can be treated at home. The message to the public can be "Stay at home, take care of yourself following basic self-care protocols distributed by the health department; seek hospital care if you experience any of the severe symptoms described in the protocol."*

Plan for layered preparedness and response.

Teams can consider whether and how it might be possible to ensure some level of layered preparedness and response mechanisms. For example, to avoid systemwide failure, plans could specify processes for redundant systems and contingency plans to pick up the burden in case one part of the system is disabled or overwhelmed.

- *Example: The local hospital or other health care organization considers multiple levels of redundancy for its communications systems, including backup phone systems, additional radio licenses for portable radios, cell phones, Ham radios, satellite phones, personal digital assistants, e-mail, and so forth. Use of these technologies assures not only redundancy but a level of interoperability so that the organization's*

emergency command operation can maintain communications with municipal, regional, or state emergency operations centers and/or fire and emergency medical services (EMS) agencies.

Ensure compatibility with unified command functions and the incident command system.

Community planning templates and processes should dovetail with unified command functions and the incident command system (ICS). Unified command concepts, widely used by civil authorities, provide guidelines and enable agencies with different legal, geographic, and functional responsibilities to coordinate, plan, and interact effectively.[27] According to the DHS, "The ICS is a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to enable effective and efficient domestic incident management."[27(p. 7)]

The *National Incident Management System (NIMS)* adopts the basic tenets of the ICS and outlines the interrelationship of the ICS and the *NIMS* as follows:

> The initial response to most domestic incidents is typically handled by local 911 dispatch centers, emergency responders within a single jurisdiction, and direct supporters of emergency responders. Most responses need go no further. In other instances, incidents that begin with a single response discipline within a single jurisdiction may rapidly expand to multidiscipline, multijurisdictional incidents requiring significant additional resources and operational support. Whether for incidents in which additional resources are required or are provided from different organizations within a single jurisdiction or outside the jurisdiction, or for complex incidents with national-level implications (such as an emerging infectious disease or a bioterrorist attack), the ICS provides a flexible core mechanism for coordinated and collaborative incident management. When a single incident covers a large geographical area, multiple local ICS organizations may be required. Effective cross-jurisdictional coordination using processes and systems described in the *NIMS* is absolutely critical in this instance.[27(p. 7)]

Link the community's plan to the *NIMS* and the *NRP.*

Commencing in 2005, the DHS has made adoption of the *NIMS* and the *National Response Plan (NRP)* a requisite for access to federal funding by local organizations.[27] Sidebar 9 is an overview of the federal initiatives and how they relate to local initiatives. Community plans and initiatives should link to the *NIMS* and the *NRP* for both funding and coordination purposes.

The *NRP* requires communities to do the following:

- Use established incident reporting protocols to notify local and regional Joint Terrorism Task Forces (JTTFs) and the Homeland Security Operations Center (HSOC), as appropriate.
- Coordinate with the HSOC regarding procedures for establishing connectivity for domestic incident management purposes. Local government procedures should be coordinated with the respective state government and/or emergency management agency.
- Modify existing incident management and emergency operations plans to ensure proper alignment with *NRP* coordinating structures, processes, and protocols.
- Notify the secretary of homeland security of any substantial conflicts between this plan and state or tribal government laws or regulations. This plan is not intended to compromise existing state or tribal government laws or corresponding incident management or emergency response plans.[10]

Community planning teams must ensure that they complete these tasks.

Consider linking to the Joint Field Office.

Community teams can consider assigning a liaison to the Joint Field Office (JFO) to facilitate interaction, communication, and coordination in an emergency. According to the DHS's *National Response Plan,* the JFO is a multiagency coordination center that provides a central point for federal, state, local, tribal, nongovernmental, and private-sector organizations with primary responsibility for incident oversight, direction, and/or assistance. The JFO uses the scalable organizational structure of the *NIMS* ICS, not for managing on-scene emergency operations but for providing support to on-scene efforts and conducting broader support operations that may extend beyond the incident site.[10]

Link to county and state plans and planning initiatives.

Local elected officials should ensure that their communities' plans are linked to the regional emergency plan (for example, at the county or multicounty level), which should itself be linked to a state-approved emergency plan approved by FEMA. This can support a more efficient and timely allocation of resources. Planning can begin with an existing county or state plan or initiatives that local leaders have already acknowledged or bought into, such as a local emergency planning committee (LEPC).

State planning initiatives include LEPCs, which are appointed by State Emergency Response Commissions. The focus of these committees has traditionally revolved around hazardous materials; the federal proponent is the Environmental Protection Agency. LEPC members are volunteers and government employees who live with-

Sidebar 9. A Key Tool for Scalable Incident Management

The goal of the *National Incident Management System* and the *National Response Plan (NRP),* to be used as a joint tool, is to provide "a consistent nationwide template to enable federal, state, local, and tribal governments and private-sector and nongovernmental organizations to work together effectively and efficiently to prevent, prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity, including acts of catastrophic terrorism."

A basic premise of the *NRP* is that incidents are generally handled at the lowest jurisdictional level possible. Police, fire, public health and medical, emergency management, and other personnel are responsible for incident management at the local level. In some instances, a federal agency in the local area may act as a first responder and may provide direction or assistance consistent with its specific statutory authorities and responsibilities. In the vast majority of incidents, state and local resources and interstate mutual aid normally provide the first line of emergency response and incident management support.

When an incident or potential incident is of such severity, magnitude, and/or complexity that it is considered an "Incident of National Significance" according to the criteria established in the *NRP,* the secretary of homeland security, in coordination with other federal departments and agencies, initiates actions to prevent, prepare for, respond to, and recover from the incident. These actions are taken in conjunction with state, local, tribal, nongovernmental, and private-sector entities as appropriate to the threat or incident. In the context of Stafford Act disasters or emergencies, U.S. Department of Homeland Security (DHS) coordinates supplemental federal assistance when the consequences of the incident exceed state, local, or tribal capabilities.

Source: U.S. Dept. of Homeland Security (DHS): *National Incident Management System*. Washington, DC: DHS, Mar. 1, 2004, p. ix; and U.S. Dept. of Homeland Security (DHS): *National Response Plan*. Washington, DC: DHS, Dec. 2004, p. 15.

in a specific local emergency planning district. Federal legislation states that, at a minimum, each LEPC shall include representatives from the following groups: elected officials, law enforcement, civil defense, fire fighting, first aid, health, local environmental, hospital, transportation personnel, broadcast and print media, community groups, and owners/operators of facilities. For, example, there are 20 LEPCs in the state of Alaska.

Examples:

- *In Illinois, the West Central Municipal Conference has created a regional Homeland Security Coordinating Committee, which includes the mayors of 38 communities, some large and some small. Among other activities, this committee monitors allocations and expenditures by local, state, federal, and private entities for homeland security and develops and influences policies, protocols, and coordinated efforts.*

- *The Mayoral Institute for WMD (Weapons of Mass Destruction) and Terrorism Incident Preparedness, provided through the Idaho Institute of Emergency Management, provides the nation's mayors a "mayors only" forum to discuss strategic and executive-level issues and challenges and to share proven strategies and practices related to WMD/terrorism preparedness.*

- *The Peoria County Emergency Services and Disaster Agency, in Peoria, Illinois, coordinates all phases of comprehensive emergency management, defined by the agency as mitigation, preparedness, response, and recovery, for Peoria County. It functions collaboratively within a five-county region to integrate planning and response across multiple jurisdictions.*

- *Missouri's Department of Health and Senior Services has a close working relationship with the Missouri Hospital Association (MHA). Three MHA planners work with the 144 member hospitals and coordinate hospital planning efforts, assuring that hospital representatives are at the local, regional, and state planning table and linked to each plan.*

Establish mutual aid agreements.

Emergency response agencies establish mutual aid agreements, sometimes called *memorandums of understanding* or *memorandums of agreement,* with neighboring jurisdictions to support a more effective response effort. Disaster mutual aid consists of organized and supervised coordination, in which reciprocal help is given by neighboring or contractual communities during public emergencies in the form of personnel, equipment, and physical facilities. Mutual aid agreements include policies and procedures for maintaining coverage on a day-to-day basis and during emergencies. Given the resource limitations of most small, rural, and suburban communities, establishing and maintaining mutual aid agreements are critical to community ability to prepare for and respond to an emergency. However, communities, no matter how small, must not neglect to establish a baseline level of capacity and capability.

TOOLS:

- American Hospital Association: Model Hospital Mutual Aid Memorandum of Understanding. http://www.hospitalconnect.com/aha/key_issues/disaster_readiness/resources/content/ModelHospitalMou.doc.

5. Determine Current Capacities and Capabilities

Recommended Planning Strategies:

- **Use federal government asset categories and target capabilities as a guide.**
- **Specifically consider the public as an asset category.**
- **Consider other groups not yet represented at the planning table.**
- **Identify geographic features and vulnerabilities that may affect capabilities.**
- **Consider surge capacity and consult surge planning resources.**
- **Consider *all* community health resources.**
- **Define critical capacities for each health entity and link to state databases.**
- **Know the federal government's definition of required surge capacity.**
- **Consider the issues involved with standards of care during mass casualty events.**
- **Identify dual uses for existing or emerging capabilities.**
- **Identify alternative care and shelter facilities.**
- **Identify federal resources in the community.**
- **Identify gaps in community assets.**

The planning team's next activity is to determine the community's current capacities and capabilities for emergency prevention, preparation, response, and recovery. A systematic asset inventory can be conducted to account for the major services required to achieve general emergency management goals identified in Section 4. Created by all relevant planning partners identified so far, at a minimum those listed in Sidebar 4, this inventory describes the assets under their purview. Strategies to assist communities in determining capacities and capabilities follow.

Use federal government asset categories and target capabilities as a guide.

To assure a thorough identification of inventory asset categories, community planning teams can use the national resource typing list published by the federal government in the *National Response Plan (NRP)* and *National Incident Management Systems (NIMS)* documents. Sidebar 10 outlines these categories, which closely parallel the emergency support functions (ESFs) outlined in Sidebar 6. When community resources are limited in any one category, the resource typing categories can be used as a guide to areas where mutual aid agreements are needed.

Sidebar 10. Resource Categories Used in the National Resource Typing System

- *Mass care:* To support efforts to meet the mass care needs of disaster victims, including delivering such services as supplying victims with shelter, food, and emergency first aid; supplying bulk distribution of emergency relief supplies; and collecting information to and for a disaster welfare information system designed to report on victim status and assist in reuniting families.
- *Health and medical:* To meet public health and medical care needs following a disaster or emergency or during a potential developing medical situation.
- *Food and water:* To identify, secure, and arrange for the transportation of safe food and water to affected areas during a disaster or emergency.
- *Search and rescue:* To provide specialized lifesaving assistance in the event of a disaster or emergency, including locating, extricating, and providing on-site medical treatment to victims trapped in collapsed structures.

continued

Sidebar 10. Resource Categories Used in the National Resource Typing System (continued)

- *Energy:* To help restore energy systems following a disaster or emergency.
- *Fire fighting:* To detect and suppress fires.
- *Law enforcement and security:* To provide law enforcement assistance during response and recovery operations; to assist with site security and investigation.
- *Hazardous materials response:* To support the response to an actual or potential discharge and/or release of hazardous materials.
- *Public works and engineering:* To assist those engaged in lifesaving, life-sustaining, damage mitigation, and recovery operations following a major disaster or emergency by providing technical advice, evaluation, and engineering services; contracting for construction management and inspection and for the emergency repair of water and wastewater treatment facilities; supplying potable water and ice and emergency power; and arranging for needed real estate.
- *Volunteers and donations:* To support the management of unsolicited goods and unaffiliated volunteers, and to help establish a system for managing and controlling donated goods and services.
- *Information and planning:* To collect, analyze, process, and disseminate information about a potential or actual disaster or emergency to facilitate overall activities in providing assistance to support planning and decision making.
- *Communications:* To provide communications support for incident management efforts.
- *Resource management:* To provide operational assistance for incident management operations.
- *Public information:* To contribute to the well-being of the community following a disaster by disseminating accurate, consistent, timely, and easy-to-understand information; to gather and disseminate information about disaster response and recovery process.
- *Transportation:* To provide transportation to perform incident management missions following a major disaster or emergency; to coordinate incident management operations and restoration of the transportation infrastructure.
- *Animals and agricultural issues:* To coordinate activities responding to an agricultural disaster and/or when the health or care of animals is at issue.

Source: Adapted from U.S. Dept. of Homeland Security (DHS): *National Incident Management System*. Washington, DC: DHS, Mar. 1, 2004, p. 122.

The capabilities identified by the federal government can also provide helpful guidance. Sidebar 11 provides the U.S. Department of Homeland Security's (DHS's) *Target Capabilities List (TCL),* which includes 36 critical capabilities needed to perform the tasks identified in the DHS's *Universal Task List* described earlier.

Tools:

- U.S. Dept. of Homeland Security: *Target Capabilities List*. http://www.ojp.usdoj.gov/odp/assessments/hspd8.htm.

Sidebar 11. Target Capabilities List (Version 1.1)

Common-target capabilities

1. Planning (preparedness)
2. Interoperable communications (communications and information management)

Prevent mission area-target capabilities

3. Information collection and threat recognition (manage data collection)
4. Intelligence fusion and analysis (analyze intelligence)
5. Information sharing and collaboration (disseminate threat information)
6. Terrorism investigation and apprehension (investigate and apprehend terrorist suspects)
7. CBRNE* detection (defeat weapons)

Protect mission area-target capabilities

8. Risk analysis (assess vulnerabilities)
9. Critical infrastructure protection (protect assets and property)

continued

* Chemical, biological, radiological, nuclear, or explosive

SIDEBAR 11. TARGET CAPABILITIES LIST (VERSION 1.1) (CONTINUED)

10. Food and agriculture safety and defense (safeguard public health)
11. Public health epidemiological investigation and laboratory testing (safeguard public health)
12. Citizen preparedness and participation (prepare the public)

Respond mission area-target capabilities

13. On-site incident management (manage incident)
14. Emergency operations center management (manage incident)
15. Critical resource logistics and distribution (manage incident)
16. Volunteer management and donations (manage incident)
17. Worker health and safety (manage incident)
18. Public safety and security response (manage incident)
19. Animal health emergency support (respond to hazard)
20. Environmental health and vector control (respond to hazard)
21. Explosive device response operations (respond to hazard)
22. Fire-fighting operations/support (respond to hazard)
23. Weapons of Mass Destruction/hazardous materials response and decontamination (respond to hazard)
24. Citizen protection: evacuation and/or in-place protection (implement protective actions)
25. Isolation and quarantine (implement protective actions)
26. Search and rescue (conduct search and rescue)
27. Emergency public information and warning (distribute public information)
28. Triage and pre-hospital treatment (provide medical care)
29. Medical surge (provide medical care)
30. Medical supplies management and distribution (provide medical care)
31. Mass prophylaxis (distribute prophylaxis)
32. Mass care (sheltering, feeding, and related services) (provide mass care)
33. Fatality management (manage fatalities)

Recover mission area-target capabilities

34. Structural damage assessment and mitigation (rebuild property)
35. Restoration of lifelines (restore lifelines)
36. Economic and community recovery (restore economic institutions)

Source: U.S. Dept. of Homeland Security: *Target Capabilities List: Version 1.1.* May 23, 2005. http://www.ojp.usdoj.gov/odp/docs/TCL1_1.pdf (accessed Jun. 17, 2005).

Specifically consider the public as an asset category.

Rather than being looked at primarily as potential casualties, the public can be considered part of the community's assets in emergency management initiatives. As such, the capacities and capabilities of the general public should be accounted for where possible. The willingness of the average person to be an early responder may vary depending upon whether the event is a slow-moving biological event or a sudden-impact natural or man-made event. The team thus should carefully consider whether certain assignments might be ones assumed by volunteers as opposed to trained or professional responders.

Consider other groups not yet represented at the planning table.

Such groups may offer additional capabilities in supporting communication or transportation efforts, providing temporary shelter and supplies, and assisting with other emergency needs. One way to identify such groups is to consider vocational or avocational special interest groups that represent certain skills or resources that might be valuable in an emergency, such as truck drivers,

snowmobile owners, youth group members, recreational boaters, and so forth. For example, in one community drill that tested distribution of an emergency pharmaceutical stockpile, high school football teams were trained and deployed to support security around the stockpile prior to its distribution in the community.

Identify geographic features and vulnerabilities that may affect capabilities.

In addressing current and needed capacities and capabilities, "the planning team should note geographic and topographic features that may affect operations, for example, dependence on a single main transportation artery in and out of the jurisdiction. The group will want to map out where special needs groups are concentrated and be alert to other issues that could affect planning assumptions," notes one document.[7(pp. 2–11)] Current technology allows planners and responders to consider alternative routes for security or weather concerns and allows for multiple modes of transportation.

Potential areas of vulnerability for terrorism identified by Federal Emergency Management Agency (FEMA) include traffic (on roads, tunnels, bridges, and so forth), trucking and transport activity (including HazMat cargo), waterways, airports, trains/subways, government facilities, recreation facilities, military installations, HazMat facilities, utilities, and nuclear facilities.[29]

This planning effort should be coordinated with state or local geographic information systems (GIS)/mapping resources, which can provide valuable information, such as GIS locations of hospitals, mass prophylactic sites, and regional pharmaceutical and medical equipment resources.

Consider surge capacity and consult surge planning resources.

The planning team must consider *surge capacity,* defined as "the ability to expand capabilities in response to sudden or more prolonged demand,"[30(p. 19)] and identify sources and methods for adding additional capacity (staff, supplies, technology, medications, transport vehicles). Although commonly considered in communities as *medical surge capacity and capability,* the concept of surge capacity applies to all assets. Rural, small, and suburban areas are typically resource-strapped and find it difficult to expand capacity in many, if not most, key capability areas as listed in Sidebars 10 and 11.

The focus here is on *medical surge capacity,* defined as the ability to care for a markedly increased volume of casualties that challenges or exceeds normal operating capacity.[15] Because the first goal of community emergency preparedness and response efforts is to save lives (which encompasses preventing the spread of disabling disease and injuries), if the community's medical system is overwhelmed, the community simply will lose its capacity to meet this goal.

The Medical Reserve Corps, described earlier, is specifically designed to provide surge capacity

Rather than being looked at primarily as potential casualties, the public can be considered part of the community's assets in emergency management initiatives.

personnel in the event of a large-scale emergency. Federal resources, available through ESF #8: Public Health and Medical Services, may be called upon to provide additional medical surge capacity and capability. For example, under FEMA's National Disaster Medical System, Disaster Medical Assistance Teams (DMATs) provide assistance in the event of large-scale disasters. DMATs are volunteer groups of medical and nonmedical individuals, usually from the same region where the disaster is occurring. Because the material in this planning guide is intended to help small communities stand on their own for the first day or days and develop and maintain as much capacity as possible, federal and state resources are not itemized here but should be familiar to the community planning team.

If a hospital or a number of hospitals are present in the community, the leaders of these organizations must determine their surge capacity and evaluate strategies to enhance capacity. This calculation of capacity should include at a minimum the number and type of beds, personnel, pharmaceuticals, supplies, and equipment, among other critical items.

TOOLS:

- CNA Corporation: *Medical Surge Capacity and Capability: A Management System for Integrating Medical and Health Resources During Large-Scale Emergencies.* http://www.cna.org/documents/mscc_aug2004.pdf.
- School administrators: National Clearinghouse for Educational Facilities. http://www.edfacilities.org/rl/disaster.cfm.
- Emergency physicians: American College of Emergency Physicians. http://www.acep.org.
- Business owners: National Business Group on Health. http://www.businessgrouphealth.org.

Professionals working in all community settings, such as schools, businesses, and health facilities, can consult their professional organizations for assistance in surge planning. Several examples appear in the tool box.

Consider *all* community health resources.

In communities of all sizes, critical medical surge capacity can come from not only hospitals, but urgent care centers, home health agencies, community health centers, clinics, ambulatory care facilities, physicians' offices, and long term care and other health facilities. Doctors, nurses, home health aides, social workers, retired health professionals, and all other medically trained professionals can help to meet medical surge personnel needs. Other required surge needs include decontamination facilities, laboratory capacity, and immunization supplies, among many other elements. As part of the planning process, and in advance of an emergency, planning teams should identify all community health resources and assess the ability of each resource to contribute to emergency prevention, preparedness, response, and recovery.

Define critical capacities for each health entity and link to state databases.

Surge capacity for a hospital is different than surge capacity for a long term care facility or a community health center. The planning team should agree on what role each organization will play in a large-scale emergency and ensure that health facilities are linked to any resource-coordinating databases operated by the state or region. Figure 1 illustrates a regional planning matrix of critical capabilities for health care–related resources.

FIGURE 1. CONNECTICUT REGIONAL EMERGENCY AND PUBLIC HEALTH PREPAREDNESS: HEALTH CARE AGENCY BIOTERRORISM ANNEX PLANNING CRITERIA.

REQUIRED ELEMENTS	SURGE CAPACITY	STOCKPILING	EMERGENCY COMMUNICATIONS	LAB CAPACITY	SURVEILLANCE	EDUCATION / TRAINING	PROTOCOLS	EMERGENCY CREDENTIALING	DRILLS / EXERCISES	ONGOING RISK ASSESSMENT	ICS / UNIFIED COMMAND	DECONTAMINATION	FACILITY PREPAREDNESS	SECURITY / LOCKDOWN	SOPS	MASS IMMUNIZATION	RISK / CRISIS COMMUNICATION	ISOLATION / QUARANTINE	EVACUATION	EQUIPMENT
AGENCY																				
ACUTE CARE HOSPITALS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LOCAL HEALTH DEPARTMENTS		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes
SKILLED NURSING FACILITIES	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes			Yes		Yes			Yes	Yes	Yes
URGENT CARE CENTERS	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		Yes		Yes				Yes	Yes
HOME CARE AGENCIES	Yes		Yes		Yes	Yes	Yes		Yes	Yes					Yes	Yes				Yes
EMERGENCY MEDICAL SERVICES	Yes		Yes			Yes	Yes		Yes	Yes	Yes	Yes			Yes			Yes	Yes	Yes
COMMUNITY HEALTH CENTERS	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes			Yes	Yes	Yes	Yes			Yes	Yes
COMMUNITY MEDICAL PROVIDERS				Yes	Yes	Yes	Yes	Yes												Yes

Source: Connecticut Regional Emergency and Public Health Preparedness: Health Care Agency Bioterrorism Annex Planning Criteria. Used by permission.

- *Example: The Maryland Institute for Emergency Medical Services Systems maintains a Web-based Facility Resource Emergency Database to expedite the flow of resources (including emergency depart ment and pediatric bed availability, medications, blood, medic unit availability, and emergency response personnel and apparatus) to the scene of an incident or to an emergency operations center. Hospitals, public health, 911 centers, specialty referral centers, law enforcement agencies, and other components of the emergency medical services system monitor this Web page.*

Know the federal government's definition of required surge capacity.

The Health Resources and Services Administration's (HRSA's) capacity projections in a mass casualty event are based on a population of one million, which obviously exceeds the population of small, rural, and suburban communities addressed in this planning guide. However, local planners should be aware of HRSA guidance related to surge capacity because it impacts the ability of surrounding communities to handle victims of mass casualty events. A critical benchmark identified by the HRSA for regional surge capacity for the care of adult and pediatric victims of terrorism and other public health emergencies is as follows:

> Establish systems that, at a minimum, can provide triage treatment and initial stabilization, *above the current daily staffed bed capacity,* for the following classes of adult and pediatric patients requiring hospitalization within three hours in the wake of a terrorism incident or other public health emergency:
>
> - 500 cases per million population for patients with symptoms of acute infectious disease, especially smallpox, anthrax, plague, tularemia, and influenza
> - 50 cases per million population for patients with symptoms of acute botulinum intoxication or other acute chemical poisoning, especially that resulting from nerve agent exposure
> - 50 cases per million population for patients suffering burn or trauma
> - 50 cases per million population for patients manifesting the symptoms of radiation-induced injury, especially bone marrow suppression[31(p. 3)]
>
> For *decontamination* surge capacity related to the numbers of patients indicated above, the critical benchmark is as follows:
>
> Insure that adequate portable or fixed decontamination systems exist for managing adult and pediatric patients, as well as health care personnel, who have been exposed during a chemical, biological, radiological, or explosive incident in accordance with the numbers associated with CBM # 2-1 (those indicated above). As stated in *OSHA* (Occupational Safety and Health Agency) *Best Practices for Hospital-Based First Receivers of Victims from Mass Casualty Incidents Involving the Release of Hazardous Substances:* "All participating hospitals shall be capable of providing decontamination to individual(s) with potential or actual hazardous agents in or on their body. It is essential that these facilities have the capability to decontaminate more than one patient at a time and be able to decontaminate both ambulatory and stretcher bound patients. The decontamination process must be integrated with local, regional and state planning." All decontamination assets must be based on how many patients/providers can be decontaminated on an hourly basis. The awardee should plan to be able to decontaminate all patients and providers within three hours of the onset of the event.[31(p. 34)]

- *Example: Numerous states are considering or have purchased deployable, mobile, military-type trailers to meet some of the needs for surge capacity. These trailers can offer extra bed and additional isolation capacity. Although small communities are unlikely to have the financial resources to purchase such trailers, resource pooling may be a possibility.*

Consider the issues involved with standards of care during mass casualty events.

Americans are hesitant to think about "austere care"—defined as the level of medical care that is provided when health care resources, medical supplies, and medical personnel are limited or unavailable for an extended response period—and expect to obtain only the highest level of care. This obviously may be difficult if not impossible for small communities to provide in

mass casualty events involving thousands of victims. As part of the planning process, planning teams should wrestle with the issues involved with standards of care in mass casualty events.

To assist in doing so, in May 2005, the Agency for Healthcare Research and Quality (AHRQ) and the Office of Public Health Emergency Preparedness issued a report for officials on how to plan for delivering health and medical care in a mass casualty event.[32] The report recommends that planners at all levels, including the community level and health systems level, develop or revise both triage guidelines for specific types of events and allocation guidelines for the use of scarce resources such as ventilators, burn beds, or surgical suites. The report also addresses such issues as what circumstances would trigger a call for altered standards of care, who is authorized to make that call, and the sources of relief available to address concerns about financial resources and reimbursement of medical care costs. Planning teams should be alert for further reports on this important topic.

TOOLS:

- Agency for Healthcare Research and Quality: *Altered Standards of Care in Mass Casualty Events.* http://www.ahrq.gov/research/altstand.

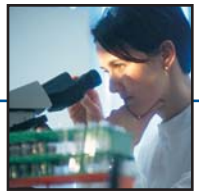
Identify dual uses for existing or emerging capabilities.

Finding dual uses for existing or emerging capabilities is particularly critical for resource-strapped small, rural, and suburban communities. A reverse 911 call system established by a community for law enforcement emergencies, for example, could also communicate other types of emergencies. Investments made by local public health departments in upgrading laboratory services for smallpox, SARS, anthrax, and other specialized testing can benefit more routine laboratory services in the community as well. The planning team can identify businesses with call-center capabilities, such as telemarketing and airline operations, as potential emergency call centers during disasters.

Identify alternative care and shelter facilities.

Most individual health care facilities in small, rural, suburban, and even urban communities have limited, if any, surge supplies, personnel, and equipment. Backup systems for critical assets are often shared among community facilities. "This double counting of resources diminishes the ability to meet individual projected surge demands across multiple institutions during a medical emergency," notes one report.[15(pp. 3-5)]

The planning team should identify supplemental facilities, such as hotels, motels, college infirmaries, dormitories, libraries, high schools, places of worship, and other structures that could meet health care and shelter surge needs. For example, a small town in Texas identified its community college as a facility that could be turned into a surge hospital. However, the team should also



Investments made by local public health departments in upgrading laboratory services for smallpox, SARS, anthrax, and other specialized testing can benefit more routine laboratory services offered to the community.

remember that the facilities cannot function without concurrent plans for additional staffing, supplies, and equipment and that the alternative facilities must be accessible to the disabled. Checklists are available for assessing the adequacy of facility accessibility (*see* Tools).

TOOLS:

- New York State Office of Advocate for Persons with Disabilities: *ADA Accessibility Checklist for Existing Facilities.* http://www.ghi.com/pdf/adachecklist.pdf (accessed Jun. 20, 2005).

Identify federal resources in the community.

Federal resources located in the community may or may not be available to the community in the event of a large-scale emergency. Communities near military installations can consider military assets that might be available as appropriate, such as beds in Veterans Administration (VA) hospitals, naval search and rescue capabilities, army helicopters, and so forth. The planning team determines who initiates contact with these assets to help determine how their resources may be incorporated in planning and response activities.

The planning team also needs to consider that during a major emergency, as defined in the Stafford Act, the president can direct federally controlled resources located in the community, such as VA hospitals, Bureau of Primary Health Care facilities, military hospitals, and any other medical or nonmedical federal assets, to respond in ways directed by the president. As this directive may or may not include assistance to the particular community in which such resources are permanently housed,[10] the planners need to prepare for contingencies when such personnel, equipment, supplies, facilities, and managerial, technical, and advisory services might not be available to the community.

Identify gaps in community assets.

The planning team then reviews the asset inventory information so that gaps and areas of commonality can be identified. During development of the integrated plan—the next activity (addressed in Section 6)—the team begins to identify strategies to close the gap between what is needed and what is available for disaster preparedness and response. "Shortfalls may require negotiating agreements with private suppliers or other jurisdictions. Determination of the resource base also should include a consideration of what facilities are vital to emergency operations and how they might be affected by hazards: problems that cannot be mitigated should be taken into account in the emergency operations plan, not assumed away," notes the FEMA planning guide.[7(pp. 2-10)]

6. Develop the Integrated Plan

Recommended Planning Strategies:

- **Maintain a collaborative effort; broaden planning partnerships where necessary.**
- **Choose an approach to developing the plan.**
- **Use available guidance and resources.**
- **Determine how the plan is to be drafted and the expected time frame.**
- **Agree on meeting frequency.**
- **Review existing plans, laws, and mutual aid agreements.**
- **Commit to the use of simple language.**
- **Clearly delineate roles and responsibilities.**
- **Determine how the plan will be organized.**
- **Address all types of events and cover all defined goals.**
- **Specifically address health and medical facility emergency planning.**
- **Specifically address how to meet needs for pharmaceuticals and medical supplies.**
- **Identify and address hazards and resources that cross jurisdictions.**
- **Identify how preparedness and response success will be measured.**
- **Consider the lessons learned from 9/11.**

The integrated emergency management plan is designed to meet the needs defined for the community based on its hazard vulnerability analysis (HVA; Section 3), its goals for preparedness and response planning (Section 4), and its current capacities and capabilities (Section 5). Through the HVA, goal setting, and capabilities identification processes, the team determines what is being planned for and what assets might be needed and allocated.

Plans, of course, have both a political and strategic value in their quantification and description of available and needed resources. Small, rural, and suburban communities must be realistic; the planning and asset allocation process will undoubtedly require trade-offs. The integrated plan's objectives include achieving a level of preparedness and response that is sustainable and building capabilities for the future as needs evolve. It addresses the four phases of emergency management described in Section 4—prevention, preparation, response, and recovery.

The plan is a living document and must be reviewed, updated, and tested as risks, goals, and capabilities change over time (Section 12). Transitions in team leadership and responsibility must also be considered as the planning process matures and moves into implementation and maintenance phases.

The plan's coverage of issues related to communication, mental health needs, and the needs of special populations warrants in-depth description. Thus, these issues are covered in separate sections in this planning guide: Section 7 addresses communication, Section 8 addresses mental health needs, and Section 9 addresses the needs of special populations. Teams must ensure that these topics are thoroughly covered in their final integrated plan. A description of selected strategies that can help teams to develop high-quality integrated plans follows.

Maintain a collaborative effort; broaden planning partnerships where necessary.

All stakeholders, including the media and others as identified in Section 2, are included as partners in plan development. The value of a collaborative planning process cannot be overemphasized. Although a document is the tangible result at this

stage, intangible results, such as new and improved relationships, have significant positive value above and beyond the document. Planning conducted with a group over an extended period of time builds and enhances partnerships and communication that will be essential during an actual emergency. Partnerships often also extend to neighboring communities and the surrounding region. Subgroups or committees can be formed to focus on particular areas of planning. Communication, reporting, and decision-making channels must be developed and maintained so that the efforts of subset groups are integrated into overall plans.

- *Example: Arlington, Massachusetts (population 43,000), formed a subcommittee of the local emergency planning committee to enhance the community's ability to respond to the threat of terrorism. Subcommittee initiatives included targeted hardening of critical infrastructure; specialized police training for incident command; updating of mutual aid agreements; acquisition of protective equipment and emergency operations planning software; enhancement of the town's emergency management plan; development of emergency plans for specific locations, such as schools; and emergency operations exercises at a high-profile institution.*[33]

Choose an approach to developing the plan.

The planning team can take one or a combination of four general approaches to creating an integrated plan based on the HVA. The team should note that three of the four approaches involve *adapting* existing plans, not *adopting* existing plans. The distinction between *adapting* and *adopting* is critical. If the team chooses one of the adaptation options, it will need to carefully review all elements of the existing plan and revise plan elements to meet the community's unique needs and resources as identified through the team's HVA. *Adopting* a plan and transferring it "wholesale" from one community to another, "cookie-cutter style," is extremely risky and ill-advised. The four approaches are as follows:

- Develop the plan from a blank sheet.
- Adapt a plan that already exists in one of the community's organizations (for example, fire department, school system, local hospital).
- Adapt a plan obtained through the emergency management literature.
- Adapt a county, regional, state, or national plan.

Again, whether starting from a blank sheet or adapting an existing plan, the planning team must tailor the plan to the risks, capabilities, and goals defined for the specific community through its HVA.

Use available guidance and resources.

The blank sheet approach may be more time-consuming than other approaches. Most states can provide valuable assistance to local jurisdictions. States typically publish their own planning guides, conduct training, and may assign planners to work with local community planners. Federal guidance, such as the *Public Health Emergency Response Guide for State, Local, and Tribal Public Health Directors,* published by the Centers for Disease Control and Prevention (CDC), can provide valuable planning guidance and templates for documentation of contacts and actions, leadership assignments, and incident-specific preparedness (*see* Tools).

Determine how the plan is to be drafted and the expected time frame.

Decisions include Who will draft the plan and prepare the needed graphics? To whom will the draft plan be circulated? How will changes be agreed upon and incorporated? Who will receive a copy of the final plan? and What is the desired time frame for the plan's drafting, revision, and finalization? Sidebar 12 provides selected sample steps outlined by the Federal Emergency Management Agency (FEMA).

TOOLS:

- Centers for Disease Control and Prevention (CDC): *Public Health Emergency Response Guide for State, Local, and Tribal Public Health Directors,* Version 1.0. http://www.bt.cdc.gov/planning/responseguide.asp.
- National Association of County & City Health Officials: *Bt PREP: A Bioterrorism Response Plan Design Guide for Local Public Health Agencies,* 1st ed., 2003. http://www.naccho.org/pubs.
- Resources for local planning for pandemic disease, available through the CDC, include: *Pandemic Influenza Preparedness and Response:* http://www.hhs.gov/nvpo; *State and Local Pandemic Planning Guide:* http://www.hhs.gov/nvpo/pubs/pandemicflu.htm.
- Northern New England Metropolitan Medical Response System: *Community Planning Guide: Improving Local and State Agency Response to Terrorist Incidents Involving Biological Weapons,* Jun. 2003. http://www.nnemmrs.org/surge.html.

Agree on meeting frequency.

The planning team and its subcommittees or task groups may meet weekly or monthly during different phases of planning and implementation. Meetings with neighboring, regional, state, or federal partners may occur on a monthly, quarterly, or biannual basis after the relationships are established.

Review existing plans, laws, and mutual aid agreements.

Local, state, and federal laws, rules, and regulations may impact the plans that are developed. Appropriate plans, laws, codes, and regulations and existing agreements with neighboring communities, private-sector organizations, and others should be reviewed carefully by the team.[7] These should include plans concerning command and control and, in particular, the integration from an incident command system structure to a unified command system.

Commit to the use of simple language.

The emergency management plan should be written in plain English. Team members can define all terms at the beginning and avoid using too many acronyms or abbreviations. A clearly marked glossary at the end of the document may define the acronyms or abbreviations that are used.

SIDEBAR 12. SAMPLE STEPS TOWARD CREATING A WRITTEN EMERGENCY OPERATIONS PLAN

- Develop a rough draft of the basic plan to serve as a point of departure for the planning team.
- Develop agendas and invitation lists for the first cycle of planning meetings.
- Conduct a presentation meeting, establish committees for parts of the plan, appoint committee chairs, and schedule a follow-up meeting.
- Work with committees on successive drafts.
- Prepare necessary graphics (for example, maps and organizational charts).
- Produce a final draft and circulate the draft to the planning team for review and comment.
- Hold a meeting to incorporate final changes, discuss an implementation strategy and necessary distribution, and obtain informal commitments to provide information that could necessitate revision.
- Obtain concurrence from organizations with identified responsibilities for implementing the plan.
- Obtain official promulgation of the plan by local elected officials and advise the media of this in advance.
- Print and distribute the plan, with a copy (or press release) to local media. Maintain a record of the organizations and persons that received a copy (or copies) of the plan.

Source: Adapted from Federal Emergency Management Agency: *State and Local Guide (SLG) 101: Guide for All-Hazard Emergency Operations Planning.* 1996. pp. 2-11–2-12. http://www.fema.gov/rrr/gaheop.shtm (accessed Feb. 2005).

Clearly delineate roles and responsibilities.

The plan should clearly describe areas of responsibility, the circumstances under which the plan is to be activated, who is initially in charge, and who is authorized to activate the plan. As mentioned earlier, coordinated emergency management planning and decision making require community leaders and team players to play different roles in different circumstances. The plan also should outline alternative roles for personnel during emergency situations, including who they should report to within a command structure. Roles and responsibilities must be determined in advance because, during an emergency, turf battles or lack of clarity about who is to do what can result in lost time, resources, and perhaps lives. Operational duties and goals for key positions can be provided in checklist format.

Determine how the plan will be organized.

FEMA and other government agencies do not mandate a particular format for emergency plans. However, it is important that the plan be organized in a format that the team is comfortable with and one that enables users to obtain with ease the information they need. Additional issues includes sequencing of the material (is it logical?), consistency of sections, adaptability of material to multiple situations, and compatibility with plans of other jurisdictions.[7]

A functional approach to the plan's structure enables communities to address the effects common to hazards without having to develop separate plans for each hazard. For example, as mentioned earlier, the *National Response Plan* is organized around 15 emergency support functions, such as transportation; mass care, housing, and human services; and others (Sidebar 6). FEMA provides the following list of core functions that warrant attention and may require that specific actions be taken during emergency response operations:

- Direction and control
- Communications
- Warning
- Emergency public information
- Evacuation
- Mass care
- Health and medical services
- Resource management[7(p. 5–1)]

Figure 2 illustrates how each core function can be assigned to specific organizations or individuals. Sidebar 13 outlines the components of an integrated plan that uses a functional structural approach.

Address all types of events and cover all defined goals.

Plan contents should address all those elements outlined as goals for preparedness and response in Section 4. For example, the emergency management plan should include a brief description of the various activities the organization plans to

Roles and responsibilities must be determined in advance; during an emergency, turf battles or lack of clarity about who is to do what can result in lost time, resources, and perhaps lives.

Figure 2. Responsibilities for Response Functions

	Chief Executive Official	Fire Department	Police Department	Health and Medical Coordinator	Public Works	Emergency Program Manager	EOC Manager	Communications Coordinator	Public Information Officer	Evacuation Coordinator	Mass Care Coordinator	Resource Manager	Education Department	Animal Care and Control Agency	Warning Coordinator	Comptroller/Chief Financial Officer	Volunteer Organizations	Other Organizations
Direction and Control	P	P/S	P/S	P/S	P/S	S	S	S	S	S	S	S	S	S	S	S	S	S
Communications	S	S	S	S	S	S	S	P	S	S	S	S	S	S	S	S	S	S
Warning	S	S	S	S	S	S	S	S	S	S	S	S	S	S	P	S	S	S
Emergency Public Information	S	S	S	S	S	S	S	S	P	S	S	S	S	S	S	S	S	S
Evacuation	S	S	S	S	S	S	S	S	S	P	S	S	S	S	S	S	S	S
Mass Care	S	S	S	S	S	S	S	S	S	S	P	S	S	S	S	S	S	S
Health and Medical	S	S	S	P	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Resource Management	S	S	S	S	S	S	S	S	S	S	S	P	S	S	S	S	S	S

P ..... *Primary Responsibility*
S ..... *Support Responsibility*
P/S ..... *Depending on the nature and scope of the emergency, some jurisdictions will put one of these agencies in charge.*

★ **Note:** *The above matrix is not all-inclusive, nor prescriptive; it is meant only to illustrate how responsibilities can be summarized.*

Source: Federal Emergency Management Agency: *State and Local Guide (SLG) 101: Guide for All-Hazard Emergency Operations Planning,* 1996. http://www.fema.gov/rrr/gaheop.shtm (accessed Feb. 2005).

Sidebar 13. Components of a Functionally Structured Emergency Plan

The Basic Plan: The basic plan is an overview of the jurisdiction's emergency response organization and policies. It cites the legal authority for emergency operations, summarizes the situations addressed by the emergency operations plan (EOP), explains the general concept of operations, and assigns responsibilities for emergency planning and operations.

continued

SIDEBAR 13. COMPONENTS OF A FUNCTIONALLY STRUCTURED EMERGENCY PLAN (CONTINUED)

Functional Annexes: Functional annexes are plans organized around the performance of a broad task. Each annex focuses on one of the critical emergency functions that the jurisdiction will perform in response to an emergency. The number and type of functional annexes included in the EOP may vary from one jurisdiction to another, depending on needs, capabilities, and organization. Because functional annexes are oriented toward operations, their primary audience consists of those who perform the tasks. They do not repeat general information contained in the basic plan.

Hazard-Specific Appendixes: Hazard-specific appendixes provide additional detailed information applicable to the performance of a particular function in the face of a particular hazard. They are prepared when hazard characteristics and regulatory requirements warrant and are attached to the relevant functional annex(es).

SOPs and Checklists: Standard operating procedures (SOPs) and checklists provide the detailed instructions that an organization or an individual needs to fulfill responsibilities and perform tasks assigned in the EOP. They may be attached to the EOP or referenced as deemed appropriate.

Source: Federal Emergency Management Agency: *State and Local Guide (SLG) 101: Guide for All-Hazard Emergency Operations Planning.* 1996, pp. 3-2–3-3. http://www.fema.gov/rrr/gaheop.shtm (accessed Feb. 2005).

TOOLS:

- A suggested format for a terrorist incident appendix to a basic all-hazards emergency plan can be found in Federal Emergency Management Agency: *State and Local Guide (SLG) 101: Guide for All-Hazard Emergency Operations Planning: Chapter 6, Attachment G.* Apr. 2001. http://www.fema.gov/pdf/rrr/allhzpln.pdf.

undertake in each of the four emergency management phases (prevention, preparation, response, and recovery).

The plans also should include the following:

- Organizations and individuals responsible for carrying out specific actions at projected times and places in an emergency that exceeds the capability or routine responsibility of any one agency (for example, the fire department)
- Authority and organizational relationships, and how all actions will be coordinated
- How people and property will be protected in emergencies and disasters
- Personnel, equipment, facilities, supplies, and other resources available—within the jurisdiction or by agreement with other jurisdictions—for use during response and recovery operations
- Steps to address mitigation concerns during response and recovery activities[7]

However the plan is organized, the team should ensure that the plan is flexible enough to respond to different situations. Communities must be prepared for natural disasters, unintentional disasters, and intentional disasters.

Specifically address health and medical facility emergency planning.

Local planners must take into account the services required to support operations for health care delivery during and after a disaster affecting the community. For example, planners must consider the following:

- Plans and decisions regarding water reservoirs, tanks, or other sources can impact a health care facility's access to water essential for sanitation, sterilization, cooling of generators, and other utility-related functions.
- Closure of or limited access to banks and ATMs impacts a health care provider's ability to pay essential staff continuing to work through the crisis.

- The receipt, storage, and distribution sequence of mass prophylaxis for first responders and their families, first receivers and their families, other health and public safety workers, and the general public must be determined collaboratively and in advance to avoid confusion.
- Plans and decisions regarding curfew, road closures, or traffic routing can impact the ability of health care professionals to get to and from health care facilities and alternative care sites.

Health care organizations accredited by the Joint Commission on Accreditation of Healthcare Organizations must meet emergency management planning and drill requirements as outlined in Joint Commission accreditation manuals for ambulatory care, behavioral health care, critical access hospitals, health care staffing, home care, hospitals, laboratory, long term care, and office-based surgery facilities. The goal of these requirements is to ensure that health care organizations prepare for and can respond to an emergency within their organizations or in their communities that suddenly and significantly affects the need for their services or their ability to provide those services.[34]

Health facility leaders on the community planning team, who represent Joint Commission-accredited facilities, will be familiar with Joint Commission emergency management requirements and can advise the team on their facilities' ability to provide capacities and capabilities in the areas outlined in this section. Not all health care organizations are accredited by the Joint Commission, however, so communities with acute care and other health facilities should address such facilities' capacities and capabilities to meet needs, including (but not limited to) the following:

Ongoing risk assessment: A risk assessment process, such as HVA, ensures that the health care organization identifies potential emergencies that could affect the need for its services or its ability to provide those services.

Surge capacity: Surge capacity is not just a hospital issue, but a community issue, as described in Section 5. During disasters, surge capacity is perhaps the most fundamental component of a health care organization's emergency preparedness program. *Surge capacity* is the organization's ability to expand care capabilities in response to sudden or more prolonged demand. It encompasses the following elements:

- Potential patient beds
- Available space in which patients may be triaged, managed, treated, vaccinated, decontaminated, or simply located
- Available personnel of all types
- Necessary medications, supplies, and equipment
- Legal capacity to deliver health care services under situations that exceed authorized capacity

Surge capacity has both a point-in-time aspect (that is, the ability to accommodate patients for a limited time period during the acute crisis) and a longitudinal dimension (the ability to manage longer-term care needs).

Plans and decisions regarding water reservoirs, tanks, or other sources can impact a health care facility's access to water essential for sanitation, sterilization, cooling of generators, and other utility-related functions.

Evacuation and alternative care sites: When a facility's physical environment can no longer support adequate care and treatment, the organization must have plans for both horizontal (on the same floor or level) and vertical (to a different floor) evacuation. Procedures for horizontal evacuation to areas of safety beyond closed smoke barriers are written into every health care facility's fire plans and should be familiar to all staff. Even though less common, vertical evacuation must also be considered in the planning process. Other evacuation planning considerations include Who is responsible for the decision to evacuate? With what company(ies) will transportation of patients be arranged (for example, local paratransit or ambulance services)? What evacuation routes will be used? Where will these routes be posted? Who is responsible for maintaining the medical and medication profile sheet throughout the event and after?[35]

Hospitals and long term care organizations are required by the Joint Commission to identify an alternative care site(s) that has the capabilities to meet the needs of patients when their own facilities are not able to do so due to the effects of a disaster. Consideration must be made for the type of patients being relocated, with assurance that the chosen alternative site can meet the clinical needs of the individuals it receives.

Emergency communications and building utility systems: Health facilities must ensure an appropriate backup for key internal and external communications systems in the event of failure during emergencies. Hospitals or other health care organizations frequently consider multiple levels of communications systems redundancy, including backup phone systems, additional radio licenses for portable radios, cell phones, Ham radios, satellite phones, personal digital assistants, e-mail, and so forth.

Sidebar 14. Communication and Power Considerations for Health Care Facilities

The major information categories of the draft guidelines in development at the Greater New York Hospital Association include the following:

Communication considerations: internal phone switches, analog phone lines, long-distance service provider trunks, runner system, radios, walkie-talkies, cell phones, overhead speaker and paging system, stand-alone computer and Internet access, access to external information systems, communications directories, and vendor contact numbers.

Power considerations: standards, fuel supplies, supplemental emergency generators, operation of emergency generators, placement and security of emergency generators, elevators, radios, critical equipment, and contingency planning.

Source: Greater New York Hospital Association, New York. Used with permission.

Facilities must identify an alternative means of meeting essential building utility needs when the facility must provide continuous service during an emergency. Electricity, water, ventilation, fuel sources, and medical gas/vacuum systems may each require special consideration. Key questions related to utility failure include Does the organization's emergency management plan address how the organization would handle a utility failure caused by an interruption in service by a utility provider? By a lightening strike? What effect would a utility failure have on the organization? How has the plan addressed such effects? What backup systems are in place in the event of a utility failure? Sidebar 14 provides Greater New York Hospital Association's planning categories related to communication and power issues.

Emergency education and training of health care staff: Orientation and education about potential emergencies and their expected risks and consequences, how to respond to each type of emergency, and how to provide the best possible care to disaster victims, as appropriate, should be pro-

vided to health care staff *before* a disaster occurs. When a disaster or emergency occurs, there is little or no time for staff training to be conducted. An orientation and education program for all personnel, including licensed independent practitioners who participate in implementing the emergency management plan, is required by the Joint Commission for accreditation and is recommended for all organizations. Education addresses, as appropriate to the individual, the following:

- Specific roles and responsibilities during emergencies
- How to recognize specific types of emergencies
- The information and skills required to perform assigned duties during emergencies
- The backup communication system used during emergencies
- How supplies and equipment are obtained during emergencies

Incident command system (ICS)/unified command: The health care organization's command structure must link with the community's command structure. The Hospital Emergency Incident Command System (HEICS), used by many hospitals nationwide, is based upon public safety's ICS all-hazards structure.

Isolation and decontamination: A community must know what is available for radioactive, biological, and chemical isolation and decontamination and how to access such capabilities. Not all hospitals *have* facilities for such decontamination, but current belief is that it is advisable for hospitals to work with the community to develop decontamination plans and capabilities. The team should also obtain information on hospital/health facility capacity to support ventilator-dependent individuals and to isolate and quarantine individuals who require isolation and quarantine. According to a recent study of hospital and community emergency preparedness linkages,[14] only about half of respondents from rural hospitals reported that their community plan addresses the hospital's capacity to isolate individuals, as needed, and to support ventilator-dependent patients.

Security/lockdown: According to some experts, a plan to secure the facility within a few minutes of an internal or known external biologic or chemical incident in order to protect current care recipients, the facility, and staff is appropriate, and entry should be permitted only to noncontaminated staff and decontaminated care recipients.[36] Good perimeter control and access control points around health facilities are often critical to prevent the spread of infectious diseases and agents. Security planning issues include What additional security staff is required in the event of a communitywide disaster? How might such staff be obtained during an emergency? What "emergency lock-down" control procedures should be implemented in the event of a disaster? How will these occur? Who will implement them? What role will local law enforcement agencies play in assisting the organization during a communitywide incident? How will the organization's security staff communicate with local agencies during a communitywide incident?

- *Example: To decrease the possibility of contamination of treatment areas, the Medical Center of Central Georgia in Macon designed a physically separate space for decontamination. If an individual is or may be contaminated, staff posted at the emergency medical services (EMS) entrance ramp ensures that the person is directed from the private vehicle or ambulance into a decontamination room prior to entering the emergency department.*[37]

Surveillance and laboratory capacity: The team should also work to ensure that hospitals and public health agencies in the area have a collaborative plan for timely and appropriate identification and testing of suspected agents of bioterrorism, which include anthrax, smallpox, and others.

Drills/exercises: Health care organizations must give drills and exercises serious and comprehensive attention. Testing of every aspect of an emergency management plan includes all equipment the organization will be using during an emergency (for example, communications backups, emergency generators), involving community agencies, deploying the clinical staff, setting up the incident command center, evacuating and transporting the patient population, and requesting and receiving emergency supplies and equipment from other organizations.

Emergency credentialing: Credentialing of disaster volunteers in order to expand community capability warrants special focus. As described in Sections 4 and 5, the team should consider the range of potential volunteers, from local health care professionals such as Medical Reserve Corps and Community Emergency Response Team, through Disaster Medical Response teams at the federal level. The planning team or a subgroup will need to establish appropriate credentialing processes. Approximately one third of study respondents from hospitals in rural communities have no established mechanism for credentialing volunteer staff during an emergency.[14] "This issue has been a big problem in those communities that have already experienced a variety of different kinds of disasters, and deserves significant attention," comments Jerod M. Loeb, Ph.D., executive vice president of the Joint Commission's Division of Research.

Credentialing of disaster volunteers appears to be lacking nationwide in both urban and rural areas and should be examined by community planners. Through a program called Emergency System for Advance Registration of Volunteer Health Care Personnel (ESAR-VHP), the Health Resources and Services Administration (HRSA) is working with states and jurisdictions to establish a common approach to credentialing licensed health care professionals. "ESAR-VHP will be a national system in the sense that every state and jurisdiction will have developed their systems using the ESAR-VHP national guidelines. States and jurisdictions will be encouraged to enter into agreements to create local and regional consortia," notes Marilyn Biviano, chief of HRSA's ESAR-VHP Branch.[38]

With the assistance of state licensing boards and medical staff offices at local hospitals, some communities and community hospitals are establishing databases that include information (and photos) of credentialed medical volunteers. Photo identification cards facilitate the accurate identification of credentialed volunteers.

Specifically address how to meet needs for pharmaceuticals and medical supplies.

Health care organizations and health departments have routine medical and pharmaceutical suppliers and often negotiate special supply arrangements with these and other suppliers for emergency situations. Supply arrangements must be identified as part of the community planning effort in order to ensure that all potential surge supply sources are included in the community plan and to prevent multiple organizations from unknowingly relying on the same supplier, thereby running the risk of an early depletion of supplies with no alternative supply arrangements in place.

Successful emergency management planning includes identifying contingency suppliers that can provide the resources that may be needed to handle a patient surge. Resources include people, equipment, food, and medical supplies, among other items. Leaders should establish agreements ahead of time with community agencies, other

health care providers, and backup suppliers to ensure that the organization's resource needs can be met during a dramatic patient surge. Having adequate quantities of ventilators and personal protective equipment is of particular concern with a large influx of patients with severe respiratory problems.

In the event of major emergencies or disasters, hospitals in local communities contact the local health department or, in jurisdictions with no local health department, hospitals call the state health department to request state assistance in meeting needs for drug and medical supplies that exceed local resources. Sidebar 15 provides additional information on this process. The state's governor's office can request federal assistance if local needs exceed state resources. The CDC's Strategic National Stockpile (SNS), formerly known as the National Pharmaceutical Stockpile (NPS), can be made available to any community in need of additional medicinal support in response to an event involving a number of different threat agents. It consists of several tons of needed pharmaceutical supplies and equipment, strategically located throughout the United States, which will be delivered to the local community within 12 hours of an event. The *National Response Plan* does not need to be activated in order for the stockpile to be requested by the governor for use in a local community.[39]

All communities, both large and small, must address how they will procure and distribute additional supplies from local stockpiles and the national stockpile. Responsibility currently varies widely by community and includes local health care providers, public health officials, EMS, fire services, law enforcement, and other services. In testimony before a U.S. House of Representatives subcommittee, a CDC official stated: "Local organizations at the city, county, and regional level will be essential in the effort to reach all citizens who need medical help after a terrorist incident. However, these partners need to become fully aware of the NPS to ensure that they are able to most effectively plan for and use this valuable resource."[40]

To meet this need, the CDC is now offering extensive training to fully prepare state and local partners. According to the CDC, "The preparedness training and education program is for state and local health care providers, first responders, and governments (to include federal officials, governors' offices, state and local health departments, and emergency management agencies). This training not only explains the SNS program's mission and operations, it alerts state and local emergency response officials to the important issues they must plan for in order to receive, secure, and distribute SNS assets."[41] Training information is available at www.bt.cdc.gov/training.

Given the availability to hospitals of external sources of drugs and related supplies from the CDC's SNS, the American Hospital Association recommends that hospitals be prepared to sustain a 24-hour supply of pharmaceutical products at the most common dosage and that a standardized formulary should be developed to adequately determine stock requirements for medical/surgical supplies and equipment.[42] In its white paper, the Joint Commission recommends ensuring a 48- to 72-hour stand-alone capability through the appropriate stockpiling of necessary medications and supplies.[30]

Identify and address hazards and resources that cross jurisdictions.

Disasters do not recognize jurisdictional lines (for example, hurricanes affect multiple municipalities and counties simultaneously); similarly, resources

Sidebar 15. Assuring Drugs and Medical Supplies in Local Communities

During the occurrence of a major emergency or disaster, a hospital in the local region may quickly need additional support in the form of drugs and medical supplies. The hospital will have activated its emergency response plans using the Hospital Emergency Incident Command System (HEICS) or another incident command system (ICS).

The individual functioning as Incident Commander, as specified under the ICS structure, or a person to whom he or she has delegated this responsibility, will initiate a request with the local public health department (LHD) that serves the jurisdiction in which the hospital is located. The Incident Commander alerts the LHD to the fact that the hospital is experiencing rapid depletion of certain medications or supplies due, perhaps, to a widespread problem affecting the area's residents.

Before an emergency occurs, it therefore is critical that the Incident Commander and other hospital leaders know who the hospital's public health officials are and how to contact them. Hospital leaders must establish ongoing relationships with their public health officials. In rural areas of the nation, where there is no local public health department, the state health department provides public health services to local jurisdictions.

Local health departments can request further support from state health departments. State health departments, through the governor, can request federal support, including pharmaceuticals and medical supplies from the CDC's Strategic National Stockpile.

Source: Christine C. Bradshaw, D.O., M.P.H., M.B.A., medical officer, Centers for Disease Control and Prevention, Coordinating Office of Terrorism Preparedness and Emergency Response.

must cross jurisdictional lines to meet the needs of communities affected by disasters (for example, by transporting residents of one county without an acute care facility to another county with such a facility). The plan should address both realities.

Identify how preparedness and response success will be measured.

Drills, exercises, and real events described in Section 10 can shed light on the success (or lack thereof) of preparedness and response efforts outlined in the plan. However, while developing the plan, the team will want to consider parameters or indicators that will be used to measure success. Communities need realistic feedback regarding the true level of preparedness. This helps to establish realistic expectations, ensure identification of gaps, and enable these gaps to be filled in the best possible way, given the community's resources.

Consider the lessons learned from 9/11.

The Pentagon's use of a unified command system during the 9/11 attack was considered by many to be a model of implementation in terms of coordinating the roles of emergency responders, first receivers (hospitals), public health, law enforcement, the FBI, and others. The emergency response at the World Trade Center was heroic, yet there were significant lessons learned. Communities, no matter how small, can learn from what went right and what went wrong. *The 9/11 Commission Report*[11] cited the following lessons:

- Avoid bureaucratic inertia.
- Simplify oversight and clarify accountability. Too many parties dilute the effectiveness of response and run the risk that no one assumes responsibility.
- Challenge assumptions about what the likely threats will be. Think outside the box.
- Assure joint operational planning. Give up turf and collaborate for efficiency. Avoid duplication of effort.

- Provide layered preparedness and response mechanisms.
- Designate who will be the communicator at each response and operations entity.
- Technology is an asset but can also be a liability. If power fails, is there a means for communication and other functions served by technology?
- Train people as backup for technology.
- Ensure detailed and effective transfer of knowledge when new persons come into important roles or during other transitions/transfers of authority or responsibility.
- Develop standardized operating procedures covering how different commands should communicate during an incident.
- Make sure first responder civilians know what to do.
- Assure that each participant of the unified incident management system has command and control of its own units and adequate internal communications.
- Conduct regional drills in order to establish professional relationships and trusts.
- Promote and reward information sharing.
- Match resources to responsibility and function.

TOOLS:

- Federal Emergency Management Agency (FEMA): *State and Local Guide (SLG) 101: Guide for All-Hazard Emergency Operations Planning,* 1996. http://www.fema.gov/rrr/gaheop.shtm.

Published in 1996, this guide outlines the preparedness, response, and short-term recovery planning components that FEMA recommends be included in state and local emergency operations plans. Attachment G, published in April 2001, provides specific guidance for terrorism planning. http://www.fema.gov/pdf/rrr/allhzpln.pdf.

- State and Local Preparedness Guidance: http://www.fema.gov/preparedness/state_local_prepare_guide.shtm.

Emergency Operations Planning Guidance is designed to help state and local governments fine-tune their EOPs and address critical planning considerations to include a focus on weapons of mass destruction (WMD) incidents, interstate and intrastate mutual aid agreements, resource typing, resource standards, protection of critical infrastructure, inventory of critical response equipment and teams, continuity of operations, and family and community preparedness.

- Managing the Emergency Consequences of Terrorist Incidents—Interim Guidelines: http://www.fema.gov/preparedness/managing.shtm.

This interim planning guide provides state and local emergency management planners with a framework for developing supplemental emergency operations plans that address the consequences of a terrorist attack involving WMD. It encourages the efficient integration of state, local, and federal terrorism response activities and provides current information regarding planning and operational challenges faced by communities that have dealt with terrorist events.

- National Capability Assurance: http://www.fema.gov/preparedness/nca.shtm.

FEMA's Capability Assurance effort focuses on resources and programs to help the state, tribal, and local emergency management and response communities be better prepared to respond to disasters and incidents of all kinds. These processes and resources focus primarily on assessment and exercise-related programs, processes, and systems.

Train people as backup for technology.

7. Ensure Thorough Communication Planning

Recommended Planning Strategies:

- **Understand how communication is transmitted.**
- **Plan for alternative and backup communications links and systems.**
- **Plan and provide for emergency backup power to communications systems.**
- **Ensure interoperability of communications systems.**
- **Use available communications planning resources.**
- **Review and build on existing communications planning initiatives.**
- **Obtain/prepare information for crisis communications.**
- **Define emergency communications protocols or procedures.**
- **Establish communications credibility with the public.**
- **Recognize and plan for the critical role played by the media.**
- **Identify how every community member can be reached in an emergency.**
- **Plan to provide decisional support.**
- **Ensure culturally sensitive communication.**
- **Use publicly available communications materials.**
- **Ensure integration of the local health care organization's communications plans.**

Two principal goals of communications planning in emergency management are (1) to establish and maintain a common operating picture and (2) to ensure accessibility and interoperability across jurisdictions and functional agencies.[27] Although progress toward meeting these goals has been made, much work remains to be done. During the 9/11 attacks, for example, the response efforts of the first fire fighters to arrive at the World Trade Center were hampered by radio communications problems. Those first responders thus actually had less knowledge about what was happening inside the buildings than those outside the buildings.

In any community, communication patterns develop and change to fit the day-to-day needs of the community. These communication patterns, both internal and external, are influenced by equipment use, procedures, and channels for collecting, organizing, and exchanging information among community agencies and organizations. Planning for the provisions that should be available for communications during an emergency is difficult because emergencies are by their very nature unpredictable, and so are their effects on the community. Elements of an emergency response plan for communications that works for one community may not meet the needs of other communities due to differing communications infrastructure, equipment, channels of communication, and dozens of other possible factors. Strategies that can help communities achieve thorough communications planning follow.

Understand how communication is transmitted.

An understanding of how communication methods work is critical to effectively planning for the communications consequences of an emergency because emergencies can interrupt established communication systems (*see* section on "Plan for alternative and backup communication links and systems."). Communications are usually transmitted by wire line, radio, or a combination of the two. Wire line communications, such as telephone and telegraph, involve sending and receiving an electromagnetic signal by a closed conducting path, such as a copper wire or fiber-optic

cable. In radio communications, signals are sent and received by electromagnetic radiation, generally through the atmosphere, without a connecting wire. Combination communications systems, such as cellular radio, use both wire line and radio transmission paths. Sidebar 16 itemizes types of communications equipment.

SIDEBAR 16. COMMUNICATIONS EQUIPMENT

Radio Equipment	Wire Line	Combination
Two-way radio	Telephone	Cellular telephone
Pagers	Fax machine	Satellite telephone
Broadcast radio	Computer modem	
Television	Public address system	
Satellite	Intercom	

For effective emergency response, reliable communications must exist between specific fixed locations, between fixed and nonfixed (mobile) locations, and between two or more mobile locations. Some of the communication paths that must be planned for and established include local emergency medical services (EMS) radio dispatching, health care organizations to each other and to ambulances, ambulances to a medical communications control center, fire and law enforcement to command centers and to each other, and so forth.

Plan for alternative and backup communications links and systems.

Although many small communities may find it challenging enough to establish and maintain needed communications links and systems, backup links and systems may be equally critical to effective emergency response. (*see* Sidebar 17 on page 55.) For example, the public telephone network can be overloaded easily by increased traffic or become physically disrupted during a major disaster. Because radio and microwave systems can also be damaged, communities should consider available replacement supplies of antennas, coaxial cable, and other hardware susceptible to damage. Make sure that telephone lines coming into community communications centers are buried (where feasible), clearly marked, and protected from damage.

A designated radio frequency can be used for point-to-point community disaster coordination. Because a single frequency is often easily overloaded and abused during even minor emergencies, incorporate into the system a method for preventing overload. This might include a practiced system discipline (such as limitations on the lengths of messages) and alternative communications paths (such as switching to cellular radio telephone to handle a communications overload). When possible, radio transmitter/receivers equipped to operate on multiple frequencies should be available.

- *Example: The Huntington Beach (California) Fire Department has a volunteer program called Radio Amateur Civil Emergency Services (RACES), which provides backup communications during disasters. In*

For effective emergency response, reliable communications must exist between specific fixed locations, between fixed and nonfixed (mobile) locations, and between two or more mobile locations.

2001 the fire department trained RACES to back up its 800 MHz system. In September 2004, just two weeks after an exercise to test preparedness, the fire department's 800MHz fire radio system went down for the entire county. The fire department placed a RACES member in the police dispatch where the 911 calls came in and one in each fire engine, truck, and ambulance. RACES provided emergency communications for the city for several hours.[43]

Plan and provide for emergency backup power to communications systems.

Facilities with fixed communications systems should have adequate standby power sources that are independent (batteries or generators, for example) to avoid dependence on commercial power. Important locations in a service area, such as health care organizations, should have more

Sidebar 17. Backup Communications

The State of New Hampshire, as part of the Critical Benchmark expectations of the Cooperative Agreement Grant: The National Bioterrorism Hospital Preparedness Program with the Health Resources and Services Administration (HRSA), has developed a strategy to update ambulance-to-hospital (HEAR) radio equipment and provide for redundant communications for the 26 acute care hospitals in New Hampshire. The benchmark in the grant is as follows:

Critical Benchmark #2-10: Surge Capacity: Communications and Information Technology

Establish a secure and redundant communications system that ensures connectivity during a terrorist incident or other public health emergency between health care facilities and state and local health departments, emergency medical services, emergency management agencies, public safety agencies, neighboring jurisdictions and federal public health officials.

A survey of each hospital's HEAR radio system was completed. It was discovered that some, but not all, hospitals had a backup radio. Many of the hospitals had very old equipment, especially in small rural hospitals. Few if any hospitals had digital capability. Concurrent with this effort has been an ongoing statewide radio interoperability project for police and fire services.

The radio subcommittee of the New Hampshire Hospital Association's Hospital Emergency Preparedness Working Group developed the following simple objectives for the radio purchase project to ensure that each hospital:

- has APCO 25 compliant equipment (http://www.apcointl.org/frequency/project25/information.html)
- has digital capability (part of APCO 25 compliance)
- has redundant radio capability (by preserving their existing system)
- Another objective of the committee is to have the same equipment in hospitals throughout the State in order for it to be familiar to personnel in the event they are called to respond to a mass casualty event where they are working in another hospital, etc.

Based on these criteria, we decided to purchase a base station radio that has 16 channels and can work in either analog or digital (some of our more rural and mountainous parts of the State cannot support digital). It is understood that though a hospital may choose to use the new radio for their primary radio for continuous EMS monitoring/communication, having the built-in capability on the other channels is prudent and could be useful during a large scale emergency.

Source: Personal communication from Jose'Their Montero, M.D., state epidemiologist of New Hampshire, Aug. 10, 2005.

than one radio site so that communications will not be totally lost if one radio site fails. If possible, teams can consider whether it is possible to install extra equipment at different geographic locations throughout the community.

The system's design should allow for enough telephone lines, radio channel capacity, and operating positions, or rapid expansion capability to handle the heavy communications traffic loads generated by disasters. For example, health care facilities can consider having several telephone lines with unlisted numbers, which makes it easier to make outgoing telephone calls when there is heavy incoming telephone traffic.

Ensure interoperability of communications systems.

Interoperability of communications systems in emergency planning involves primarily the ability of first responders and emergency coordinators to communicate directly by radio with individuals from other agencies. The ability of computers, mutual aid entities, and planning groups across jurisdictions to participate in joint efforts is also often considered part of interoperability.

Lack of interoperability is a significant problem nationwide and was a well-publicized obstacle faced by the New York City fire and police departments during the 9/11 attacks. Local and state first responders currently are spread across 10 different radio frequency bands and often cannot communicate directly with each other. Interoperability challenges result from spectrum limitations, funding limitations, incompatible technology, and lack of systems planning. In response, the 9/11 Commission called for Congress to support pending legislation for the expedited and increased assignment of radio spectrum for public safety purposes.[11]

The Federal Emergency Management Agency (FEMA) eGov Disaster Management Program provides responders with a Web-based service called the Disaster Management Interoperability Services Interoperability Backbone, which offers free communication tools that allow responders to share information with other responder organizations. "Responder groups receive and transmit information over the web, enabling them to rapidly develop and exchange incident information with other responder organizations. This capability of sharing incident information gives all responders greater knowledge of a particular disaster event by leveraging technology to gain efficiency," notes the Web site[44] (*see* Tools).

TOOLS:

- The goals of the DMIS Interoperability Backbone Web site are to improve disaster response by enabling responders to share information seamlessly between organizations, and to provide new software tools at no cost to responder organizations for increased disaster response effectiveness. http://www.cmi-services.org/dmishp_what_is_dmis.html.

- *Example: Laurel, Maryland, a city of 22,000 located near Washington, D.C., created a low-cost command center with used computers and donated software from the federal government. The center provides interoperability with four counties surrounding D.C. Its software includes instant messaging capabilities that allow users to access and share documents over a private network.*[33]

Use available communications planning resources.

Like other planning efforts, communications planning need not involve reinventing the wheel. Teams can consult available resources. For example, a Web-based guide and toolkit provided by

the National Education Association for school administrators includes tips, resources, ideas, and examples for being prepared before a crisis, being responsive during a crisis, being diligent in moving beyond a crisis, and for hands-on assistance for educators (*see* Tools).

Local planners can consult federal Web sites that provide free access to collaborative communication tools. One such Web site is http://www.disasterhelp.gov (*see* Tools).

TOOLS:

- Agency for Toxic Substances and Disease Registry: *A Primer on Health Risk Communication Principles and Practices.* http://www.atsdr.cdc.gov/HEC/primer.html.
- American Red Cross: *Talking About Disasters: Guide for Standard Messages (2004).* http://www.redcross.org/disaster/safety/guide.html.
- National Education Association: *Crisis Communications Guide and Toolkit,* 2003. http://www.nea.org/crisis.
- U.S. Department of Health and Human Services (DHHS): *Communicating in a Crisis: Risk Communication Guidelines for Public Officials.* Washington, DC: DHHS, 2002. http://www.riskcommunication.samhsa.gov/index.htm.
- Wyatt W.: *Be Prepared: Communicating in a Crisis.* http://www.ncsl.org/programs/legman/nlssa/402crisis.htm.
- DisasterHelp offers collaborative tools, including instant messaging and chat, discussion threads, and secured document sharing to the responder community. http://www.diasterhelp.gov.

Review and build on existing communications planning initiatives.

Communications planning may already have occurred in numerous agencies within small communities, such as law enforcement, fire, hospitals, and school systems. These initiatives might provide an appropriate starting point for overall community communications planning. Plans should be reviewed thoroughly and adapted as needed.

- *Example: Nuclear power plants are required by law to facilitate and fund community-based emergency planning and to engage in education, information, preparedness, and drills with their community residents on a regular basis. Such relationships, which cross jurisdictional lines, can serve as models for other communities to engage in integrated communication planning, coordination, and public education.*

Obtain/prepare information for crisis communications.

Lists of contacts, with addresses and phone numbers, should be established and maintained regularly[45] to support timely access to critical individuals, information and resources. The team can prepare emergency proclamations, citizen alerts, and other important documents in advance.[46] Much of the success of effective *crisis communication,* communication that occurs during an actual crisis, is predicated on the effort that goes into communications planning, information provision prior to a crisis, and ongoing public education often called *risk communication*.

Sidebar 18 provides the rules of risk communication recommended by the U.S. Environmental Protection Agency.

SIDEBAR 18. SEVEN CARDINAL RULES OF RISK COMMUNICATION

1. Accept and involve the public as a partner. Your goal is to produce an informed public, not to defuse public concerns.
2. Plan carefully and evaluate your efforts. Different goals, audiences, and media require different actions.
3. Listen to the public's specific concerns. People often care more about trust, credibility, competence, fairness, and empathy than about statistics and details.
4. Be honest, frank, and open. Trust and credibility are difficult to obtain; once lost, they are almost impossible to regain.
5. Work with other credible sources. Conflicts and disagreements among organizations make communication with the public much more difficult.
6. Meet the needs of the media. The media are usually more interested in politics than risk, simplicity than complexity, danger than safety.
7. Speak clearly and with compassion. Never let your efforts prevent your acknowledging the tragedy of an illness, injury, or death.

Source: Covello V., Allen F.: *Seven Cardinal Rules of Risk Communication*. Washington, DC: U.S. Environmental Protection Agency, Office of Policy Analysis, 1988.

Define emergency communications protocols or procedures.

Disaster communications procedures should be clearly defined, with an emphasis on interagency coordination. These procedures should be a straightforward expansion of day-to-day procedures rather than a radical change in normal operating procedures. There should be established communications paths with military, amateur, air, public utility, and other radio operations outside the Public Safety Radio Service. Communication must be accurate and up-to-date and provide information in "real time" so that messages will be correct and consistent across all entities.

The planning team should ensure intact protocols that allow law enforcement, fire, EMS, and hospitals to communicate with each other during disaster operations. A crisis communication protocol is a key element of community plans; community planners should be aware of protocol contents. According to the study of hospital and community emergency preparedness linkages,[14] the majority of respondents from rural hospitals indicated that a crisis communication protocol existed in their community, but many still did not know whether such a protocol was available.

Some communications techniques include using common disaster channels and multichannel radios and cross-banding or cross-patching of channels through communication-center consoles.

Establish communications credibility with the public.

Communication with the public during and following an emergency must be clear, credible, and consistent. This requires thorough planning in advance of any major occurrence. Residents of small towns and rural communities often turn to local leaders as the most direct source of information in their towns and communities.[46] Identification of a spokesperson who is well respected is key. In some communities, this might be the mayor or other elected official, hospital leader, religious leader, or others. Prior to any emergency, this individual can be involved in educating and building trust with the community. "People are more likely to follow official instructions when they have a lot of trust in what officials tell them to do and are confident that their community is prepared to meet their needs," notes one study.[24]

- *Example: Poison control centers, nurse call lines, and other types of medical contact systems can serve as a conduit of credible information to the public. As part*

of their normal, day-to-day operations, they become a familiar source of health and safety information for the public. During an emergency, the public is likely to seek information from these sources, which become an important means of community response support. By addressing questions on exposure, symptoms, and care over the telephone, they can help reduce the demand on acute care facilities.

- *Example: To answer questions about how residents can prepare for all types of emergencies and how their city and county were preparing for emergencies, Roseville, Minnesota (population 34,000), hosted a community emergency readiness night.*[46] *The presentation and discussion were open to all residents. Topics included how to prepare for all types of severe weather and preparing for Y2K problems, which was an issue of concern at that time.*

Recognize and plan for the critical role played by the media.

The media observe and report, but they also educate and warn. As indicated in Section 2, the planning team includes the media, but special effort can be made to integrate the media's two key functions in planning. "In the first role (to observe and report), the media acts as an outsider to the community; in the second role (to educate and warn), the media is an integral part of the emergency preparedness system. Seldom are the two roles well integrated, leading to a weaving back and forth from one role to the other, and confusing media users. News stories provide the operative 'reality' about the crisis period for almost everyone," notes E.L. Quarantelli, cofounder of the Disaster Research Center at the University of Delaware.[47]

Identify how every community member can be reached in an emergency.

Community preparedness requires a "locational" system that can reach every person in a community, from cradle to rocking chair. Communication channels, including telephone, television, radio, and computer (for Internet and e-mail, for example), can be thoroughly considered by the planning team. According to a recent survey conducted for the U.S. Department of Homeland Security's (DHS's) Office of Citizen Corps, there is no one channel of communication that all Americans prefer for receiving information.[26]

- *Example: Many communities have developed and are using a "reverse 911" system to contact residents in the event of an emergency and to provide ongoing guidance during an emergency (for example, indicating that hospital X cannot take more patients, but to go for care at hospital Y instead). Depending upon the length of the message and system capabilities, automated telephone calling systems can, within a one-minute period, dial a dozen to hundreds of telephone numbers and deliver a prerecorded message. Targeted messages can be delivered to certain areas and in different languages, as appropriate. Through educational efforts, residents can be encouraged to provide the reverse 911 agency with their unpublished or cell phone numbers.*

Plan to provide decisional support.

During an emergency, people want to know what is happening, what they should do, and where to get help. For events such as a terrorist attack, it is not always possible to provide complete information. However, it is imperative that communication occurs and that the spokesperson plans to establish an immediate presence and provide as much accurate and timely information as possible.[46]

"Although we live in an electronic age and a lot of information is available through the Internet, obtaining information or advice from another human being appears to be critically important to the American public in this situation. Both the survey and our discussions with community residents around the country document that people are looking for decision-making support, not just

facts. People want to talk to someone to (1) confirm what they are hearing from government officials or through the media, (2) get additional information to answer their questions, and (3) help them resolve difficult tradeoffs so they can make the best decisions for themselves and their families," indicates the *Redefining Readiness* study.[24(p. 19)]

"Good communication is perceived differently by the communicator, who wants public cooperation and understanding in a time of crisis, and the public, which wants inclusion, consideration, respect, expert guidance, and proof that officials have justly considered the public. (High quality) risk communication bridges this gap by providing individuals and communities with information that allows them to make the best possible decisions about their well-being," notes an Institute of Medicine (IOM) report.[48(p. S-38)]

Ensure culturally sensitive communication.

Consideration of the communication form and language is critical. Given the large portion of non-English-speaking residents in the United States, cultural sensitivity must be assured. Communities with significant cultural diversity need to plan for communication in the appropriate languages.

The planning team should consider if there are cultural or linguistic groups not represented at the planning table. These should be included or consulted to assure that the most effective strategies, messages, and modes of communication for those groups are incorporated in the planning. The anthrax attacks in 2001 illustrated the risk of providing mixed messages to different communities. Ethnic groups who have experienced disparities in health care and/or social services may look upon certain pronouncements with an attitude of skepticism rather than cooperation, especially messages regarding, for example, the phased distribution of prophylaxis or the need for isolation or quarantine. Houses of worship, business groups, and ethnic radio/TV and print media are frequently trusted sources of information within ethnic communities. Community-organized telephone support networks can provide culturally in-tune and accurate advice when integrated into the planning process. Other "high-touch" methods, including in-person outreach, may be needed in some communities.

"Unless public messages are tailored to gain the attention of specific segments of our racially and culturally diverse society, they are likely to be ignored. (For example,) clear communication will be essential to obtaining adherence to mass vaccination campaigns during a pandemic," notes a recent IOM report.[48(p. S-37)]

- *Example: The hurricanes of 2004 hit hard in portions of DeSoto County, Florida, where migrant farm workers lived and worked in the area's citrus groves. The local hospital, health department, and the Centers for Disease Control and Prevention (CDC) were concerned about the communitywide risks posed*

Good communication is perceived differently by the communicator, who wants public cooperation and understanding in a time of crisis, and the public, which wants inclusion, respect, expert guidance, and proof that officials have justly considered their needs.

by standing and contaminated water and other health hazards. In the past, migrant workers typically used the local hospital to meet their health care and information needs. However, leery of contact with government officials on the scene, many workers chose to stay in the citrus groves rather than seek hospital care. The hospital sent mobile care units, staffed by bilingual individuals, into the citrus groves to identify and treat injuries, provide information on safe water use, and try to reestablish contact and trust.

Use publicly available communications materials.

Small communities need not create their own public awareness and readiness advertisements, materials, and other communications vehicles concerning certain standardized content. Such information is available through numerous sources, including the American Red Cross (http://www.redcross.org/press/psa/psaPrint.html), FEMA (http://www.fema.gov), and other agencies. Resources offered by the American Red Cross include preparedness print advertisements devoted to specific emergencies (for example, "Are you ready for an earthquake?"), and television, radio, and Web banner public service announcements in English and Spanish. FEMA offers guides, educational materials for teachers, fact sheets, and so forth.

- *Example: A Midwestern town hung on its downtown lamp posts two American Red Cross banners: One banner read "Together We Prepare." The second banner listed five activities people could carry out to get prepared: make a plan; build a kit; get trained; volunteer; and give blood.*

Ensure integration of the local health care organization's communications plans.

Because many community residents will call or come to the local health facility for care, for information on their loved ones' location or health status, simply for general information on disaster response, or as a safe haven, these facilities must have a communications plan that includes a triage communication procedure. The plan must be integrated with the communitywide plan to ensure consistency between the message delivered by the health facility's administrator and the communitywide spokesperson. "Hospitals need to work with local emergency service organizations to provide clear, accurate information during large-scale emergencies. To avoid disseminating conflicting information, hospitals that use incident command systems provide for an individual who will coordinate with other response groups and communicate with the media and other outside organizations," notes an Occupational Safety and Health Agency report.[49(p. A-16)] A well-designed communication plan can decrease the flood of individuals not requiring care but coming to health facilities as a preventive measure, as was experienced by many New York health facilities on 9/11 and the days following the attacks.

8. Ensure Thorough Mental Health Planning

Recommended Planning Strategies:

- **Use available mental health disaster planning resources.**
- **Link to pastoral care resources.**
- **Consider organizing self-help groups.**
- **Link to and know how to access federal and state disaster mental health plans/resources.**
- **Recognize and plan for the emotional effect of crises on rescue and health care workers.**

Reactions to disasters may vary from one individual to another, and stress reactions can occur immediately following the disaster or many months later.[50,51] These reactions may include physiological symptoms (nausea, dizziness, chills), cognitive/intellectual symptoms (distractibility, difficulty communicating thoughts), emotional symptoms (anxiety, grief, depression), behavioral symptoms (insomnia, substance abuse), and spiritual symptoms (challenges to faith beliefs, anger and blaming, and so forth). These reactions may be experienced by both victims of the disaster and those who responded to help the victims. Some of these reactions may be severe enough to require an individual's referral to behavioral health services.

Mental health problems following natural or man-made disasters impact communities of all sizes, but rural and small communities may find it particularly challenging to respond to the needs of their residents. In the best of circumstances, such communities lack a sufficient number of mental health specialists. Moreover, their residents, whether due to geographic, economic, cultural, ethnic, or other impediments, may be unable or unwilling to access mental health specialists. "Even more than other areas of health and medicine, the mental-health field is plagued by disparities in the availability of and access to its services. These disparities are viewed readily through the lenses of racial and cultural diversity, age, and gender," notes a U.S. Surgeon General's report.[52(p. vi)]

Strategies teams can use to address mental health needs follow.

Use available mental health disaster planning resources.

Since publication in 2003 of the *Mental Health All-Hazards Disaster Planning Guidance* by the Center for Mental Health Services of the U.S. Department of Health and Human Services,[53] state and local mental health leaders have had a key resource for the creation or revision of all-hazards mental health response plans (*see* Tools). The publication outlines the planning process, plan contents, and resources. An appendix outlines the discrete elements of an all-hazards state disaster mental health plan.

Sidebar 19 lists numerous organizations that provide information on the behavioral consequences of disasters.

Link to pastoral care resources.

In times of crisis and long after the crisis is over, many people look to their familiar clergy and other religious leaders in the community for comfort and guidance. Planning teams should consider community faith-based social support systems and how to link to pastoral and spiritual caregivers who can provide assistance to individuals seeking spiritual and emotional support, reassurance, and guidance. National pastoral crisis resources, including the American Red Cross, the International Critical Incident Stress Foundation,

Sidebar 19. Behavioral Health Information Resources for Dealing with the Effects of Disasters

The following list identifies a few of the numerous organizations that provide information on the behavioral consequences of disasters.

- American Academy of Child and Adolescent Psychiatry
  http://www.aacap.org
- International Critical Incident Stress Foundation, Inc.
  http://www.icisf.org
- American Academy of Experts in Traumatic Stress
  http://www.aaets.org
- National Alliance for the Mentally Ill
  http://www.nami.org
- American Psychiatric Association
  http://www.psych.org
- National Association of School Psychologists
  http://www.nasponline.org
- American Psychiatric Nurses Association
  http://www.apna.org
- National Association of Social Workers
  http://www.naswdc.org
- American Psychological Association
  http://www.apa.org
- National Center for Post-Traumatic Stress Disorder
  http://www.ncptsd.org
- American Red Cross
  http://www.redcross.org
- National Depressive and Manic Depressive Association
  http://www.ndmda.org
- The Center for Mental Health Services
  http://www.mentalhealth.org
- National Institute of Mental Health
  http://www.nimh.nih.gov
- Disaster Mental Health Institute at the University of South Dakota
  http://www.usd.edu/dmh
- National Mental Health Association
  http://www.nmha.org
- Federal Emergency Management Agency
  http://www.fema.gov

Inc., and the Salvation Army, can also be considered. In a disaster relief operation, Salvation Army volunteers offer emotional comfort and spiritual comfort through a "ministry of presence." Recognition of the diversity of faith traditions and belief systems is critical to the effectiveness of pastoral services.

Tools:

- Institute of Medicine: *Preparing for the Psychological Consequences of Terrorism: A Public Health Strategy.* Washington, DC: National Academies Press, 2003. http://www.nap.edu/openbook/0309089530/html.

- U.S. Department of Health and Human Services (DHHS). *Mental Health All-Hazards Disaster Planning Guidance.* DHHS Pub. No. SMA 3829. Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, 2003. http://www.mentalhealth.samhsa.gov/publications/allpubs/SMA03-3829/default.asp.

- U.S. Department of Health and Human Services (DHHS): *Mental Health Response to Mass Violence and Terrorism: A Training Manual.* DHHS Pub. No. SMA 3959. Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, 2004. http://www.mentalhealth.samhsa.gov/publications/allpubs/SMA-3959/default.asp.

Consider organizing self-help groups.

Self-help groups or teams can be helpful in providing needed assistance following a disaster, particularly if mental health professionals are not available in or to the community. Emotional encouragement and practical support (working with neighbors to board up windows and clean homes after a catastrophic fire, escorting neighborhood children to school past tornado-damaged homes,

and so forth) are invaluable during a disaster and throughout the recovery phase as people try to respond to the crisis and rebuild their lives.

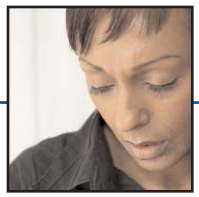
- *Example: Westport, Connecticut, developed a community support and counseling team to address the mental health needs of its approximately 26,000 residents in times of crisis. The team is developing training for mental health professionals, school and community clinicians, home health care providers, child care workers, and volunteers.*[33]

Link to and know how to access federal and state disaster mental health plans/resources.

When disasters strike, regional or state mental health/substance abuse agencies and local service providers may be suddenly thrust onto the front line for response and recovery efforts because of geographic proximity to the area affected by disasters. Often they find themselves confronting new or unknown problems for which no amount of preplanning is possible.[54] The provision of mental health services following a disaster will be beyond the capability of many small, rural, and suburban communities. Such communities must link their plans to state disaster mental health plans and must know how to access regional, state, or federal services (Sidebar 20).

The state of New Hampshire has little experience with terrorism, and the most rural areas lack the resources to prepare for and respond to disasters. Historically New Hampshire's behavioral health response to critical incidents came from two areas: community mental health centers and the Red Cross mental health branch. Following the events of 9/11 it soon became apparent that New Hampshire like many other states lacked the capacity to respond to the behavioral health needs of its citizens if a major disaster were to occur. The Substance Abuse and Mental Health Services Administration (SAMHSA) issued a request for proposal to increase state behavioral health response capacity. New Hampshire was one of 35 states to receive a $200,000 grant from SAMHSA for this purpose. The majority of these funds have been used to identify behavioral health professionals, encourage them to volunteer, and train them in the unique aspects of disaster behavioral health response. In addition, training has been provided to emergency medical, public health, and public safety organizations to familiarize them with the psychosocial impact of disasters and the existence of behavioral health response in New Hampshire.

The New Hampshire Department of Safety's Bureau of Emergency Management (BEM) has developed organized teams of behavioral health providers to respond to the mental health needs of New Hampshire residents following disasters. Five regional disaster behavioral health response teams (DBHRTs) totaling over 500 professionals have been created and can be deployed immediately anywhere in the state. These teams would respond to disasters or critical incidents when local behavioral health resources have been



Planning teams should consider community faith-based social support systems and how to link to pastoral and spiritual caregivers who can provide assistance to individuals seeking spiritual and emotional support, reassurance, and guidance.

depleted or are overwhelmed. The goal of the DBHRTs is to provide an organized response to individual victims, family members, survivors, or the community affected by critical incidents or disasters. Teams include individuals with experience in human services, psychology, mental health, substance abuse, social work, psychiatry, education, or spirituality. DBHRT members have completed specialized training. Team members operate under the supervision of BEM's disaster behavioral health coordinator, receive ongoing training, and participate in communitywide drills. Team members can provide interventions in three distinct phases that may be delivered at a disaster site, in an affected community, or statewide. The phases and interventions include the following:

Immediate Response: Behavioral health needs assessment, psychological first aid, crisis intervention, community outreach, public information, and behavioral health consultation

Transition to Recovery: Brief supportive counseling, information dissemination, screening and referral, support groups, and public education

Preparedness and Mitigation: Disaster behavioral health planning and networking, prevention services designed to strengthen community resilience, specialized training initiatives for team members and community partners, and research

Activation of the DBHRT is done through the governor, or a designee at the BEM, during federal or state emergencies. If an emergency is not declared, local municipalities or emergency response systems may request assistance in order to meet the behavioral health needs of communities in local crises by contacting the disaster behavioral health coordinator located at the BEM.[55]

The American Red Cross (http://www.redcross.org/services/disaster) also provides mental health services to anyone in affected areas following any emergency and to families outside the disaster area. Services, which are available on average for a few days or a week following the event, include counseling and referral by licensed mental health professionals.

The Department of Justice's Office for Victims of Crime (http://www.ojp.usdoj.gov/ovc) provides advocacy and other services, including support for short- and long-term mental health services, to victims of criminal acts (including terrorism).

Sidebar 20. Federal Mental Health Resources

SAMHSA DTAC

Established by the Substance Abuse and Mental Health Services Administration (SAMHSA), the Disaster Technical Assistance Center's (DTAC's) mission is to ensure that the United States is prepared and able to respond rapidly when events increase the need for trauma-related mental health and substance abuse services. The agency performs the following functions:

- *Preparation:* Assists states and territories with "all-hazards" disaster response planning by providing consultation to review disaster plans, conducting literature reviews, and brokering knowledge and support.
- *Response:* Assists in identifying suitable publications, psychoeducational materials, and expert consultants, and organizes training events and workshops to share the experiences of states that have confronted certain types of disasters.
- *Communication and resources:* Maintains a contact database of state/territory mental health commissioners, substance abuse directors, and disaster coordinators, and a roster of federal agencies and nongovernmental organizations involved in disaster and trauma research and/or service delivery. Also maintains a collection of technical assistance publications.

continued

Sidebar 20. Federal Mental Health Resources (continued)

For more information:
http://www.mentalhealth.samhsa.gov/dtac/default.asp

FEMA Crisis Counseling Program

The Federal Emergency Management Agency's (FEMA's) Crisis Counseling Program provides short-term services to eligible survivors of presidentially declared major disasters who are experiencing normal reactions to very abnormal situations. Its mission is to help relieve any grieving, stress, or mental health problems caused or aggravated by a disaster or its aftermath. The confidential services, typically lasting for about a year following a disaster, are provided by FEMA as supplemental funds granted to state and local mental health agencies. Individuals may contact FEMA's toll-free helpline number, 1-800-621-FEMA (TTY 1-800-462-7585), to learn where these services can be obtained. Crisis counselors are often on hand at disaster recovery centers (when they are established). Crisis Counseling grants are applied for by a State Mental Health Authority when local resources cannot meet local needs in a presidentially declared disaster.

For more information:
http://www.fema.gov/rrr/inassist.shtm

Recognize and plan for the emotional effect of crises on rescue and health care workers.

Numerous national crises have taught important lessons about the extent of the emotional effect of crises on rescue and health care workers. No one who responds to a mass casualty incident is untouched by it; training as a first responder or caregiver does not provide such immunity. Stress management assistance is often needed and should be considered by community planning teams. One form of assistance—psychological debriefing—which usually occurs within days of a critical event, aims to help first responders and others exposed to a traumatic event to talk about their feelings and reactions in order to reduce traumatic stress.[56] Planning teams should consider the possible range of staff support needs, match the plans and potential interventions to those needs, and prepare to solicit additional mental health resources from local, state, or federal sources should staff needs during response and recovery exceed expectations and plans.

9. Ensure Thorough Planning Related to Vulnerable Populations

Recommended Planning Strategies:

- **Identify special-needs populations to support effective communication, outreach, and planning.**
- **Include a cross section of partners in planning and response efforts related to vulnerable populations.**
- **Consider the unique needs of children.**
- **Involve the school nurse in emergency preparedness and response.**

The needs of vulnerable populations should be considered by planning teams. These individuals can easily suffer harm disproportionately during or following an emergency because they may not be able to seek help, care for themselves, or pursue other survival and recovery strategies pursued by nonvulnerable populations. Strategies teams can use to address the needs of vulnerable populations follow.

Identify special-needs populations to support effective communication, outreach, and planning.

In disaster preparedness and response, the Centers for Disease Control and Prevention (CDC) defines special populations as "groups whose needs are not fully addressed by traditional service providers or who feel they cannot comfortably or safely access and use the standard resources offered in disaster preparedness, relief, and recovery. They include, but are not limited to, those who are physically or mentally disabled (blind, deaf, hard-of-hearing, cognitive disorders, mobility limitations), limited or non-English-speaking, geographically or culturally isolated, medically or chemically dependent, homeless, frail/elderly, and children."[57] They may also include certain institutionalized populations, such as those in foster care or nursing homes. A number of resources from governmental agencies, not-for-profit organizations, and commercial companies are available to local planners preparing to serve vulnerable populations. For example, PrepareNow.org provides tools, expertise, and access to resources to assist anyone engaged in disaster planning for individuals with special needs.

Older and disabled people are particularly vulnerable during and following a disaster. Following the 9/11 World Trade Center attacks, older people and those with disabilities living near the disaster area were trapped for days before being rescued.[58] Even in a city as large as New York, at that time there was no effective way to identify vulnerable people who were not connected to a community service agency. There also was no means for community service providers to enter the disaster area to provide critical assistance and information to older and disabled people. Identifying vulnerable individuals as part of the emergency management plan and alerting, relocating, or otherwise aiding them when disaster appears imminent is essential in preventing harm. For example, the National Organization on Disability urges media outlets to follow closed-captioning guidelines for persons with hearing disabilities when broadcasting emergency information to the general community.

Include a cross section of partners in planning and response efforts related to vulnerable populations.

The Disability Preparedness Center advises planners to include individuals and organizations with disabilities not only as information resources, but as active planning partners and in drills and exercises so that responders can refine the necessary skills in working with these populations.

Sidebar 21. Needs Assessment on Disability Preparedness

In February 2005 the Disability Preparedness Center conducted a needs assessment on disability preparedness, which generated a number of valuable findings and recommendations regarding strategies for including people with disabilities in emergency management planning activities. Their specific recommendations were focused on the National Capital Region (NCR), but many of the recommendations are applicable to different types of communities across the country:

1. Survey first responders and regional and local planners to assess (and raise awareness of) resources and needs for disability preparedness in localities throughout the region.
2. Provide technical assistance and skills development to first responders to assist them in including persons with disabilities in planning activities and in response and recovery plans.
3. Identify people with disabilities living independently, with family, or in residential facilities and recruit them to participate in planning activities.
4. Plan and implement an information campaign to inform the public about ways to better prepare in the event of an emergency.
5. Establish an NCR Disability Advisory Committee to be a visible public presence and oversee development of inclusive emergency preparedness, response, and recovery.
6. Hold a one-day regional conference on the roles and responsibilities in emergency preparedness of people with disabilities, advocates, agencies, and service providers.
7. Develop a curriculum for persons with disabilities to prepare them to participate effectively in planning and to pass on their skills to other people with disabilities.
8. Develop a "planning participation course" for disability agency staff and service provider staff to help prepare them to do effective emergency planning and implementation.
9. Develop an enhanced emergency communication network for persons with disabilities.

Source: Disability Preparedness Center (DPC): *NCR Needs Assessment on Disability Preparedness.* Washington, DC: DPC, 2005.

Tools:

- Pennsylvania Department of Health: *Special Populations Emergency Preparedness Planning.* http://www.dsf.health.state.pa.us/health/cwp/view.asp?a=171&q=233957.
- Federal Emergency Management Agency's Emergency Management Institute offers a course on emergency planning and special needs populations (EMI - G197) that can be downloaded from its Web site: http://training.fema.gov/EMIWeb/pub/register.html.
- National Organization on Disability http://www.nod.org.
- Disability Preparedness Center http://www.disabilitypreparedness.org.

The team might involve social workers and home health care agencies in locating vulnerable individuals who will need special assistance. High school and college students can also play a significant role in planning and response activities.

- *Example: AmeriCorps Emergency Readiness teams in California provide opportunities for students in local community colleges to provide disaster/emergency preparedness services to vulnerable populations.*[59]
- *Example: The Teen School Emergency Response Training (SERT) program is an in-class curriculum-based program that helps students make informed decisions regarding emergency readiness and response.*[60] *Pilot-tested for the nation at Pueblo West High School in Colorado in November 2003, the program is offered over a nine-week period for one hour per day.*

Consider the unique needs of children.

According to the National Center for Disaster Preparedness (NCDP) at Columbia University's Mailman School of Public Health, the needs of

children have rarely been highlighted in disaster planning and, hence, have rarely been planned for.[61] Special pediatric considerations cited at the 2003 NCDP Pediatric Preparedness for Disasters and Terrorism National Consensus Conference include the following:

- Children are more vulnerable to chemical agents that are absorbed through the skin or inhaled, and are closer to the ground, thereby more susceptible to gases that are heavier than air.
- Children have special susceptibilities to dehydration and shock from biological agents.
- Children require different dosages or different antibiotics and antidotes to many agents.
- Children are more susceptible to the effects of radiation exposure and require different responses than adults.
- Children have unique psychological vulnerabilities, and special management plans are needed in the event of mass casualties and evacuation.
- Children's developmental ability and cognitive levels may impede their ability to escape danger.
- Emergency medical services, medical, and hospital staff may not have pediatric training, equipment, or facilities available.

The Program for Pediatric Preparedness is currently working on a Model Pediatric Component for State Disaster Plans.[61] In addition, initiatives are under way in a group of California hospitals to enhance training of emergency department staff in treatment, equipment, supplies, medications, and techniques required to treat pediatric patients more effectively in a disaster situation. The American Academy of Pediatrics sponsors a Web page titled "Children, Terrorism & Disasters," which provides extensive information not only for physicians and parents, but also for teachers and community planners.

TOOLS:

- Resources for planning, care, and treatment concerning children in disasters is offered by the American Academy of Pediatrics at http://www.aap.org/terrorism/index.html.

Involve the school nurse in emergency preparedness and response.

The more than 60,000 school nurses in the nation's public and private elementary and secondary schools represent an important resource for emergency preparedness and response for children in small communities nationwide, particularly in the area of bioterrorism preparedness and response. "School nurses have easier access to large populations of people than most health professionals and are, therefore, in positions to monitor unusual symptoms or signs, recognize patterns of symptom presentation, act to protect against spread of communicable diseases, and provide immediate treatment and decontamination for members of the school community," notes the National Association of School Nurses.[62] School nurses are in a unique position to monitor school absenteeism and to follow up with students and the local public health department on any suspicious patterns of symptoms.

Involve social workers and home health care agencies in locating vulnerable individuals who will need special assistance.

10. Identify, Cultivate, and Sustain Funding Sources

Recommended Planning Strategies:

- **Proactively pursue funding.**
- **Include all planning partners in the funding requests.**
- **Consider revenue-raising opportunities.**
- **Seek funding collaboratively and regionally.**
- **Consider the impact of funding reductions.**

Many local governments are hard-pressed to provide basic services and, as a result, funds and resources needed for "special activities," including emergency preparedness, often are sorely lacking. Federal and state governments provide for funding at the local level for emergency preparedness planning; however, many communities have either not attained or not pursued the funding that will enable them to develop and implement emergency management plans.

In some states, fire, law enforcement, public health, emergency medical services, or hospitals may be designated to receive the lion's share of federal funding. However, collaborative planning and preparedness require funding of and training for all response partners. Commenting on funding disparities in the public health arena, researchers involved in a study of public health preparedness in 12 U.S. communities noted: "Despite the large inflow of federal dollars to *some* communities, the cost of implementing or improving communications and surveillance systems, training, planning, and labs remains daunting."[63] Because details pertaining to funding sources and requirements can change rapidly, this section focuses on broad strategies that can be used to identify, cultivate, and sustain funding and identifies a key resource for obtaining current information on a range of funding sources.

Proactively pursue funding.

Many small communities for a variety of reasons have not been proactive in providing states with plans and initiatives eligible for federal funds through the state. As a result, some state governments have not allocated all funds or have applied funds to other projects. To gain access to federal funding to which they are entitled, local planning bodies must be proactive and persistent. A good "one-stop shopping" source of information related to available grants appears in the Tools box.

Tools:

- U.S. Department of Homeland Security (DHS) grants Web site: http://www.dhs.gov/dhspublic/display?theme=18.

This site provides information on homeland security and public safety grant opportunities offered by agencies across the federal government and is intended to simplify access to these grants by placing information in a single, easily accessible site. It includes grants offered by the DHS, as well as other federal departments and agencies. Critical state and local missions supported through these grants include the preparedness of first responders and citizens, public health, infrastructure security, and other public safety activities. Grants described can be awarded to a variety of entities, including local governments, Native American tribal government partners, and private nonprofit organizations.

DHS grants listed include those administered by the Office of Domestic Preparedness, the Federal Emergency Management Agency, and the Transportation Security Administration. Other federal agency programs include public health preparedness grants from the Department of Health and Human Services, Department of Justice grants for counterterrorism and general-purpose law enforcement activities, and Environmental Protection Agency grants for enhancing the security of the nation's water supplies.

Include all planning partners in the funding requests.

Many communities do not receive their full share of funding because the role of all partners in the emergency management plan is not represented in the funding requests. Requests for funding made to county, state, federal, and other entities should present the full spectrum of participants that require support.

Consider revenue-raising opportunities.

The chief executive of small communities can support funding within his or her community, region, or state by sponsoring or supporting tax incentives, bonding bills, grants, and other measures. Such measures can either direct funding to the community or incentivize planning partners to participate more fully in planning and response efforts. The incentives can be especially important for increased access to response capabilities and assets held by industrial and telecommunications entities, hospitals, and other private businesses.

Seek funding collaboratively and regionally.

Distribution of funds may be a bigger problem in some states than the actual availability of funds. Getting resources into the right hands often is related to the availability of all key players at the table. To increase leverage in funding negotiations or to take advantage of economies of scale, chief executives should foster collaboration within their communities and across jurisdictions to coordinate funding requests. Leaders of small, rural, and suburban communities with a hospital or hospitals can make special effort to partner with hospital leaders in emergency preparedness planning. Hospitals may have access to numerous emergency preparedness funding streams, and collaborative grant-seeking can be productive.

States often allocate federal funds on a regional basis. Mayors and other leaders of small communities should consider participating in the planning and hazard mitigation efforts of multijurisdictional regional councils of government, for example, in order to increase awareness of planning and funding initiatives. Through linkages to regional and state planning efforts, elected and other leaders of small communities can participate in funding requests, thereby securing the necessary seat at the table and a voice to articulate the community's full range of planning, training, response, and recovery needs.

Consider the impact of funding reductions.

A risk that must be considered in the funding strategy is that budgets at the state and federal level change with fiscal and political pressures. The planning team can prepare for potential reductions in funding by identifying alternative or creative sources and methods for sustaining preparedness funding levels.

Through linkages to regional and state planning efforts, elected and other leaders of small communities can participate in funding requests, thereby securing the necessary seat at the table and a voice to articulate the community's full range of planning, training, response, and recovery needs.

11. Train, Exercise, and Drill Collaboratively

Recommended Planning Strategies:

- **Identify who should be trained and the training needs for each.**
- **Ensure competency-based training programs.**
- **Identify cross-training opportunities.**
- **Consider offering the CERT program.**
- **Access other training programs offered through the federal government.**
- **Ensure incident command training for appropriate personnel.**
- **Recognize drills or exercises as a critical element of the emergency preparedness process.**
- **Involve all players in exercises and drills.**
- **Be sure to include local businesses in training, exercises, and drills.**
- **Access available resources.**
- **Practice with other communities.**
- **Identify performance measures for drills and exercises.**
- **Ensure the realism of drills and exercises.**
- **Include alternative care sites and shelters in disaster drills.**
- **Activate the emergency plan.**

Communitywide emergency preparedness and response training, exercises, and drills allow communities to test their plans, identify weaknesses, and correct those to reduce the risk of process failures during an actual emergency. The planning and response partners are required to work collaboratively, many of them for the first time, to test their communication and coordination systems designed to save lives, protect health and property, and restore operability of essential community functions and services. Health care providers, public health officials, first responders, the general public, and all response partners require training and practice in their intended roles.

Identify who should be trained and the training needs for each.

Individuals responsible for responding to a disaster situation must be identified and trained. Not everyone is capable of performing every function. For example, not *all* individuals working in the health field may wish to participate or are suited to enter a disaster environment; some staff will require training in decontamination procedures and others will not.

- *Example: In various communities in Texas, selected mental health workers, social workers, school counselors, drug abuse counselors, faith-based counselors, and others can attend a 16-hour training program in emergency response. If the community or a neighboring community requires mental health support, these individuals are activated to provide mental health services through the emergency operation center.*[64]

Training sessions ideally are provided to representatives of the major organizations or agencies involved in emergency response, including emergency medical services (EMS) personnel, fire service, law enforcement, emergency management personnel, business leaders, local health care facility personnel, public health officials, and others as appropriate.

In smaller communities, face-to-face training and drills can be challenging, especially where one person may wear several "hats." To meet this challenge, the planning team can identify a variety of training methodologies and schedules as appropriate to meet required competencies, roles and responsibilities, and time and technology constraints. Some

preparedness partners (for example, an EMS agency) may be able to obtain extensive classroom training for each staff member; others may need to use Web-based training, CDs, or videos.

Ensure competency-based training programs.

Education and training programs should be competency based, with programming that is specific to the individual's role in emergency response. Individuals responding to a disaster situation must have the knowledge, skills, abilities, and behaviors needed to perform tasks correctly and skillfully. Some education and training will be appropriate for both the general public and emergency responders (for example, CPR), while other programs will be appropriate only for specialized personnel (for example, decontamination).

Identify cross-training opportunities.

In small communities, cross training of first responders increases the ability of individuals to respond appropriately in different situations, such as fire, rescue, hazardous materials, and weapons of mass destruction. Cross training also extends available skill sets during disasters involving displacement of large numbers of people, evacuation of hospitals, nursing homes, or other settings, and emergencies of long duration.

- *Example: Tyler, Texas (population 84,000), recently purchased several hundred low-cost ventilators and the training program to use these ventilators. Emergency personnel are teaching disaster life support very broadly among possible first responders, health care personnel, and other citizens in the community.*

Consider offering the CERT program.

Communities whose residents have not yet experienced the Community Emergency Response Team (CERT) program[65] may wish to consider offering the program. CERT is funded by Congress through Citizen Corps program grants, which may be available to local communities. Citizen Corps is the community-based initiative to engage citizens in homeland security and community and family preparedness through public education and outreach, training opportunities, and volunteer service. A key component of Citizen Corps, the CERT program trains citizens to be better prepared to respond to emergency situations in their communities. When emergencies occur, CERT members can give critical support to first responders, provide immediate assistance to victims, and organize volunteers at a disaster site.

The CERT program is a 20-hour course, typically delivered over a seven-week period. Training sessions cover disaster preparedness, disaster fire suppression, basic disaster medical operations, light search and rescue, and team operations. The training also includes a disaster simulation in which participants practice skills that they learned throughout the course.

The CERT course is taught in the community by a trained team that has completed a CERT Train-

Some preparedness partners (for example, an EMS agency) may be able to obtain extensive classroom training for their team members; other partners may need to use Web-based training, CDs, or videos.

the-Trainer course conducted by their state training office for emergency management or by the Federal Emergency Management Agency's (FEMA's) Emergency Management Institute (EMI). CERT programs currently serve in more than 170 communities nationwide. A local government agency, such as the emergency management agency, fire department, or police department, typically provides the CERT classes.

CERTs are active in the community before a disaster strikes, sponsoring events such as drills, neighborhood cleanups, and disaster education fairs. Trainers offer periodic refresher sessions to CERT members to reinforce the basic training and to keep participants involved and practiced in their skills.

TOOLS:

- Federal Emergency Management Agency's Emergency Management Institute Web site provides a resource center on best practices for starting and maintaining a Community Emergency Response Team program. http://training.fema.gov/EMIWeb/CERT/new_CERT/index.htm. Funding information is available through State Citizen Corps points of contact listed at http://www.citizencorps.gov/citizenCorps/statepoc.do.

- *Example: Iredell County in North Carolina (population 130,000) applied and obtained a $10,000 grant through the state Citizen Corps to offer three CERT training programs during 2003. The county's Board of Commissioners defined the programs' purpose as follows: (1) enhance the overall preparedness of Iredell County's citizenry; (2) provide information about the CERT program and improve preparedness and safety; (3) use local agencies in the training; (4) collaborate with local agencies to promote/support Neighborhood Watch/Community Watch programs and Volunteers in Policing programs; and (5) obtain commitment from the Citizen Corps council and local emergency planning committee to support the CERT efforts/programs.*[66] *Says Tracy Jackson, the county's Director of Emergency Services, "An effective disaster preparedness program must reach out to and educate all citizens and organizations within the community. The CERT program is a great means to do just that."*[67]

Access other training programs offered through the federal government.

Training courses developed by numerous federal agencies provide a broad curriculum and enable local communities to tailor programs to their specific training needs. For example, FEMA's EMI offers independent-study training programs on such topics as special-events contingency planning for public safety agencies, livestock in disasters, radiological emergency management, developing and managing volunteers, community hurricane preparedness, principles of emergency management, multihazard emergency planning for schools, and dozens of others (*see* Tools).

TOOLS:

- A complete list of training resources offered through the Federal Emergency Management Agency can be accessed at http://training.fema.gov/EMIWeb.

- A complete list of training resources offered through the U.S. Department of Homeland Security is available at http://www.dhs.gov/dhspublic/display?theme=63.

- Training offered by the Centers for Disease Control and Prevention's Agency for Toxic Substances and Disease Registry is available at http://www.atsdr.cdc.gov/hazmat-emergency-preparedness.html. Emergency preparedness and response training programs related to biological, nuclear, and radiological terrorism are listed at http://www.bt.cdc.gov/training.

Ensure incident command training for appropriate personnel.

The *National Incident Management System (NIMS)* and the *National Response Plan (NRP)* require incident management personnel to be appropriately trained to improve all-hazards incident management capability nationwide.[27] The EMI offers training related to key elements of the *NIMS.* The EMI also offers courses in preparedness and resource management. Both the *NIMS* and the *NRP* are being incorporated into virtually every course offered by the EMI. For more information, access http://training.fema.gov/emiweb/emicourses/e449.asp.

Recognize drills or exercises as a critical element of the emergency preparedness process.

Drills are integral to the process of troubleshooting weaknesses in emergency management plans. They are designed both to provide training exercises and to identify weaknesses in the response plan so that shortcomings can be addressed. Communities should regularly test (at least annually) their emergency preparedness plans through reality-based drills for the purpose of identifying opportunities for improving and refining the plan. Sidebar 22 provides the U.S. Department of Homeland Security's definitions for various types of drills and exercises.

- *Example: During a semiannual communitywide emergency management plan drill in California, the medical center that organized the drill discovered some holes in its emergency management response plan.*[68] *The scenario was a radioactive waste spill. After scrambling to locate the appropriate personal protective equipment, staff discovered that the decontamination suits did not fit. Several even ripped while the engineers tried to put them on. Furthermore, several "paper patients" were lost in transit. When investigating what went wrong, the organization discovered that the lost paper patients were actually transferred to an off-site location, but there was no way to indicate this on the emergency response patient transfer form.*

Sidebar 22. Definitions of Various Forms of Drills and Exercises

Tabletop Exercises

Tabletop exercises focus on facilitating understanding of concepts, identifying strengths and shortfalls, and/or achieving a change in attitude. Exercises generally involve senior staff, middle management, and other key personnel who are encouraged to discuss issues in depth and develop decisions through slow-paced problem solving rather than rapid, spontaneous decision making.

Games

A game is a simulation of emergency management operations that often involves teams, usually in a competitive environment, and does not involve the use of actual resources. The goal is to explore decision-making processes and the consequences of those decisions. Players are commonly presented with scenarios and asked to perform a task associated with the scenario episode.

Operations-Based Exercises

Operations-based exercises represent the next level in the exercise cycle and are used to validate the plans, policies, agreements, and procedures. Operations-based exercises include drills, functional exercises, and full-scale exercises and are characterized by mobilization of resources and commitment of personnel over an extended period of time.

Drills

A drill is a coordinated test used to evaluate a specific operation or function in a single department or nursing unit. Drills can be used to provide training on new equipment, test new policies or procedures, or practice skills.

continued

SIDEBAR 22. DEFINITIONS OF VARIOUS FORMS OF DRILLS AND EXERCISES (CONTINUED)

Functional Exercises

Functional exercises are designed to test multiple functions, activities, and departments with a focus on exercising the plans, policies, procedures, and staffs. Functional exercises simulate the operations by presenting realistic problems requiring responses.

Full-Scale Exercises

The full-scale exercise is the most comprehensive level in the exercise cycle and usually includes multidepartment, multiorganization, multijurisdiction agencies. The full-scale exercise simulates the reality of operations in multiple functional areas through the presentation of realistic problems requiring critical thinking, rapid problem solving, and effective responses. Full-scale exercises are used to assess organizational and individual performance, demonstrate interagency cooperation, review allocation of resources and personnel, assess equipment capabilities, activate personnel, assess interjurisdictional cooperation, test public information and communication systems and analyze memoranda of understanding, standard operating procedures, plans, policies, and procedures.

Source: U.S. Department of Homeland Security, Office of Domestic Preparedness: *Homeland Security Exercise and Evaluation Program, Vol. 1: Overview and Doctrine Revised*. May 2004. http://www.ojp.usdoj.gov/odp/docs/HSEEPv1.pdf (accessed Jun. 21, 2005).

Involve all players in exercises and drills.

Full-scale exercises and drills, involving all the major emergency response participants, provide full-scale value in terms of lessons learned. Local leaders, public health authorities, EMS, fire, law enforcement, volunteers, the general public, and all other appropriate parties should be involved in communitywide drills. "The key to making practice pay off for your city or town is to seek out opportunities to test your plan in as many ways as possible, at all levels of your government. Everyone who works for the city should at some point be part of the testing, with a special focus on first responders and managers of all city departments," advises the National League of Cities.[46 (p. 14)]

Health care organizations accredited by the Joint Commission will be experienced partners because they are required to conduct drills related to their emergency management plan at least twice yearly; one of these drills is expected to be a communitywide one. However, not all health care organizations are accredited, and, according to a recent study of hospital and community emergency preparedness linkages,[14] involvement of key players in hospital-initiated communitywide emergency drills in rural areas is inconsistent. Local health departments and government agencies were reported to be involved in fewer than half of communitywide drills; traditional first responders (fire, EMS, law enforcement) were most commonly included in communitywide drills.

- *Example: Using FEMA's Comprehensive Hazmat Emergency Response - Capability Assessment Program (CHER-CAP), Lake Havasu City,*

Local leaders, public health authorities, emergency medical services, fire, law enforcement, volunteers, the general public, and all other appropriate parties should be involved in communitywide drills.

Arizona (population 50,000), conducted a full-scale field exercise that was supported by 40 agencies. The exercise provided weapons of mass destruction (chemical bomb) training to emergency management personnel. A follow-up tabletop exercise included newly elected city officials and assisted the school district and local hospital with their emergency plans. The CHER-CAP exercise program is used nationwide to increase response capabilities to technological hazards.[33]

- *Example: In December 2004, the Northern New England Metropolitan Medical Response System, in coordination with Dartmouth Hitchcock Medical Center and community emergency planners, offered a successful flu vaccination clinic in an indoor sports arena at Dartmouth College. More than 1,900 primarily high-risk patients were vaccinated. Involvement of multiple agencies and organizations in this type of "routine" care reinforced the concept of working together but also provided valuable experience and insight into what may occur within that community during an actual emergency.*

- *Example: Every U.S. nuclear plant is required by law to develop and periodically test an on-site comprehensive emergency response plan and ensure that off-site plans exist. These plans are approved by the Nuclear Regulatory Commission (NRC) and FEMA. Local, state, and national officials are included in the plans and in periodic exercises. Every two years, each nuclear plant conducts a full-scale emergency exercise involving a confidential emergency scenario to be handled by on-site and off-site emergency response organizations, including plant employees, local hospitals, county emergency management agencies, and radiological monitoring teams. The NRC evaluates performance and identifies improvements of the on-site plan; FEMA evaluates the off-site plan. In alternate years, plants conduct on-site training drills involving such key factors as coordination; communications; assessment of emergency, medical, and fire brigade response; and radiation dose measurement. For example, a nuclear plant sited on the Susquehanna River in Pennsylvania has a large emergency response network consisting of 27 municipalities, county and state governments, school districts, hospitals, fire companies, ambulance and EMS, and federal agencies. The level of response to an event depends on the potential threat to public health and safety.*[69]

Be sure to include local businesses in training, exercises, and drills.

Involvement of local businesses in the training and exercise process is very important. First responders, fire, law enforcement, and other agencies can provide basic training sessions in companies, covering such topics as what to do in an emergency, what can be expected from local law enforcement or fire personnel, where to obtain information, and so forth.

- *Example: Saco, Maine (population 16,000), held a disaster recovery workshop and simulation exercise focused on its information technology infrastructure. The city tested its plan to safeguard data and systems in the event of a natural disaster, or even a man-made technological disaster, such as computer hacking. Representatives from all city agencies and some local businesses participated in the simulation. Backup computer storage, telecommunications, and backup power generation were among the systems tested.*[46]

Corporate America has become increasingly involved in emergency preparedness. The tragedies of 9/11 showed once again that many disasters occur while individuals are at work. Incidents result in significant interruption of business operations, lost productivity, and increased employee stress. In response, the National Business Group on Health developed a project with the Centers for Disease Control and Prevention to explore ways that private-sector employers and public health agencies can partner to better prepare communities for bioterrorism and other public health emergencies[12] (*see* Tools).

TOOLS:

- The National Business Group on Health offers numerous resources, including an employer toolkit on terrorism preparedness and planning and an employer checklist on forming business and public health preparedness partnerships. These are available at http://www.businessgrouphealth.org/prevention/et_terrorismpreparedness.cfm.
- The Building Owners and Managers Association offers numerous resources to help building managers and owners fight terrorism. http://www.boma.org.

Access available resources.

Whenever possible, communities should use training programs and exercises, such as tabletop drills, that are already in place and available through federal, state, professional associations, and other sources. For example, the National Association of County & City Health Officials offers customizable bioterrorism tabletop exercises and a "bt toolbox" with links to other available exercises and programs (http://www.naccho.org/bttoolbox).

Practice with other communities.

It may be particularly cost- and time-effective for small, rural, and suburban communities to conduct joint exercises and drills with neighboring communities. Because natural and man-made disasters cross borders, and emergency response services are likely to overlap in small and rural areas, joint exercises are not only desirable, but necessary.

Identify performance measures for drills and exercises.

The purpose of drills and exercises—to improve performance—cannot be accomplished without agreement about what constitutes success and how indicators of success are to be measured. The community's emergency management team should prospectively identify appropriate metrics for drill/exercise evaluation.

Ensure the realism of drills and exercises.

As the realism of drills and exercises increases, so too do the learning and improvement opportunities. To achieve real value, a drill or exercise should be planned to truly inconvenience the participants and the community—as a real disaster would.[30] Communities should be encouraged to rigorously exercise and drill the system or function being tested. An exercise that tests the limits of a plan or its subparts can effectively identify weak spots and opportunities for improvement.

- *Example: Santa Monica, California (population 88,000), obtained a Federal Transit Administration grant to conduct a full-scale functional exercise in which armed terrorist role players, who claimed to have a bomb, commandeered a city bus with 20 civilians on board.*[33]

Communities can consider conducting drills and exercises involving the most likely disaster scenarios, such as pandemic influenza in any community, hurricanes in Florida, or earthquakes in California, for example, and potentially the most vulnerable function or system within the response plan. For example, disaster communications systems and procedures should be tested regularly, and the results of these tests should be reviewed so that any failures can be corrected.

Critical backup systems should also be tested as part of the drill or exercise.

Include alternative care sites and shelters in disaster drills.

Although testing of current health care sheltering capabilities is critical, it may be equally important to include alternative health care sites and shelters

in the exercises and drills. During drills and exercises, the community can test the use of sites such as ambulatory clinics, doctors' offices, schools, churches, and other facilities identified in the emergency management plan. Such testing increases communitywide awareness of the existence, location, strengths, and challenges of such facilities.

Activate the emergency plan.

Activating the community's emergency plan provides a way of testing, reinforcing, and refining communication, technology, coordination, decision making, and other issues. Even "noncatastrophic emergencies," such as when a hospital air conditioner malfunctions in August in the South, can be used to test, stress, and improve coordinated response before a catastrophic emergency hits. Emergency plans should be activated when smaller-scale emergencies occur. Regular tests of communications systems and plans enable response partners to become familiar with each other's roles and processes and will help to ensure that people know what to do when a large-scale disaster occurs.

12. Critique and Improve the Integrated Community Plan

Recommended Planning Strategies:

- **Conduct periodic review and reprioritization of possible emergency incidents.**
- **Review the emergency management plan on an annual basis.**
- **Base the review on an analysis of performance.**
- **Discuss posttest problems and assign remedial actions.**
- **Consider obtaining external feedback.**
- **Review the planning process.**

Community emergency management plans cannot be static documents; they must be evaluated and revised on an ongoing basis through an integrated, iterative, team-based process. The community's hazard vulnerability analysis (Section 3), goals for preparedness and response (Section 4), and current capacities and capabilities (Section 5) require review on a regular basis in order to provide for changing environmental conditions, federal and state regulations, standards and requirements, community resources, and many other factors. Use of a matrix that outlines key plan elements can help teams ensure a thorough approach to plan review and improvement.

Conduct periodic review and reprioritization of possible emergency incidents.

Before 9/11, crashing a civilian airplane into a high-rise building was unthinkable. Anthrax attacks in fall 2001 also made the possibility of biological, chemical, and radiation incidents all too real. The majority of disaster scenarios identified by U.S. Department of Homeland Security for planning purposes (Sidebar 8) were, in fact, not on the radar screens of most emergency preparedness planners. SARS and recent outbreaks of avian influenza have reinforced the "inevitability" of catastrophic pandemics. Every community should be redefining the realm of possible disasters, community needs, and preparedness and response mechanisms on an ongoing basis. The priority issues identified in the community's hazard vulnerability analysis provide the foundation for planning efforts. Building and sustaining capabilities to address disasters in the community and region are integral to the planning goals, processes, and collaborative efforts with partners across disciplines and organizations.

Review the emergency management plan on an annual basis.

The community's emergency plan should be reviewed on at least an annual basis. Collaborative and regular review keeps the plans current and relevant, incorporates new partners or processes, and retires obsolete content. "The emergency operations plan is a living document. Problems emerge, situations change, gaps become apparent, requirements are altered—and the plan must be adapted to remain useful and up-to-date," notes the Federal Emergency Management Agency's guide for local communities.[7(p. 2-12)]

Base the review on an analysis of performance.

Following an actual emergency, a community identifies and analyzes data related to its implementation of the emergency management plan. In the absence of an actual emergency, data from plan drills, training, and exercises should be collected and analyzed. Performance-monitoring data form the backbone of regular evaluation. Thus, it is appropriate that these data be presented, trended, and analyzed. Documentation provided by drill observers, for example, can provide relevant performance data on the adequacy of

training, risks and needs, missing steps, and opportunities for improvement.

Exercises and drills can be critiqued through an "after-action" report, which summarizes the event and the response, identifies strengths and weaknesses in the response effort, and offers explicit recommendations for improvement. After-action reports should be based on predetermined performance objectives.

- *Example: The public health bio-defense team in Montgomery County, Maryland, conducted a table-top training exercise to test the system for accessing the Strategic National Stockpile (SNS) and disseminating the SNS supplies to public and private points of distribution. The exercise involved 18 public and private agencies. An after-action, "lessons learned" report summarized problems encountered and potential solutions as follows:*

PROBLEMS ENCOUNTERED	SOLUTIONS
Activating telephone system at PHCC took too long. Communications with telecommunications staff was slow.	Practice activating system. Test lines often. Establish faster communications with telecommunications staff.
One dispensing site manager could not be contacted.	Develop a list of back-up personnel for all key staff.
Many of the individuals who would staff the hotline could not be reached.	Create alternate means of communicating with hotline staff. Identify additional staff for backup.
Planning coordinator had too many roles because she also was injects distributor.	Have alternative staff assigned to distribute injects.
Public received mixed message. First, told to stay home, then told to go to shopping centers. This would create confusion and worsen traffic-control problems.	Tell residents to stay where they are and wait for further instructions.
PHCC needs more communications from RSS site.	Establish regular intervals for situation reports from RSS site. Communications should be bidirectional.
Incident Command Structure was not always followed at PHCC. Communications among PHCC staff should flow through Incident Command Structure to the Incident Commander.	Communications should follow Incident Command Structure. PHCC staff should be briefed on Incident Command Structure protocols to follow.
Situation reports were lengthy.	Follow Incident Command Structure so one person is reporting from each component of FLOP. Need system for tracking progress so that information is conveyed visually as well as orally.
RSS Site was concerned that they might not receive all necessary supplies and medicines. RSS Site staff should not have to prioritize distribution of medications.	RSS site should regularly report to PHCC what it has received. PHCC should determine how to distribute supplies and medications based on this information.

Notes: PHCC is Public Health Command Center; RSS is receipt, store, and stage; FLOP is finance, logistics, operations, and planning. Full report available at http://www.naccho.org/bttoolbox/index.cfm (accessed Jun. 24, 2005).

TOOLS:

The Federal Emergency Management Agency has developed the *Hazardous Materials Exercise Evaluation Manual (HM-EEM),* and its companion guidance, the *HM-EEM Evaluation Forms,* as guidance and technical assistance to assist state and local governments, first responders, and industry in the development, implementation, and evaluation of their own realistic and challenging exercise programs. The evaluation form has many sections that can be helpful to community emergency management planning teams. The section evaluating alert and notification of the public appears here, and the whole document is available at http://www.training.fema.gov/emiweb/downloads/HMFormsEval%20forms.doc.

Discuss posttest problems and assign remedial actions.

Information captured from tests, exercises, and after-action reports must be used to improve current preparedness and response plans. The planning team meets to discuss problems that were evident or that emerged during drills and exercises and to objectively assess performance. The team identifies and agrees on remedies and assigns to appropriate individuals and organizations the responsibility for corrective actions. Needed actions may involve revision of planning goals, assumptions, training, communication, or a myriad of other issues.

After corrective actions have been implemented, a tabletop exercise can be scheduled as a follow-up activity to ensure that the corrective actions did in fact address the issues identified during the drill.

The critiques of the plan, the exercises, and the drill after-action analyses must have the support of the leadership of the planning team and of the individual agencies and organizations involved, par-

Date: _____

HAZARDOUS MATERIALS EXERCISE EVALUATION FORM

EVALUATOR NAME/TEAM LEADER:	EVALUATOR ASSIGNMENT/LOCATION:	EXERCISE NAME:

OBJECTIVE 7: ALERT AND NOTIFICATION OF THE PUBLIC

Demonstrate the ability to signal an alert and to provide emergency notifications containing information and instructions to the public.

POINTS OF REVIEW

1. Did the response organization issue a directive to activate the public alert system?

   YES____ NO____ N/A____ N/O____ TIME___

2. Was the alert system activated?

   YES____ NO____ N/A____ N/O____ TIME___

3. Through what means was alerting accomplished?

   ___ sirens
   ___ route alerting
   ___ other _____

4. When did alerting take place? (If this occurred more than once note all times.)

   _____
   _____

5. Did the response organization disseminate messages to notify the public of emergency instructions and information?

   YES____ NO____ N/A____ N/O____ TIME____

6. Check through which means notification was accomplished.

   ___ EBS
   ___ route alerting
   ___ other _____

7. When did notification take place? (If this occurred more than once note all times.)

   _____

8. Was notification accomplished in a timely manner?

   YES____ NO____ N/A____ N/O____

9. Did the organization select prescripted notification messages for dissemination via EBS or other means?

   YES____ NO____ N/A____ N/O____

10. Did the organization prepare ad hoc notification messages for dissemination via EBS or other means?

    YES____ NO____ N/A____ N/O____

11. Check those items which were included in the notification messages.

    ___ contain accurate information about the incident/accident
    ___ describe protective actions clearly and succinctly
    ___ instruct the listener on the actions to be taken
    ___ identify the affected areas
    ___ emphasize the importance of taking these actions as promptly as possible

12. Did the organization provide alert and notification to members of special populations?

    YES____ NO____ N/A____ N/O____ TIME____

13. Check those special populations which were provided alert and notification.

    ___ hearing impaired
    ___ mobility impaired
    ___ visually impaired
    ___ schools
    ___ other _____

14. What means were employed for special population alert and notification?

    _____
    _____
    _____

15. Were copies of all logs and messages maintained? (Note: Obtain copies)

    YES____ NO____ N/A____ N/O____

ticularly in terms of accountability, follow-up, and resources for improvement.

Consider obtaining external feedback.

Emergency planning teams can consider selecting an external reviewer or an internal reviewer with limited exposure to the plan to provide objective feedback on a continuing basis. Neighboring communities, the county, or the state can be asked to review the community's emergency plan to suggest improvements based on their accumulated experience.[7] External feedback can be helpful in identifying gaps and assumptions that need to be filled or rethought. The top 10 weaknesses often identified in emergency management plans appear as Sidebar 23.

Sidebar 23. Top Ten Weaknesses in Emergency Management Plans

1. Have a lack of critical information.
2. Are not flexible enough.
3. Do not address communication issues broadly or in enough detail.
4. Do not contain enough multidisciplinary input.
5. Do not contain adaptable forms for managing information.
6. Do not consider enough scenarios (or enough hazard vulnerabilities).
7. Do not document incidents well.
8. Do not include troubleshooting tools.
9. Lack alarm points signaling that critical supplies are running low.
10. Have not undergone a detailed review with all appropriate local agencies and do not consider community linkages or processes.

Source: Bruce C.: Troubleshooting your top ten weaknesses in emergency preparedness plans. *Environment of Care® News* 3(2):11, 2000.

Review the planning process.

A community's emergency management planning team would be well served to regularly review not only the plan, but the planning process used to create the plan. Sidebar 24 offers 10 possible assessment criteria.

Sidebar 24. Ten Criteria for Assessing Community Disaster Planning

High-quality local disaster planning is characterized by the following:

1. Focuses on the planning process rather than the production of a written document.
2. Recognizes that disasters are both quantitatively and qualitatively different from minor emergencies and everyday crises.
3. Is generic rather than agent specific.
4. Avoids the development of a "command and control" model.
5. Focuses on general principles and not specific details.
6. Is based on what is likely to happen.
7. Is vertically and horizontally integrated.
8. Strives to evoke appropriate actions by anticipating likely problems and possible solutions or options.
9. Uses the best social science knowledge possible and not myths and misconceptions.
10. Recognizes that crisis disaster planning and disaster management are separate processes.

Source: E.L. Quarantelli, Disaster Research Center, University of Delaware. Used with permission.

The critiques of the plan, the exercises, and the drill after-action analyses must have the support of the planning team leadership and of the individual organizations involved, particularly in terms of accountability, follow-up, and resources for improvement.

13. Sustain Collaboration, Communication, and Coordination

Recommended Planning Strategies:

- **Ensure proper documentation and dissemination of plans and supporting information.**
- **Establish mechanisms for receiving and reviewing regional, state, and federal plans.**
- **Collect and disseminate information about effective models, practices, and lessons learned.**
- **Build multilayered relationships and prepare for transitions.**
- **Ensure ongoing communication with the public.**

The final activity described in this planning guide—sustaining collaboration, communication, and coordination—assures the continued viability of community emergency preparedness and response. The planning process and the plan that results from this process are only as good as their weakest link. Continued collaboration, coordination, and communication are critical to reinforcing and maintaining established links, processes, and plans. Strategies for sustaining the processes and plans outlined in this publication follow.

Ensure proper documentation and dissemination of plans and supporting information.

As described in Section 11, policies, procedures, contact information, and plans must be maintained and periodically reviewed to assure accuracy and relevance to community preparedness and response. In addition to having a copy of the integrated community plan, all partners must have copies of each organization's individual plans to which they are a party, either as a recipient or as a supplier. This facilitates a comprehensive understanding of roles and resources that should be maintained and adjusted over time, as needed.

Ideally, the community emergency management plan has elements that are integral to the normal operations of some of the partners who support communication and coordination as part of their regular business or service functions within the community. In other cases, contact between partners will be limited to emergencies and disasters.

Establish mechanisms for receiving and reviewing regional, state, and federal plans.

Just as local community plans change and require updating, so too do plans created by regional, state, and federal agencies. Local communities should establish a means to receive and review the changes made to regional, state, and federal plans. Such changes can have a significant impact on community resources and preparedness and response initiatives.

The *National Response Plan (NRP)* will be reviewed and updated every four years but will have interim

Ideally, the community emergency management plan has elements that are integral to the normal operations of some of the partners who support communication and coordination as part of their regular business or service functions within the community.

revisions as needed between full reviews. The U.S. Department of Homeland Security is required to distribute notices of changes to the *NRP* to all regional offices and state emergency management offices. Thus, local community planning teams can access the information through these sources.[10]

Collect and disseminate information about effective models, practices, and lessons learned.

All planning partners can benefit from receiving information about effective models, practices, and lessons learned in other communities and in the region, state, and nation. Developing an "information stockpile" to support educational and communications activities can be helpful. Such information can be gathered from a variety of sources, including local and regional meetings, Internet resources, desktop exercises, and reviews of how other communities are planning for or have responded to emergencies and disasters. The Tools section provides a sampling of sources for best-practice and lessons learned–related information.

Build multilayered relationships and prepare for transitions.

Over time, individuals leave organizations or change jobs, organizations change the scope or nature of their services, planning partners drop out of the planning process, and new partners emerge. The planning team must prepare for transitions in roles and responsibilities. Relationship building for long-term sustainability requires multiple relationships within groups with different levels and types of stakeholders.

Ensure ongoing communication with the public.

An active and disciplined communication effort will help to mitigate the impact of changes that occur over time. Ongoing communication should be provided to the multiple levels of response partners and to the public and should include information about the functions and responsibilities of preparedness and response partners. The media provide a primary means for communicating with the public, as described in Section 7.

TOOLS:

- The Medical Reserve Corps (MRC) Web site includes information on "promising practices," such as "Guidelines for Spiritual Care Providers," "Volunteerism Flyer," and "Agency Needs Assessment," obtained from MRC units: http://www.medicalreservecorps.gov/resources/result.asp?subcategory_id=43.
- National Memorial Institute for the Prevention of Terrorism (http://www.mipt.org) hosts Lessons Learned Information Sharing, which is a national network of lessons learned and best practices for emergency response providers and homeland security officials. http://www.llis.dhs.gov.
- The Federal Emergency Management Agency's Mitigation Division provides best practices and case studies. http://www.fema.gov/fima/bp.shtm.
- The National Governors Association's Center for Best Practices: Homeland Security & Technology Section includes best practices related to agroterrorism, bioterrorism preparedness, critical infrastructure protection, energy assurance, emergency management, information sharing and technology, intelligence, interoperability, nuclear and radiological terrorism, and telecommunications and digital infrastructure. http://www.nga.org/center.
- The Rand Corporation makes available on its Web site a publication titled *Protecting Emergency Responders: Lessons Learned from Terrorist Attacks* by Brian Jackson et al. http://www.rand.org/publications/CF/CF176.

Ongoing communication with the community is essential to managing concerns within the population about risk, maintaining public interest in and involvement with preparedness activities, and sustaining trust and dialogue that will be essential in directing the public effectively during a disaster.

- *Example: The Rocky Mountain Poison and Drug Center (the Center) in Colorado worked with the state health department to create a public emergency information line. The Center had a long-standing and well-recognized public role in providing accurate and timely information. Following 9/11, its role expanded to providing information to the public on a smallpox vaccination program, providing clinical decision support for vaccinees and their health care providers, and collecting reported adverse reactions to smallpox vaccinations. The demand for smallpox information was very modest, but the emergence of outbreaks of the West Nile virus in 2003 allowed the Center to adapt its capabilities to include tracking virus occurrence in the state and providing the public with consistent, accurate information about virus risks and disease management strategies. By asking people to report on dead birds in their yards, the service involved the public in the response effort, helped establish a mechanism for information exchange, and resulted in a meaningful role for the public in the process. Since then the service has been expanded to monitor and support other public health issues such as influenza, mold, hantavirus, and plague. The Center's capabilities continue to expand based upon emerging public health concerns and requests for information.*

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Closing Comment

Continued collaboration, coordination, and communication provide the glue needed for a truly strong and interconnected community fabric. Returning to Melville's quotation, "We cannot live for ourselves alone. Our lives are connected by a thousand invisible threads, and along these sympathetic fibers, our actions run as causes and return to us as results." To achieve the results desired in a disaster situation—survival for two or three days before help arrives—small, rural, and suburban communities must develop and sustain emergency preparedness and response capabilities. The 13-step process outlined in this planning guide is offered as one template for doing so. Whatever resources are used, small communities must prepare for disasters that would inflict significant destruction in the form of lost lives, injured residents, and damage to critical community infrastructure and property. The time for preparedness efforts—for weaving together thousands of invisible threads—is now.

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