Nearly four years after the events of Sept. 11, 2001, vulnerabilities remain in homeland security preparedness both nationally and in the commonwealth. A national survey of city mayors found, for example, that only one in 10 cities had received first-responder funding by Aug. 1, 2003, which at the time confirmed that “the long-sought federal funding for our cities’ first responders has been both diluted and delayed.” Since 2001, more than $23 billion has been appropriated to support state and local preparedness efforts, but it is estimated that between $8 billion and $9 billion is still unspent and sitting in the administrative pipeline at multiple governmental levels. Increasingly, Congress and other leaders are demanding greater accountability of how homeland security funds are spent and the return on investment in this critical function. Because Virginia is home to many defense installations and federal agencies, it is a “target-rich” environment. Thus, Virginia must act decisively to plan and execute policies and programs for homeland security preparedness that are effective and efficient.

What is “preparedness”? Preparedness, to much of the public, is about first responders (firemen, police, and emergency medical services, for example). However, preparedness constitutes a continuum of interrelated tasks that includes at least four critical activities: prevention and mitigation, response, recovery and restoration, and attribution. Understanding the interdependencies of these stages is critical to effect preparedness. Good mitigation practices, for example, reduce response demands and can speed recovery and lower restoration costs. Attribution is not the end process, for if we understand how and why a disaster occurs, we can better prevent a recurrence. With terrorism, successful investigation and prosecution of those engaged in deliberate actions of terror can deter future acts.

These interdependencies mean not only that positive actions at one stage will have future benefits, but that, equally importantly, uncoordinated actions or poor execution in one stage will result in negative effects throughout the system. It is imperative, therefore, for preparedness planning not to focus solely on a single stage but rather on system dynamics and the potential cascading effects that can occur.

Inter-jurisdictional challenges

A systems approach must not only recognize interdependencies within the preparedness continuum, but also consider the complicated inter-jurisdictional relations that must be addressed for successful implementation. Arguably, no national priority has challenged our abilities to plan and manage functions across local, state, and federal government as has homeland security. Even after several years of funding, many of the challenges of vertical and horizontal governmental coordination have not been resolved. Until significant progress in jurisdictional coordination is attained, neither advances in technology nor continued use of government dollars will achieve our end goal—a safer, more secure homeland.

Some of the homeland security roles for government are depicted in Table 1. As illustrated in the table, government roles and actions are not discrete but overlap and, therefore, require coordination and cooperation across all levels of preparedness. To achieve the necessary coordination, there must be considerable planning, which has not always been apparent in many states. Virginia addressed this issue early on by creating a cabinet-level Office of Commonwealth Preparedness. One of its missions is to coordinate state and federal programs with local governments and critical regions, such as Northern Virginia and Tidewater. However, as one Virginia official noted, “The urgency to get the money out without total oversight [created a barrier to planning efforts]. I think that there was some competition created by the money which led to some lost opportunities because people don’t work together as much.”

The federal government assumes a major responsibility for prevention and mitigation of significant catastrophic events, as well as for attribution—particularly for events thought to be acts of terrorism. For example, various federal intelligence agencies and the FBI have key responsibilities for detection and apprehension of terrorists both within the country and internationally. Even for natural events, federal government agencies, such as the Centers for Disease Control and Prevention (CDC) and National Oceanic
and Atmospheric Administration, provide data that forewarn major natural events. However, state and local governments also have prevention, mitigation, and attribution roles. Localities in Virginia have begun identifying mitigation priorities and developing strategies to implement them. Major weather events, such as Hurricane Isabel and flooding in Southwest Virginia, increased interest in mitigation programs designed to reduce repetitive losses. These events also emphasized the value of computerized mapping programs in planning for and responding to disasters. In light of three presidential disaster declarations during 2003, the accumulated Hazard Mitigation Grant Program funding may be almost $20 million in the near future. To date, the Virginia Department of Emergency Management has received preliminary requests for local mitigation projects totaling approximately $130 million.

Virginia, like some other states, has begun to address prevention and mitigation issues by doing systematic risk (threat) assessments. Well-conceived and implemented risk assessments not only allow the targeting of assets to prevent outbreaks of natural events and terrorist attacks, but also enable the government to direct funding for first responders to areas where the need and probability of occurrences are the greatest. Risk assessments, however, must be multi-dimensional and not based solely on population densities or economic impacts. High-risk areas may be in rural areas that have strategic resources.

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sensitive environmental conditions, or infrastructure points of vulnerability.

In the preparedness continuum, the need for coordination is perhaps greatest at the response stage because speed is important. Loss of response time due to jurisdictional confusion or conflict can cost lives, so it is vital that protocols and roles of engagement between responders and jurisdictions are understood and followed. Confusion and delay in recovery efforts reduce citizens’ confidence in their government, which could spawn discontent or even unrest.

Prior to Sept. 11, first-responder agencies were equipped to focus on specialized problems, e.g., a fire or major accident, with little inter-agency coordination or communication. A survey of state and local response organizations conducted before Sept. 11 by the Rand Corporation found that public health agencies were not well integrated into comprehensive bio-terrorism planning and preparedness activities. Likewise, the Dark Winter exercise held in June 2001 to simulate a smallpox event in the United States determined that state and federal priorities were “unclear, different, and conflicted.” The drill unveiled the tensions between state and federal efforts when coordinating a response. Furthermore, it revealed that state officials wanted authority over decisions that related to quarantine and vaccination, as well as control over state borders and transportation hubs, despite objections from federal officials that these decisions should be made on a national basis.

Much of the attention on emergency response has been on expanding resources and providing new technologies, but, as seen in the Dark Winter exercise, coordination among national, state, and local agencies can hamper the effectiveness of even the best-equipped cadre of first responders. As the category of first responder grows to include private partners and non-traditional public actors, the complexity of roles and responsibilities will expand, making coordination even more difficult.

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According to the Rockefeller Institute of Government, we now have traditional and nontraditional organizations thrust into the role of first responder, yet there exists misunderstanding of their roles, where they fit, and how their interactions persist.

For example, initial funding for state homeland security initiatives supported the purchasing of equipment; however, questions remain about who is going to fund and maintain not only the equipment but the personnel. Currently, only one Homeland Security Grant Program allows states and localities to use grant funding to pay the salaries of emergency managers. The burden of sustaining homeland security efforts will inevitably trickle down and rest on the shoulders of the commonwealth’s localities, which are already wrestling with fiscal difficulties.

Funding homeland security in the commonwealth

Federal funding guidelines for homeland security have changed over time, complicating the tracking of resource allocations. In November 2002, the Homeland Security Act established the Department of Homeland Security (DHS) to protect the nation against conventional and unconventional attacks in the United States. The mission of DHS is to analyze information and protect critical infrastructure; develop countermeasures against chemical, biological, radiological, and nuclear attacks; secure the U.S. borders and transportation system; organize emergency preparedness and response efforts; and coordinate counter-terrorism activities with other federal agencies, state and local govern-
Responsibilities.

and local levels have homeland security jurisdiction at the federal, state, and more than 87,000 different governments, and the private sector. More than 20 existing federal agencies or portions of agencies were consolidated into DHS, and more than 87,000 different governmental jurisdictions at the federal, state, and local levels have homeland security responsibilities.

Original funding allocations for homeland security followed three principal streams: 1) the State Homeland Security Program and 2) the Urban Area Security Initiative, which are both funded by the Department of Homeland Security under the Homeland Security Grant Program (in 2005, it was recommended that six programs be consolidated in order to streamline the process); and 3) the Bio-terrorism Preparedness Initiative, funded by CDC and Health Resources and Services Administration (HRSA). Figure 1 illustrates how these programs are related to allocations to the state government and, eventually, to local governments and regional organizations within the commonwealth.

<table>
<thead>
<tr>
<th>Prevention and mitigation</th>
<th>FEDERAL GOVERNMENT</th>
<th>STATE GOVERNMENT</th>
<th>LOCAL GOVERNMENT</th>
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<td>Goal: Reduce or eliminate (prevention) the risk of a disaster occurring or, in the event of a disaster, lessen its impact (mitigation).</td>
<td>Protect national security by coordinating federal response to detect, prevent, preempt, and disrupt natural and manmade disasters in the United States. Federal government also has jurisdiction on any prevention and mitigation that is international in scope. Through the appropriate agencies, alert state and local officials of terrorist and public health threats. Assist states and localities in identifying international disease transmission. Establish standards for secure building assessments.</td>
<td>Coordinate state resources to address the full spectrum of actions to prevent and prepare for incidents in an all-hazards context, which includes terrorism, natural disasters, and accidents. Respond as needed to national alerts that are specific in location and date to their jurisdiction. Work with federal agencies as requested in surveillance and apprehension of suspected threats. Conduct risk assessments within the state and share with federal and local jurisdictions.</td>
<td>Coordinate and apply local resources to address the full spectrum of actions (e.g., land-use planning and building codes) to prevent and mitigate incidents in an all-hazards context, which includes terrorism, natural disasters, and accidents. Work with state officials to administer national alert actions as directed by the state and federal governments. Develop a response plan to reduce public safety threats during early onset of event.</td>
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| Response | Coordinate federal resources to respond to natural or manmade disasters and assist states and localities in responding to disasters by designating an emergency and offering federal resources to affected states/regions. Augment local resources with additional or specialized capabilities as needed. Provide block grants to help local governments obtain new technologies for rapid response. | Respond to incidents in an all-hazards context, which includes terrorism, natural disasters, and accidents. Use National Guard for response as needed. Augment local resources in recovery efforts. Make cross-jurisdictional mutual agreements to facilitate resource sharing. Facilitate communication to the public in the state's jurisdiction. | Directly respond to incidents in an all-hazards context, which includes terrorism, natural disasters, and accidents. Share resources with other localities through regional collaborations. Facilitate communication to the public regarding response actions and additional public safety issues resulting from event (e.g., water safety or temporary shelters after a major natural disaster). |

| Recovery and restoration | Maintain national health information and provide immunizations and prophylactics by stockpiling. Provide and disburse emergency relief funds, particularly for reconstruction of critical infrastructure. | Coordinate federal relief funding within a state. Assist local jurisdictions in reconstruction through state resources, particularly for state infrastructure elements. Oversee recovery and reconstruction in conjunction with local governments and federal agencies. Administrate, through state health departments, immunizations and prophylactics as needed. | Coordinate with state and federal officials to ensure recovery is consistent with local needs and legal criteria. Supply some local support for reconstruction of local infrastructure. |

| Attribution | Use federal assets to determine origins of a disaster. Investigate and prosecute criminal activity related to disasters. This is the prime jurisdiction in all cases of known or likely terrorist events. | Under certain emergencies the state can institute police powers to make, amend, and rescind orders and regulations, and deploy authorized state militias and National Guard. Through the state laboratory system, investigate suspected biological or chemical toxins. Share with federal government agencies as required under legal statutes. | Request assistance from state and federal government when local law enforcement resources are exceeded. Work with state and local federal assets to identify, locate, and collect relevant information and evidence. |

Table 1: Jurisdictional roles and responsibilities in homeland security preparedness
The State Homeland Security Grant Program provides homeland security assistance funds directly to states and territories to prevent, respond to, and recover from terrorist attacks. Funding from the program is intended to address state homeland security planning, equipment acquisition, training, and exercise needs. The Urban Area Security Initiative (UASI) provides funding to address the planning, equipment, training, and exercise needs in urban areas identified by the DHS. In FY 05, Congress authorized funding from this program to go to nonprofit organizations located within the identified urban areas. The funds from CDC and HRSA were appropriated primarily to expand the public health infrastructure in states and to ensure that medical services (such as hospital beds) were available in times of crisis.

Despite efforts to streamline the funding process by consolidating agencies and programs, confusion regarding the guidelines has persisted. According to the Task Force on State and Local Homeland Security Funding, “The lack of national standards guiding the distribution, tracking, and oversight of homeland security-related grant funds contributes to delays in disbursement.” A large part of the problem revolves around the Cash Management Act of 1990, which requires that homeland security funding be provided to state and municipal governments on a reimbursement basis. This requires local governments and municipalities to incur expense prior to receiving funding. While state homeland security funding from 1999 to 2002 moved relatively quickly to localities, in FY 04, delays in funding occurred. In Virginia, paperwork and front-end assessments from the 144 cities and counties delayed some distribution of funding. To minimize paperwork and expedite the funding process, Virginia took the unique approach of accepting applications from localities as a request for funding. Furthermore, in FY 05, localities were given six months of front-end funding with back-end auditing.

**Homeland Security Grant funding**

In 2002, each state received base funding from the federal government for homeland security. The resource allocations were distributed through block grants based on a population formula. Virginia's cities and counties received approximately 80 percent of the funds as state pass-throughs, with the remainder allocated to state and regional offices to address priorities. Since 2003, approximately $53 million has been allocated to cities and counties in Virginia under the State Homeland Security Grant, with an additional $25 million going to state agencies. In the 2004 allocations, two urban areas within the commonwealth were designated for USAI funding—the Washington, D.C., National Capital Region ($29 million) and Richmond ($6.5 million). Additionally, the transit system in the Washington area was to receive $2.8 million to enhance the security of its passengers. In 2006, Virginia is slated to initiate a full, competitive grant process for homeland security funding, which may alter funding that is allocated through the State Homeland Security Program and the Urban Area Security Initiative.

**Public health**

Prevention and mitigation of disease have long been public health missions. Because most forms of disaster, natural or intentional, threaten public health directly and indirectly, public health agencies have extension response, recovery, and restoration roles. In cases of bio-threats, epide-

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**Figure 1: Jurisdiction relations for funding allocations**

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miologists are key to tracing origins and causes of outbreaks. Clearly, public health agencies are a vital part of the preparedness continuum, yet their roles have never been fully understood; consequently, financial support for enhancing our public health infrastructure has not been forthcoming, even after Sept. 11 or the anthrax attacks the following year.

In 2002, Congress quickly responded to the anthrax attacks by enacting the Public Health Security and Bio-terrorism Preparedness and Response Act that allocated $4.5 billion to develop new vaccines, improve hospital capacity, and strengthen local public health departments. The bio-terrorism preparedness initiatives were funded by the CDC and the HRSA. The nearly $1 billion slated for state and local governments in 2002 was 14 times greater than the previous year’s bio-defense spending. The sum represented the single largest investment in the public health infrastructure since World War II, although it did not adequately compensate for decades of neglect.

Several studies suggest that despite a long history of addressing critical health emergencies—such as infectious disease outbreaks and food, water, and air pollution—local public health agencies were not prepared for the new role of “front-line” responders in a potential terrorist attack. Before the anthrax attacks, the public health system in America was in severe disarray. Decades of federal and state cutbacks, combined with public inattention, led to dangerously low levels of funding, expertise, and capacity. Prior to the Sept. 11 attacks, the CDC and National Association of County and City Health Officials conducted an e-mail test to determine how quickly local public health agencies could respond to a health alert or bio-terrorist threat. At that time, they found that only 35 percent of the e-mails were delivered successfully. Further impeding communication efforts was the fact that more than half of local public agencies lacked high-speed Internet and only 45 percent had facsimile capabilities, according to a February 1999 survey.

A majority of funding for public health at the state and local levels is drawn from grants and cooperative agreements with the CDC. Most of the CDC grants to states are categorical and focus on specific activities and diseases. Prior to the infusion of funding provided for the fiscal-year appropriations, CDC funding for state and local emergency preparedness was limited.\begin{1} Beginning in 1999, the CDC appropriated funds specifically for bio-terrorism preparedness. In FY 01, $180.9 million was appropriated for these efforts, with $66.7 million allocated to building state and local preparedness. After the anthrax attacks and the events of Sept. 11, a tenfold increase in appropriations resulted in $2.1 billion being dedicated to anti-terrorism activities in FY 02. As well, additional investments of approximately $917 million were made in FY 02 in the form of grants to states and localities.\end{1}

Emergency preparedness

In FY 04, Virginia received $29.3 million to address emergency preparedness. The commonwealth instituted an all-hazards approach in spring 2002, prior to receiving the CDC recommendations. This approach created flexibility in planning for emergencies and allowed localities to assess local challenges and needs. According to a Virginia health official, “We are well on our way to creating a system that we did not have before an all-hazards, all-purpose system. … I think the system is getting worked out and doing more exercises. The communication is now better between agencies and hospitals, and there is a basic understanding at the state level of what happens at the local level.”

The renewed attention and funding have improved preparedness efforts in the commonwealth. State and local public health officials generally agreed that the public health system in Virginia is better structured than before. One state official stated, “We are much more prepared than we have ever been, and I have worked in the health department since 1966. We always had a plan, but it was on the shelf. We used it when we had a hurricane or something, but we did not realize how inadequately prepared we were.”

Critical policy issues

While public health officials agree that the commonwealth’s public health and homeland security preparedness systems are better structured to respond to emergencies now than before Sept. 11, some issues remain. According to one local public health officer, there are three aspects to successful communication: physical communication, intra-communication and power sharing, and information sharing with the public. While we have made progress on the first aspect, communication between agencies and with the general public needs to be improved before we can have successful planning efforts.

Sustaining efforts with shrinking funding and significant public health workforce needs (i.e., recruitment, retention, capacity, and training) are key concerns. According to Lisa Kapowitz, director of emergency preparedness for the Virginia Department of Health, “A significant percentage of the public health workforce is due to retire in five to seven years, and getting replacements will be a major issue. We hope that some of the funding from emergency preparedness can be used to recruit people to public health jobs. A lot of the people brought in do not have a public health background. At the same time, we just need more people trained in public health.” According to another Virginia public health official, “In five years, we will have a crisis. Most of the public health nurse managers are over age 50, and 75 percent could retire right now. Very few young people are going into the jobs.”

Despite improvements in state and local cooperation, local efforts are compromised by the structure of the state government. State government hiring freezes and personnel policies encumber health departments in recruiting and retaining skilled public health professionals. Also, since the position of state health commissioner or chief executive officer is a political appointment, it shortens the average tenure of the agency leadership, which is two years. According to the Joint Legislative Audit and Review Commission (JLARC), since 1991, there have been five health commissioners at the Virginia Department of Health, which has “fostered an atmosphere of instability” (JLARC 2000). Changes in leadership and changes in the public health workforce are concerns for emergency preparedness.

In addition, despite improved efforts around public health planning, many agree that there are some disparities in local resources. A Virginia public health official noted:

There is a disparity based on funding and resources. Geographically, there is not a whole lot we can do, but
we can address resources and funding. Resources are not the same across the state. In Virginia, looking at the fire and EMS side, we are predominately a volunteer state and we are losing manpower from volunteers, which is part of economics—a lot of businesses are not open to letting people leave work to man the local fire departments.

Another Virginia public health official observed, “Emergency planning across all jurisdictions is not comparable. I think of the small rural counties that have one public health nurse. We have 20 counties with only one public health nurse.” These inequities in local preparedness can have serious implications. The Health Resource and Service Administration states that a lack of emergency-related resources in rural areas may compromise the nation’s readiness for future emergencies.

With billions of dollars appropriated for homeland security since Sept. 11, accountability is becoming of great concern to many policy makers. Has our investment been spent wisely? That is, are we receiving the greatest impact for our public dollars? This will become increasingly critical because new technologies for homeland security are becoming available, many of which are very expensive. For example, new wireless systems, rescue vehicles, and network security systems are now being marketed to state and local governments. The competition for public dollars for these technologies is great, yet many governments may not have the necessary information and product evaluations to make wise investment decisions.

Policy principles

Although Virginia is making impressive gains in homeland security preparedness, improvement is needed. As we move forward, we must be certain that policies are guided by some basic principles.

1. Preparedness must be approached from a systems perspective. Policies and funding cannot be directed to just one element in the system, otherwise negative cascading will occur in times of crisis. The system perspective should also clarify the roles of the respective governmental levels to ensure effective processes. The commonwealth should also work to ensure that the responsibilities of different state agencies are clearly articulated and monitored across the preparedness continuum.

2. Risk assessment methodologies must be used to aid in decisions about homeland security resources allocations.

3. Objective evaluations of new technologies for homeland security should be a priority of the government. It is imperative that governments invest wisely, from both a security and a cost-effectiveness perspective. A laissez-faire approach to homeland security technology is too risky at this point in time.

4. We need to remain focused on the front lines and to make sure that local plans and systems are in place to make the best use of local assets. Only through integrated planning and exercises and improved communications among first responders will local communities be able to respond effectively to future natural or man-made threats. One thing is clear: first responders will be on the frontlines—ready or not.

5. Accountability methods must be employed to ensure that resources for preparedness are achieving their goals. Taxpayers and public officials must be assured that our public dollars are actually improving our levels of preparedness in the most effective ways. Without measurable standards of performance, future calls for funding will be difficult to justify.

Endnotes

1. One can find in the literature more than four stages articulated. Some analysts make, for example, a distinction between prevention and mitigation. Others include intelligence gathering (surveillance and monitoring) as a separate process. The vocabulary may also vary—“prevention” in some models is termed “deterrence.” However, all models include the core four that are in Table 1.

2. Preparedness encompasses both deliberate actions (terrorism) and natural events (natural disasters such as the recent tsunami in Southern Asia).

3. The term “vertical” coordination as used here refers to coordination between levels of government (federal, state, and local), while “horizontal” refers to coordination across the same levels (state to state or county to county).

References


