



Public Health Preparedness:

Progress and Challenges Since September 11th, 2001

A Progress Report by
Trust for America's Health
September 2002

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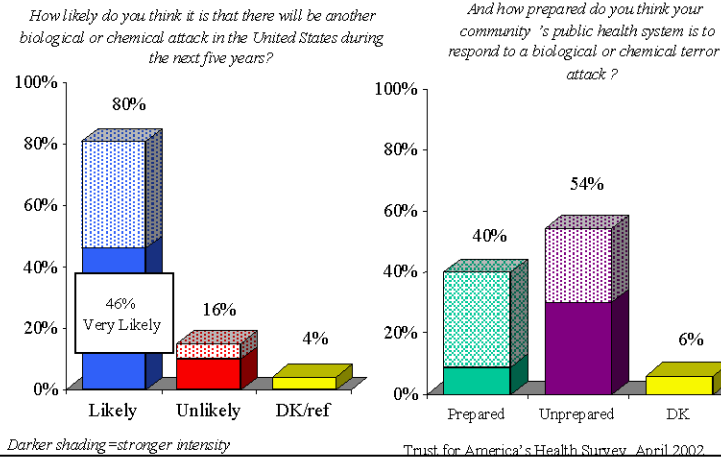
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The Trust for America's Health is a national non-profit organization whose mission is to protect the health and safety of all communities, especially those most at risk of environmental and other public health threats. For more information, visit www.healthyamericans.org.

Introduction

Almost a year has passed since attacks on the World Trade Center and the Pentagon horrified the nation, and indeed the world. In addition to the devastating destruction and tragic loss of life caused by the attacks, they also created immediate and potentially long-lasting environmental health crises. It has also been nearly a year since anthrax-laced mail killed five people and threatened the health of the public at large.

A Majority Think There Will Be A Biological Attack In The US During The Next Five Years, And Most Think Their Community's Public Health System Is Not Prepared



In each case, public health officials acted quickly to limit harm to people's health. But these crises also revealed the limits of the public health system and raised many troubling questions among the public.

For example, according to a recent poll, 80 percent of Americans believe a biological or chemical terrorist attack is likely in the United States within the next five years. But only 40 percent believe their

local health system would be prepared to handle such a crisis. Fifty-four percent say their community's public health system would be unprepared.

In the year since the 9/11 attacks and the anthrax mail crisis, what has been done to strengthen America's public health defenses? What are the most important priorities for further action? This is a progress report aimed at answering those questions.

Overcoming Decades of Decline in Public Health Infrastructure

America's public health system – the network of health professionals, services and equipment used to protect our population from disease – is as important to our homeland security as police and fire protection. But after decades of neglect at the federal, state and local levels, there are gaps in our health defenses. In fact, in March 2001, the Centers for Disease Control and Prevention (CDC) told Congress that the nation's public health infrastructure "is still structurally weak in nearly every area."

In the aftermath of the World Trade Center attacks, many of these weaknesses were readily apparent. Health officials resorted to monitoring hospital emergency rooms and pharmaceutical sales to determine whether residents were getting ill from chemicals released in the attacks. New York state's congressional delegation had to seek special funding to monitor the health of Ground Zero workers, while others who worked and lived in the area were not offered such help. In a high-tech world, in which we equip our military with the most sophisticated resources available, the professionals responsible for protecting our health are forced to improvise with little more than paper, pencil, a telephone and shoe leather.

The anthrax crisis offers similar lessons. It was an astute health professional in Florida who alerted others to the possibility of an anthrax exposure. But what if the first case had appeared in a community where there was no trained staff? Also, as reports poured in of other possible anthrax exposures, there were only a handful of laboratories available to analyze the evidence.

Fundamentals of the Public Health System

The nation's public health system is a network of local, state and federal organizations. The core components of the system – those used everyday to protect communities from illness – are:

- ▶ Trained health professionals;
- ▶ Early-warning and communications systems;
- ▶ Fully equipped public health laboratories; and
- ▶ Disease and exposure tracking.

For practical reasons, the public health system must be a multi-purpose system. That is, the same people and resources that might be called upon to respond to sudden health emergencies are also responsible for ongoing serious concerns. Local health departments, hospitals and labs – and the personnel and equipment in them – are our front lines in dealing with the full range of health threats. They may be called upon to deal with everything from the intentional poisoning of a community water supply to investigating the possible causes of a cancer cluster to tracking an outbreak of West Nile virus.

The public health system must be a multi-purpose system.

As Congress, the President and all levels of government work together to boost homeland security, they must devote greater resources to these fundamentals of public

health protection. Creating this type of “zone defense” would help us cover the full range of health threats, from biological and chemical terrorist threats to serious, ongoing crises of chronic diseases, as well as infectious diseases.

Public Health Professionals

The vast majority of health departments at the state and local level are understaffed, and personnel are generally under-trained. Of the approximately 500,000 professionals working to protect public health at the local, state and federal levels, fewer than half have had formal, academic training in public health, according to the Health Resources and Services Administration. As of 1997, 78 percent of local health department executives did not have graduate degrees in public health, according to a 2001 CDC report on public health infrastructure. At all levels, government hiring freezes and personnel policies hinder the ability of health departments to recruit and retain talented professionals.

The results are painfully clear. In a 1998 study of the nation’s largest public health departments, conducted by experts at the University of North Carolina, the average score in performing 20 of the most basic public health functions was only 64 percent.

Without trained and available staff, our communities are vulnerable to unforeseen health threats and hamstrung in efforts to prevent illness. More and better-trained public health officials must be developed in every state. The CDC has recommended that one trained epidemiologist be available for every 500,000 people. Since September 11th, many states have made plans to hire more health officials, but progress has been slow.

Communication Networks

Like the majority of the tools needed to protect the public’s health, communication networks have been drastically under-funded for decades. The result has been a

In 1999, only 45 percent of local health departments had the capacity to send broadcast fax alerts. Fewer than half of local health departments had high-speed continuous access to the Internet, and 20 percent did not have email capabilities.

network of agencies that have trouble communicating with each other, let alone with the public. For example, the 2001 CDC report discovered that in 1999, only 45 percent of local health departments had the capacity to send broadcast fax alerts to multiple recipients such as state health

agencies, the CDC and doctors. Fewer than half of local health departments had high-speed continuous access to the Internet, and 20 percent did not have email capabilities.

The Health Alert Network (HAN) is a federally coordinated system that allows the CDC and state and local health departments to communicate in real time using state-of-the-art communication tools, including the Internet. The network is not yet operational in all 50 states, but implementation has been accelerated since last fall’s events, and all states are receiving funding from the CDC to accomplish this. The HAN is expected to be the backbone of increased communication capacity among all health officials.

Disease and Exposure Tracking

The *New York Times*, *Washington Post* and other news organizations have reported that many people in the New York City region fear their health has been, or will be, impacted by their exposure to the dust and smoke that emanated from Ground Zero. However, because New York does not systematically track human exposures to the full range of environmental contaminants, nor the incidence of chronic illnesses like asthma and cancer, health experts have no way to anticipate or prevent the illnesses that might have been caused by the attack.

Chronic diseases are collectively the #1 killers of Americans today, accounting for seven out of 10 deaths each year.

New York is not alone. Across the United States, there is no systematic tracking of chronic diseases and their possible links to environmental hazards. Unlike our system for tracking infectious diseases such as cholera and polio, we do not have consistent, comparable data for people's exposures to environmental factors and their relationship to chronic diseases, which are collectively the #1 killers of Americans today, accounting for seven out of 10 deaths each year. Many of these illnesses are on the rise, but we do not know why.

In 2000, a blue-ribbon commission at the Johns Hopkins University School of Public Health proposed the establishment of a nationwide health tracking network to provide critical health data on where and when chronic diseases strike and their links to environmental factors. Since then, 80 health, environmental and consumer groups have endorsed this proposal.

This spring, bipartisan legislation was introduced in the U.S. House of Representatives (H.R.4061), with similar legislation also introduced in the U.S. Senate (S.2054) to create a nationwide health tracking network. In 2001, Congress funded \$17.5 million to begin state pilot programs for health tracking, which will be the building blocks of a nationwide network.

With a \$12 million grant approved by Congress in late 2001, Mt. Sinai School of Medicine in New York City, along with a consortium of health clinics in New York and New Jersey, is conducting exposure monitoring and health tracking to better understand how Ground Zero workers' health has been impacted. It is expected that the health tracking initiative will involve 8,500 first responders and volunteers who worked at the World Trade Center site.

The Ground Zero health tracking study and related programs are valuable and necessary steps in the right direction. But ideally, this information should have been available much sooner. Had a nationwide health tracking network been in place before the terrorist attacks, we would have had immediate access to health data that would have helped researchers anticipate an upsurge in certain ailments.

The September 11th attacks provide us with a very tragic case study of environmental health threats. But there are disease clusters and concerns in communities all across

America, and too little health information to help health officials prevent these illnesses. Today, we are using a very limited, piecemeal approach to understanding health risks after the fact, whether our object of concern is leukemia clusters in dozens of communities or toxic exposures in New York City.

Laboratories

Another essential component of the national public health system is well-equipped laboratories. Preliminary results of a recent survey of 47 state and territorial labs conducted by the Association of Public Health Laboratories (APHL) found that public health laboratories need substantial infrastructure improvements. Of the 47 respondents, most reported needing multiple upgrades for their physical facilities, including freezer capacity and specimen receiving capability. Eighty-five percent said performing anthrax-related tests last fall impacted routine laboratory work, delaying tests for other diseases and conditions. With the federal funding that has been committed to date, many laboratories are making improvements, but much more capacity is needed nationwide.

For example, the U.S. needs to expand biomonitoring capabilities to labs throughout the country. Biomonitoring is a laboratory technique that analyzes blood, urine and other evidence to gauge the extent to which people have been exposed to chemicals in the environment. At and around Ground Zero, the CDC has conducted biomonitoring of New York City firefighters, but there is no such analysis of the wider population. And almost a year later, the data that has been gathered is not yet published, leaving health officials with gaps in critical information that could help prevent illness.

Biomonitoring is also used for investigations of cancer clusters. For example, in Fallon, Nevada, researchers are utilizing biomonitoring to assess whether environmental exposures might have contributed to a leukemia cluster in which 16 children have been diagnosed with leukemia since 1997. Fallon's rate of leukemia is much higher than the one case in every five years that statistics suggest the county might expect. Parents in Fallon have grown so impatient waiting for the CDC to produce data that they have hired their own experts.

While some states are currently developing their biomonitoring capacity, only the CDC has the ability to comprehensively test blood and urine for a full spectrum of chemicals. This lack of regional capacity for biomonitoring hinders local health officials from responding rapidly to health crises. Many months into the ongoing CDC investigation of the Fallon cluster, the agency announced in August that high levels of arsenic and tungsten were found in the urine of 80 percent of the people tested. But investigators do not know whether either metal has anything to do with the leukemia cluster. Much more analysis, using biomonitoring and other tools, is needed.

To assess people's exposures to potentially hazardous substances in the environment, every state needs increased laboratory capacity that could provide community-based information. At a minimum, every state should have at least one laboratory capable of conducting biomonitoring.

Progress in Strengthening Public Health Protection Since 9/11

In the year since the 9/11 attacks and the anthrax mail threat, Congress, the President and public health agencies have taken a number of steps to improve public health preparedness.

Bioterrorism Preparedness

Late in 2001, in response to terrorism concerns, Congress enacted the Supplemental Appropriations Act for Further Recovery From and Response to Terrorist Attacks on the United States (PL-107-206), which provided approximately \$1 billion in grants to the states to improve public health defenses against bioterrorism. Specifically, the fundamentals of public health were funded as follows.

- Communication networks:** To develop an around-the-clock communications system among local and state public health departments, health care organizations, hospital emergency departments and other key officials, and for expanding the Health Alert Network, **\$190 million.**
- Public health professionals:** For education and training of public health workers and professionals, **\$97 million.**
- Surveillance:** To receive and evaluate urgent reports from all parts of the state, 24 hours a day, for symptoms or events that may be associated with biological terrorism, **\$200 million.**
- Laboratories:** To improve laboratory capacity for testing biological terrorism agents and integrating laboratories within the state, **\$147 million.**
- Planning:** The largest chunk of the money, **\$280 million**, is provided for state preparedness assessment and planning, including ensuring adequate leadership, assessing readiness of hospitals and emergency medical services, and developing

Bioterrorism Preparedness and Public Health Preparedness Go Hand in Hand

State health officials understand the need for across-the-board public health preparedness. In announcing North Carolina's plan to spend their share of the CDC bioterrorism funding, Acting State Health Director Dr. Leah Devlin said:

"This represents the most significant new money for public health infrastructure in more than 50 years. The thing that most people don't realize is, that by preparing for a potential biological attack, we are also strengthening the entire public health system. The benefits go far beyond bioterrorism preparedness."

It's Time to Strengthen Our Front Lines in the Fight Against Bioterrorism



What we learn about the critical role of public health is recent events. Still today, too many of our communities—the front lines in the fight against bioterrorism—continue to have all the resources they need to protect our health.

Congress is now looking for the best way to help local and state officials. The solution must include investments in the fundamentals of our public health defenses including "early warning" and communication systems, more training for professionals, better equipped public health laboratories, and tracking of diseases.

Investments like these would improve our capacity at the local, state and federal levels to respond to both bioterrorist threats and everyday health concerns like asthma, food safety, birth defects, and cancer.

A bipartisan group of fifty-nine U.S. Senators said it best in Senate Resolution 171: "Now is the time to strengthen our public health system."

American College of Preventive Medicine
American Public Health Association
Association of Schools of Public Health
Association of Public Health Laboratories

Health-Track
National Association of County and City Health Officials

National Association of Local Boards of Health
Physicians for Social Responsibility
Public Health Foundation
Trust for America's Health

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Investments in the public health system are a fundamental step toward improving our ability to respond to both bioterrorist threats and ongoing health concerns like disease clusters.

the capacity to handle items from the National Pharmaceutical Stockpile and other sources of antibiotics, vaccines, and medical supplies.

Approximately 20 percent of the total funding was released in January 2002 to all 50 states, as well as the District of Columbia, the territories and three major cities (Chicago, Los Angeles and New York City). To help jurisdictions plan for and implement these improvements, the CDC issued guidelines for state preparedness plans. Once the states, cities and territories met the benchmarks outlined by CDC, they were to receive the remaining 80 percent of funding

By August 2002, 26 states and three cities had received full funding. Another 22 states were deemed to have met most of the guidelines and were awarded the majority of funds. Two states plus the District of Columbia were granted extensions for further work on their preparedness plans.

Bioterrorism Grants Funding Status (as of August 28, 2002)	
Completed Plans & Received Total Funding <ul style="list-style-type: none"> ▪ 26 States ▪ 3 Cities 	<u>States</u> <ul style="list-style-type: none"> <li style="width: 33%;">• Arizona <li style="width: 33%;">• Louisiana <li style="width: 33%;">• Oregon <li style="width: 33%;">• California <li style="width: 33%;">• Maryland <li style="width: 33%;">• Pennsylvania <li style="width: 33%;">• Delaware <li style="width: 33%;">• Massachusetts <li style="width: 33%;">• Rhode Island <li style="width: 33%;">• Florida <li style="width: 33%;">• Minnesota <li style="width: 33%;">• South Carolina <li style="width: 33%;">• Georgia <li style="width: 33%;">• Nebraska <li style="width: 33%;">• South Dakota <li style="width: 33%;">• Hawaii <li style="width: 33%;">• Nevada <li style="width: 33%;">• Vermont <li style="width: 33%;">• Idaho <li style="width: 33%;">• New Hampshire <li style="width: 33%;">• Washington <li style="width: 33%;">• Indiana <li style="width: 33%;">• New Mexico <li style="width: 33%;">• West Virginia <li style="width: 33%;">• Iowa <li style="width: 33%;">• New York <u>Cities</u> <ul style="list-style-type: none"> <li style="width: 33%;">• Chicago, IL <li style="width: 33%;">• New York City, NY <li style="width: 33%;">• Los Angeles, CA
Most Funds Received, Remaining Disbursements Pending Further Plan Development <ul style="list-style-type: none"> ▪ 22 States 	<u>States</u> <ul style="list-style-type: none"> <li style="width: 33%;">• Alabama <li style="width: 33%;">• Maine <li style="width: 33%;">• Ohio <li style="width: 33%;">• Alaska <li style="width: 33%;">• Michigan <li style="width: 33%;">• Oklahoma <li style="width: 33%;">• Arkansas <li style="width: 33%;">• Mississippi <li style="width: 33%;">• Tennessee <li style="width: 33%;">• Colorado <li style="width: 33%;">• Missouri <li style="width: 33%;">• Texas <li style="width: 33%;">• Connecticut <li style="width: 33%;">• New Jersey <li style="width: 33%;">• Virginia <li style="width: 33%;">• Illinois <li style="width: 33%;">• North Carolina <li style="width: 33%;">• Wisconsin <li style="width: 33%;">• Kansas <li style="width: 33%;">• North Dakota <li style="width: 33%;">• Wyoming <li style="width: 33%;">• Kentucky
Extensions to Complete Development of Plans <ul style="list-style-type: none"> ▪ 2 States ▪ 1 District 	<u>States</u> <ul style="list-style-type: none"> • Montana • Utah <u>District</u> <ul style="list-style-type: none"> • Washington, DC

Source: U.S. Department of Health and Human Services. Information on state funding amounts available at <http://www.hhs.gov/news/press/2002pres/20020606b.html> and <http://www.hhs.gov/ophp/funding/>

Health Tracking

Over the past year, our country's chronic disease tracking and exposure monitoring capacity has also been expanded. In one action, as mentioned above, Congress provided \$12 million to track the health effects suffered by the first responders and cleanup workers at Ground Zero and the Pentagon. These funds are welcome and necessary, but similar services should be available to everyone who lives and works in these areas.

In another action, in its Fiscal Year 2002 health appropriations, Congress provided \$17.5 million to begin state-level health tracking pilot programs in 15 states. The CDC solicited proposals for these state programs in July; final awards are expected this fall.

In its Fiscal Year 2003 budget request, the Bush Administration indicated that health tracking is a priority of the CDC. And in the FY03 funding process, the Senate Appropriations Committee recently approved \$30 million to launch more state health tracking pilot programs. The House of Representatives is expected take action on this measure in early September.

The data these programs produce will help foster better strategies for preventing disease and responding to health crises.

These initiatives will build on existing tracking programs in the states or create them where they do not exist, all with the ability to coordinate with an eventual nationwide network. The consistent, comparable data that these programs will produce will provide information that health professionals need and ultimately will help foster better strategies for preventing disease and responding to health crises.

Funds Available for State Health Tracking Programs

State and local health departments can now apply for federal funding from the Centers for Disease Control and Prevention (CDC) to begin or expand their state health tracking programs. The CDC grants, announced in the July 18, 2002 *Federal Register*, will help enhance or develop chronic disease tracking in 15 states and coordinate them with a future nationwide network.

As directed by Congress, the CDC is offering approximately \$10 million to establish or enhance 15 state pilot programs. The grants may be provided to any of the 50 states, the District of Columbia, or the local health departments of Chicago, Houston, New York City, Philadelphia, and Los Angeles County.

The CDC is also offering \$2 million to establish three "Centers of Excellence" at Schools of Public Health to support research and expertise for state health tracking. The grants will be awarded in September. Information on the grants can be found on TFAH's home page: www.healthyamericans.org.

Ongoing Challenges for Improving Public Health Preparedness

Over the past year, all levels of government have shown an increased level of commitment to our public health defenses, but much more action is needed.

Chemical Threats

The public health improvements envisioned by Congress and the President, and promoted by the CDC, emphasize preparation for a possible terrorist attack using biological agents like anthrax or smallpox, but not enough has been done to deal with potential attacks using *chemical* agents.

This is a troubling oversight in light of the fact that more than 850,000 facilities across the United States use hazardous chemicals like chlorine, cyanide, and phosgene. Many of these substances are transported in railcars and trucks on our roadways every day. Industrial chemicals can produce immediate or delayed effects and are easier to access, handle and use than biotoxins or chemical weapons.

For all of these reasons, efforts to protect our communities from biological terrorism must be expanded to also account for the risk posed by chemicals and potential acts of chemical terrorism.

Chronic Disease

Beyond the threat of terrorism, families are threatened every day by chronic diseases like cancer, lupus and asthma. As noted above, many of the people and facilities needed to deal with terrorist health threats are the same ones needed to combat these ongoing health concerns. Chronic illnesses collectively are the number one killers of Americans today, and they cost our society more than \$325 billion each year. Many of these illnesses are on the rise, even though most of them are preventable.

Congress' post-9/11 investments in the nation's public health fundamentals are extremely welcome and necessary. But they need to be followed up with a sustained, long-term commitment to a multi-purpose public health protection system.

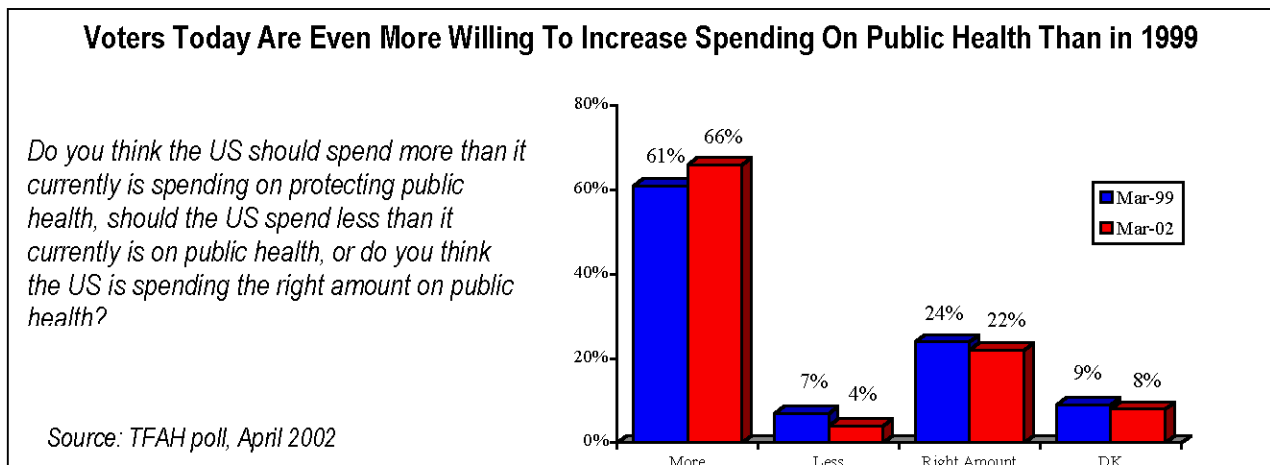
State and Federal Budget Deficits

Another area of potential concern is the risk that federal funding for bioterrorism preparedness will be diverted for other purposes in states that experience budget shortfalls. Equally worrisome is the possibility that states will not use the federal money to build new and additional "conventional" public health capacity, and might actually reduce funding for such vital activities as vaccines, tobacco cessation and chronic disease prevention efforts. Additionally, many state health departments have been prohibited from hiring new personnel because of worries that funding will not be available in the future to sustain new positions.

The late 1990s tobacco settlement, while not funded by taxpayers, is a good example of how money targeted for improving communities' health can be viewed as a pot of gold

by state legislators. For example, Wisconsin's state legislature used most of its future proceeds from the tobacco settlement to meet its budget needs in one year, foregoing sustainable funding for improving health through cessation or other tobacco-control programs.

At the federal level, renewed budget deficits will place new pressures on health programs and could lead future Congresses to cut public health expenditures. Yet a public opinion poll commissioned by Trust for America's Health shows that voters see public health spending as a significant spending priority.



Conclusion

The task of revitalizing our nation's long-neglected public health system to meet the full range of modern health threats is more than a one-year, one-shot deal. The health and safety of nearly 300 million Americans depends on an ongoing commitment at all levels of government to fully fund our public health fundamentals.

Specifically, we need:

- More and better-trained public health professionals;
- A state-of-the art early warning system and communications network;
- Tracking of diseases and monitoring of environmental exposures; and
- Better equipped laboratories.

America's public health system is vital to our defenses against biological and chemical attacks, as well as ongoing serious health concerns like cancer and asthma, and the unforeseen health emergencies of tomorrow. The United States needs to make a long-term commitment to strengthening the fundamentals of our public health system. We cannot afford to do less.

For more information, visit Trust for America's Health web site:
www.healthyamericans.org.

Other Sources of Information:

“Backgrounder on Chemical Terrorism: Preparedness, Prevention and Public Health.” Report by Trust for America’s Health, March 2002.

<http://healthyamericans.org/campaigns/bioterrorism/>

“Public Health’s Infrastructure: A Status Report.” Report by the CDC, March 2001.

http://www.phppo.cdc.gov/documents/phireport2_16.pdf

CDC National Center for Environmental Health (NCEH)

<http://www.cdc.gov/nceh/default.htm>

This site has information/education resources on a broad range of topics, including asthma, birth defects, radiation, sanitation, lead in blood, and more.

Agency for Toxic Substances and Disease Registry (ATSDR)

<http://www.atsdr.cdc.gov/>

ATSDR is an agency of the U.S. Department of Health and Human Services that seeks to prevent exposure and adverse human health effects and diminished quality of life associated with exposure to hazardous substances from waste sites, unplanned releases, and other sources of pollution present in the environment.

Association of State and Territorial Health Officials (ASTHO), Anti-Terrorism Preparedness Task Force

<http://www.astho.org/phiip/responds.html>

This site offers information relating to ASTHO’s anti-terrorism preparedness policy and its programmatic and legislative priorities.

Centers for Disease Control and Prevention, Public Health Emergency Preparedness and Response

<http://www.bt.cdc.gov/index.asp>

The CDC site for issues concerning bioterrorism.