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FEDERAL EFFORTS TO COORDINATE AND PREPARE THE UNITED STATES FOR BIOTERRORISM: ARE THEY READY?

JOINT HEARING

BEFORE THE

GOVERNMENTAL AFFAIRS
COMMITTEE
UNITED STATES SENATE

AND THE

INTERNATIONAL SECURITY, PROLIFERATION
AND FEDERAL SERVICES SUBCOMMITTEE

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FEDERAL EFFORTS TO COORDINATE AND PREPARE THE UNITED STATES FOR BIOTERRORISM: ARE THEY READY?

WEDNESDAY, OCTOBER 17, 2001

U.S. SENATE,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
AND THE SUBCOMMITTEE ON INTERNATIONAL
SECURITY, PROLIFERATION, AND FEDERAL SERVICES,
Washington, DC.

The Committees met jointly, pursuant to notice, at 9:37 a.m., in room SD–342, Dirksen Senate Office Building, Hon. Joseph I. Lieberman, Chairman of the Committee, presiding.

Present: Senators Lieberman, Thompson, Akaka, Levin, Dayton, Carnahan, Durbin, Domenici, and Collins.

OPENING STATEMENT OF CHAIRMAN LIEBERMAN

Chairman LIEBERMAN. The hearing will come to order. I thank all of you for being here, particularly our witnesses.

This morning, this Committee will try to provide answers to the urgent question of whether our government at all levels is organized adequately to respond to biological and chemical attacks on the American homeland. Senator Thompson, who will be here in a few moments, and I are pleased to hold this hearing in conjunction with the Subcommittee on International Security, Proliferation, and Federal Services and its able Chairman and Ranking Member, Senator Akaka of Hawaii and Senator Cochran of Mississippi.

As we are now painfully and, in this Capitol Hill area, personally aware, the past week has brought one story after another of anthrax attacks, biological attacks, endangering hundreds of innocent civilians and actually infecting over a dozen people, and by this morning's calculation, actually, a significant number more throughout the United States.

Here on Capitol Hill, a wing of the Hart Building was quarantined. Senators and staff were undergoing testing and mail delivery came to a halt when anthrax was identified in a package delivered to the Majority Leader's office. We have received word today, which I presume will be dealt with in an announcement that will be made this morning, that a number of members of Senator Daschle's staff are now known to have been infected by the anthrax that came to his office and they are being treated appropriately.

These incidents and the countless false alarms and hoaxes people are experiencing daily have put many Americans into an under-

standable state of high anxiety over this threat to our public health.

This morning, I hope, and am confident, that we can calmly discuss the facts, offer reassurance to the public that the Federal Government is on duty and rapidly improving our preparedness to respond to whatever may come. The sad fact is that we have now entered an era when the previously theoretical, with regard to chemical and biological attacks, has become altogether real.

Although it is clear to me that our government still has a lot of work to do, the reassuring fact is that the response of our Public Health System over the last 2 weeks is just about what we would have hoped it would be. There has been quick detection, identification, treatment, and containment of the problem and that has clearly and thankfully minimized the casualties.

I want particularly to commend our first witness, Secretary of Health and Human Services Tommy Thompson, for his leadership in responding to this crisis, in calming a tense Nation, and in urgently acting to improve our response systems to this now very real threat.

The Governmental Affairs Committee is an oversight committee. We are charged with the specific mandate to ensure that the Federal Government is organized effectively to fulfill its responsibilities. In today's hearing, therefore, we are going to focus on the organizational aspect of this new threat, and that is the question of whether we are organized and coordinated adequately, since there are scores of Federal bureaus and departments that are involved and will continue to be involved in responding to bioterrorism or chemical terrorism.

Ten major agencies and dozens of bureaus, including the Defense Department and the intelligence agencies, are responsible for, among other things, threat assessments, surveillance of disease occurrences, surveillance of food and water supplies, developing and stockpiling vaccines, and assisting State and local governments in planning, training, and responding.

Secretary Thompson's Department itself has six different agencies involved in bioterrorism and chemical terrorism, which is why, Mr. Secretary, I think it made such good sense and was an act of real leadership for you to appoint a Department coordinator last July, before the current threats became real.

This morning, we are also going to look at coordination between the Federal Government and State and local governments and their public health systems because these are the people on the front lines of homeland defense and they will be called upon to respond first.

The possibility of a biological or chemical attack poses a completely different kind of threat, requiring a different kind of response, from a different set of responders than the one we witnessed on the dark day of September 11. That day, events were visibly and immediately seen by, in fact, millions of people on television and the catastrophe required conventional fire, rescue, and medical capabilities, obviously on a large and huge scale.

On the other hand, a biological or chemical attack might well unfold in a very different way. It might not be immediately visible. It could emerge slowly in different locations, in neighborhoods, of-

fices, workplaces, in mailrooms, doctor's offices, clinics, emergency rooms, and public health department laboratories. And a completely different set of people, mostly medical personnel, would be the first to respond. They would be our first line of defense.

Some biological agents, such as smallpox, are contagious and would spread rapidly throughout the population. A government exercise simulating a biological attack conducted earlier showed that such diseases could, in fact, greatly challenge State and local medical capabilities to respond.

But there is some better news here and that is that we do have systems and equipment in place to respond to an attack of this sort, and as we are going to hear today, the Federal Government has really begun to organize the pieces that will be needed to contain biological or chemical attacks that might occur on a large scale.

The Health and Human Services Department is, for instance, developing an Internet-based surveillance system to gather data on disease incidents that would allow a real-time analysis. The Pentagon is developing civil support teams within the National Guard in every State. And State and local officials are increasingly well trained to deal with these attacks.

But the systems that are in place clearly need to be strengthened. Real preparation for these types of attacks did not even begin at the Federal level until the late 1990's, so many agency plans and programs are still incomplete. There is duplication and overlap because of traditional government stovepipe structures and the inevitable turf battles that accompany this kind of overlap. Add to this the fact that there does not appear to be one single central executive agency involved and it is hard not to conclude that the Federal Government has a series of organizational decisions to make, and quickly.

Federal support for State and local governments and health care systems must also grow to meet the growing challenge. These are the agencies that employ the local heroes, the emergency medical technicians, the police, the fire fighters, and the hospital emergency room workers.

While Federal funding for response to terrorist attacks involving biological and chemical weapons has increased in the past 3 or 4 years, not enough of that, from what I can see, is reaching the State and local levels. We need, therefore, to build a robust Public Health System now, capable of aggressive surveillance programs, early warning systems to quickly detect the onset of illnesses and then respond immediately. We need adequate inventories of the appropriate pharmaceuticals and we need better coordination and support for State and local governments and their health care systems.

It seems to me that, ultimately, only the Federal Government can ensure that the capabilities to protect our citizens in the event of biological and chemical attack are in place, and I hope this hearing and, in fact, this Committee can help the Federal Government do that as quickly as possible.

Senator Thompson.

OPENING STATEMENT OF SENATOR THOMPSON

Senator THOMPSON. Thank you very much, Mr. Chairman, and I thank Secretary Thompson for being with us. I, too, want to commend him for the steadying influence he has had on all of this. It is a delicate balance that he and others in the administration have to walk in telling the truth to the American people on the one hand and not being unduly alarmist on the other, and frankly, I think you are doing an excellent job of that.

Last Friday, we held a hearing to discuss the structure of the new Homeland Security Office in the administration. Today, we look a little closer at some of the more specific challenges that the Director of that office will face with regard to biological and chemical attacks.

Concerns about these issues are not new. Two months ago, the International Security, Proliferation, and Federal Services Subcommittee held a hearing to discuss our level of preparedness for a biological attack. There have been over ten different hearings held in Congress this year on the biological and chemical threat and the Federal Government's response capabilities. Moreover, in the "Government at the Brink" report I released earlier this year, I noted that combatting terrorism was an area of potential overlap and fragmentation, issues that I believe we will be discussing more today.

While these concerns may not be new, there is a new sense of urgency. There have been anthrax attacks now in three States, as well as here in Washington. Our Committee office was shut down yesterday and again today because of its proximity to Senator Daschle's office, and our staff has had to undergo testing. Mr. Chairman, your own personal office has been shut down.

Clearly, we no longer have the luxury of time to deal with the bioterrorism threat and our government's response. The challenge we have before us is to determine how we can, at the Federal level, best prepare our country for chemical and biological attacks.

As a Nation, we do have certain priorities in this area. First, ensuring that local officials are prepared for an attack. Especially in dealing with a biological attack, the first responders on the first line will be the local medical personnel and community public health officials. How well trained and ready they are will be the biggest factor in our success or failure in dealing with these attacks.

Second, the Federal Government must provide proper support to local first responders in the event of an attack. That support could come in the form of response teams, pharmaceutical supplies, law enforcement, as well as other efforts.

And third, the Federal Government can continue to provide research to aid in the surveillance, detection, and treatment for biological and chemical attacks.

The good news is that there are many Federal agencies working on all of these issues. The bad news is that there are many Federal agencies working on all of these issues. As GAO recently stated in a report, coordination of Federal terrorism research preparedness and response programs is fragmented. Several different agencies are responsible for various coordination functions, which limits accountability and hinders unity of effort.

I think it is probably appropriate to point out that this is not true just with regard to this issue of terrorism. It is endemic throughout government. We are just simply following a familiar pattern.

In our "Government at the Brink" report, we listed examples of program overlap and fragmentation and we listed and discussed in some detail with numbers problem areas: Border patrol; combatting terrorism was second; community development; drug control, prevention and treatment; early childhood development; economic development; education; environmental programs; Federal land management; Federal property management; financial regulation; food safety; foreign relations; homelessness; international trade; and law enforcement—at least 45 different Federal agencies conduct Federal criminal investigations; military acquisitions; military health care; nuclear health and safety; people with disabilities, research and development; rural development; satellite control systems; statistical programs; teen pregnancy prevention; and youth programs. All of these have overlap and duplication problems.

We follow a familiar pattern in our country, it seems. We ignore for a long time clear and present dangers. We have been having hearings and being told about these things for at least a decade, and during all that time, we add program on program on program. Then we get our attention and we want to go in and do something fast and we begin to consolidate, but just with regard to that particular area that we are having a problem with at that particular point. So we are following a particular pattern here.

But other problems exist. The Federal Government tends to spend most of its resources at the Federal level rather than on the front lines. As one of our witnesses today, Dr. Smithson, noted in her book on this subject, just 3.7 percent, or $315 million of the overall $8.4 billion counter-terrorism budget in 2000 went to the front lines in the form of training, equipment grants, and planning assistance. She says, "Bluntly put, an absurdly small slice of the funding pie has made its way beyond the beltway." We are spending a great deal of money on this problem and we will need to make sure it is spent more efficiently.

Also, the large number of Congressional committees asserting jurisdiction in this area has resulted in several different agencies receiving authorization for activities that overlap.

So I look forward to hearing from our witnesses today and I hope we can discuss not only what problems may exist with regard to coordination and fragmentation in our fight against biological and chemical terrorism, but also ways that we can improve the efficiency and effectiveness of the Federal response to such attacks. Thank you, Mr. Chairman.

Chairman LIEBERMAN. Thank you, Senator Thompson, for that statement.

I would like to now call on the Chairman of the relevant Subcommittee, Senator Akaka.

OPENING STATEMENT OF SENATOR AKAKA

Senator AKAKA. Thank you very much, Mr. Chairman. I am delighted to be here and I want to thank you for holding this joint hearing. I want to welcome our Secretary, Mr. Thompson, and add

my commendation to what you are doing for bringing better understanding to the problems that we are facing and bringing also a calming effect on the people of our country and I thank you for that.

The Subcommittee on International Security, Proliferation, and Federal Services, which I Chair, has been working on bioterrorism for a long time. In July, the Subcommittee had a hearing on FEMA's role in managing bioterrorist attacks and the impact of public health concerns on bioterrorism preparedness. Representatives from FEMA and HHS discussed the activities underway by dedicated Federal employees across the government to prepare our communities for a biological crisis.

We learned that, contrary to current press reports, the Federal Government is not unprepared, as evidenced by the rapid response of the CDC and FBI to the anthrax exposures in Florida and New York. However, preparedness levels are not uniform or consistent across the United States. There are considerable and serious problems. While not unprepared, we are clearly under prepared.

Today, I plan to introduce three bills that will deal with some of these problems. I would welcome any of my colleagues that would like to join me in these initiatives. We lack the tools to monitor the air, water, and food supply continuously in order to detect rapidly the presence of biological agents. One bill will increase our efforts to develop the necessary tools to minimize the impact of bioterrorism by reducing the number of people exposed and alerting authorities and medical personnel to a threat before symptoms occur.

The second measure addresses a part of the larger question as to how our health care workers are prepared and trained for bioterrorism or any biological crisis. Senator Rockefeller and I propose using the existing emergency communications infrastructure, disaster training program, and community partnerships within the Nation's 173 VA hospitals to train both VA hospital staff and local health care providers.

The third piece of legislation addresses a related but distinct set of concerns, the safety of our agriculture. I will introduce the Biosecurity Agricultural Terrorism Act of 2001. This bill will enhance Federal efforts to prevent, prepare, plan, respond, and recover from acts of agricultural terrorism. It would do the same for naturally occurring agricultural epidemics by prioritizing efforts, authorizing funding, and establishing new policy guidelines. The measure addresses risks and gaps in our law on foreign biosecurity, agricultural monitoring and surveillance, response and recovery efforts, vaccine treatment research, and other aspects of biosecurity.

Our proposals address several critical parts of the puzzle we are to solve. A complex Federal interagency process governs our preparation for bioterrorism and naturally occurring medical crises. The Nation's response to current threat must strengthen and augment existing Federal programs, minimize confusion or duplicity in program efforts, and work to prepare all communities, from the largest city to the smallest rural town, for biological incidents.

During our hearing in July, Dr. Tara O'Toole of the Johns Hopkins Center for Bio-Defense Studies cautioned that we may have spent too much time asking who is in charge. Identifying one single agency that commands all resources is not as essential for respond-

ing to deliberate or natural outbreaks where the first line responders practice constantly in their primary responsibility, and that is caring for patients. We must ensure that these new first line responders, doctors and nurses, have the training, tools, and resources necessary to respond immediately to an incident and the capacity to cope with the several hours or days it will take before Federal help can arrive.

Again, I would like to thank our distinguished Chairman for convening today's hearing and our witnesses for taking the time to be with us today. Thank you very much.

Chairman LIEBERMAN. Thanks very much, Senator Akaka.

With the indulgence of the Members of the Committee, I would like to now go to Secretary Thompson. When we go to the first round of questions, we will add extra time for each Senator so that the Senator can make an opening statement if he or she wishes before asking questions.

I also will note for my colleagues that I received a note that at 10:30, there is a meeting, a bipartisan caucus for all Senators who wish to attend regarding the latest developments in this matter right here on Capitol Hill, particularly in the Hart Building, with regard to employees of Senator Daschle's office. But it would be my current intention to continue, certainly to hear Secretary Thompson's testimony and to allow Members of the Committee to question you, and hopefully we can get briefed later on as our colleagues will be at 10:30.

Secretary Thompson, again, you just seem to me to be the right man in a tough job at the right time. I appreciate what you have done and look forward to your testimony and we all look forward to working with you in the days and months ahead.

TESTIMONY OF HON. TOMMY G. THOMPSON,[1] SECRETARY, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Mr. THOMPSON. Thank you very much, Mr. Chairman. It is an honor for me to appear in front of your distinguished Committee. Senator Thompson and Senator Akaka, it is an honor to appear in front of this joint Committee and all distinguished Members of this body.

Thank you very much for inviting me to discuss the role of the Department of Health and Human Services and the Federal Government's efforts to coordinate, prepare for, and respond to a biological or chemical terrorist attack.

In the wake of September 11 and the recent anthrax cases in Florida, New York, and here on the Hill, there are significant questions about our preparedness, our overall coordination within government, and, yes, our ability to respond. Let me make one thing clear. The administration is absolutely committed to responding to bioterrorism quickly in a coordinated and effective manner.

Our recent efforts on September 11 demonstrate that commitment. By the end of that painful morning, I had ordered activation of the entire National Disaster Management System, including notification of all of its 7,000 volunteer health workers and 2,000 hospitals. Those 7,000 volunteer medical personnel are distributed to

[1] The prepared statement of Mr. Thompson appears in the Appendix on page 77.

90 medical teams throughout the United States. We were able to get 50 tons of medical supplies to New York City in about 7 hours. Our schedule is 12 hours. We did it in 7 hours, and even with the airlines shut down. Within a couple of days of the terrorist attack, we had 700 doctors and specialists on the ground in New York and Pennsylvania and in the Pentagon.

Let me say how very proud I am of the Department of Health and Human Services, whose committed health care professionals and support staff made a decisive difference in bringing help and healing to so many people in the wake of the attack on America.

So, as I have stated before, the Department of Health and Human Services is prepared to respond. But as I have also said, there is more we must do to strengthen our ability to respond. We need to get stronger. Coordination with our Federal, State, and local partners is without question an area that I take personally, very seriously.

At the Federal level, President Bush has made bioterrorism preparedness a priority, first asking Vice President Cheney to develop a coordinated domestic preparedness plan, and recently creating the Office of Homeland Security.

Let me outline for you this morning what steps we are already taking. HHS is the lead Federal agency for the public health response to any biological or chemical attack. We are working vigorously with our Federal partners to coordinate domestic preparedness, the Departments of Defense, Justice, and Veterans' Affairs, and, of course, the Federal Emergency Management Administration, commonly referred to as FEMA.

We have also made great progress in utilizing the expertise, the resources, and the technical support within the Federal Government. For example, HHS works with the VA on purchasing drug purchases to supplement our Department's pharmaceutical supply. Together, HHS and VA are building the stockpile effectively.

And we have partnered with the Department of Defense in creating our National Medical Response Teams, which are specialized teams capable of treating thousands of individuals exposed to chemical, biological, radiological, or nuclear attack.

As many of you know, I was particularly concerned about this issue when I came to Washington. I was told many times that our bioterrorism efforts needed substantial improvement. I read the GAO reports that have already been alluded to this morning by Senator Thompson and regarded them as the measure against which our efforts could be and should be evaluated. Our work over the past 9 months had been performed in light of the reports' recommendations.

I moved our bioterrorism preparedness efforts into my immediate office upon being selected Secretary of Health and Human Services and I appointed the gentleman on my right, Dr. Scott Lillibridge of CDC, one of the Nation's leading experts on bioterrorism, to head the Office for National Security and Bioterrorism. His office is on my floor in the HHS building.

And I went out and assembled a team of experts from throughout the Department of Health and Human Services, led by Dr. Lillibridge, that now are working 24 hours a day, 7 days a week, to coordinate the Department's activities in responding to public

health needs. They are working out of a conference room that we have remodeled just a few steps from my office so I can be continually updated on the latest developments. They also are coordinating HHS's communications with the other departments within the Federal Government to ensure that all of us have the latest information available.

We also have assembled a team from other agencies who are also spending time in our conference room.

I have announced several weeks ago that I also was creating an advisory committee to my office headed by Dr. D.A. Henderson, who is the individual that led the fight to eradicate smallpox, to advise the Department on bioterrorism activities and State and local preparedness. And since I have announced him, he has been in my office every day. I do not know if he has a real job or if this is his full-time job, but he is there every single day helping us.

I am also reaching out to State and local governments, as well as public health officials. For example, this past Saturday, I called together via the teleconference all the States' public health departments, our experts at CDC, and those in my immediate office to discuss State and local preparedness for combatting bioterrorism.

Tomorrow, Dr. Jeff Koplan of the CDC and myself will be doing a simultaneous video conference and webcast with members of the American Medical Association and the American Hospital Association to be able to answer questions from physicians, nurses, and other health professionals concerning how to recognize and also how to treat anthrax.

Then on Friday, I will be speaking to our Nation's governors, also by teleconference, and discuss with them how to rapidly improve our capacity for responding to bioterrorism. And next week, I will be doing the same with our country's mayors on the same subject.

Continuing to improve and better coordinate the efforts at the local, State, and Federal levels is truly the best way to ensure an effective response, and at the same time reassure the public. We are also working aggressively to strengthen our readiness and response, but we need your help, Senator and all Members of this Committee, as well as the entire Congress.

Bioterrorism has not, and I want to underscore this, has not been a high fiscal priority in the past and we need to move aggressively. That is why the President is today requesting an additional $1.5 billion to combat terrorism, to strengthen our ability to prevent and respond to a bioterrorism attack. President Bush's request will result in more than a six-fold increase above the $300 million Congress appropriated in fiscal year 2001. President Bush has from his first days in office made a serious commitment to addressing the issue of bioterrorism, and the President's fiscal year 2002 budget provides HHS anti-bioterrorism initiative with $345 million, which is also a 20 percent increase over the previous year.

But with the events of September 11—none of us could have expected that—the President has called for an additional $1.5 billion in Federal funding for those areas most critical to our ability to respond to bioterrorist threats. Let me outline the areas in which we are focusing our efforts.

First, pharmaceuticals. We must accelerate the production of vaccines and antibiotics and we must invest in essential programs to

ensure the speedy and the orderly distribution of antibiotics and other supplies in the event of a biological event. The President's proposal includes $1.2 million for this activity and will be used to prepare for all contingencies. These funds include $643 million to expand the National Pharmaceutical Stockpile and $509 million to speed the development and the purchase of smallpox vaccine. The President's request also includes funding to make sure the stockpile is ready, for the immediate shipment and the deployment and use by trained professionals.

We are going to add four more push packs. Each one of the push packs are now located in eight strategic locations. Each of those consists of 50 tons of pharmaceutical supply. We want to increase that by four, and that will add an additional 200 tons of medical supplies. These push packs include no less than 84 separate types of supplies. They include things like antibiotics, include Cipro, needles and IVs, a tablet counting machine, oxygen mask, and so on.

Second, let me emphasize again that much of this new money is also needed to build on our partnership with local and State governments, an issue that all of you on this Committee are passionate about and I thank you from the bottom of my heart for that passion.

For example, the President is calling for $88 million to expand HHS's capacity to respond to bioterrorist incidents, including $20 million for CDC's rapid response and advanced technology and specialty labs, which they badly need, which provide quick identification of suspected agents as well as technical assistance to State labs.

Also included in this amount is $20 million to support additional expert epidemiologists and these teams that can be sent to States and cities to help them respond quickly to infectious diseases. One of those teams was in the Capitol last night until 2 o'clock this morning working with the Majority Leader, along with Scott Lillibridge, and I was in contact with them up until midnight, when I left contact.

And then respond quickly to infectious diseases, the outbreaks and other public health risks. I believe every State should have at least one federally funded epidemiologist who has graduated from the Epidemic Intelligence Special Service training program at CDC.

The President is also asking for $50 million to strengthen also the Metropolitan Medical Response System, which will be able to increase the number of large cities that are able to fully develop their MMRS units. These are the medical and public safety response units. We have 97 right now. We would like to go to 122 with the extra money. It is imperative that we work closely with cities to ensure that their MMRS units have the proper equipment and, yes, proper training.

We are also providing $50 million to assist hospitals and emergency departments in preparing for and responding to incidents requiring mass immunization and treatment, and we are providing $10 million to augment State and local preparedness by providing training to State health departments on bioterrorism and emergency response.

The President is also requesting $40 million to support early detection surveillance to identify potential bioterrorism agents, which

include web-based disease notification to the health community nationwide, which is so important in order to hook up with the local communities, local health departments, and the State health departments. This effort will also provide for the expansion of a very successful health alert network. We have 37 States hooked up right now. We want to get to all 50, and then we would like to hook up to the local health departments. It is going to help provide early detection of disease to 75 percent of the Nation's 3,000 counties.

We are providing $15 million to support increased capacity in no less than 78 laboratories in 45 States. This funding will enhance our ability to identify and detect all critical biological agents, and we are implementing a new hospital preparedness effort to ensure that our health facilities have the equipment and training they need in order to respond to mass casualty incidents.

Third, in addition to purchasing pharmaceuticals, we are committed to the development and the approval of new vaccines and new therapies. For example, the Food and Drug Administration is working closely with the manufacturer of ciprofloxacin, commonly known by the brand name Cipro, to make certain that firm, Bayer, can safely and rapidly increase its production of that drug, which is used in the treatment of anthrax victims. I was in contact with Bayer yesterday and they have announced, as of yesterday, they will be able to produce 200 million tablets within the next 90 days.

Let me also announce that the FDA is officially approving today the use of two additional generic antibiotics for the treatment of anthrax, doxycycline, and penicillin. Because these drugs are available in generic forms and produced by several manufacturers, they will be relatively inexpensive and readily available. The FDA's approval will include instructions on what dose to use and how long to treat the inhalation form of anthrax, and I would like to quickly point out that we have found that of all the anthrax that we have received so far and been tested, all of them are sensitive not only to Cipro, but also to doxycycline and also to penicillin. So let me again stress that there is no need for anyone to stockpile any drugs. We have the drugs that we need and they will be available whenever and wherever they are needed.

The fourth, food safety. The President is also requesting $62 million to enhance the frequency and the quality of imported food, to order inspections, and be able to modernize the import data system to enable us to detect tainted food. This funding will also provide for 410 new FDA inspectors to help ensure that our food is better protected.

In addition, the administration will be sending to Congress legislation to strengthen our ability to protect the Nation's food supply. This measure will require prior notice of imported food shipments, enhancing our ability to inspect food, allowing for detention of foods suspected of being tainted, and providing the flexibility for the FDA to approve drugs and other treatments for dealing with illnesses resulting from pathogens on our food.

Much of the initial burden for providing the effective medical response to a terrorist attack, of course, rests with local governments. If the disease outbreak reaches any significant magnitude, however, local resources will be stretched, and very quickly, and the Federal Government will be required to provide protective and re-

sponsive measures for the affected populations. In the testimony I have submitted to the Committee, Mr. Chairman, I have outlined the specifics of how the various departments and the agencies are working together in a coordinated effort.

So, Mr. Chairman, let me again emphasize that the administration is taking aggressive steps to make sure that our country is well protected from bioterrorism, and let me once again tell the American people the following: One, anthrax is not contagious.

Two, the government at all levels is responding to bioterrorist threats and responding well.

Third, our postal system is being monitored very carefully. People should exercise caution, and if something seems suspicious, use good judgment. But there is no reason not to send and receive letters and packages.

Fourth, be vigilant and cautious, but do not let the terrorists win by frightening us unduly. Do not let them scare you into not living your life. That would help our enemies achieve what they are trying to do, and that is terrorize American citizens.

Contemplating bioterrorism is very unpleasant, but it is imperative, and under the leadership of this Committee, this Congress, and President Bush, we are taking all the steps necessary to keep America safe in an era when biological and chemical attacks are as possible as they are unthinkable.

I want to thank you, Mr. Chairman, both Mr. Chairmen and the Ranking Minority Member and all Members on this Committee for giving me this opportunity to talk about this subject. Now I will be more than happy to answer any questions you have.

Chairman LIEBERMAN. Thank you very much, Secretary Thompson, for a reassuring and very helpful statement.

I wonder if I might suggest to my colleagues that Senator Thompson and I and Senator Akaka have 5 minutes on a first round of questioning, since we got to give an opening statement, and we will give every other Member of the Committee, shall I say at least 8 minutes, and we will go in order of arrival, which would mean, just for the information of Members, after Senator Akaka, it will be Senator Domenici, then Senator Levin, Senator Collins, Senator Dayton, Senator Carnahan, and then Senator Durbin.

Mr. Secretary, just to bring it home, and it really is right here, I wonder whether you or Dr. Lillibridge have any information you want to convey to the Committee about what has now been determined as to the infection caused by the anthrax sent to Senator Daschle's office.

Mr. THOMPSON. I would be more than happy to, Senator Lieberman. I believe it has already been publicized—we are waiting for Senator Daschle to make that notice first, but there are over 20 individuals on the staff that have the anthrax within their system, that tested preliminarily positive. We have provided at the present time 1,200 bottles of Cipro. One thousand individuals will be tested. We are going to have six nurses on hand, two pharmacists, and a doctor, and 750 tests are going to be conducted by NIH and all this is being done as we speak right now, Mr. Chairman.

Chairman LIEBERMAN. Is it correct to infer that the reason why such a large number in Senator Daschle's office were infected, larg-

er than in the other instances where anthrax has been mailed to an office, was because of what we have learned was the pure and more refined state of the anthrax that was sent to the Daschle office?

Mr. THOMPSON. You certainly can draw that conclusion, but the tests have not been finalized, so I do not want to speculate, but there is no question that this is a very serious attempt at anthrax poisoning.

Chairman LIEBERMAN. And all of the individuals, I presume, were in the Daschle office or in the vicinity of——

Mr. THOMPSON. I am not sure about that.

Chairman LIEBERMAN. Doctor, do you want to add anything here?

Dr. LILLIBRIDGE. Sir, let me add two things. One is that I would like to differentiate between being exposed and being infected.

Chairman LIEBERMAN. OK.

Dr. LILLIBRIDGE. We are telling the American people that these people were exposed, but they are not currently infected. They are, indeed, healthy and on medicine to prevent illness or prevent from becoming infected.

Chairman LIEBERMAN. Say a little more about the distinction so we understand it.

Dr. LILLIBRIDGE. When we say exposed, that means they were in an area perhaps where there was dust or a powder or in the vicinity where a letter was opened up. They may have recovered spores from their clothing or from their nasal passages. But that is a far cry and that is very different from having a bacteria set up housekeeping and creating infection and illness in the human. They are not to that stage, and indeed, with medical prophylaxis and a proper environmental follow-up, we do not expect them to move to that stage.

Chairman LIEBERMAN. That is a very important distinction.

Mr. THOMPSON. Of all the anthrax so far, we have only had four that have actually become infected.

Chairman LIEBERMAN. Infected.

Mr. THOMPSON. Two in Florida and two in New York.

Chairman LIEBERMAN. That is a very important distinction. So at this point, as far as the two of you know, none of the individuals in Senator Daschle's office——

Mr. THOMPSON. That is correct.

Chairman LIEBERMAN [continuing]. Are actually infected?

Mr. THOMPSON. Absolutely. And it is too early and they are on the necessary antibiotics and they should not become infected.

Chairman LIEBERMAN. As we learned yesterday in the briefing that Senators received, it takes a pretty significant number of anthrax spores to actually become infected.

Mr. THOMPSON. Different amounts between the three different types of anthrax. Cutaneous infection results from a break in the skin. Ingestion—you have different tainted food from animals that could get into your system, causing gastrointestinal problems, which would take less than inhalation. Inhalation anthrax, they have figured, has to have 10,000 spores enter your system in order for one to become infected, and that is a lot.

Chairman LIEBERMAN. It is very important for people to hear that, particularly since the number of those exposed is larger than in any other case that we have had thus far.

Mr. THOMPSON. That is correct.

Chairman LIEBERMAN. I wonder if either of you, and I just want to use this as a moment to try to help convey information that will be helpful to us and perhaps the public.

Mr. THOMPSON. That is very good and I appreciate this.

Chairman LIEBERMAN. No, I thank you. I wonder if you have anything to say about what we can determine about the fact that this anthrax in Senator Daschle's office was presumably more pure and refined than that sent to the other offices. Are there any conclusions we can draw about who was sending it, what was done?

Mr. THOMPSON. That is being completely investigated by the FBI, Senator. We have no knowledge of that at this point in time. We are hopeful to be able to have the FBI make some arrests and some breakthroughs, but at this point in time, it is purely speculation. And the research in the labs, there is research being done at Fort Detrick and also research being done at our labs at CDC in Atlanta and all that research and analysis will be coming forthwith to you and to other members as soon as we get it.

Chairman LIEBERMAN. A final question on my round for you about the facts here, and about this, I think there is some uncertainty, too. How difficult is it to obtain anthrax? There have been times I have heard broadcasts where people have said there are only three countries in the world that have it, perhaps certainly the former Soviet Union, the United States has some, I gather, in laboratories, and there have been allegations of other countries, including Iraq, possibly having it. But then I have also heard at different times that it exists in labs around this country in some numbers and that, therefore, that is another place that somebody sending these packages could have obtained it. So I wonder if you can help us understand how the people doing this might have obtained the anthrax.

Mr. THOMPSON. Well, there is a lot of different anthrax. A lot of it occurs naturally in the blood of animals that, once the animal dies, gets emitted into the air. It is emitted in culture. There are laboratories across America that have had anthrax and have done research and experiments on it. It could be done. There are other countries that have used anthrax and tried to use it as a weapon. They are the ones that have manufactured and milled it into a weapons grade and that, of course, is the most dangerous part.

But this anthrax that we have right now, we are still doing research on it. We do not know the exact strains or where it comes from.

Chairman LIEBERMAN. Is it fair to say that it is difficult to obtain the kinds of anthrax that has been sent to people around the country now in the last couple of weeks?

Mr. THOMPSON. It is more difficult for it to be able to be used as a poison in a letter——

Chairman LIEBERMAN. Right.

Mr. THOMPSON [continuing]. Because it clumps together.

Chairman LIEBERMAN. Right.

Mr. THOMPSON. And to be able to allow it to go up into the air requires some degree of scientific ability.

Chairman LIEBERMAN. So that is what, I presume, was noteworthy about what was sent to Senator Daschle, because the analysis of it suggested that it had been refined to a greater extent than is normally found.

Dr. LILLIBRIDGE. Mr. Chairman, let me make a few comments. You asked, where might this organism come from? Where might you recover anthrax bacteria? It is in the soil. It is a disease of the animal population. Many labs around the world investigate anthrax as it relates to the safety of herds and other kinds of animal veterinary activities.

As for the sample in question, there are a number of tests that are ongoing that will look at the size and the purity and the sensitivity. I can tell you at this time, we are aware that the sensitivity of this organism that was released in Senator Daschle's office is sensitive to ciprofloxacin, doxycycline, and penicillin—the common drugs that would be used to treat any kind of outbreak of this nature. That is, in itself, reassuring.

The issue of whether it is weaponized or where it came from may take quite a bit of strain analysis and sophisticated testing. That is ongoing with the Federal Bureau of Investigation at the lead. It is our impression from a public health safety standpoint that we have enough information in terms of its sensitivity and its purity and isolation to make sure this really is anthrax organism to guide our investigation both environmentally and make public health recommendations. As soon as that information becomes known, it will be made public as best it can.

Chairman LIEBERMAN. Fine. Just a final point of clarification. I assume it is some distance from the naturally occurring anthrax, that is, anthrax that occurs naturally in the soil or in animals, from that to the kind of powder that was sent to Senator Daschle's office.

Dr. LILLIBRIDGE. Let me just use the short answer for this. I think it shows there has been some attempt to collect it, perhaps refine it and make it more concentrated. That seems to be certain.

Chairman LIEBERMAN. OK. Thanks very much to both of you.

Senator Thompson.

Senator THOMPSON. Thank you, Mr. Chairman. Your last statement was with regard to that found in Senator Daschle's office?

Dr. LILLIBRIDGE. Yes, sir.

Senator THOMPSON. There was apparently some attempt to refine it?

Dr. LILLIBRIDGE. Well, when you have a collection of anthrax spores put into a package, that takes some effort to do that. This organism is in the soil, but getting it into spore form requires some degree of effort.

Senator THOMPSON. The GAO report of last month that someone referred to said that processing biological agents into the right particle size and delivering them effectively require expertise in a wide range of scientific disciplines. Would you agree with that, Doctor?

Dr. LILLIBRIDGE. Yes, sir.

Senator THOMPSON. So if, in fact, we do find that this was more highly refined in terms of particle size, weaponized, I guess is a

good way of putting it, then that would indicate someone had a wide range of scientific disciplines?

Dr. LILLIBRIDGE. Let me just extrapolate the process as you go through this. As the investigation unfolds and moves into either national security or law enforcement arenas, they will begin looking at the strains, the match-up, what effort went into manufacturing it, and see if they can pinpoint a source, either a geographic location or a specific stockpile or a specific strain that inhabits a certain part of the world.

Senator THOMPSON. This may be a little bit beyond——

Mr. THOMPSON. Senator Thompson, it has to be a certain size in order for it to get into the body. If it is smaller than one micron or larger than ten microns, it is not able to be inhaled properly.

Senator THOMPSON. This is all a little premature, I suppose, but indulge me with one more question. This may be beyond your purview. I have read that in order to produce especially large quantities of this powder form that would be weapons grade, if you want to call it that, that it would require substantial infrastructure. I have seen millions of dollars spent to have that kind of production capability and facilities. As a general proposition——

Mr. THOMPSON. That is absolutely——

Senator THOMPSON. Is that a correct assumption?

Mr. THOMPSON. That is our understanding, Senator.

Senator THOMPSON. With regard to the——

Mr. THOMPSON. To have a weapons grade, it could possibly have a country behind it.

Senator THOMPSON. A country would probably be behind the weapons grade?

Mr. THOMPSON. But we want to make sure that none of this is a weapons grade.

Senator THOMPSON. You want to make sure that none of it—we do not know yet with regard to this?

Mr. THOMPSON. Of the past one, it is still being tested.

Senator THOMPSON. Right. With regard to these large stockpiles that we have developed and are in the process of developing, is this going to have to be constantly replenished? Are there expiration dates on all these drugs, as we commonly understand them, and what budgetary impact will that have in these huge numbers we are talking about?

Mr. THOMPSON. We have two different systems, Senator. In the push packages, some of those will have to be replaced. But we also have a vendor marketing inventory and part of the agreement with the vendor's marketers is that their responsibility is to restore items that have used up their shelf life with new stuff and that is built right into the contract, so it is an ongoing thing. So there are some of the more durable things that are in the push package, but we also have a different system, which is called VMI, and that is brought up currently on a monthly basis and that is being conducted and supervised by CDC.

Senator THOMPSON. I see.

Mr. THOMPSON. And that is built right into our contract.

Senator THOMPSON. Mr. Secretary, there has been a lot of discussion, as you know, about Governor Ridge's position, the authority that he has or should have. With regard to all of these things that

you and your Department are doing, how do you see that fitting within his operation? How do you see your relationship and your duties and responsibilities and all these things that you are doing intersecting with what you understand his responsibilities are going to be? Is that too broad a question to answer?

Mr. THOMPSON. No, it is not.

Senator THOMPSON. Have you given some thought to it?

Mr. THOMPSON. It is a very valid question. I will give you an example. As of 4 o'clock yesterday afternoon, we had a meeting, various departments with Governor Ridge and we worked out some difficulties. He was the coordinator and we threw out questions and problems and we just had a roundtable discussion and then he would delegate, "Tommy, you take care of this one, and Madam Secretary, you take care of that problem, sir, you are responsible for this," and so on.

So his job is to coordinate and make sure that when we have problems in the public health arena, we can go to somebody like Tom Ridge and say, "This is a problem. Can you assist us with the FBI or with the CIA or with the Department of Defense and help us along?" It has been working out, I think, very effectively so far.

Senator THOMPSON. How do you foresee budget determinations? Would you expect him to have input in your decisions or would he make certain decisions in certain areas with regard to your Department? How do you see that playing out? Have you gotten into that yet?

Mr. THOMPSON. Senator, we put in this request, and I talked to Governor Ridge and I know that he talked to the President in regards to this, as I did, and we all talked to OMB. I think somebody from the President's Office, including Governor Ridge and myself, talked to OMB, and as a result of that, the request today of about $1.6 billion is in front of you.

Senator THOMPSON. Thank you. My time is expired. Thank you, Mr. Chairman.

Chairman LIEBERMAN. Thank you, Senator Thompson. Senator Akaka.

Senator AKAKA. Thank you very much, Mr. Chairman. Mr. Secretary, I am pleased to hear the President's request for $40 million to support the early detection surveillance to identify potential bioterrorism agents. This matches the authorization in my bill.

Mr. THOMPSON. And I thank you for that, Senator.

Senator AKAKA. I look forward to working with you to ensure these funds are made available.

Senator DOMENICI. Mr. Chairman, could I ask the Senator to yield for 30 seconds?

Senator AKAKA. Certainly.

Chairman LIEBERMAN. Go right ahead, Senator Domenici.

Senator DOMENICI. Mr. Chairman, we have a complication in that there is a meeting with reference to a collateral issue at 10:30.

Chairman LIEBERMAN. Correct.

Senator DOMENICI. I will come back, and if you are still here, I would appreciate the opportunity to inquire. I just wanted you, Mr. Secretary, to understand why I will not be staying here and thank you for what you have been doing. You are doing a great job.

Mr. THOMPSON. Thank you, Pete.

Chairman LIEBERMAN. Thanks, Senator Domenici. We will be here and await your return.

Senator AKAKA. Thank you. Mr. Secretary, I believe that the animal health community requires formal coordination with the HHS and CDC and I am delighted to know you are both on the same floor and there is much coordination. Currently, their interaction is on a case-by-case or a need basis. Formal and regular contact will ensure that animal health and agriculture issues are addressed by HHS and FEMA disaster preparedness.

Federal efforts should also take advantage of the expertise veterinarians have to offer, such as familiarity with anthrax. In fact, in a National Public Radio report yesterday morning, two out of the three anthrax specialists interviewed were animal disease specialists. Veterinarians could also help in detecting unusual biological events because many emerging diseases appear in animals long before humans. Additionally, animal diagnostic labs have the capacity to identify and confirm the diseases.

The bill I am introducing today establishes a senior-level official within HHS who has formal responsibility for regular contact with the animal health community. Would you please comment on current coordination efforts between HHS and the animal health community and on my proposal.

Mr. THOMPSON. First off, let me just say I like the proposal and I hope that it gets prompt action in the U.S. Senate.

Second, we are trying to coordinate very closely with the Department of Agriculture on food safety as well as animal safety wherever we possibly can.

The third thing, your analysis that veterinarians may have a tremendous amount of expertise in the disease of anthrax is absolutely correct and we have, of course, several teams of veterinarians that are involved with our Public Health System. In fact, I think we sent four veterinarian teams to the City of New York to take care of the search dogs and they were there for several weeks taking care of the dogs while they were still trying to find people alive in the rubble and our veterinarians were there to take care of them.

Five, food safety. I know it is a big concern of yours as well as my friend Senator Durbin's, and it is a real priority for me. I know it is for the Secretary of Agriculture, and I think we have to do a much better job than we have in the past in this arena and I would be more than happy to discuss that with you at any time.

Senator AKAKA. In the event of a biological terrorism event, clinical laboratories are likely to be overwhelmed with samples.

Mr. THOMPSON. We are finding that right now, Senator, and we have so many—we have thousands—I do not know how many, but we have a lot of false starts in regards to the anthrax scare and we are trying to deal with them through the Post Office Department, through the FBI, and, of course, a lot of the burden rests upon our laboratories that we have to take care of.

Senator AKAKA. I commend you on identifying that problem and also again urge you, as you have been doing, to calm the feelings of people by giving them the proper information on these samples and medicines, as well.

I believe that many areas should begin developing regional plans to assist neighboring cities or States in handling surge diagnostic lab demands.

Mr. THOMPSON. Yes.

Senator AKAKA. However, I am concerned that, geographically, remote areas like Hawaii will be at risk, and also our territories that are non-contiguous. We cannot forget that the grounding of all air traffic during the terrorist attacks on September 11 effectively isolated both Hawaii and Alaska, and our territories, for several days. In fact, some U.S. territories beyond Hawaii are having trouble getting their medical samples analyzed because they must be flown to Honolulu first.

My question is, does Hawaii have the laboratory capacity to absorb a dramatically increased sample load in the event of a biological crisis and what plans are in place to ensure that remote areas have capacity to detect and identify human diseases and plant and animal pathogens?

Mr. THOMPSON. Senator, I am not expert enough to talk about a particular lab, but let me tell you the system, how we have got it set up and how we are able to respond. We have connected with Hawaii, with Alaska, and with our labs in CDC in Atlanta and they are hooked up to the lab and we have put out the notice and we are putting out information on a regular basis to all the State health departments asking them to get involved and if they see something suspicious, they are to get us the tests, the tissues, and the blood samples as soon as possible so we can make a confirmation of what the preliminary lab may find in Hawaii or in Wisconsin or Alaska or Michigan, wherever the case may be.

And then if we find that there is any type of biological agent, we are able within hours to fly CDC teams to that particular area to help put together a State or local plan and to assist them. We have 7,000 medical professionals divided into 90 teams throughout the United States, one of which is in Hawaii, and they are able to respond very quickly. We have one in D.C. that is able to respond to the Capitol within 90 minutes. These are individuals that are experts in biological, chemical, and radiological kinds of attacks.

So we are able to respond and we also have medicines that we can distribute very quickly to any locale in the United States, including Hawaii.

Senator AKAKA. Thank you very much.

Chairman LIEBERMAN. Thank you, Senator Akaka. Senator Collins.

OPENING STATEMENT OF SENATOR COLLINS

Senator COLLINS. Thank you, Mr. Chairman.

Mr. Secretary, I want to begin my comments by thanking you for your tremendous leadership and strength during this very difficult time. There is no one in whom I have more confidence than I do you to guide our Nation and to manage our efforts to deal with bioterrorism.

Mr. THOMPSON. Thank you. Thank you very much, Senator.

Senator COLLINS. In the past, an attack with a biological agent like smallpox or anthrax seemed highly unlikely. Today, such at-

tacks not only seem frighteningly possible, but rather the question has changed from "if" to "when and where."

Mr. THOMPSON. Right.

Senator COLLINS. Intellectually, we may understand that more people die of the flu than of anthrax, but that is of little comfort because people do not try to deliberately kill us by exposing us to the flu. It is both disturbing and unsettling to all of us that we were told yesterday that the staffer who opened the mail in Senator Daschle's office and discovered the anthrax-tainted letter did exactly the right things, that she took exactly the right steps, and yet still more than 20 members of his staff have tested positive for exposure to anthrax. I think that is very unsettling to us all.

In most parts of the country, the first responders are not likely to be officials from the CDC or highly-trained epidemiologists who have the training to recognize anthrax and to trace where the infection has come from. They are much more likely to be the family doctor or the emergency room nurse or the local police officer. I am very pleased to hear of your efforts to educate our health care providers and those on the front lines.

Last week, I attended a hearing at which Dr. Henderson, whom you appointed to head your advisory committee, testified along with several other public health experts about the Florida response to the first case of anthrax, and to a person, they testified that they felt in many ways it was fortuitous that the physician had recognized that this might be a case of anthrax, that there was a lab nearby that had the capability of identifying anthrax, and that if this first case had happened in many other parts of the country, it might not have been detected as anthrax. That is of concern to me and suggests we need to do more.

I know one of your goals is to make sure that every State has a federally-trained epidemiologist. Could you tell us how many States now lack a federally-trained epidemiologist?

Mr. THOMPSON. I think there are 17 that—it is either 13 or 17, I am not sure. But first, let me thank you for your comments, and second, let me quickly point out that I think that would be a giant step forward. Luckily, the individual doctor in Florida had had training from CDC, as I understand it, and knew exactly what to look for.

I think it would be a wonderful thing for this Congress to be able to place in every health department maybe at least one individual that has EIS training, like Scott Lillibridge does from CDC, and also the regional areas would be the same, so that we have that expertise out in the field. It would strengthen the local and State health departments and Public Health Systems tremendously and I thank you for your support of that, Senator.

Senator COLLINS. I think that really is absolutely critical because they are the ones who are on the front lines and are going to have to make the right decisions before there is likely to be Federal involvement.

The second issue that you brought up in your testimony was your plan to have additional push packs, and I understand that these are the collections of medical supplies. I commend you for pushing for additional packages. I am concerned, however, about how we know what to put in these push packs because today it may be an-

thrax. Tomorrow it may be smallpox. The next day, it may be another kind of chemical rather than biological agent that is being used to attack our citizens. How do you decide what kinds of pharmaceuticals or supplies to put into these essential push packs that can be deployed on very short notice?

Mr. THOMPSON. Let me just quickly point out that we have a panel of experts that explore that. We have two systems. We have the push packs, in which there are eight strategically located around the United States, 50 tons in each one. In order to move them, it takes nine semi-trucks or a C–130 to move them, and our plan is to move them within 12 hours. In the case of New York, we were up there within 7 hours.

Then we have a second ancillary system called the VMI system which is in the process of purchasing. We purchase pharmaceuticals but we do not take delivery of them. We have individuals that supervise them and keep them current, and that is the VMI system.

So you have two different systems and you have a panel of experts that analyze on a regular basis what should be in either the VMI, and those are the ones that would have a shorter shelf life, and then the ones in the push packages.

And the third thing is that we are continuing upgrading that. As far as smallpox vaccine, that is a separate thing. That is the third thing. That is being under supervision of Wyeth and we have 15.4 million doses of vaccine. Right now, we are looking at the smallpox and seeing whether or not we could cut that 5–1 so that we could expand from 15.4 to 77 million doses of vaccine for smallpox, and NIH is doing that analysis.

Right now, the preliminary analysis is that by cutting it down from—we have tests going from 1–1, 5–1, 10–1, and 100–1, and we have found that the effective rate is around 95 percent on 5–1, but that is preliminarily. At 10–1 dilution, it is 70 percent effective, and 100–1 is 20 percent effective. So we strongly think from the preliminary analysis with our doctors at NIH and with the consultation of CDC that we could have that reduced from 5–1 and still be very effective and increase the number of doses for smallpox vaccine from 15.4 to 77 million doses.

Senator COLLINS. Thank you. I see that my time is running short. I just want to touch quickly on two other issues.

The first is the vulnerability of our food supply. I held hearings a couple of years ago that showed that our system for inspecting imported food was woefully inadequate, that less than 1 percent of shipments of imported food were inspected, but more troubling, that it was very easy for unscrupulous shippers to circumvent the inspection process and to actually reship tainted food that had been caught through the inspection system. So I want to share with you the hearings that we held and our findings and recommendations, some of which were enacted but many of which were not because of lack of resources, and I look forward to providing you with that information.

Mr. THOMPSON. I appreciate that very much, Senator, and anything you can help with in regards to improving the food safety, I would appreciate it very much. Seventy-seven million Americans last year had food poisoning, one out of four. Three hundred and

thirty-two thousand ended up in the hospital and 5,000 died because of food poisoning. So when you look at that and compare that to only four individuals that have actually been infected from anthrax, you can see that food safety and food pathogens is a much bigger problem and I thank you.

Senator I wanted to correct something that I guess—somebody sent me a note. I did not in any way imply that there were countries behind this attack on Senator Daschle and that it is weapons grade. The tests are still being done. I just said that it is very potent.

Chairman LIEBERMAN. Thanks, Mr. Secretary. I thought you made that clear——

Mr. THOMPSON. I thought I did, too, but I wanted to——

Chairman LIEBERMAN [continuing]. But I appreciate the extra clarification.

Mr. THOMPSON. Thank you.

Senator COLLINS. I see my time has expired. Thank you, Mr. Chairman.

Chairman LIEBERMAN. Thanks, Senator Collins, for some excellent questions. Senator Levin.

OPENING STATEMENT OF SENATOR LEVIN

Senator LEVIN. Thank you. First, let me thank you, Mr. Secretary, for your extraordinarily solid, thoughtful leadership. You and your agency have made a major contribution to the security of this Nation and its well-being and, hopefully, its calm consideration of the threat.

Actually, this last clarification of yours is something I was going to ask you about and that has to do with the difference between concentrated anthrax and weapons grade anthrax, if you can tell us that. You indicated, I believe, that it would take a state to produce the weaponized variety because there are millions of dollars that might be involved in the infrastructure to produce it. Would it also be safe to say, however, that a well-financed terrorist organization, if it had enough millions of dollars to produce the infrastructure, could produce weapons grade anthrax?

Mr. THOMPSON. I think we are all learning and I do not know if anybody knows for sure, but I think you can make that supposition quite easily. Maybe, Scott, you would like to——

Senator LEVIN. Maybe one word on the difference between concentrated and weapons grade, if you know it.

Dr. LILLIBRIDGE. Let me make two statements on this. First of all, the issue for health really is not so much whether it is concentrated or weapons grade, if the investment has been made in dissemination and the process to mill it down and make it distribute easily.

The distinction between concentrated and weapons grade, as we understand it, is that concentrated is what you do to simply get spores close together so you can put them in an envelope and mail them out. There are a number of ways technically to do that, depending on the investment, the time and effort, and the amount of risk you want to take at your local lab certainly would factor in.

The issue of weaponization or weapons grade is often used in the literature to evoke large industrial investment in preparing sam-

ples for dissemination. It includes milling down the spores so they are easy to disseminate. It involves coating the spores so they stay in the air a little longer. It involves research into dissemination devices, different ways to move it to the population. We do not have any of that information on this particular sample at this time.

Senator LEVIN. Thank you. I want to talk about smallpox for a minute. Our former colleague, Sam Nunn, took part in an exercise called "Dark Winter," and I do not know if you have seen the video tape——

Mr. THOMPSON. Yes, we have.

Senator LEVIN. The major finding of that study was that the Nation was very unprepared for such an attack, and so I want to ask you about what kind of preparations, in fact, have been or are in the process of being made. You just discussed the dosage issue and that is very helpful information.

In addition to seeing whether or not we can divide our 15 million doses into smaller doses, can you answer or address two issues. One, are we also attempting to produce more, and if so, what is the time line for that? And second, whatever number of doses we have, whether it is 15 million or 75 million or whatever number, what is the plan prior to any attack? Are we going to start immunizing people before evidence of an attack, given the very different nature of smallpox, or what are our plans in that area?

Mr. THOMPSON. Well, thank you very much for the question, Senator Levin. Let me point out first that when Dark Winter was being conducted, we took that experiment, that example, along with the GAO report, and when I appointed Scott Lillibridge, I said, you have got to take all of these things, find out the deficiencies we have and start correcting them, and that is why we brought Scott Lillibridge and brought in a team into the Secretary's office to address those inadequate situations and we are knocking them down as we go along.

We have accelerated, of course, since September 11 and are doing a lot more, and even though the terrorist attack was terrible for America, one good thing that came out of it, the consequence of that is that we are much better prepared to deal with a bioterrorism attack and we are getting stronger each and every day.

In regards to smallpox, I am happy to report that we are meeting with a lot of the pharmaceutical companies. In fact, we are going to be discussing smallpox with four of them very soon, and we have talked to them in the past. We are going to talk to them again about purchases. We are looking to expand and purchase 300 million doses of vaccine, Senator Levin. Acambis is the company that has a contract currently with CDC to produce 40 million doses. They were not going to start producing until 2005. They now have accelerated that to 2002.

We have also talked to some other companies and we think that we will be able to purchase some smallpox vaccine and start manufacturing yet this year, Senator Levin, and we should be able to have, provided Congress goes along with the appropriation, the necessary dollars and be able to have the 300 million doses by the end of next year.

Senator LEVIN. Is it safe to say or is it accurate to say that smallpox, if it could be obtained by a terrorist, would be a more threatening substance than anthrax?

Mr. THOMPSON. There is no question because it is infectious and contagious and anthrax is not.

Senator LEVIN. Is it also your plan to begin inoculations prior to any evidence of attack?

Mr. THOMPSON. That was the second question. I apologize I did not answer it, Senator. We do not believe at this point in time that inoculation is the right thing because there are some serious side effects to inoculation of smallpox. There will be some fatalities, some inflammation of the brain, some other maladies that will come as a result of taking a smallpox vaccine.

We may sometime in the future, with consultation with Congress, set aside some of the 300 million doses of vaccine for voluntary vaccination if, in fact, Americans want to do it, but that decision has not been made. But we do want a stockpile of 300 million and that is what we are asking Congress for the appropriation to do.

Senator LEVIN. Thank you. Having been a governor, which is a tremendous asset to you, I think, in your work and working with local and State officials as a governor now is surely going to give you some really important experience in your current work. But as a former governor, you have also had knowledge in terms of how you structure an Executive Branch and I want to follow up on some of Senator Thompson's questions relative to that structure. You commented a bit on it.

There are a number of proposals in front of this Committee. One is to create a separate agency. One is to create an office in the Executive Branch of the President. I would like to ask what your ideas are in this area.

Under the present system, as you have begun to work in it, if there are differences between agencies on who should do what particular function, does Governor Ridge have the power to make a decision? I know he can make a recommendation and I know he can seek to get some kind of a consensus, but in terms of decision-making, if Governor Ridge says, "It should be done this way," and you or some other cabinet agency says, "No, we think it really should be done that way." Does he have the power to decide or is it just the power to recommend to the President?

Mr. THOMPSON. I cannot answer that, Senator Levin. I do like your comments about being governor. I never in my life thought that being governor, I was taking this job and was going to become an expert on embryonic stem cells and bioterrorism, but that has been the two examples that have really been foisted upon me.

In regards to Governor Ridge, I think he has the power. I think the President has given him that power to make the decisions, beyond just making recommendations.

Senator LEVIN. Beyond, you say?

Mr. THOMPSON. Just making recommendations. I think just the fact that the President says that he is going to be the coordinator, I cannot imagine any cabinet officer would be dumb enough to challenge that.

Chairman LIEBERMAN. Secretary Thompson, Senator Levin, I apologize for intervening. I just received a message and request from Senator Daschle that we recess this hearing for now and that the two of you come with us to the joint caucus of Senators to be part of the briefing. I apologize to my colleagues who have not had a chance to ask questions. I would ask the patience of the witnesses on the second two panels. I will definitely return and we will continue the hearing at that time.

But for the moment, in response to a request from the Majority Leader, I am recessing the hearing.

[Recess.]

Chairman LIEBERMAN. This hearing of the Senate Governmental Affairs Committee will now reconvene.

Secretary Thompson, thanks very much for staying here. I know you have got other appointments. I do not know if I would say we negotiated an agreement with Senator Daschle that we would leave Dr. Lillibridge there and you would come back and complete your testimony.

Mr. THOMPSON. I think Senator Daschle got the better part of the deal over you, Senator Lieberman. [Laughter.]

Chairman LIEBERMAN. We are very happy and grateful that you have returned with us.

Senator Durbin, you were next. Thank you.

OPENING STATEMENT OF SENATOR DURBIN

Senator DURBIN. Mr. Secretary, thank you very much for returning. I really appreciate it under all these circumstances. I want to ask about two specific areas, one, immunizations, and the second, food safety. Let me start with immunizations.

I think what you have told us is that you are gathering together 300 million doses of smallpox vaccine, and I would like to ask some further questions about what your plans are for immunization. It is my understanding that, unlike anthrax, where exposure can be treated successfully with antibiotics, that exposure to smallpox is much more dangerous, much more likely of infection, and, therefore, you virtually have to be vaccinated in advance or you stand a high risk of being infected with smallpox. So could you tell me what your vision is in terms of this smallpox vaccine and how it will be used?

Mr. THOMPSON. Thank you. We are not going to gather. It is going to be produced and we are in the process right now of negotiating with the companies. There is one from Illinois, by the way, that is involved in the negotiations. But there are four companies that would like to get in the business of producing the smallpox vaccine.

Two, we have accelerated the production from 2005 to 2002 and I can announce today that we are going to be able to accelerate even further and we should be able to start producing smallpox vaccine as early as this year, sometime in November and December, and we will be able to produce 300 million doses of vaccine for smallpox within 12 months. So by the end of next year, we will have 300 million doses of vaccine within our inventory to be able to be used if, in fact, smallpox ever turns up.

Three, the shot, vaccine, if you get it within 2 to 5 days, it is still effective even after you have been exposed to smallpox, but the earlier you can get the vaccination, the better off you are.

Four, what we would do if a smallpox outbreak did occur, we would go in and would quarantine the area. Then we would give the vaccination to the first responders and the medical personnel first, and then we would make a concentric circle and go around and vaccinate all the individuals in that concentric circle.

Senator DURBIN. But this will not be like my first memory of public health when I was a grade school kid and learned the name Jonas Salk and we had a national effort to immunize children across America. Your idea is not to move forward with immunization unless and until there is evidence of outbreak?

Mr. THOMPSON. That is correct at this point in time. Now, there may be a decision after we have it in stock that the Congress and the Public Health System and the President will decide that maybe we should make some of the 300 million doses available for voluntary vaccination, but I do not believe that you will see mandatory vaccination because of the side effects of vaccination for smallpox. There will be some fatalities, not many, but probably one out of every million doses, there will be a fatality is what the experts predict. There will be some inflammation of the brain in some cases, a few more than fatalities. So there are some adverse side effects.

So mandatory vaccination, I do not think will take place and it is not recommended by the specialists that I have talked to. Dr. D.A. Henderson, who is going to be my science advisor, is really the father of the eradication of smallpox and he does not advise vaccination at this point in time.

Senator DURBIN. Three hundred million doses will treat how many people?

Mr. THOMPSON. Three hundred million.

Senator DURBIN. So it is one immunization that is necessary?

Mr. THOMPSON. One, but we have 15.4 million doses right now of the old vaccine and tests are being conducted on that right now in regards to diluting that 1–1, 5–1, and 10–1, and the preliminary analysis is 5–1, which would give us 77 million right now. If a smallpox epidemic occurred, we would have 77 million because the experts feel, even though the analysis has not been completed, that it would be strong enough to protect 95 percent of the American public.

Senator DURBIN. I would like to make one general observation about immunization. Since I got into the subject a few years ago and studied it, I was surprised to learn how many children are not immunized, do not receive the basic immunizations that we consider important for public health, and I was also surprised to learn that 3.6 million children currently that have health insurance are not covered for immunizations, that health insurance does not cover immunizations for over three million children in our country. I hope that we can work together on that to extend that umbrella so that kids in Chicago and Milwaukee and all over can get the basic——

Mr. THOMPSON. Senator Durbin, you are absolutely correct. Preventative health, that is No. 1. Vaccination is the best way to pre-

vent some disastrous disease and it saves money for the insurance company.

Senator DURBIN. Anthrax vaccine, is that being considered, as well?

Mr. THOMPSON. There is one company that produces anthrax vaccine. It is called Bioport. It is in Michigan. They are closed down right now for some problems and they are remodeling and reconfiguring their factory to produce anthrax vaccine. They have just applied for us to go in and to inspect it. We got that application as of last Friday. They are going to complete their renovations within the next 2 weeks. We will then go in and make the inspection and if the inspection meets FDA approval, which we think that it will, hope that it does, they should be able to be in production by November 15.

They have an exclusive contract with the Department of Defense. The Department of Defense purchases all the anthrax vaccine that they have. They have approximately 5.2 million doses of anthrax vaccine in inventory right now. Of that, about 3.3 million of it could be approved as an IND, a new drug, which means that you could use it if somebody would sign and say that it has not been completely tested and completely approved.

So there is that 3.3 million. The Department of Defense has some anthrax vaccine in their inventory, but they, of course, I am sure, will be using it for the military. And the 3.3 million or the 5.2 million which is in inventory which has not been inspected by FDA will go to the Department of Defense.

Senator DURBIN. First, let me commend you, because in your opening statement, you have come to an issue which you have now talked about several times on food safety. I believe there is a need here for us to focus on two or three levels. First, what you have suggested, take a look at the current laws. Where are they inadequate to meet the current need, safety and security?

Second, find more and higher levels of cooperation between the 12 different agencies of government that currently are involved in this. I think what will evolve from that is my ultimate goal, a single agency. But I am willing to stay on board with you for the first two steps because they are critically important.

Can you amplify any further your remarks about what we need to do to make certain that food does not become a vehicle for bioterrorism?

Mr. THOMPSON. Well, first, let me just say, Senator Durbin, I thank you, because you have been a stalwart in trying to protect the Nation's food supply. You have been a passionate advocate and I applaud you for it. I am hopeful that as a result of these bioterrorism attacks that we have had, that we will address food safety in America. We have 750 inspectors at FDA to inspect 56,000 establishments in America. Some of those establishments are only being inspected 1 out of every 4 or 5 years. Those that cause problems are inspected annually. But it still does not give me the sense of security that I would like nor you would like and we do not—we have 132 points of entry into America for food coming into America from other countries and we only have 150 inspectors, and as you can tell just by the sheer numbers, that is not enough.

Agriculture, on the other hand, has reduced the number of ports of entry down to nine, and I think that this Congress should take a look at reducing the number of ports of entry, increasing the number of food inspectors, the laboratory analysis. You and I talked about this coming over, and I was on the border as of Monday going to a food inspection station in El Paso, Texas, and take out a sample and then the sample has got to be UPS-ed up to Kansas City where it is analyzed and then the analysis is sent back. To me, that is not a very effective way to inspect food in America.

Senator DURBIN. Thank you. Thanks, Mr. Chairman.

Chairman LIEBERMAN. Thanks, Senator Durbin.

Secretary Thompson, I just want to ask you a few more questions and then we will thank you for being here, and this comes back to the focus of this Committee on organization. As we look at this, we see, as we mentioned before, literally dozens of Federal agencies that have some part to play in either preparing for or responding to a chemical or a biological attack. The Justice Department has a State assistance program. Federal Emergency Management has a State assistance program. Your Department has a State assistance program. There are research programs that are relevant in the Defense Department, the Energy Department, even the Treasury Department.

In your own Department, you have got several subdivisions involved, Food and Drug, the Centers for Disease Control, NIH, Office of Emergency Planning, and again, before I commended you for asking Dr. Lillibridge to coordinate those programs.

So here is the concern or the criticism that I have heard, which is that the question remains, who is in charge? In other words, you have asserted a strong coordinating role, certainly over the relevant agencies that come under you as Secretary of HHS. But is this not still ultimately a kind of stovepipe situation, where there may be some coordination, but there is not clearly one person who is in charge of preparing America for the possibility of a chemical or biological attack and then coordinating the response to it?

Mr. THOMPSON. I think you are right. I do not think there is one person. I think there are a lot of different individuals involved. Our responsibility is the public health and I think we do that quite well. We are making it much more responsive than it has ever been before. By appointing one person to be the coordinator, Scott Lillibridge, we have also put in place a lot of other fine individuals, representatives from the various agencies on a council working with Scott Lillibridge and they report directly to me.

Especially during this period of time, we are meeting every morning, every afternoon about updated intel that is coming in and our responses. We also talk about the problem areas that we still see and assign people to try and fix them and report back to us when they are fixed, or if they cannot be, why not and if they need more resources.

So we have, I think, a well-coordinated operation in the Department of Health and Human Services, but when you look at the totality of it, I think that is what Governor Ridge has been set up to accomplish, is to bring us all together, report to him. And yesterday, we had a meeting in the White House, and that meeting went extremely well, with all the various agencies dealing with bioter-

rorism coming in to talk about problem areas as well as common sense solutions.

Chairman LIEBERMAN. I think in your answer you have just gone ahead and responded to my next question, which was, should there be one person to coordinate across the various departments? I take it you have answered that.

Mr. THOMPSON. Yes.

Chairman LIEBERMAN. At this point, then, I was then going to ask you, who should it be, and I believe you have said that it should be Governor Ridge as the head of the new National Homeland Security Agency.

Mr. THOMPSON. That is correct.

Chairman LIEBERMAN. We have an ongoing discussion here and with the administration about the powers that Governor Ridge should have. I am going to leave that for another day, but I think you may know that I feel, ultimately, he needs some kind of budgetary authority to make sure that everybody is working together. And at some point, and you and he as governors, I think, can appreciate this particularly where we have got a crisis now as urgent as the threat of chemical and biological attack, you have got to have somebody who can say, hey, this is it. This is what I decide. Do it. That is what you did as a governor, that is what he did as a governor, and that is what I think we need here, but that is another question.

Last year, we had a very troubling, interesting, and educational, I suppose I would say, experience, beginning in Connecticut, and going around the country, with the outbreak of West Nile virus. My staff on the Committee here did an excellent investigation. I was very proud of them. It helped me to understand it. It took weeks for the Public Health System to correctly identify the disease. It had not been seen before in the United States. In fact, at the outset, if I remember correctly, CDC and other health officials misidentified the disease as St. Louis encephalitis.

I am not saying this to criticize CDC. That was not an easy call. But I am raising it to show how difficult it can be in a broader case of a larger scale chemical or biological attack to identify the disease as it begins to appear in doctors' offices or hospitals all over the country.

I wanted to ask you if you have any thoughts about what we might do at the Federal Government level to improve our ability, not just on the science, but I guess in one sense to share information as it may begin to pop up in individual offices around the country or even a separate geographic area before we actually have a sense that something pretty bad is happening?

Mr. THOMPSON. I think what we need to do, Senator, and you raise a very valid point. Even though—I am not sure, but I heard the CDC finally did determine it was——

Chairman LIEBERMAN. They did. They absolutely did. At the outset, they——

Mr. THOMPSON. They made a mistake.

Chairman LIEBERMAN. But again, very understandable because it had not been seen before.

Mr. THOMPSON. And that is the problem, especially now with anthrax and the hemorrhagic viruses and so on. They are very com-

plex and you do not see them every day so you do not have the knowledge.

Chairman LIEBERMAN. Sure.

Mr. THOMPSON. So there are certain things you have to do. You have to really educate the emergency doctors and the emergency individuals that deal with patients so that they have some basic information on what to look for.

Second, we have got to strengthen the local health departments.

Third, we have got to strengthen the State health departments and we have got to connect them all with CDC, and there has to be education going from CDC down to all of these various agencies in order to get a uniformity of instructions and support throughout the system. And I also think it would be very valuable if individuals that have gone to CDC and have been educated as EIS specialists, as you know, and have them assigned to every State health department and the larger regional health departments so that they can help advise, put on these educational programs for the local and State health departments. I think it would be very beneficial to all of us.

Chairman LIEBERMAN. I appreciate that, and anything you could do to bring that about, including, and I think is implicit in what you are saying—I do not have a specific idea, but some kind of real-time information sharing so that people can see that similar cases are suddenly turning up in a lot of different doctors' offices.

Mr. THOMPSON. That is why we have set up now a 24-hour hotline at CDC for local health people to call in during this period of time.

Chairman LIEBERMAN. Right.

Mr. THOMPSON. I can assure you it is being widely used.

Chairman LIEBERMAN. Thank you. Senator Carnahan, welcome back. I believe you would like to speak and have some questions.

Senator CARNAHAN. Yes, if it is all right, I would like to make an opening statement.

Chairman LIEBERMAN. Please.

OPENING STATEMENT OF SENATOR CARNAHAN

Senator CARNAHAN. First of all, I would like to compliment the Secretary for his rapid and comprehensive response. I think your demeanor, your advice, all have caused the American people to have a lot more awareness and a lot more confidence and I thank you for that.

Since September 11, the Senate has focused on responding to attacks on our Nation, and now that the Senate itself is under attack, and I applaud Senator Daschle for responding to this incident with calm and with resolve. But we are now taking the next necessary steps to protect ourselves against any future attacks. We must also act with speed to ensure that our Nation is prepared, as well. Future attacks may affect many more people. They may also affect livestock and the food and water supply.

Unfortunately, many places in the country do not currently have the capability to respond as quickly and thoroughly as the United States Capitol, and that is why we are here today. We must ask the difficult questions. We must address our vulnerabilities. And

we must ensure that we are ready to respond to an attack anywhere in the United States.

Our best weapon, of course, is public awareness. Rumors and misinformation just play into the hands of the terrorists. They create fear and insecurity. We should arm our citizens with scientific and accurate information.

Today, I am announcing my introduction of S. 1548, the Bioterrorism Awareness Act. The bill would create an integrated website containing accurate, scientifically-based information about bioterrorism. The website will serve as the official Federal Government source of information for the public. Currently, there is information on bioterrorism on a variety of Federal websites. Since the bioterrorism information on these websites can be very difficult to find, I think where it would be well for us to select a central location that the public can go to get accurate bioterrorism information geared specifically to their needs.

For example, we need to be sure that our doctors know how to recognize the symptoms of a bioterrorism outbreak. There will be a section on the website with information geared toward health care professionals. Another section of the website will be geared to help farmers and other personnel involved in the Nation's food supply system to protect themselves, their livestock, and the Nation's food supply in the case of an attack.

States are key players in our country's ability to respond effectively to a bioterrorist attack, and I am pleased that in a later panel we will have Dr. Maureen Dempsey, Director of the Missouri Department of Health and Senior Services, here to testify and to share the State perspective. States need sufficient resources to prepare for, detect, and respond to bioterrorist attacks.

To give States these resources, I have signed on as an original cosponsor to the State Bioterrorism Preparedness Act sponsored by Senator Evan Bayh. It will give State Public Health Agencies the resources to have surveillance systems in place so that they are equipped to detect any pattern of unusual illness that could indicate a biological attack. This is just one example of what the bill would support.

In addition, I have asked the Appropriations Committee to provide $2.5 million for the St. Louis University Center for Research and Education on Bioterrorism and Emerging Infections. The SLU Center for Research and Education on Bioterrorism is the only CDC Public Health Preparedness Center devoted to bioterrorism preparedness, training, and education. Its work is more important now than ever before. The funding should help the center meet the increased demands for its considerable expertise.

Certainly, we need to be vigilant in this struggle. Given the resources, I know that our law enforcement officials as well as our public health authorities can get the job done, but we need to act quickly and effectively.

Thank you, Mr. Chairman, for calling this very timely and important hearing and I have one question for the Secretary. In the last month, we have seen what a powerful role the media can play in relaying information to the public. The media has the ability either to calm our fears or to increase our anxiety. What has HHS done to educate the media on how to communicate to the public

during a bioterrorist attack in such a way that it minimizes people's fears?

Mr. THOMPSON. Thank you very much, Senator. Let me compliment you on the introduction of your bill. It is badly needed and I hope that you will get bipartisan support for it and I applaud you for doing that.

Second, what we did first was we wanted to make sure that we contacted the State health departments and local health departments. We have what is called the Health Alert Network and we are hooked up with, at the present time, 37 States. We have just given out enough grants to have us hooked up to all 50 States. I would like to be able to expand that in the future so that the HAN, the Health Alert Network, could be expanded into the counties. There is money in the appropriation bill for that, and I think that would be the best way in order to get information.

We also set up a 24-hour hotline in regards to giving information out and receiving information from local health departments and doctors, from hospitals and so on who could call up and give us information and ask questions.

Third, Jeff at CDC, Dr. Koplan, and myself spoke to all of the health departments on a teleconference last Saturday and we answered their questions and we are going to do the same thing tomorrow for the American Medical Association and the American Hospital Association and get out information through the teleconference. On Friday, I am talking to all the governors on a teleconference about what they can do and how they can report to their constituents on bioterrorism, and next week, we are going to do the same thing with the country's mayors. Those mayors who want to hook up on a teleconference, we are going to be able to do that, or through a webpage.

Finally, last night, we had an informational meeting with the print press in which we had three doctors and myself answer their questions over the telephone. There were a lot of press on, I do not know how many, and we have been holding briefing meetings through my press office with the press about the status and things like this. But it is very hard to knock down all the rumors. We are getting thousands of rumors, as you can well imagine, and it is difficult to be able to answer all of those rumors, but we are trying to do the best job we possibly can.

I would just like to leave you with one thing and that is that we have to make sure that people understand, even with all of the individual exposures on anthrax, there still are only four cases, two in Florida and two in New York, and even though you are exposed, it is not a disease that can be conveyed to another individual. It is one that can be treated with antibiotics, and I am happy to be able to report that of all the things that we have seen on anthrax, all of them have been sensitively proven that antibiotics work, and it is not only ciprofloxacin, it is doxycycline, it is penicillin. By allowing generic drugs for doxycycline and penicillin, they should be very reasonably priced so that individuals, if the need be, can purchase it.

I would not in any way encourage people to horde these pharmaceutical drugs because the government has got plenty in supply to be able to take care. We will have enough right now to handle 2

million Americans with Cipro and other antibiotics for 60 days and we are asking the Congress to allow us to purchase and give us the money to purchase an additional 10 million for 10 million individuals, enough supply to handle then 12 million individuals in America. We are purchasing vaccine for smallpox and we feel that we will have enough of that within the year to treat 300 million Americans.

Senator CARNAHAN. That is exactly the message we need to hear in America today. Thank you very much, Mr. Secretary.

Mr. THOMPSON. Thank you very much.

Chairman LIEBERMAN. Thank you, Senator Carnahan.

Secretary Thompson, thanks very much. You have been not only cooperative and informative, but really reassuring. Again, I appreciate the fact that you are there, that you are doing the job you are. I thank you for the specific announcements that you have made today, the ones that you have just mentioned, that the American people can be sure that their government is prepared, and insofar as the Senator first said a while ago, but we may be under-prepared, we are moving rapidly to close that gap.

For our part on this Committee, I hope that we can be supportive in helping you assert your leadership and making sure that all the agencies and offices of the Federal Government that have any responsibility or programs for chemical and biological warfare are well coordinated and directed, and I think you are right that Governor Ridge is now the person to do that.

Anyway, thank you, God bless you, and good luck in your work.

Mr. THOMPSON. Thank you so very much. Thank you for holding the hearing.

Chairman LIEBERMAN. Thank you.

We will now call the second panel. Michael Brown is the Acting Deputy Director of the Federal Emergency Management Agency. Deborah Daniels is Assistant Attorney General, Office of Justice Programs, U.S. Department of Justice. Henry L. Hinton, Jr., is the Managing Director of Defense Capabilities and Management, U.S. General Accounting Office. Anna Johnson-Winegar is Deputy Assistant to the Secretary for Biological and Chemical Defense at the U.S. Department of Defense.

I wonder if I might also call to take a chair at the end of the table Gary McConnell, who is the Director of the Georgia Emergency Management Agency, who is testifying on behalf of the National Emergency Management Association. Why do you not pull right up in that comfortable chair, Mr. McConnell. I gather that you have got plane pressure. How soon do you have to leave?

Mr. MCCONNELL. Mr. Chairman, I will be here as long as you need for me to. I just need to get back to Atlanta at my earliest convenience, but if I can get out of here by 1:30 or 2 o'clock, I will be fine.

Chairman LIEBERMAN. Oh, you do? OK. If this panel moves, maybe we will wait and bring you on on the third panel.

Mr. MCCONNELL. OK, sir.

Chairman LIEBERMAN. If not, I will call you earlier.

I thank you all for your patience under these unusual circumstances. The testimony you prepared will be submitted in full as part of the record. To the extent that you can keep your remarks

to 5 minutes, I would appreciate it, but if you feel like you have some more to say and you need to say it, we will not physically remove you from the premises, I assure you. [Laughter.]

Mr. Brown, please proceed.

TESTIMONY OF MICHAEL D. BROWN,[1] ACTING DEPUTY DIRECTOR AND GENERAL COUNSEL, FEDERAL EMERGENCY MANAGEMENT AGENCY

Mr. BROWN. Thank you, Mr. Chairman, Members of the Committee. I really appreciate the opportunity to be here today and speak on behalf of Director Allbaugh and all of the workers in New York City, the Pentagon, and here at headquarters of the Federal Emergency Management Agency.

What I would like to do is give you a very broad overview of FEMA's preparedness response activities to both natural and manmade disasters and how those programs make FEMA uniquely fitted to deal with the consequences of terrorism, regardless of the type of terrorism.

But first, I want to talk about the immediate response to the attacks at the Pentagon and the World Trade Center. On the day of the attacks, September 11, I was in Big Sky, Montana, preparing to give a speech about terrorism at 11 o'clock that morning when I received a phone call that said, "Turn on your television. We are under attack." I turned on the television and realized immediately that I needed to get out of Big Sky, Montana, along with Director Allbaugh. We jumped a military plane and came back to DC, after finding a military plane that could get us back there.

But I thought about that speech and the three things that I wanted to say in that speech on September 11 are equally applicable today, and it is probably a speech that I could give anywhere else in the country, any other time in the future. Three things.

First, this administration recognizes that the first individuals to respond to the 911 phone calls are the local and State emergency managers, the fire departments, emergency medical services, and law enforcement. Those truly are the first responders. When someone dials 911, they do not call Washington, DC. They call their local officials.

Second, we rely upon and must rely upon the wisdom and the experience of those at the State and local levels as we prepare and work toward a national plan that includes the active participation of all levels of government.

And third, and probably most importantly, the Federal Government must provide a comprehensive national strategy to prepare for terrorist attacks. Our goal, our strategy must be to provide the best resources, the best education, the best guidance, and the best training to the State and local officials to enable them to respond when, indeed, they are called in that 911 phone call.

I often think of duty honoring country when reflecting on the events of September 11. The response that day and every day demonstrates the true heroism of all of those who responded, fire fighters, policemen, emergency medical technicians, the emergency managers, all who placed themselves in danger to respond and help

[1] The prepared statement of Mr. Brown appears in the Appendix on page 89.

those in need. Many of those heroes tragically lost their lives that day, rushing to the scene to save lives, rescuing the trapped and the injured. They were, in fact, being the first responders. Our hearts hurt with them and for the innocent families who lost loved ones. Now we must, however, be prepared for long-term recovery efforts and stand united and ready to assist those who were injured both physically and emotionally.

The level of cooperation and professionalism by the Federal, State, and local agencies and emergency responders in responding to New York and the Pentagon have been absolutely outstanding. The American people can and should be proud of the work that they have done in helping the Nation recover from those incidents.

At FEMA, our mission is to reduce the loss of life and to reduce damage to property, and that mission applies to all hazards, to all disasters, whether those disasters are manmade or whether they are natural disasters. When a disaster overwhelms the response capabilities of State and local governments, the President may sign an emergency or major disaster declaration. On September 11, the President did that. Declarations were signed immediately and response of the Federal Government was immediate.

As in response to other presidentially declared disasters and emergencies, FEMA utilized the Federal Response Plan to coordinate the government's response activities to those disasters. We use this tool, on average over the past 10 years, 53 times a year in responding and coordinating the Federal Government's response to a disaster. The Federal Response Plan provides the framework for 26 different Federal departments and agencies, as well as the American Red Cross, to respond and support the efforts of State and local governments.

These Federal agencies are organized into interagency functions based on their authorities and their expertise and the needs of the counterparts at the State and local government. For example, as we heard from Secretary Thompson, HHS is the lead support agency for health and medical needs.

Since 1992, the Federal Response Plan has been used exactly under this mechanism to respond to disasters, regardless of the cause. To the Members of this Committee, you are familiar with the response that FEMA has in natural disasters, whether it be floods in Ohio or fires in New Mexico, tornadoes in Oklahoma, whatever it is. You are accustomed to how we respond. That is exactly how we responded in New York.

The Federal Response Plan worked in New York City just as it worked in Oklahoma City in 1995. The effectiveness of the Federal Response Plan has clearly been demonstrated, and that is why the Federal Response Plan must be used to identify Federal resources and response capabilities for the threat of biological terrorism.

Immediately following the attacks on September 11, President Bush recognized the need to respond quickly and accurately, to make certain that the Federal Response Plan was working the way it was supposed to. The President convened three different working groups to respond to those disasters, a military or foreign policy response group, a protection response group, and the group that he asked me to chair, the consequence management working group.

That group is responsible and is still working today—and, in fact, Senator, we are meeting this afternoon on another issue—was responsible for identifying those issues, those holes, if you want to call them that, in the Federal Response Plan and how do we fix those. We identified those holes and we divided them into three categories, first, those holes that we needed to fix immediately, that we had to fix today. Then those holes that we need to fix in the next 30 or 60 days, and then the long-term fixes that we could put off and deal with in a longer-term situation.

The result of that consequence management working group you are seeing today. You are seeing, as Secretary Thompson indicated, the push packs being increased, the vaccine issue being addressed, the issue of what we are going to do with the antibodies. All of those issues were addressed by the working group and briefed to the President and the President had decision papers directing us exactly what to do with those issues. That is how the Federal Response Plan is supposed to work, and, indeed, how it did work.

We see Governor Ridge as the President's spokesman for all issues regarding terrorism. Yesterday, for example, Governor Ridge asked FEMA to take the lead in organizing a joint information center to coordinate all of the efforts going on between FEMA, Health and Human Services, FBI, Department of Justice, all of the agencies, so there can be one centralized location for the administration to put out the message of what they are doing and what the response should be and how the American public can respond. We intend to put together packets for the American public so they will have information that is helpful to them in responding to this new crisis. Clearly, groups such as HHS will be involved in that effort.

The threat of a biological attack presents unique challenges to this country's response system. The first responders in a biological event shift, as I think Senator Collins mentioned earlier, from the fire fighter and the policeman to the doctors, to the Public Health Service, to those people that will now need to respond in an emergency situation.

The Department of Health and Human Services is a critical link between the health and medical community and the larger Federal response. In all disasters, FEMA works closely with HHS, the Public Health Service, and the Centers for Disease Control to make certain that we have the assets and the response mechanism that we need in this type of incident. In New York and in the Pentagon, that is exactly what occurred.

Again, as the lead agency with responding and coordinating a response to a disaster, whether manmade or natural, we have tasked HHS to put together to the Federal Response Plan a Bioterrorism Annex so the Federal Response Plan will have in place for future agencies, for future people working in those agencies, the response and coordinated effort that they must have.

Just like Secretary Thompson, Director Allbaugh and I met yesterday with Governor Ridge to provide him with information about this very response mechanism. In Director Allbaugh's testimony yesterday before the Senate Committee on Environment and Public Works, he stated that he could think of no greater person than Tom Ridge for the position of the Director of Homeland Security.

FEMA is committed to working with Governor Ridge in that respect and will implement the strategy that he asks us to do so.

We kind of see Governor Ridge as the conductor of this great orchestra, telling us what we need to do and how to do it. He has the power because he speaks on behalf of the President of the United States. As Director Allbaugh will also serve on the Homeland Security Council, FEMA will support the office to any extent that the governor asks us.

We believe that FEMA is ready, able, and willing to respond, as seen in New York. We are ready, willing, and able to respond in any future incidents and believe we have the mechanism to do so.

Mr. Chairman, thank you for convening this meeting so that we can discuss about the organizational issues facing the government at this time.

Chairman LIEBERMAN. Thanks, Mr. Brown. I look forward to the question and answer period with you.

Ms. Daniels, thank you for being here on behalf of the Department of Justice.

TESTIMONY OF HON. DEBORAH J. DANIELS,[1] ASSISTANT ATTORNEY GENERAL, OFFICE OF JUSTICE PROGRAMS, U.S. DEPARTMENT OF JUSTICE

Ms. DANIELS. Thank you, Mr. Chairman and Senator Akaka. I am pleased to have this opportunity to talk about the Office of Justice Programs' (OJP) efforts related to bioterrorism and our coordination with the Department of Health and Human Services on this critical issue.

As you know, since 1998, OJP's Office for Domestic Preparedness, to which I will refer as ODP for short, has been working to help State and local public safety personnel acquire the specialized training and equipment they need to safely respond to and manage domestic terrorism incidents, particularly those involving weapons of mass destruction. Of course, these efforts have taken on new urgency in the aftermath of the September 11 attacks.

And as the Senators have suggested this morning, State and local personnel are on the front lines. They are typically first on the scene of any emergency and first to respond in the event of a terrorist attack. ODP is working to ensure that these brave men and women are well prepared and as well equipped as possible for these potentially catastrophic events.

Over the past 3 years, ODP has worked to develop and implement a national program to enhance the capacity of State and local agencies to respond to domestic terrorism incidents. We provide coordinated training, equipment acquisition, technical assistance, and support for national, State, and local exercises to address a wide range of potential threats, including chemical, biological, radiological, nuclear, and explosive weapons.

We also support the efforts of the Department of Health and Human Services, particularly the U.S. Public Health Service and the Centers for Disease Control, to deliver training and equipment assistance to the public health and medical communities, and we have worked with HHS to test the Nation's bioterrorism response

[1] The prepared statement of Ms. Daniels appears in the Appendix on page 96.

capacity through the use of field exercises. This partnership has been beneficial to both HHS and to our Office for Domestic Preparedness. Whereas ODP has taken the lead in reaching the public safety and emergency response community, we have deferred to HHS to lead the preparedness effort for public health and medical personnel.

ODP's domestic preparedness activities are concentrated in the areas of training and technical assistance, equipment, planning, and field exercises. We provide over 30 direct training and technical assistance courses and programs to enhance the capacity of State and local jurisdictions to prepare for and to respond to terrorist attacks on U.S. soil.

Since 1998, we have provided training to over 77,000 emergency responders in 1,355 jurisdictions in all 50 States and the District of Columbia. We have also completed over 2,000 deliveries of technical assistance to State and local response agencies, and we are completing delivery of the Nunn-Lugar-Domenici training program to the remaining 52 of the Nation's 120 largest cities that did not receive all elements of the program from the Department of Defense before the transfer of the program to the Justice Department. This training will include a biological weapons tabletop exercise and briefings on the U.S. Public Health Service's Metropolitan Medical Response System, to which Secretary Thompson referred.

ODP is also working with all 50 States, the District of Columbia, and the five U.S. territories to help them develop comprehensive 3-year domestic preparedness strategies. These strategies are based on integrated threat, risk, and public health assessments that are conducted at the local level. They will identify the specific level of response capability necessary for a jurisdiction to respond effectively to a terrorist incident involving weapons of mass destruction.

Once assembled and analyzed, these plans will present a comprehensive picture of equipment, training, exercise, and technical assistance needs across the Nation. In addition, they will identify Federal, State, and local resources within each State that could be utilized in the event of an attack. We anticipate receiving the majority of these strategies by December 15 of this year. We then will work with each State and territory to implement assistance specifically tailored to the needs identified in their own plans.

The Attorney General recently wrote to each governor stressing the urgency of completing these assessments. He has directed ODP to place the highest priority on analyzing these strategies and helping States to meet the identified needs as quickly as possible.

To give you an idea where we have been in terms of providing dollar assistance, in fiscal year 1999, States received a total of $54 million in initial planning and equipment funds under the program. They are scheduled to receive an additional $145 million in fiscal year 2000 and 2001 funds as their plans are completed. In addition, from 1998 through this year, we have provided a total of $242 million in equipment grants for 157 local jurisdictions, the 50 States, the District of Columbia, and the five U.S. territories under the County and Municipal Agency Equipment Program. These funds are helping to ensure that State and local personnel have the specialized equipment they need to safely and effectively respond to biological, chemical, or other hazardous incidents.

And as indicated in my written testimony that I have submitted, OJP, the Office of Justice Programs as a whole, makes available additional millions to each State in the form of block grants that can be utilized for law enforcement equipment for first responders.

Finally, Mr. Chairman and Senator Akaka, ODP provides funding and technical assistance to state and local jurisdictions to support local and regional interagency exercises. These exercises test crisis resistance, identify procedural difficulties, and provide a plan for corrective action to improve crisis and consequence management response capabilities without the penalties that might be incurred in a real crisis.

In May 2000, we conducted TOPOFF, the largest exercise of its kind, involving separate locations and a multitude of Federal, State, and local agencies. TOPOFF simulated simultaneous chemical and biological attacks around the country and provided valuable lessons for the Nation's emergency response communities.

ODP has begun planning for the Congressionally mandated TOPOFF 2 exercise, which will be conducted in the spring of 2003, and we are working with the Department of Energy to establish a Center for Exercise Excellence at the Nevada test site that will help to ensure the operational consistency of weapons of mass destruction exercises nationwide.

ODP actively coordinates its programs with other Federal agencies to ensure that the highest quality training and technical assistance is provided to the Nation's emergency response community while also eliminating duplication of Federal resources. For example, we helped to establish TRADE, the Training Resources and Data Exchange working group. TRADE includes representatives from the National Fire Academy, the FBI, FEMA, the EPA, the Department of Energy, HHS, and specifically the CDC. TRADE is already working on a number of joint initiatives that will enhance the coordination of training delivery resources in accordance with State strategies.

These and other joint endeavors will greatly enhance the capacity of the Nation as a whole to respond safely and effectively to incidents of terrorism involving weapons of mass destruction, including biological agents. We are committed to continuing build on the efforts already underway to ensure that States and local jurisdictions have the training and resources they need as a vital link in our Nation's response to terrorism.

Once again, Mr. Chairman, I want to thank you for the opportunity to describe the efforts of the Office for Domestic Preparedness in this vitally important area and, of course, will be pleased to respond to any questions the Senators have. Thank you.

Chairman LIEBERMAN. Thanks, Ms. Daniels. Let me just take the liberty to ask you to speak a moment more about the TOPOFF exercise, how it was conducted and, just briefly, what the conclusions were about our state of preparedness.

Ms. DANIELS. Mr. Chairman, TOPOFF was conducted at multiple sites. There were multiple exercises so that we could literally test our preparedness to respond to multiple events, including biological terrorist attacks.

Chairman LIEBERMAN. So you simulated biological attacks in different regions of the country?

Ms. DANIELS. Correct. I believe that in Denver, the biological exercise occurred.

Chairman LIEBERMAN. And chemical exercises elsewhere, was that——

Ms. DANIELS. Portsmouth, New Hampshire. My experts are behind me. Thank you.

Chairman LIEBERMAN. Right.

Ms. DANIELS. And there has been an analysis that has been conducted that is contributing to the preparation for TOPOFF 2, and I think some valuable lessons were learned and have been disseminated to those who are responsible for preparing for potential events in the future.

Chairman LIEBERMAN. To the best of your recollection, would you say that the conclusion from those TOPOFF exercises simulated attacks was that we were—to use a formulation that we are involved in here now—adequately prepared, under-prepared, or unprepared?

Ms. DANIELS. My understanding, Mr. Chairman, is that at the time the TOPOFF 1 exercise took place, I think it clarified some interesting gaps in our preparedness at that time. There has been time in the interim, I think, to deal with those gaps and I would hope that we could say that we are close to at least being adequately prepared for the future.

Chairman LIEBERMAN. But probably for now, we would say we are under-prepared? We are not unprepared.

Ms. DANIELS. We are not unprepared.

Chairman LIEBERMAN. Right. Thanks.

Mr. Hinton, thank you for being here. We are always glad to see somebody from GAO. We consider you part of the Governmental Affairs family.

TESTIMONY OF HENRY L. HINTON, JR.,[1] MANAGING DIRECTOR, DEFENSE CAPABILITIES AND MANAGEMENT, U.S. GENERAL ACCOUNTING OFFICE

Mr. HINTON. Thank you, Mr. Chairman and Senator Akaka. I appreciate the opportunity to be here today to discuss GAO's work on efforts to prepare for and respond to chemical and biological terrorist attacks. My comments today are based on several of our recently issued reports, including our September 28 report on Federal research and preparedness activities to counter biological terrorism. My colleague, Dr. Jan Heinrich, who directed that work, is with me today, sitting right behind me on my left. For this hearing, we also took a quick look at 50 Federal exercise evaluations to identify problems associated with chemical and biological terrorism that needed to be addressed.

I will briefly address three points, Mr. Chairman. First, I will highlight some of the specific Federal programs and coordination challenges to prepare for and respond to chemical and biological agents or weapons. Second, I will point out some of the problems identified in the evaluations of the preparedness exercises. And finally, I will offer some suggestions for Congress to consider for investing resources in chemical and biological preparedness.

[1] The prepared statement of Mr. Hinton appears in the Appendix on page 107.

I want to echo a comment you made right at the onset of the day's hearing, Mr. Chairman. The body of work that we have done over the last several years shows that there has been progress on many fronts. But as you said, and we agree, there is more to be done.

Let me turn to the programs. The Federal Government has a variety of programs to prepare for and respond to chemical and biological terrorism. They include response teams, support laboratories, training and equipment programs, and research efforts. These programs face two coordination challenges, if I could refer you to the graphic.[1]

At the program level, our first graphic illustrates the complex relationships among some of the key Federal departments and agencies involved in just biological terrorism research and preparedness activities. I am not going to go into the details on that, but you can get the gist of the complex relationships there.

Chairman LIEBERMAN. It looks messy.

Mr. HINTON. At the operational level, our second graphic identifies the Federal response teams available to provide assistance to State and local first responders, if needed, for chemical and biological terrorism. If you were to add the State and local government activities to each graphic, the relationships will be more complex and the coordination challenge that much more extensive. A number of interagency and intergovernmental plans and working groups are involved in coordinating these activities.

Let me turn to our analysis of exercise evaluations, also known as after-action reports. We identified a number of problems that require solutions to improve preparedness. The problems and their solutions fell into two categories.

One category was those problems and solutions that are generally applicable to any type of a terrorist incident, major accident, or natural disaster. For example, they covered issues involving command and control, specifically the roles, responsibilities of different agencies. The legal authority to plan and carry out a response to a WMD terrorist incident were not always clear, which resulted in a delayed and inadequate response. In the communication area, interoperability difficulties exist at the interagency and intergovernmental level.

Last, in planning and operations, State and local emergency operation plans did not always conform to Federal plans.

The other categories were those problems and solutions that are applicable to both chemical and biological terrorist events. Those problems included issues involving public health surveillance, a topic that has come up this morning. Specifically, the basic capacity for public health surveillance for biological terrorism and emerging infectious diseases is an urgent preparedness requirement at the local level. The detection and identification of chemical and biological agents was another problem frequently raised in exercise evaluations. The capability of first responders and specialized response teams to rapidly and accurately detect, recognize, and identify chemical and biological agents and assess associated health risks can be slow. Equipment and training was another problem. First

[1] Chart referred to by Mr. Hinton appears in the Appendix on page 123.

responders often lack specialized personal protective equipment or chemical or biological detection kits. And finally, problems were identified in the laboratories. Even a small outbreak of an emerging disease was determined to strain the resources. There is a need for broadening laboratory capabilities, ensuring adequate staffing and expertise, and improving the ability to deal with surging and testing needs.

Let me turn to the resource question, Mr. Chairman. Congress faces competing demands for spending as it seeks to invest resources to better prepare our Nation for chemical and biological terrorism. As the Comptroller General recently testified before this Committee, we believe a risk management approach must be used. It should include a threat assessment to determine which chemical and biological agents are of most concern in order to focus finite resources on areas of greatest need.

Our work shows that some of the solutions to improve the response to chemical and biological terrorism have broad applicability across a variety of contingencies, while other response solutions are only applicable to a specific type of attack. For example, efforts to improve public health surveillance would be useful in any disease outbreak, whereas efforts to provide vaccines for a specific disease would only be useful if terrorists used that disease in a biological attack.

Until the results from a risk management approach is available, Congress may want to initially invest resources in areas with broad applicability, and as threat information becomes more certain, it may be more appropriate to invest in efforts applicable to specific chemical or biological agents.

Mr. Chairman, that completes my statement and we stand ready to answer any questions.

Chairman LIEBERMAN. Excellent. Thank you.

Dr. Johnson-Winegar.

TESTIMONY OF ANNA JOHNSON-WINEGAR,[1] PH.D., DEPUTY ASSISTANT TO THE SECRETARY OF DEFENSE FOR CHEMICAL AND BIOLOGICAL DEFENSE, U.S. DEPARTMENT OF DEFENSE

Dr. JOHNSON-WINEGAR. Thank you. Mr. Chairman and distinguished Committee Members, I would like to briefly describe for you the role of the Department of Defense.

As we all know, the tragic events of September 11 and the more recent anthrax cases have heightened the public's awareness of the threat posed by biological terrorism. The Department of Defense has long considered the use of biological weapons as a possible means by which State and non-state actors might counter America's overwhelming conventional war-fighting strength. This is often referred to as an asymmetric threat.

In response to this threat, Congress indeed directed the Department of Defense to consolidate all our efforts in chemical and biological defense, and since that consolidation in 1994, and with the continued support of the Congress, I feel that the Department of Defense has made significant progress in fielding defensive equipment for our war fighters and we stand ready to assist the civilian

[1] The prepared statement of Dr. Johnson-Winegar appears in the Appendix on page 124.

community through our technology sharing, through technical advice, and as otherwise requested by the appropriate authorities.

In order to meet the challenge of biological warfare across the spectrum, our program must address the need for both material improvement and operational concepts to address this threat. In order to address this more thoroughly, we have indeed documented gaps and deficiencies through the use of exercises such as TOPOFF and there will be a continuing relook and refocus of the prioritization of efforts within the Department of Defense.

One of the lessons that we learned from the TOPOFF exercise was that to work effectively during an actual crisis, various governmental agencies must actually exercise together beforehand or their cultural differences will possibly overcome the plan. We will continue to work with the other agencies, including the new Office of Homeland Security, to ensure good working relationships. One specific area that we will focus on is to help define what support the Department of Defense can provide.

As you may know, the Department of Defense does, indeed, have unique expertise and materiel. However, we are not charged with lead Federal agent responsibilities as described in the Federal Response Plan. In the area of domestic terrorism medical response, the Department of Health and Human Services takes charge and requests support as needed. In my testimony today, I will outline the ways the Department of Defense can provide materiel support to other organizations and how we help to coordinate the efforts.

Requests for specific materiel may come to the Department of Defense from a number of different avenues. These requests are approved on a case-by-case basis, and indeed, my office has dealt with a number of requests from other Federal agencies for individual and collective protective equipment and access to vaccine, while the operational support provided by the Department of Defense is coordinated through the Army. The Department will continue to provide the support within our means and balance this against our main requirement, which is to provide for the readiness of our military forces to accomplish their war-fighting mission.

DOD can, indeed, offer many of its systems, either in the field or otherwise, or expertise that may, indeed, prove useful to the civilians. Our chemical and biological detection equipment, for example, could be applied in many civilian situations, as can many of the medical countermeasures that we have developed. However, I caution that the provision of materiel alone does not enhance one's capability. It needs to be accompanied by valid operational concepts, training, and maintenance.

The mission of the DOD's chemical and biological defense program is to provide specific materiel to allow our Armed Forces to be trained and equipped to conduct their operational mission in an environment contaminated with chemical or biological agents. Therefore, our Armed Forces are, indeed, trained primarily for traditional war-fighting requirements. However, we also maintain significant capabilities to support homeland security through such operational units as the Technical Escort Unit, the WMD Civil Support Teams, and the Marines' Chemical and Biological Incident Response Force.

In order to enhance our Nation's overall capabilities, the Department of Defense participates in many programs to support the transition of military equipment and concepts to other than DOD agencies. I would like to name a few of those.

Specifically, we participate as a member of the Technical Support Working Group, which rapidly prototypes emerging technologies for high-priority Federal interagency requirements. We participate in the Interagency Board for Equipment Standardization and Interoperability, known as the IAB, which is a partnership with Federal, State, and local agencies focused on the capabilities necessary for local responders, that is fire, medical, and law enforcement, in order to be able to cope with WMD terrorism. We also participate in the Domestic Preparedness Program mandated under the 1997 Nunn-Lugar-Domenici legislation, and indeed help to train and equip many municipalities and have subsequently transferred that program to the Department of Justice, as was previously mentioned.

We have a number of interagency agreements with the Department of Justice, Office of State and Local Domestic Preparedness, to purchase specific equipment. We help provide medical training programs from our U.S. Army Medical Research Institute for Infectious Diseases, for biological agents, and our Institute for Chemical Defense for chemical agents. And we also participate in the White House Office of Science and Technology Policy Program on Weapons of Mass Destruction Research and Development Subgroup.

I think that these efforts represent just a small snapshot of the Department of Defense efforts to address bioterrorism. As the individual lead Federal agencies assess their needs, DOD anticipates additional requests for our participation in these groups.

The Department of Defense has established a set of requirements for the successful completion of military operations in chemical and biological environments. As you know, we submit an annual report to the Congress documenting our progress in meeting these requirements. My office additionally continues to coordinate our efforts, and I would particularly like to point out our coordination with the Department of Energy, Department of Health and Human Services, and the intelligence community, as is reported in our Counterproliferation Program Review Committee.

DOD again, in conclusion, I believe, works regularly with the lead Federal agents to coordinate requirements and development efforts for biological terrorism. In addition to coordination, there are a number of other mechanisms for the Defense Department to provide assistance to other Federal, State, and local agencies. In light of recent events, the Department certainly anticipates a greater number of requests for assistance. DOD will address these requests on a case-by-case basis to make sure that public safety is enhanced and that the DOD can still accomplish its war-fighting mission.

I would like to thank you for the opportunity to speak with you today and for holding this hearing on what I feel personally is a very important topic. I will be happy to answer any of your questions.

Chairman LIEBERMAN. Thanks, Doctor. Thanks to all of you. As I listened to the references to the TOPOFF exercises, and, in fact,

as I listened to the reports of what each of the three departments on this panel have been doing in regard to chemical and biological, the possibility of chemical and biological attacks, and including what Secretary Thompson testified to for HHS, there is some comfort here in the sense that we have been hearing, certainly here on Capitol Hill, for a long time, warnings and concerns. We have all expressed ourselves, or a lot of us have, about the possibility of chemical and biological attacks against the United States.

And the good news here is that we, and you, and the Federal Government together have created a series of programs to prepare for and help us better respond to those attacks. So I feel very strongly that we are right when we say America is not unprepared for chemical and biological attacks. We are under-prepared, and our fear on this Committee, mine certainly, is that we are also under-organized, and I take that to be part of what your conclusions, Mr. Hinton, were, GAO's.

I feel that as I hear the testimony that the three departments have offered here on this panel, it seems to me that Justice has a series of programs for State and local governments to receive training and equipment. FEMA has programs to do some of the same. HHS has programs. DOD has some programs, a little bit different, but also reaching out to State and local to help train, because those are the first responders.

So my question, and maybe I will start with you, Mr. Brown, is who is in charge? Maybe I ought to go about it in a slightly different way. In the best of all worlds, should we be, for instance, putting all of these various programs under FEMA as the coordinating agency? And I will give you a chance to respond, Ms. Daniels. Why does Justice have this authority? Would that not be better if it came under FEMA as the central response agency in the Federal Government?

Mr. BROWN. Mr. Chairman, I think maybe the best way to answer that question is to tell you what we have organizationally.

Chairman LIEBERMAN. Go ahead.

Mr. BROWN. Having only been in FEMA now since Director Allbaugh came on in February, I am amazed at the organizational structure we have to respond to these types of, or frankly, any kind of disaster. In our emergency support team operation, we have literally desks and cubicles for every agency that needs to be responding, so that whoever is in the field, if they have cross-cutting issues that need to be addressed, those can be addressed in the emergency support team function right here in Washington, DC. We eventually move those out into the field, like we are doing in New York right now, but there is a mechanism in place to do that coordination in FEMA right now and I think FEMA does it very, very well.

I think what Governor Ridge brings to the table is the ability to say on a broader scale now, when things are not working and need to be coordinated, and he made this point to Director Allbaugh just the other day, training is a very important component that he wants to work on and he wants to make sure they are all working together. Because of his authority under the directive of the President, he can now say to all of us, we ought to start combining some of these programs. We ought to see who is doing it the best and make sure they are the ones taking the lead on that, and I think

that is going to happen. I can just tell that by the way Governor Ridge is working things right now.

But to go back to my initial point, FEMA has that structure set up now to coordinate all of those things. The emergency support functions that all come together in times of disaster and even non-disaster are in place to deal with those cross-cutting issues.

Chairman LIEBERMAN. And FEMA has the authority or the cooperation of the other agencies so that, in fact, you have not had problems in responding to crises?

Mr. BROWN. Generally, yes.

Chairman LIEBERMAN. OK.

Mr. BROWN. I would say this, that when we have had a problem, it has taken the sheer willpower of individuals to conquer those problems. I think now Governor Ridge is in place to help us do that. And I think the other thing that the administration did to respond immediately to New York was to create the Domestic Consequences Principals Committee, which did that very thing, brought together in the White House a group of principals so that when there were issues that arose in the New York incident, we could resolve them right there at the table and get them done before they rose to the next level.

Chairman LIEBERMAN. Correct me if I am wrong, but it seems to me that in response to September 11, I was interested to be reminded that the immediate consequence management responsibility was actually in the Department of Justice, not in FEMA, where I would have guessed it would be. Is that correct?

Mr. BROWN. Well, no.

Chairman LIEBERMAN. No? OK.

Mr. BROWN. We have the initial response in terms of the consequence management. But in terms of the crisis management, in terms of the crime scene, that is the Department of Justice.

Chairman LIEBERMAN. So is that a clear enough distinction that Justice is involved in the law enforcement aspect of it but does not manage the scene where we want most of all to have rescue and relief occurring?

Mr. BROWN. I think it works quite well. I will give you an example. I think the Attorney General would like to say something, too.

Chairman LIEBERMAN. Yes.

Mr. BROWN. It is clear to me that, for example, in New York there was a problem with some communications that DOJ, the FBI needed to resolve immediately. FEMA was able to step in and resolve that for them. Is that really crisis management or consequence management? It is really a little bit of both, but because of them working together, we are able to solve those problems.

And we know—I think FEMA is smart enough to know that when it is a crime scene, it is something the FBI needs to take the lead on. We back off and let them do that and support them to the greatest extent that we can.

Chairman LIEBERMAN. Ms. Daniels, why do you not respond about that, and then to the more general question, devil's advocate though it may be, why should not all these programs of training and assistance to local responders be in FEMA, for instance, because it is going to coordinate the response when a crisis occurs?

Ms. DANIELS. Senator, maybe I can back up a little bit and talk about how we came to be where we are, I suppose. During the 1990's, there were two Presidential directives that laid out the hierarchy and the delegation of responsibilities in the event of a terrorist incident. Those gave the Attorney General the basic authority to deal with the incident and allowed him to delegate crisis management to the FBI for the immediacy of the crisis and crisis management; and delegate the follow-up, or consequence management, to FEMA at the point where the crisis aspect has subsided, and we have reached the point where we can turn that corner.

And I think that the theory was that that gives us the organizational capability in one official that will enable us to do that seamlessly. It seemed to work, in fact, very well, as Mr. Brown has indicated, in New York. I think everyone has been working wonderfully together.

With regard to the larger issue, your first question, I think, was who is in charge——

Chairman LIEBERMAN. Right.

Ms. DANIELS [continuing]. And I would say that the President is in charge and Governor Ridge is his spokesman or his agent. And, frankly, the Department of Justice will do whatever it is that they determine is the best thing for us to do.

We do have, and we have developed over many years, a very close working relationship with law enforcement and that has helped us in our training exercises. But we also not only work collaboratively with the other agencies, including FEMA, but also defer when it is a public health issue, to HHS. We do not try to do their job for them, and I think everyone has a piece of this pie and we are all right now seeking the best way to do that collaboratively.

I liked what Governor Ridge said the day he was sworn in, which was that the only turf we should be concerned about is the turf we stand on, and I agree.

Chairman LIEBERMAN. From what you have said, it is clear to me that you think, and I agree, that we are in a better organizational structure now that Governor Ridge—that the Office of Homeland Security has been created and Governor Ridge is in charge. We may have our discussions and debates about exactly how much authority he has, but it does seem to me that he fills a gap that was there before. What would you say to that and what you have heard, Mr. Hinton?

Mr. HINTON. Mr. Chairman, this report that we issued back on September 20 dealt right square on with that issue.

Chairman LIEBERMAN. Yes.

Mr. HINTON. And based on all the work that we had done over the last several years, we saw a lot of fragmentation around some of the key leadership functions in the government, overseeing a national threat and risk assessment, setting priorities for national strategies, coordinating and monitoring international programs, providing liaison and assistance to state and local governments. These were spread throughout the Executive Branch.

We made a recommendation to the President to establish a focal point within the Executive Office of the President that would rise

above the individual agencies and deal with those functions and bring them together.

Chairman LIEBERMAN. Right.

Mr. HINTON. To refer to your question about the programs, whether to put them in Justice or FEMA, there are four programs right now being run by HHS, Justice, and FEMA, all targeted to basically the same group in the State and local governments that are dealing with emergency preparedness. Well, if you can rise above that and have, like Governor Ridge, that may be one of the targets of opportunity for him to focus on to try to make some rational decisions as to how many programs we exactly need and the resources.

Chairman LIEBERMAN. In other words, we may not need them all, or maybe they can be consolidated in one or another department.

Mr. HINTON. Exactly. You asked the question, how much redundancy might be needed and what is enough? Well, I think the appointment of Governor Ridge in that position was timely with respect to that issue. I think there are some long-term issues that need to be there.

One goes to the definition of homeland security, everything we would put in it. How can the coordinator achieve real influence in the budget and resource allocation process, a question that has come up this morning, is a very important question that needs to be addressed. Should the coordinator's role and responsibilities be based on specific statutory authority? I think that is another question that the Congress needs to look at over the long term.

Depending on the scope, structure, and organizational location of this new position, what are the implications for Congress in its ability to conduct oversight? I think that is another very important issue—and particularly as GAO's role in that effort to assist you, the Congress, in its oversight.

Chairman LIEBERMAN. I agree. Thanks. My time is up. Senator Akaka.

Senator AKAKA. Thank you very much, Mr. Chairman.

Attorney General, I am concerned, and this has been alluded to, that there is a cultural divide between how the law enforcement and public health communities view bioterrorism. The difference is demonstrated by how the different groups answer the following question, and the question is, is a bioterrorist event a medical crisis with a law enforcement component or is it a crime scene with a public health aspect?

Now, this question is for you and anyone else who wants to answer it and to comment on it. So my question is, how would you answer this?

Ms. DANIELS. Senator Akaka, actually, maybe this will be reassuring to you, coming from the Department of Justice, but I would say that an incident of biological terrorism is a medical crisis with a law enforcement component because, as has been discussed of late with regard to the anthrax situations and other things that could come up in a biological context, you are not going to necessarily have a crime scene where there is an explosion and something happens and you have to clean up after it. You are going to have people getting sick and they may be getting sick well after the

incident that spurred the disease. So, frankly, we do think that is a medical crisis and that is why we want to work very closely with HHS.

Senator AKAKA. Thank you. Does anybody wish to comment otherwise?

Let me ask you my second question. Agriculture terrorism presents a serious challenge to our legal system's ability to protect our agricultural industry. Currently, terrorism using a weapon of mass destruction is a very serious offense. However, the application of this law to agricultural terrorism is problematic because the use of biological weapons is defined as being directed against a person or public property of the United States. Therefore, a biological attack against agricultural land or livestock does not qualify as terrorism using a weapon of mass destruction.

So my question is, do you feel that the threat of agricultural terrorism warrants amending the U.S. Code to include private property or agriculture in the definition of bioterrorism?

Ms. DANIELS. Senator, I can answer your question, I think, only partially, and my partial answer is that I absolutely think that we should have a serious concern about the safety of our livestock and it has to do with the safety of our entire food supply and everything else along the line. So I think it is very important.

Having said that, I have been in the Federal Government before but have not been for several years. Now I am back in and have been in my current position for all of 3 weeks today, so I have not yet had a chance to examine the current state of the terrorism law or what the pending bills that came out of the House and Senate and, I guess, are ready for conference at this point actually include in the way of legislation that would protect livestock and the agricultural supply. So with that, I would be happy to get back to you on that point.

Senator AKAKA. You can provide it for our record, please.[1] Thank you.

Ms. DANIELS. Thank you.

Senator AKAKA. Mr. Brown.

Mr. BROWN. Yes, sir?

Senator AKAKA. FEMA uses the Federal Response Plan to coordinate the government response to disaster or emergency situations, and we have been alluding now to coordination between agencies. This plan contains 12 emergency support functions to mobilize Federal resources and conduct activities to augment State and local response efforts. My bill would create an emergency support function for disasters affecting agricultural production of the food supply, which currently does not exist.

Could you explain the procedure for creating an emergency support function? The USDA currently leads the response to production agriculture disasters. What agencies do you see filling a support role?

Mr. BROWN. Let me answer it this way, Senator. The first thing we can do is, if there is somebody else that needs to be a part of the emergency support team during a disaster or a declaration, we

[1] Letter from the U.S. Department of Justice responding to question posed by Senator Akaka to Ms. Daniels, dated June 25, 2002, appears in the Appendix on page 176.

will just add those. I mean, we will rely upon the willingness of other agencies to come in and help support our response, which we have seen an overwhelming desire to do that. So if we see a need that is not being filled that we need some coordination on, I am certain that the Director can call any of the secretaries or other directors and say, we need that support team here on 24/7 and they will be there.

In terms of others that we need, I guess the best analogy is the working group that has been meeting since September 11. We have brought in different groups at different times based upon the particular issue. There is a group today that is going to meet this afternoon that we are going to bring in the Department of Energy and EPA where they were not involved before, but because of some particular issues we need to address, we are bringing them in.

So I think the way it has been occurring is on an ad hoc basis. As we need them, they come in, and they do and they support us.

Mr. HINTON. Senator Akaka, could I jump in there for just a second with a comment, and it piggybacks on Senator Lieberman's comment, too, and it deals with threat assessments that we have been seeing in the government that are ongoing. We have some agencies doing multiple assessments to look at the impact on public health. We have the FBI looking at what might be the more likely attack that we are going to have. And then we have a few others going on.

We also have some other agencies who have not been involved in some of the discussions about threat, for example, some of the transportation, agriculture, and the others that you are mentioning there, and I think that goes right to your question there. Unless they are an active player, they may not be brought in early on in that process and I think that is an important step that needs to get some consideration in this environment that we are in.

Mr. BROWN. Senator, if I could just add, I just spoke to one of my experts behind me also who tells me that just last week, Emergency Support Function 11, which is the food support function within FEMA, has asked for the Department of Agriculture and USDA to come in to deal with some issues that have already arisen that you have alluded to. So we are already doing that.

Senator AKAKA. Now that you have mentioned them, you did not mention the Department of Transportation on the list that you just mentioned and I feel that the importance of transportation restrictions and private industry abiding by those restrictions cannot be over emphasized.

Mr. BROWN. Right, and the Department of Transportation is already one of our support functions in that group. They already exist.

Chairman LIEBERMAN. Thanks, sir. Very thoughtful questions, Senator Akaka.

I just have one additional question for Dr. Johnson-Winegar. Obviously, the Defense Department has spent a lot of time and money working on these problems with chemical and biological components to war fighting, and now we are at a point where we have got to begin to think about the same threats here at home. The obvious interest that we have is to make sure that we do not put civilian agencies into a position of reinventing the wheel.

I know we are in open session, but I wonder, to the extent that you can here, Doctor, if you would describe for us some of the types of technologies and ongoing research that DOD possesses or is overseeing that would be transferrable or applicable to the civilian sector, and then what is the process to make sure now that that happens?

Dr. JOHNSON-WINEGAR. Certainly. Thank you for the opportunity to describe some of our programs.

As Secretary Thompson mentioned this morning, clearly, the area of medical countermeasures, both prophylactic and treatment, for biological agents has been one that the Department of Defense has invested in for a long time. I am very happy about the collaboration between our two departments on a new anthrax vaccine, for example. The current vaccine requires six doses for full immunization and we have pooled our resources and expertise to look at recombinant technology to come up with a new product. So that is clearly an example of one where the Department of Defense and the civilian community can share in some of the technology that is ongoing.

Beyond the area of specific medical countermeasures, we could talk about the detector systems, biological and chemical agent detector systems. And while we have a very well-defined concept of operations for using those detectors on the battlefield and can, indeed, when the detectors give an alarm or an alert, can order our military troops to don their protective equipment, the protective masks and individual clothing, certainly, the technologies that we have worked on, and again, in conjunction with other work that is being done in the Department of Energy and other organizations, can look at those technologies for detection and identification of chemical and biological agents.

The whole area of protection, collective protection for buildings, individual protection, I think the Department of Defense has been the leader in developing a number of those technologies and we are certainly ready and willing to work with the civilian sector to see which of those can transfer immediately and which may require some type of modification to meet the specific needs of the civilian community.

Chairman LIEBERMAN. Is some of the detection equipment you described in use now as we respond to this anthrax attack or series of attacks?

Dr. JOHNSON-WINEGAR. Well, I would like to differentiate between detection equipment and identification equipment.

Chairman LIEBERMAN. Yes.

Dr. JOHNSON-WINEGAR. And specifically, some of the test kits that are being used for the identification are, indeed, those that have been developed by Department of Defense funding in our research and development programs and those are some of the little immunoassay tickets, and our laboratories have been participating with CDC and other labs in identification using PCR technology and other technologies.

When I was speaking specifically of detectors, I was referring to those things, for example, which can continuously collect air samples and then can be periodically analyzed for the presence of a biological agent.

Chairman LIEBERMAN. At this point, those are not being distributed throughout the country, but obviously that is one potential if there began to be concern that there was a biological threat in some area.

Dr. JOHNSON-WINEGAR. Yes.

Chairman LIEBERMAN. Are you confident that the interaction between the Department of Defense and the civilian agencies is adequate to guarantee that they have a comprehensive idea of what capacities you have and, therefore, are more able to use them to confront the threats here at home now?

Dr. JOHNSON-WINEGAR. I certainly think that while I would not say that we are 100 percent of the way to solving that communication and information exchange, I think that we are in pretty good shape and that we have made a number of attempts to publicize the information about what is available, and as I said, it is a matter of making those decisions about which is automatically transferrable and can be used as is, if you will, and those things which may require some type of adaptation or modification. And an example of that might be the protective masks, and I know there was a lot of concern amongst the public about the need to purchase individual protective masks and we certainly do not recommend that from a Department of Defense point of view.

But the technologies and the understanding that we have in how those work and, for example, we have the specialized laboratories and expertise where we can do the testing with real chemical and biological agents where many of our civilian counterpart agencies do not have those containment laboratories or do not have the personnel who are trained and qualified to work with the real pathogens and the chemical agents to do that testing. And through the interagency board and a number of the other interdepartmental groups, that is one of the things that we are bringing to the table, is our ability to do that type of work.

Chairman LIEBERMAN. Good. Mr. Hinton, did you have a last word you wanted to offer?

Mr. HINTON. I was just going to say, one of the leadership functions that we recommended be part of the focal point in Governor Ridge's office would be the oversight of Federal research and development activities, also.

Chairman LIEBERMAN. Absolutely. It was a good recommendation and we included it in our bill.

I want to move on so I can let Mr. McConnell testify and then return safely and in a timely way to Atlanta.

I want to thank all of you for what you are doing and for your testimony today, which has been very helpful to the Committee, and I hope reassuring to the public insofar as they are watching. Thank you.

The final panel this morning—Senator Akaka, thanks for hanging in there with me—Dr. Maureen Dempsey, Director, Missouri Department of Health and Senior Services; Dr. Margaret Hamburg, Vice President for Biological Programs, Nuclear Threat Initiative; and Dr. Amy Smithson, Senior Associate of the Henry L. Stimson Center.

I thank all of you, and with the permission of the other panelists, or even without it, for that matter, I am going to call Mr. McCon-

nell to testify first. Mr. McConnell is the Director of the Georgia Emergency Management Agency and is here on behalf of the National Emergency Management Agency.

Again, to pose too simplistically the general question that is before the Committee, in addition to all the expertise all of you bring to this, we want to know whether the Federal Government, working together with State and local governments, is adequately organized to meet the now-real threat of chemical and biological attack.

Mr. McConnell, thanks for being here.

TESTIMONY OF GARY W. McCONNELL,[1] DIRECTOR, GEORGIA EMERGENCY MANAGEMENT AGENCY, ON BEHALF OF THE NATIONAL EMERGENCY MANAGEMENT ASSOCIATION

Mr. MCCONNELL. Mr. Chairman, I appreciate the opportunity to be here, and let me tell you a little bit about where I am coming from. I am more into the yes and no answers, so let me give myself a little room to get out of this.

Chairman LIEBERMAN. OK.

Mr. MCCONNELL. I have been the Director of Emergency Management in Georgia for the past 11 years. We have had 16 Presidential disasters. I was also the coordinator for then-Governor Miller to prepare for and respond to and pull off the 1996 games, and before that, I was a county sheriff for 22 years, so I am more into the yes or no answers, sir, so please forgive me.

Chairman LIEBERMAN. Yes, Sheriff. All right.

Mr. MCCONNELL. Are we prepared? We are better prepared than we were 3 years ago. Are we where we should be? Probably not. There is a lot of Federal agencies doing a lot of good stuff and the States are very appreciative of that. Most of my comments today will be from my experience, and you have the written testimony from NEMA, so please do not hold that against the other group other than myself.

I certainly hope we do not reinvent the wheel. Justice has some great programs. FEMA has some good programs. DOD has some very good programs. But let us not start from ground zero.

Let us understand that when DOD talks about, with all due respect, to having equipment that can tell you when to put on your mask, the first responders do not have the equipment or the mask, in most cases. Usually, with the exception of some Justice money, normally, the first responders, when they get sick, they know there is something there.

It is certainly important to understand that the States and local governments want to plan with the Federal Government, but we ask you all, please do not plan for us. There are a variety of issues that are different across this country, from the simple issues of having ports on the ocean waterfront to the State of Kansas that does not have much interest in port authority issues.

How can we do it better? I think I have heard a lot of questions this morning about who is in charge, and we heard that a lot in 1996 with the Olympics and I have a different view of that. Who is responsible? Everybody is in charge. Everybody wants to be in charge when it is going real well. But who has to stand there and

[1] The prepared statement of Mr. McConnell appears in the Appendix on page 132.

tell those parents or tell the families that their fire fighters or EMS folks or law enforcement did not come out of the Twin Towers or did not come out of Centennial Park? That is when you decide who is responsible, Mr. Chairman.

We think that State and local governments are responsible. I know if it happens in Atlanta, Georgia, this afternoon, I know who Governor Barnes is going to hold responsible for it. I do not have a problem with that. But I do have a problem with everybody being in charge and nobody being responsible.

The assistance coming from the Federal Government is great. I have been doing this now for about 30-odd years and some of these issues we have been talking about for quite some time. Terrorism is certainly different. It is on the front burner today. But a lot of the responses, just as the gentleman from the Budget Office mentioned, are also applicable to a number of disasters and emergencies—communications, command and control, unified command. The last thing we need is 46 or 50 or whatever number you want to use of State and Federal agencies showing up and having to decide in the parking lot who is responsible for what, and that actually happens, sir.

Chairman LIEBERMAN. You have seen that happen?

Mr. MCCONNELL. I saw a fistfight in downtown Atlanta, Georgia, in 1996 when we had the Olympic park bombing, between two Federal agencies deciding who was in charge——

Chairman LIEBERMAN. Right.

Mr. MCCONNELL [continuing]. And we decided that I was because I outweighed both of them. [Laughter.]

That is to the point that we need to get on with it, sir. I am sure that the new Office of Homeland Security or Homeland Defense is certainly a step in the right direction, but let me encourage you to think about three or four things as we move forward.

Chairman LIEBERMAN. Please.

Mr. MCCONNELL. Please do not stovepipe all the Federal resources. Right now, for example, the Department of Energy, Federal Emergency Management, DOD, and two or three others deal with hazardous materials and biological chemicals. Now we get money from the Federal Government to do certain things with that, but we are not allowed to use DOE money, for example, to train people not on the DOE transportation routes. Even though it is the same training it would need somewhere else.

Please understand that a simple thing like a background check to have clearance to find out what is going on from five different Federal agencies requires five different background checks for me. It looks to me like DOD, FEMA, the Department of Energy, and whoever else should do one background check or at least share that information, not only the cost savings to the Federal Government but also getting the information to the folks that need to know.

There is an information void. I am not sure whether the information is available or we may not be on a need-to-know list or how to arrive at—information sharing is a two-way street, Mr. Chairman. A lot of times, the local responders or the State may know more about what is going on in that local jurisdiction than the Federal authorities, so we certainly need to have a clear path of how

to pass that information on and to who. There also needs to be a clear understanding of how the information is coming back to us.

So very honestly, as an old country sheriff, most all politics is local and most all disasters and most all terrorism is local. The Federal Government has a great response capability and it is going to be there in about 3 days, with no disrespect.

Chairman LIEBERMAN. Understood.

Mr. MCCONNELL. Your local fire, EMS, and your State folks are going to be there for 2 to 3 days before you get Federal assistance, and I am not trying to be ugly to the Federal counterparts, please understand.

One of the things that I did not hear this morning when we were talking about monitoring disease from Secretary Thompson is looking at the possibility of monitoring 911 calls as they come in as a faster way of knowing what is going on with diseases. Certainly it is more accurate to get it from a medical professional, but if you have a tremendous increase in calls for 911 service in Georgia and Ohio, there might be some connection for that. So as we gather that information on biological and chemical weapons and certainly a variety of diseases, let us look at the possibility of gathering that from the 911 system.

Chairman LIEBERMAN. That is a good idea.

Mr. MCCONNELL. Also, it is interesting to hear the comments about agriculture. One of the major concerns, I think, is the spread of chemical and biological on our agricultural products across this country. As it stands right now, if there is an agricultural emergency, the communities could not even recover under the Stafford Act because agriculture is not seen as part of the Federal infrastructure. So the communities, if they had a foot-and-mouth or hoof-and-mouth disease outbreak right now would not be able to recover any money through the Stafford Act through the FEMA process that is normally taking place. I encourage you to look at that.

And I guess in closing, Mr. Chairman, there is a lot of resources out here. We need to make better use of those. Some of the things that are working very good is the National Guard-DOD response teams, what used to be the raid teams, now the civil support teams, are outstanding. We have one in Atlanta. In the last 2 weeks, we have used it on an average of once every 8 or 10 hours.

But we have also got to understand that they are spread very thin. Our particular team in Georgia has eight Southern States. If I am using it every ten hours, that means Florida and a lot of other States do not have access to it. We need to enhance that capability. We certainly need to move forward with the medical packs and a variety of those things.

But another thing that has not been mentioned that we used both in New York and several natural disasters is mutual aid. Each State has a specific or has a lot of capability. We certainly need to look at how to federally fund that once it is sent from Georgia to New York or New York to California, to better use the State resources that are out there.

I think we have made tremendous strides in the last 10 years, but we have got a long way to go, sir. And with that, I will conclude and try to answer any questions you might have, sir.

Chairman LIEBERMAN. Thanks, Mr. McConnell. That was excellent.

Maybe I will ask you a question or two and then ask my colleagues if they have any, and I apologize to the other panel members, and let you go and run and catch the plane.

But I thought what you said about the response organization was critical. We had heard the testimony before that there is a Federal Response Plan and that, presumably, FEMA is in charge. But my concern is, and you have illustrated it here, is that when there is a crisis, it really is not clear who is in charge. So if you had a crisis of the kind we are talking about now in Georgia, would it be clear to you who was in charge?

Mr. MCCONNELL. Without a doubt, Senator.

Chairman LIEBERMAN. Who would that be?

Mr. MCCONNELL. It would be my governor and myself.

Chairman LIEBERMAN. Amen. But not——

Mr. MCCONNELL. We look at the Federal response as support to us.

Chairman LIEBERMAN. Right. They would be, in a sense, working at your direction. Do they see it that way?

Mr. MCCONNELL. Normally, yes, sir.

Chairman LIEBERMAN. They do?

Mr. MCCONNELL. Not always when it first starts. We have a way of delivering that message, sir.

Chairman LIEBERMAN. Yes.

Mr. MCCONNELL. But in all seriousness, it has got to be a partnership. They have certain expertise. They bring a lot of resources to the table. But you have also got to remember that they are going to get on—locals feel the same way about the State, that once it is over, they are going to be gone and we are still left there to explain why we did certain things, why it occurred that why and why it did not occur that way, and the same thing will happen in New York eventually, just the same as with any other natural disaster. It has got to be well coordinated between the State, the local, the Feds certainly play a major role. But I think the ultimate decision on how to respond to it in a State has got to lie in the governor's office, sir.

Chairman LIEBERMAN. I do not want you to name names or agencies, but just going back to that argument or fistfight that you described in 1996, was that between people at the Federal level or was it Federal and State arguing about who was in charge?

Mr. MCCONNELL. Two Federal agencies.

Chairman LIEBERMAN. That is what I was concerned that you were saying.

A final question, which I think you answered, but I want to make sure I understand. As I said to the last panel, it struck me that we have got three or four different Federal agencies with programs to train and equip local responders, who as we all agree, are where it is going to happen. These attacks are going to be local and the response is going to be local.

Is that not a problem for you in terms of even applying for grant money? I mean, would it not be better if it was concentrated in one place, because it feels as if you have got to shop around now.

Mr. MCCONNELL. It would be better from one aspect if you could have a broader base to use the funds for. We do not mind chasing the funds in different agencies, but we do have a problem, for example, if you have Department of Energy money to train first responders on moving hazardous materials from the Savannah River plant to New Mexico and Arizona for storage, but you also have a need off of that corridor to train the first responders in the same thing and you have the expertise and the people on board to do that with and you are not allowed the flexibility to do that.

If you do not move the money to one place, please try to encourage the flexibility that we can use those resources, if they are sitting there not busy doing their major response, to do DOE, for example, that we have the flexibility to use them somewhere else if we determine it is necessary, sir.

Chairman LIEBERMAN. Well said. Do either of my colleagues have any questions specifically for Mr. McConnell?

Senator AKAKA. Yes.

Chairman LIEBERMAN. Senator Akaka.

Senator AKAKA. I like your straightforward comments——

Mr. MCCONNELL. Thank you.

Senator AKAKA [continuing]. About being in charge and who is responsible. I see you recommend that all Federal programs and funding should go to the governor's designated single point of contact.

Mr. MCCONNELL. Yes, sir.

Senator AKAKA. You have been in emergency management for a while and therefore are very experienced. My question is, how can we assure—I am thinking of communities—how can we assure smaller communities that all the Federal funding will not be sent to one or two large urban areas?

Mr. MCCONNELL. I think there are two or three ways to do that. One is the Department of Justice now has what is called Byrne Grant money that has a formula that a certain percentage, and I am sorry, I do not remember the percentage off the top of my head, cannot be used for jurisdictions over 30,000 population. It breaks down how the funding has to be passed on.

The reason I think it ought to go to the governor's office, Mr. Chairman, is that way you will have some central point to know where the resources are in case you do have an emergency or an event, that now, unless you happen to ask the right person, you may not know that a particular community in your State has got a Federal grant to do something with unless you just heard about it by the grapevine.

But there is already a process in place, I known with the Byrne Grant money for law enforcement, that breaks it out into populations where you have to put a certain percentage of the money in certain jurisdictions, or not to certain jurisdictions, but certain sized jurisdictions, sir.

Senator AKAKA. Thank you, Mr. Chairman.

Chairman LIEBERMAN. Thanks very much.

Mr. McConnell, good luck in catching your plane. Thanks for the job you do in Georgia and thanks for your testimony today.

Mr. MCCONNELL. Thank you.

Chairman LIEBERMAN. Thanks to the three remaining panelists. It is too bad, in some ways, that we cannot do this on another day, because you are each superb witnesses, but we are here and so is C–SPAN, so there are people who are going to be watching and listening and being affected by it.

Dr. Dempsey, you were previously quite well introduced by Senator Carnahan, so it is nice to have you and I look forward to your testimony now.

TESTIMONY OF MAUREEN E. DEMPSEY, M.D., F.A.A.P.,[1] DIRECTOR, MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES

Dr. DEMPSEY. Thank you, Mr. Chairman, and good afternoon. I would like to thank my Missouri Senator, Jean Carnahan, for initiating discussions about my opportunity to testify here today. It is an honor to be here and I am happy to talk about preparedness.

I would briefly like to discuss the foundation that we have established in Missouri with the Department of Health and Senior Services with regard to bioterrorism preparedness and then use that as a basis for several issues that I would like to put forth for consideration.

We have been consistently planning over the last decade in Missouri with regard to strengthening the public health infrastructure, which is now the topic of the day. We wish it could have started 10 years ago in better times and would have addressed, I believe, our under-preparedness to a great degree.

We have utilized that planning to think strategically about our workforce, about how we carry out our roles and responsibilities, and how we plan for the future while taking care of our day-to-day business. As an outgrowth of that planning, we began to think about bioterrorism preparedness several years ago as a component of that planning and began to move our workforce around internally.

Despite that, we felt that we were not able to achieve an adequate focus on bioterrorism preparedness, so in May 2000, we created a bioterrorism preparedness unit within my office and have staffed it with a medical epidemiologist and an emergency coordinator. Because it is placed in my office, they therefore have the entire resources of the Department at their disposal, which includes our State epidemiologists and our CDC EIS officer and a host of other individuals who are responsible for communicable disease preparedness.

They have been tasked with the oversight of 12 work groups to look at many of the areas that were highlighted in Denver's TOPOFF exercise and our own State preparedness planning for a pandemic, influenza training that we had several years ago. We looked at areas such as mass prophylaxis, mass casualties, information systems, training of the media, building those partnerships and identifying the steps that needed to be put in place in order to effectively deal with an event should one occur.

We have also participated in the active development of the HAN Network, the Health Alert Network, and do have a capability to

[1] The prepared statement of Dr. Dempsey appears in the Appendix on page 143.

communicate rapidly with all of our 114 local public health agencies, either via E-mail or fax, and are currently working on other modes of communication should they fail, as they did on September 11.

In addition, since September 11, we have had in place—begun to put in place an active surveillance system so that we can more rapidly detect unusual events, clusters of diseases, or aberrant trends in diseases. This is in addition to our usual disease surveillance systems that have been in place, like many other States have at their disposal.

We have instituted it currently with over 1,100 providers across the State, including sentinel hospitals, physicians, federally-qualified health centers, day care centers, schools, and a host of other sites.

Chairman LIEBERMAN. How does it work?

Dr. DEMPSEY. Currently, we are utilizing a syndromic list of signs and symptoms that we are tabulating on a three times a week basis with those sites, active phone calls going from our staff that we have reassigned to those sentinel locations to tally on a regular basis what they are actually seeing at those locations so that we have an ability to have an early warning of any unusual trend.

If we would see an unusual trend as evaluated by our epidemiologist and analyst, we would then initiate an epidemiologic investigation to determine whether or not it is a manmade event or something unusual.

Chairman LIEBERMAN. Please go ahead.

Dr. DEMPSEY. In addition, we have had conversations with the Missouri Hospital Association and with our hospitals across the State to tap into the emergency rooms and the urgent care centers and some of our primary care providers across the State, as well, in order to achieve the same type of data surveillance on an active basis. We are looking at ways of doing that rapidly. Currently, there are resource constraints and personnel constraints in those hospitals that are somewhat making that a difficulty to rapidly implement, although we are looking at other mechanisms to gather that data on a very rapid basis and believe within the next several weeks we can begin to have that data available, as well.

Having said that, I will say that I think there are several areas within that public health infrastructure that we still need to support. We have heard a lot about State epidemiologists today and the ability to have CDC-trained individuals available to all States. We have that luxury in Missouri, and yet I do not believe that capacity will be adequate to meet our needs, or probably any other State's needs. We need additional individuals who can do the outbreak investigation. Currently, our folks who are doing the investigations are the same folks who are refining our plans and doing a host of other activities within the State.

In the flurry of the anthrax threats that have been occurring in Missouri, as they have elsewhere, those resources are strained and we need additional individuals who are highly trained, ready to go in at a moment's notice to ask specific questions, detailed questions, establish case identification, and then move on to establishing are other people affected and to what extent.

We also have a concern about that rapid response, and Chairman Akaka had a good question about who is in charge when you have an unusual event and is it a law enforcement or a public health lead agency at the time of that event, and I would argue that it is both, and that is true for us in Missouri, as we found out this last weekend.

There are two issues. One, as long as it is anthrax, I could say very easily, public health could handle that. But we do not know at the time the event is unfolding if, indeed, it is anthrax, and there are several considerations that need to be put in place. If it is a bioterrorism event, it would require a criminal investigation to be opened.

We currently, since October 1999, have had a relationship with the FBI and had a protocol in place in Missouri and have tested specimens for them during that 2-year period under that protocol. It has worked very effectively. They establish whether or not there is a credible threat. We do the testing for them after they have assured us that there is no chemical or radiological event that is unfolding, or if it is a package, that it is not an explosive device. All of those activities must occur before those specimens can be sent to the State public health lab, so it must be a dual responsibility at the outset of the event until the substance or agent or device, if you will, is properly identified.

As we found out this last weekend, when those resources are strained, we had to modify our protocol and are now utilizing a similar protocol for our local law enforcement agencies and are asking them to conduct an initial investigation in concert with public health, both local and State individuals. We feel that this is critical in order to protect the folks who are responding as first responders, as well as to preserve evidence and to assure that any public health threat outside of anthrax would properly be identified.

In addition to our workforce, equipment, and information systems, we believe that our Federal partners need to be adequately trained with adequate resources. They are our backup. They are the individuals we call when we need additional field investigation or technical assistance, additional expertise and knowledge that may not be available at the State level.

With regard to the training of emergency personnel, first responders, I would also like to echo other comments from today that those training dollars need to be coordinated across multiple agencies within the State, and I would often argue that the State agency or the State entities involved in that State responsibility, which may differ from State to State, should be involved in some capacity in the planning for those educational dollars.

For example, independent agencies who do not have knowledge of governmental roles and responsibilities with regard to public health cannot adequately train our medical providers on what that response system is unless they understand the response system and where the authority lies within the State to call up additional State or Federal resources.

The same is true for our law enforcement individuals. Those dollars often are coming down. I am not aware of them. We are not involved in that training. And our exercises of this past weekend and the last few days have shown us that I cannot give certain ad-

vice to law enforcement agencies, and when we train only within disciplines, I am missing critical information about how I help them respond appropriately during an event that I may take as lead and how they can assist me so that I can do my job more effectively as a public health individual.

A lot more cross-training from the State, Federal, and local level really needs to occur. Those critical roles and responsibilities are very difficult to establish in times of confusion and high energy and high concern. One of the things that having the protocol with the FBI in advance allowed us to fix our situation in Missouri very rapidly because our roles and responsibilities had been clearly defined.

We also believe that we need responsive teams available 24 hours a day, 7 days a week. We have a system available to do that. Many States do not. Many of our local public health agencies do not. But those teams need to be broad-based and supported.

We have inadequate resources for mass casualties in our State. Most of our hospitals have an inventory that is "just in time." They can barely meet their daily needs and will not be able to gear up for a large influx of ill or injured individuals.

Mental health capacity and funding for dealing with the immediate and long-term consequences of a catastrophic or terroristic event are currently unknown and untapped, I believe.

Our laboratories need to be increased in capacity. We need highly-trained individuals and they need to be staffed. We say at the public health level, I do not have reserves to call up. I do not have a Public Health Guard. We do not have time to train highly-skilled individuals in a very short time and need to assure that we are prepared in advance and adequately staffed.

With regard to dealing with the public, we would like to be able to speak with one voice and assure that we have adequate educational campaigns to address the public. They need to be comfortable with our credibility and know that our information is accurate and timely. If there were an event that we would need to assure there was no secondary transmission or quarantine and evacuate, we would need them to trust us and to listen to us immediately and respond. We believe that needs to be established in advance.

I have one final area that I would like to address that goes well beyond the vaccine for smallpox and anthrax and I think that we have a national tragedy in that we can currently not protect our population against many usual diseases that are not of terroristic origin. Influenza is a prime example. We currently also have a shortage of tetanus vaccine. Most of our current supply in Missouri was sent to New York and we have not been routinely administering the boosters to adolescents for several months, not only in Missouri, but across the country. We have recently been notified there may be shortages of childhood vaccines.

It is impossible to adequately protect our populations currently, and our vaccine supply and distribution system really needs to be examined and perhaps overhauled. We would request that we could have a rational national vaccine policy to help us deal with this issue and protect our population so they are not vulnerable to manmade or natural threats. Thank you.

Chairman LIEBERMAN. Thank you, Dr. Dempsey. Excellent testimony. Your State is lucky to have you. I would guess that some of the programs you described do not exist in many other States, certainly the preparedness for bioterrorism. Am I correct in that?

Dr. DEMPSEY. I do not know the extent of that preparedness. I know that the degree of preparedness is fairly high in Missouri and many other States are enacting very similar types of activities and units.

Chairman LIEBERMAN. Excellent. Thanks.

Dr. Hamburg, thanks for being here. It is good to see you again.

TESTIMONY OF MARGARET A. HAMBURG,[1] M.D., VICE PRESIDENT FOR BIOLOGICAL PROGRAMS, NUCLEAR THREAT INITIATIVE

Dr. HAMBURG. Thank you very much for your leadership on this important issue. It could not come at a more important time. I think today we are all painfully aware of our Nation's vulnerability to terrorism, including bioterrorism, and whether it is an unsophisticated delivery system with a limited number of exposures, as we have been seeing in recent days with the anthrax situation, or the potential of a more high-tech mass casualty attack, the prospects are certainly frightening, and today, no one is complacent any longer about this biological threat.

While there are many challenges, we do know a great deal about what needs to be done and how to do it. Improving the national response to bioterrorism must involve a comprehensive and coordinated plan. From a public health and medical perspective, several key elements must be strongly present, and you just heard a good recitation.

But perhaps first and foremost is prevention, efforts to reduce the likelihood that dangerous pathogens will be acquired or used by those who want to do harm.

Second, strengthening the public health infrastructure, our ability to rapidly detect, investigate, and respond to outbreaks of disease, enhancing medical care capacity to be able to surge in response to a large-scale event.

The National Pharmaceutical Stockpile that Secretary Thompson talked about this morning is essential to ensure that necessary drugs or vaccines can rapidly get where they are needed.

And we also need research, perhaps right now most urgently to improve detectors and diagnostics, along with better vaccines and new medications, and we also need to make sure that we bring to bear all available scientific knowledge and technology on the problems before us, that we translate what we know into action, and whether it is the development of the second generation anthrax vaccine or the implementation of new standards for ventilation systems, we still have opportunities to actually put in place a number of things that we know.

There are programs across the domains I just talked about that have been initiated in recent years. The bioterrorism preparedness activities are not just in Missouri. CDC has sponsored programs across the 50 States, but many of those programs need to be

[1] The prepared statement of Dr. Hamburg appears in the Appendix on page 152.

strengthened, need to be extended, and there are still many programs and policies that need to be developed and implemented.

And really, until recently, the importance of these kinds of programs in our overall efforts to protect national security and prepare against the threat of terrorism have been under-appreciated and under-funded and I think we really have an important opportunity at this moment to change that situation in positive ways.

So how big is the gap between the threat and our ability to respond? I was asked by your staff to briefly discuss the Dark Winter exercise, a recent bioterrorism war game involving the intentional release of smallpox. Although a simulation of a worst-case scenario, it powerfully conveyed the distinctive and sobering features of a potential bioterrorist attack and helped, I think, to spotlight vulnerabilities that we must urgently address.

Chairman LIEBERMAN. For the record, why do you not indicate under whose auspices Dark Winter occurred.

Dr. HAMBURG. OK. It was created by the Johns Hopkins Center for Civilian Bio Defense, along with the Answer Institute for Homeland Security and CSIS, the Center for Strategic and International Studies. It was played out at Andrews Air Force Base in late June of this year and it involved a simulation of a series of National Security Council meetings and the participants were all individuals who had served in government, many in cabinet or sub-cabinet roles, and I played the Secretary of Health and Human Services.

Over a 24-hour period, this game went forward, but it actually represented a 3-week simulation of a bioterrorist event. In the opening minutes of the exercise, we learned that cases of smallpox had just been diagnosed by the Federal Centers for Disease Control. Given the propensity of this disease to spread person-to-person, its 30 percent fatality rate, and the limited supply of smallpox vaccine, it was not surprising that we were soon dealing with an epidemic of devastating, if not catastrophic potential.

Smallpox has an incubation period of 7 to 21 days, and as the exercise began, we did not know when the attack had occurred or where. We had no way to understand the full scope of the crisis we were facing. How many cases were there? How many more cases could we expect? When and where did the first infections take place? Who released it? Did we have enough vaccine and could we obtain more?

We did not know it at the time, but there actually were three simultaneous attacks that had taken place 9 days earlier. Terrorists had silently released smallpox in three shopping malls at the start of the Christmas shopping season, and although the releases were variably effective, some 3,000 people turned out to have been infected by these initial exposures.

To contain a smallpox epidemic, there are two primary tools: Isolation of cases and protective vaccination of those exposed. Most of the available vaccine was distributed early on in an effort to protect key health care workers and other critical responders, to protect a fraction of our military, and most importantly, to try and put a ring of immunity around the smallpox cases that were being reported, and as you heard this morning, we only, as a Nation, have enough smallpox vaccine for about 1 in 23 Americans.

But from the beginning, the strategy for smallpox control was limited because of the large numbers of people initially infected, the contagiousness of smallpox, and our limitations on vaccine supplies. Accelerated production of new vaccine was ordered by the President, and the Secretary of State was asked to try to find surplus stocks from other countries, but this was doubtful in the face of a smallpox epidemic that was likely to quickly become global in nature.

Over the course of days, vaccine started to run out and we had to contemplate measures considered draconian by modern standards, including enforced isolation of contact and restrictions on travel. We also had to address logistical concerns, such as getting food and other essential supplies to affected areas in the face of these restrictions. And these problems were exacerbated by the fact that, by this point, we could no longer provide vaccine to essential providers.

As the exercise progressed, we started to see what appeared to be secondary infections, although we could not be 100 percent certain that we were simply seeing secondary cases or if we were seeing a subsequent attack. Because of the person-to-person spread, epidemiologic models predicted that without effective intervention, every 2 to 3 weeks, the number of cases would increase roughly 10-fold. So we were looking at three million cases in 2 months if we did not stop the waves of follow-on infections.

At the conclusion of the exercise, the epidemic had spread to 25 States and 10 foreign countries. Civil disorder was erupting sporadically around the Nation. Interstate commerce had ceased in large areas of the country. Financial markets had suspended trading. We were out of vaccine and we were using isolation as the primary means of disease control.

So you can see, for the participants, this exercise was filled with many difficult dilemmas and unpleasant insights. I want to stress again that this is, of course, a worst case scenario and it was really designed to help surface some of the critical issues in terms of how we think about a bioterrorist threat, how we organize systems to respond, and what are some of the critical gaps that we need as a Nation to address.

So some of the key lessons learned included, first, that we really need to focus more attention, concern, and resources on the specific threat of bioterrorism, understanding that it is different from the other threats we face, that it will unfold as a disease epidemic over time, potentially with waves of infection and disease as opposed to the kind of attack we saw on September 11, where, while devastating, it was confined in both time and geography.

Critically, we need to recognize the central role of public health and medicine in this effort and engage them fully as true partners. We must act on the understanding that public health is an important pillar of our national security framework.

Public health takes place, of course, at the local, State, and national level, and we have to recognize that and support capacity at all those levels, as well as integration. We need to increase the core capacities of our Public Health System to detect, track, and contain epidemics by providing resources for effective surveillance systems,

including the kind of real-time data collection and analysis strategies that were mentioned by Dr. Dempsey and by Mr. McConnell.

We need diagnostic laboratory facilities to support these efforts and effective communication links to other elements of the response. This must include a reexamination and modernization of the legal framework for epidemic control measures, and we must recognize the need to fully bring in and work with new partners, both within health, veterinary medicine, and agriculture, as we heard earlier, and also the importance of law enforcement in this kind of a context.

We also need to develop plans for a surge of patients in the Nation's hospitals. This will require careful advance planning, since most hospitals are operating at or near capacity now.

Mr. McConnell mentioned the Stafford Act as it related to agriculture, and I also think that if you are looking into that, some of those same uncertainties about reimbursement exist for voluntary and private hospitals in the event of response to a national disaster.

Related to this is the National Pharmaceutical Stockpile, which should be built to capacity, including extra production capability for drugs and vaccines with heightened security at the various storage and dispersal sites. It will also be necessary to increase funding for biomedical research to develop new vaccines, new therapeutic drugs, and new rapid diagnostic tests for bioweapon agents.

In a broader sense, we need to identify and put into practice the mechanisms by which all levels of government and all relevant agencies in government will interact and work together. These responses, as just mentioned, are cross-disciplinary and must cross agency lines. We must understand our differing roles, responsibilities, capabilities, and authorities and continue to plan and practice how to work together before an act of terrorism occurs.

We should also build on systems that are used routinely to the greatest degree possible so that we are not trying things out for the first time in the event of a crisis, whether it is HAZMAT teams that will be relevant in case of a chemical attack or disease surveillance and public health systems for a bioterrorism attack.

Similarly, there should be a clear plan for providing the news media with timely and accurate information to help save lives and prevent panic, and I think we have seen the importance of that in recent days.

Finally, measures that will deter or prevent bioterrorism will be the most beneficial means to counter these threats to public health and social order. We need to prevent the proliferation of biological weapons, in part by strengthening intelligence gathering about such threats, but also by providing peaceful research options to former bioweapons scientists in the former Soviet Union and securing their biologic materials. In addition, we need to encourage the scientific community to confront the potential misapplication of modern biological research and help them devise systems and practices that ensure secure access to dangerous pathogens for legitimate use only.

So in conclusion, let me reemphasize that a sound strategy for addressing bioterrorism will need to be quite different from those that target other terrorist acts. While a larger-scale event likely re-

mains a low probability, the high consequence implications of bioterrorism place it in a special category that requires immediate and comprehensive action.

Yet as we move forward to address this disturbing new threat, it is heartening to recognize that the investments we make to strengthen the public health infrastructure, to develop new drugs and vaccines and assure their availability, to improve medical consequence management, and to support fundamental and applied research will also benefit our efforts to protect the health and safety of the public from naturally occurring disease, be it flu or food poisoning.

So again, I appreciate your efforts on these important topics and would be happy to answer any questions you may have.

Chairman LIEBERMAN. Thanks. That is a very good point at the end, also, about the connection to more traditional public health threats.

Dr. Smithson, nice to see you here in person. I have seen you a few times on television in recent weeks.

Ms. SMITHSON. That is not my normal shtick, I assure you.

Chairman LIEBERMAN. Well, you do it well.

Ms. SMITHSON. Thank you, sir.

Chairman LIEBERMAN. We will hear your testimony now.

TESTIMONY OF AMY E. SMITHSON,[1] PH.D., DIRECTOR, CHEMICAL AND BIOLOGICAL WEAPONS NONPROLIFERATION PROJECT, THE HENRY L. STIMSON CENTER

Ms. SMITHSON. On September 11, this Nation suffered an unthinkable tragedy, particularly the family and friends of those who perished. In the aftermath of that horrific attack, a series of incidents involving anthrax have unfolded, including here on Capitol Hill. One American has died from anthrax, three have the disease, and several dozen others have been exposed to the agent. Over 280 million Americans are physically unharmed by these isolated anthrax incidents, but a great many of them are fearful of what might come next.

No matter where one comes out in the debate about whether terrorists can pull off a biological attack or a chemical attack that causes massive casualties, the debate itself is moot. One need only consult public health journals to understand that it is only a matter of time before a strain of influenza as virulent as the one that swept this country in 1918 resurfaces. You can also examine issues regarding emerging infectious diseases and the rise in the number of diseases resistant to antibiotic treatment to know that Mother Nature herself is a very formidable opponent.

The fact that we now live in large population centers and travel with great frequency, not just in this country but internationally, will complicate the ability of public health authorities to address epidemics.

As for the prospects of a large-scale chemical disaster, one needs to keep in mind what America's first responders and health care workers have to deal with on a routine basis. According to the U.S. Chemical Health and Safety Investigation Board, between 1987

[1] The prepared statement of Ms. Smithson appears in the Appendix on page 164.

and 1996, a hazardous chemical incident of some severity took place in over 95 percent of this Nation's counties. Every year, over 60,500 accidents and incidents with these chemicals occur at fixed facilities or in transit.

Thus, there is a need for this Nation's front-line responders, from fire fighters, police, and paramedics to doctors, nurses, laboratory workers, and public health officials, to be prepared to cope with chemical and biological disasters, regardless of whether or not terrorists turn to these agents in the future in an attempt to cause mass casualties.

The appointment of Governor Tom Ridge as the Director of the new Office of Homeland Security would certainly seem to be a constructive step that could put improved coordination and streamlining of the Federal response bureaucracy on a fast track. To aid Governor Ridge in his efforts, Congress should grant him czar-like budgetary authority. I will not kid you. Everybody that works inside the beltway knows that the real clout comes with control of the budgets.

Alone, Governor Ridge will have difficulty taming the Federal bureaucracy, however. When I try to tally the number of Congressional oversight committees on Capitol Hill, I not only run out of fingers, I run out of toes. A consolidation of Congressional oversight committees is sorely needed.

Also in order is a reassessment of the true value of politically popular placebo programs, like the National Guard's Civil Support Teams, and my remarks in this regard will differ from what you have heard from Mr. McConnell. I assure you I have no disrespect or intend no disrespect for the National Guard as an institution or for the fine men and women who serve our country in the National Guard.

But I urge you to consider the evaluation of these teams offered by public safety and public health officials, including members of the National Guard, that I interviewed in 33 cities in 25 States. Their views are presented fully in "Ataxia," a report that I co-authored with Leslie-Anne Levy and released last October. This report can be found on the World Wide Web at www.stimson.org.cwc.

Briefly, the message from the front line about these Civil Support Teams is unified and clear. They have a minuscule, if not negative, utility in a chemical or a biological disaster, a point that I would be pleased to elaborate on during Q and A.

To those accustomed to overseeing billion-dollar budgets, the National Guard program in this area might not seem so ill advised, but please consider how this program's budget could be put to uses that could make a real preparedness difference on the front lines. For example, to begin fixing the glaring lack of decontamination capacity in U.S. hospitals that results in recurrent hospital closures even after small HAZMAT incidents. In most of the cities that I surveyed for "Ataxia," the central game plan for hospitals in the event of a major chemical catastrophe was to lock down. That means to shut their doors to incoming patients.

Chairman LIEBERMAN. Why was that?

Ms. SMITHSON. Simply because in order to protect the safety of the patients that are already in their facility, as well as the safety of the workers there, physicians, nurses, etc., if they allow someone

that is contaminated inside the premises, they have to close that area of the hospital down.

For the cost of standing up one National Guard Civil Support Team, 2,333 hospitals or fire stations could be outfitted with decontamination capabilities. With the total 1999 budget for this program, 49,800 local rescue and health care facilities could have been armed for decontamination. Civil Support Team funds, in other words, could be used to make a genuine preparedness difference were they applied to overcoming the decontamination bottleneck at U.S. hospitals.

I am aware that proposals are now circulating for each State to have its own Civil Support Team. I would encourage you to reconsider those proposals. By all means, leave the resources in the States, but this is something, again, I would encourage you to reconsider.

If there is no other message that you take away from my testimony today, let it be an understanding that the key to domestic preparedness lies not in bigger Federal bureaucracy but in getting taxpayers' dollars channeled to readiness at the local level, and I would like to spend a few minutes, with your indulgence——

Chairman LIEBERMAN. Please.

Ms. SMITHSON [continuing]. Explaining a couple of concepts that I believe will be key to readiness at the local level.

The first of these refers to something that Dr. Hamburg just discussed and that is how can hospitals handle a great surge of patients either in a chemical or a biological disaster? The key here appears to be a need for regional hospital planning. This is something that used to occur in a lot of our cities but no longer does because of the way that our health care system currently works.

If the Federal Government provides grants to regions so that hospitals can get together and have a pre-agreed game plan about how to share burdens in these circumstances, who is going to remain open for what, for traumas, for maternity, for heart care, which hospitals would convert to care of infectious disease patients, these types of arrangements, including plans about how to prophylax a large population, how to secure emergency supplies, how to bring in, in the near term, before Federal help can arrive, reservoirs of health care personnel that might be nearby. All of these factors are all essential to the ability of hospitals to withstand the flood of patients they are likely to see, such that the local health care system does not collapse in such an event.

Chairman LIEBERMAN. As far as you know, none of this is happening now?

Ms. SMITHSON. In the survey that I conducted, there were only a couple of cities across the country—and I was not everywhere, but 33 is pretty large—that were even beginning to attempt this type of planning.

Chairman LIEBERMAN. And the Federal Government is not requiring it, as far as you can tell?

Ms. SMITHSON. This is not a requirement of the Federal programs as I currently understand them.

Chairman LIEBERMAN. OK.

Dr. HAMBURG. I think it is part of the MMRS program that Secretary Thompson talked about. They are trying to get cities receiv-

ing monies to do planning. It is not quite as required or comprehensive as what Amy is suggesting, though.

Chairman LIEBERMAN. Right.

Ms. SMITHSON. She is correct. With the MMRS program, the difficulty has been, and also with the Domestic Preparedness Program, getting hospital administrators and physicians into the planning process because they simply do not have the ability to charge their time anywhere and their time is needed for other duties.

Another concept that I would like to discuss with you is that of early warning syndrome surveillance. Disease reporting usually comes from two sources, physicians who are alert and pick up signs and symptoms, as well as laboratories that do detailed analyses of cultures.

Well, if we really want to get a head start on an outbreak, there are several places across the country that are attempting to institute disease syndrome surveillance. The utility of this is that it takes data that is already available and creates a historical database. This is a computing and data analysis challenge, and monitoring things like 911 calls and other leading-edge indicators would allow public health and emergency officials to understand that something is going wrong in the health of their communities.

They might not know what, but this kind of a technique would allow them to notify hospitals and laboratories to look hard and look fast to get more specific about what might be going wrong. It may make the difference in the ability to get that early notice of a disease outbreak in time to take lifesaving intervention. The most advanced system in that regard that I am aware of is in New York City. They have done path-breaking work.

And with that, I think I will wait for your questions.

Chairman LIEBERMAN. Thank you.

Ms. SMITHSON. Thank you.

Chairman LIEBERMAN. No, thank you. It was very helpful.

Talk just a moment about what the purpose of the Civil Support Teams of the National Guard was supposed to be.

Ms. SMITHSON. I think I should actually let the National Guard speak to their purpose because they run the program, but if one understands the dynamics of a chemical disaster response, this peaks very quickly. If you look at the situation that occurred in Tokyo, the victims in that particular instance were at the hospital within a matter of a couple of hours.

Chairman LIEBERMAN. Right.

Ms. SMITHSON. Now, the National Guard is saying that these teams will go "wheels up" in 4 hours. In New York City, I believe that they arrived at the World Trade Towers within 12 hours, perhaps that was 11 hours, and in that particular situation, they began to monitor for chemical and biological agents. Well, quite frankly, the New York City officials had begun to do that hours before, as had the Environmental Protection Agency.

There are a number of exercises and incidents that have been related to me from my interviews with regard to how well these teams have been able to perform, and simply, they have been put in between a rock and a hard place. They are very well trained, but unless you have been in the heat of battle, so to speak, it is very

difficult to apply a lot of the skills that they have been asked to master.

In a biological disaster response, for example, the medical component on these teams is four people, and in terms of how much medical manpower would be needed, that is pretty much a drop in the bucket.

Chairman LIEBERMAN. Right.

Ms. SMITHSON. So, again, these are things we can discuss in more detail——

Chairman LIEBERMAN. It is well stated and that is a question we will throw back at those in charge of those programs.

You made a point which has interested me for a while as I have focused on the current wave of terrorist attacks and concern about chemical and biological, which is the extent to which changes that have occurred in our health care system in recent years, decades, have put us more on a kind of a "just in time" inventory basis. I am making a manufacturing comparison, but you talked about it in terms of hospital rooms available.

I want to ask you, Dr. Hamburg, to comment on that from your background in public health generally. It strikes me that if we want to be really ready to respond medically to an attack, it does take government intervention, because it is not going to normally happen in the health care system as it is operating out there today. Am I right?

Dr. HAMBURG. You are exactly right. The current pressures in the health care environment have led to an enormous amount of downsizing, fewer hospital beds, "just in time" purchase of pharmaceuticals and supplies, and minimal staffing patterns, and that is fine if you want to save money, but it is not what you need in the event of a large-scale, potentially catastrophic event with many casualties.

Clearly, we do not want to encourage our health care system to add on unnecessary, unutilized beds or services in the event that a catastrophic attack will occur or a major natural disaster, but I think that what Amy was saying about regional planning is absolutely the key. We need today to have localities assess what their assets and capabilities are, not just in terms of the existing health care system but also ancillary facilities and staffing possibilities that could be brought to bear in a crisis. Then you need to look at what are the State programs and assets and the Federal programs that can be brought to bear to add to the local capabilities in a staged kind of way, recognizing that, as has already been emphasized, that the initial response is going to be truly local and it has to build on local capabilities.

It is absolutely key that as monies go out to States and localities to build new programs of preparedness in this context, I think that we put a requirement on them to do this kind of planning and specify the kinds of elements that they need to address in their plans, because again, this is the kind of thing where you have to develop a plan, you have to bring all the partners together, you have to understand the components of that activity, and then you have to practice it.

Chairman LIEBERMAN. Good idea. Going back to your report on the exercise, the simulation of Dark Winter, are you beginning to

see responses from the government to some of the lessons learned from Dark Winter?

Dr. HAMBURG. Well, I think it is a combination of Dark Winter and real world experience, I think has put some of these issues on the public consciousness in a way that it has never been before and in the halls of Congress, as well. Frankly, when I used to talk about public health infrastructure needs and the surveillance, et cetera, people's eyes would glaze over and they would find an excuse to leave the room. Now, people that I would never imagine to be interested and supportive of these issues suddenly are at the front line in terms of calling for greater investments in these areas.

From the public health perspective, I think it is very exciting and I think it really is truly the case that these are very sensible investments for the American people because, as Amy eloquently described in her testimony, Mother Nature herself is a very powerful adversary and we know that we are vulnerable to a whole array of infectious disease threats. And as I think about the problem of bioterrorism, it is part of a continuum of infectious disease threats, but at the farmost extreme end. We have allowed our Public Health System to be under-funded and inadequately supported and this is the critical time to turn that situation around.

Chairman LIEBERMAN. I agree. The investments we make now in reaction to this terrorist crisis will, if we do them right, have the effect of strengthening our Public Health System for the kinds of challenges that just face us in a more natural setting than enemy attack, including the flu epidemic that you referred to.

Dr. Dempsey, if you were taken up to the Federal level and asked how best to organize the Federal programs that we have talked about today for preparing for responding to chemical and biological attacks, what would be the overview of what you would do?

Dr. DEMPSEY. With organizing the Federal level?

Chairman LIEBERMAN. Yes.

Dr. DEMPSEY. To assist the States or just for the Federal response?

Chairman LIEBERMAN. Generally, and to assist the States, yes.

Dr. DEMPSEY. Well, I believe that, first, I would have to understand their primary roles and responsibilities and assure that the interconnections and the collaborative efforts that needed to be established between them were put into place and actually operationalized.

And what we have found on the State level, we have similar issues about how do we organize these activities at the State level, is that we are always long on theory and short on application and it is really hard to operationalize how it finally works until you try to do it, and I think that takes a different level of planning, a very deep understanding of the primary roles and responsibilities and how they relate to the roles and responsibilities.

If you look at the way we are organized now, both federally, at least the way I view the Federal perspective, is that everybody has their roles and responsibilities but they are within their discipline and within their authority, and that plays out in parallel and not in concert. So you get a lot of response, but it is not coordinated and perhaps not as effective as it could be.

I think a focus on the outcomes of what we are trying to achieve, if you are going to reorganize or reallocate resources, what are the outcomes you are trying to achieve and set your programs up or your organizations up to achieve those outcomes and then assign back roles and responsibilities. That approach, generally, I think, would be far more effective than starting from a role and responsibility and trying to figure out how to make the collaboration work later.

Chairman LIEBERMAN. Thanks. We have just completed our fifth hour in this room, or yours, anyway, and I do not want to keep you much longer, but I want to ask you a last question just to bring it back to what is happening here now, because obviously we left to go to the meeting with all of the Senators, and there are well over 20, maybe approaching 30 or just over 30 cases now around Senator Daschle's office in which people have been determined to have been exposed to the anthrax. And, of course, we have had the other episodes.

I got a note, and I should not be repeating hearsay, but that there was now a finding of anthrax in Governor Pataki's New York City office.

I wanted to ask you, you are experts, you are administrators, you have been involved in this, you have thought about it, just give me for a couple of minutes each, what are your reactions to what is happening now, and if you have any particular counsel here in terms of the Capitol or generally, I would be happy to hear it.

Dr. DEMPSEY. Actually, I have thought about it a lot because we have been dealing with it, and I think part of the difficulty that we are having with resolving the situation is the panic that ensues.

Chairman LIEBERMAN. That is right.

Dr. DEMPSEY. Even the word "exposure" and the unknown quantity for these agents that are being unleashed and what that means for individuals, you cannot see them, you cannot predict when they will be out there. And we are seeing a lot of individuals who are jumping at shadows, very concerned, beginning antibiotic therapy. We have deep concerns that if we do not manage this public message from a State, Federal, and local level with a united voice, that we will have more antibiotic resistance in the future, perhaps against agents that we only have one drug that may be effective against it now. That is a huge consideration and that is part of the management of the public.

I think the unified approach really is to assure that we do establish protocols and procedures for both testing, diagnosis, and treatment, and begin to educate people adequately on what those protocols are and then adhere to them.

Part of the difficulty we have had with overloading the system is that we have no way to manage that. Everybody wants everything evaluated within 24 hours. Everybody wants to be on drugs and everyone wants someone to come and investigate. Without a way to truly manage that, to manage the public response and the official response in a coordinated, concerted, unified effort, I think that we may miss something that is going on while we are exhausting our resources on something that we do not need to exhaust them on and that we create undue panic in the public because we

have not given them credible information on how to protect themselves.

We have given them good information on what not to do. Do not buy masks. Do not stockpile. But we have not said, here is something you can do, and I think they are hungry for that. That is why they are buying the masks.

So I would say that good, credible information, timely coordination, and a unified approach.

Chairman LIEBERMAN. Dr. Hamburg, I would ask you to respond, and maybe I will focus it a bit because I know you have spent some time thinking and working in this area. What conclusions do you draw, and I understand you are dealing with public information here, about the finding that the anthrax sent to Senator Daschle's office was of a more pure variety, and I presume, and again, I am going beyond my expertise, the fact that so many more people in his office have been exposed suggests that this anthrax was moving more widely in the air.

Dr. HAMBURG. Well, I clearly do not know all the facts about the investigation or the nature of the material identified, but I think it underscores the importance of really addressing the problem of access to dangerous pathogens. The fact that it has been described as of a higher grade and apparently prepared in a way that would suggest an intent to make it more harmful reminds us that whoever is doing this is intending to do harm and has been able to get access to materials that will make the harm done more severe.

And so I think that this is the time to really look at the systems that we have in place to assure that only those who have a legitimate use for this organism and other dangerous pathogens have them, that we know more about who is using them and why. And it underscores our need to really improve intelligence in the biological area and I think that public health and the scientific community actually has an opportunity and an obligation to work more closely with intelligence authorities in those collection efforts because I think we have expertise that can be very helpful in data collection and analysis.

Chairman LIEBERMAN. That is very interesting. I appreciate that, because it is not that this stuff is easy to get, but I have learned over the last couple of days even that there is more of it around than I would have guessed, so that—and I presume there is not much intelligence work being done in this area, so you are right. Without compromising anybody's independence and etc., the ability to share information between the research scientific communities and intelligence agencies or law enforcement now will be critically important. Thank you.

Dr. Smithson, finally.

Ms. SMITHSON. Well, I think that the scars from September 11 are running deep, but the scars that are being created by the events that are unfolding now may be even deeper and more difficult to address. I echo Dr. Dempsey's concerns in that regard and——

Chairman LIEBERMAN. Unduly, I take it you mean, in other words, that it is beyond——

Ms. SMITHSON. Yes. A lot of what the American public heard in the initial media cycles, I think, blew some of this out of propor-

tion, so it is very difficult now when they hear messages about these are isolated incidents, that there are lots and lots of hoaxes interspersed with these things. What can they do to protect themselves? How can we move forward? I am perhaps here suggesting a public service information campaign so that the messages get repeated often about how to put this threat into context.

In my initial statements about this, I talked about how someone was more likely to be the victim of a lightning strike—your odds there are one in 600,000—than you are to be the victim of a chemical or biological terrorist attack. I have used the reference of how we learned to buckle our seat belts when we get into the car to reduce the chances that we might be injured in a car wreck, but we still drive our cars and we still need to open our mail. So we are going to have to learn to take some new precautions with our mail. What are those precautions? Some of these messages are getting out, but they are getting interspersed with a lot of other stuff that, I think, is confusing for the American public as well as for policy makers.

Another thing that these incidents illustrate again and again is that all emergencies are local. I guess what I would advise you to consider is that there are some roles that the Federal Government must fulfill, for example, those related to research, development, and production of emergency medical supplies and the provision of emergency medical manpower, the provision of mid- to long-term recovery assistance in the aftermath of a disaster. Some of these—a lot of these capabilities and resources are already in place.

But there are some roles that are not appropriate for the Federal Government to undertake. Allow me to illustrate that by pointing to how training is currently being conducted. The Federal Government is hiring contractors, and according to the GAO statistics here, training is getting to responders that serve only 22 percent of our Nation's population.

Chairman LIEBERMAN. That is right.

Ms. SMITHSON. So we can either go about this the smart way or we can continue on a costly and inefficient track. The goal here is to get the entire country prepared in an even and systematic way, hopefully. It will be tough.

But, for example, on the training front, the solution there is very clear. Institutionalize the training in fire academies, in police academies. All paramedics ought to have training with regard to this. This needs to be in our medical schools, in our nursing schools. Our microbiologists need to have certain training in this regard, as do our public health officials. Get the Federal Government out of the way there, and that way, I think we will get the entire country better prepared.

There are several common sense solutions, and if you need anyone out of my Rolodex from 33 cities to convey these messages personally and with much more authority, you are welcome to them.

Chairman LIEBERMAN. Thank you. That is a generous offer.

You have been very helpful and you have got great expertise. You have shared it with us. And I think to the extent that you have given statements that are quite balanced and proportionate. It is very important to do that.

Now, obviously there is great anxiety here, as I said long ago at the beginning of the hearing, and part of it is because we are in a territory that we have not been before within the United States. I mean, there have been health epidemics, and in some ways, people have been fearful when that has happened. I watched it on a relatively small scale about West Nile virus. And, of course, earlier in our history, terrible losses associated with influenza. I lost my paternal grandmother, who I never got to know, in the influenza epidemic of 1918.

But it seems far away from life as we have known it in recent times and that is part of the anxiety, and I do think we have to put it in proportion, compare it to other risks that we have, and then share information and then, and this comes back to the purpose of the hearing, make sure that the government is organized as effectively as possible to both prepare for crises of this kind and then respond to them, and if we are, then we will give the public even greater reason for confidence.

Anyway, you have helped measurably. This has been a long hearing and it has taken at least one unexpected twist, but I think it has been valuable, certainly to me and the Committee in assisting us in fulfilling our responsibilities to the public. So I thank you very much.

Before we recess, I would like to enter into the record a statement from Senator Bunning.

[The prepared statement of Senator Bunning follows:]

PREPARED STATEMENT OF SENATOR BUNNING

Thank you, Mr. Chairman.

The threat of a biological attack has unfortunately been brought home to us during the past couple of weeks.

Understandably, Americans are nervous.

Companies and offices are taking extreme measures when opening mail, hundreds of employees have been tested for anthrax exposure and many Americans have contacted their doctors about getting prescription drugs.

During this time of confusion and anxiety, the American people are turning to us for answers.

We have known for some time that we need to be better prepared to respond to a biological or chemical attack. We have taken some steps in the past to address these concerns and better prepare our state and local governments.

However, as some of our witnesses will testify today, we have a long way to go in being able to adequately handle a large-scale biological attack.

This includes making sure our hospital personnel and others on the front line have the training and equipment they need to make the fastest diagnosis possible, making sure that we have enough medicine stockpiled to treat those infected, and making sure that our state and local governments can coordinate and communicate with the appropriate Federal personnel during and after an attack.

The United States has entered a new era. With the events of September 11 and the anthrax cases throughout the country, we must become more proactive in addressing all types of terrorist threats.

I want to thank our witnesses for being here today, and taking time out of their busy schedules to share with us their expertise on this issue.

Thank you, Mr. Chairman.

Chairman LIEBERMAN. The record of the hearing will remain open for another week for those who may wish to submit statements. At this point, I will recess the hearing.

[Whereupon, at 2:40 p.m., the Committee was adjourned.]

APPENDIX

Testimony
Before the Committee on Governmental Affairs and Subcommittee on International Security, Proliferation and Federal Services
United States Senate

Federal Efforts to Coordinate and Prepare for Bioterrorism: The HHS Role

Statement of
Tommy G. Thompson
Secretary,
Department of Health and Human Services

For Release on Delivery
Expected at 9:30 am
on Wednesday, October 17, 2001

Mr. Chairman and Members of the Committee, thank you for inviting me here today to discuss the Department of Health and Human Services (HHS) role in federal government efforts to coordinate, prepare for and respond to acts of terrorism, particularly those involving biological or chemical agents.

The Federal Emergency Management Agency (FEMA), as overall lead federal agency for consequence management efforts, has designated the Department of Health and Human Services (HHS) as the lead agency to coordinate medical assistance in national emergencies, be they natural disasters or acts of terrorism. When FEMA determines a federal response is warranted, this agency deploys medical personnel, equipment, and drugs to assist victims of a major disaster, emergency, or terrorist attack. Given our critical medical role in any biological, chemical, radiological or nuclear attack, I take HHS preparedness efforts most seriously.

We are working very closely within the Administration to make sure our resource needs are adequately and accurately developed. Areas we have particularly focused on include:

- Accelerating development and procurement of vaccines and pharmaceuticals to control and treat critical biological threats, including smallpox and anthrax.
- Protecting our food supply by increasing inspections of food imports, and providing the Food and Drug Administration (FDA) more of the modern equipment needed to detect select agents.
- Working with cities to ensure that their Metropolitan Medical Response System units have the equipment and training to respond to bioterrorist events and other disasters.

- Working with States to ensure they have comprehensive response plans, and increasing their capacity to detect and respond to threats. This includes:
  - expanding the number of State labs with rapid testing capability;
  - improving coordination with local response plans, and
  - expanding the Health Alert Network.
- Implementing a new hospital preparedness effort to ensure that our health facilities plan for the equipment and training to respond to mass casualty incidents.

Recent events involving anthrax have highlighted the collaboration between state and local health and law enforcement officials, HHS's Centers for Disease Control and Prevention (CDC) and the Federal Bureau of Investigation (FBI). We are continuing to conduct investigations related to anthrax exposures in Florida, New York, Nevada, and our Nation's Capitol complex. CDC and state and local health officials continue to work closely with medical professionals nationwide to monitor hospitals and out-patient clinics for any possible additional anthrax cases. During this heightened surveillance, cases of illness that may reasonably resemble symptoms of anthrax will be thoroughly reviewed until anthrax can be ruled out.

The public health and medical community continue to be on a heightened level of disease monitoring. This is an example of the disease monitoring system in action, and that system is working.

Coordinated Preparedness Efforts

As you know, much of the initial burden and responsibility for providing an effective response by medical and public health professionals to a terrorist attack rests with local governments. If the disease outbreak reaches any significant magnitude, however, local and state resources will be overwhelmed and the federal government will be required to provide protective and responsive measures for the affected populations.

HHS agencies that play a key role in our Department's overall terrorism preparedness include the CDC, the FDA, the Office of Emergency Preparedness (OEP), and the National Institutes of Health (NIH).

The Department has always valued the cooperation that it has received from its federal, state, and local government partners. We work closely with all of the agency signatories of the Federal Response Plan and have had a particularly close working relationship with FEMA, the Department of Defense (DOD), the Department of Justice (DOJ), the Department of State (DOS), the Department of Veterans Affairs (VA), the U.S. Department of Agriculture (USDA), the Department of Energy (DOE), and the Environmental Protection Agency (EPA).

I will focus the remainder of my testimony on a few examples of HHS's terrorism preparedness efforts conducted in collaboration with our federal, state, and local partners.

National Disaster Medical System

The National Disaster Medical System (NDMS) is the vehicle for providing resources for meeting the medical, mental health, and forensic service requirements in response to major emergencies, federally declared disasters, and terrorist acts. Begun in 1984, NDMS is a partnership among HHS, VA, DoD, FEMA, state and local governments, and the private sector.

The System has three components: direct medical care; patient evacuation; and the non-federal hospital bed system. NDMS was created as a nationwide medical response system to supplement state and local medical resources during disasters and emergencies, to provide back-up medical support to the military and VA health care systems during an overseas conventional conflict, and to promote development of community-based disaster medical systems. The availability of beds in over 2,000 civilian hospitals is coordinated by VA and DoD Federal Coordinating Centers. The NDMS medical response component is comprised of over 7,000 private sector medical and support personnel organized into approximately 70 Disaster Medical Assistance Teams, Disaster Mortuary Operational Response Teams, and speciality teams across the Nation.

When there is a disaster, FEMA, as the Nation's consequence management and response coordinator, tasks HHS to provide critical services, such as health and medical care; preventive health services; mental health care; veterinary services; mortuary activities; and any other public health or medical service that may be needed in the affected area. HHS's Office of Emergency Preparedness directs NDMS, the Public Health Service's Commissioned Corps Readiness Force, and other federal resources, to assist in providing the needed services to ensure the continued health and well-being of disaster victims.

Pharmaceutical Stockpiles

The VA is one of the largest purchasers of pharmaceuticals and medical supplies in the world. Capitalizing on this buying power, OEP and VA have entered into an agreement under which the VA manages and stores specialized pharmaceutical caches for OEP's National Medical Response Teams. The VA has purchased many of the items in the pharmaceutical

stockpile. The VA is also responsible for maintaining the inventory, ensuring its security, and rotating the stock to ensure that the caches are ready for deployment with the specialized National Medical Response Teams. Additionally, during FY 2001, OEP provided funds to the VA to begin to develop plans and curricula to train NDMS hospital personnel to respond to weapons of mass destruction events.

Research Efforts

With the support of Congress, the President has implemented a government-wide emergency response package to help deal with the tragic events of September 11th. This complements efforts already underway to prepare our nation against such heinous attacks, including threats of bioterrorism. For example, CDC and the National Institutes of Health (NIH) within HHS are collaborating with the Department of Defense (DOD) and other agencies to support and encourage research to address scientific issues related to bioterrorism. The capability to detect and counter bioterrorism depends to a substantial degree on the state of relevant medical science. In some cases, new vaccines, antitoxins, or innovative drug treatments need to be developed or stocked. Moreover, we need to learn more about the pathogenesis and epidemiology of the infectious diseases which do not affect the U.S. population currently. We have only limited knowledge about how artificial methods of dispersion may affect the infection rate, virulence, or impact of these biological agents. Our continuing research agenda in collaboration with CDC, NIH, and DOD is vital to overall preparedness.

Even before the events of September 11, HHS's Food and Drug Administration actively cooperated with DOD in the operation of its vaccine development program and the maintenance

of their stockpile program. Any vaccine development, whether by DOD or private industry, must be in accordance with FDA requirements that ensure the safety, effectiveness and manufacturing quality of the finished product. FDA provides assistance to DOD regarding the research required to develop new vaccines, as well as assistance during all phases of development. FDA also works with DOD's office that screens new and unusual ideas for development of products to treat diseases and develop diagnostic tools.

Food Safety

Because food is a possible medium for spreading infectious diseases, FDA and CDC are enhancing their surveillance activities with respect to diseases caused by foodborne pathogens, and are working with our federal, state, and local partners to coordinate these activities. PulseNet, a national network of public health laboratories created, administered and coordinated by CDC in collaboration with FDA and USDA, enables the comparison of bacteria isolated from patients from widespread locations, from foods and from food production facilities. This type of rapid comparison allows public health officials to connect what may appear to be unrelated clusters of illnesses, thus facilitating the identification of the source of an outbreak caused by intentional or unintentional contamination of foods.

FDA also works with the EPA, the Nuclear Regulatory Commission and other agencies to address chemical and nuclear food safety issues of concern.

Training

HHS has used classroom training, distance learning, and hands-on training activities to prepare the health and medical community for contingencies such as bioterrorism and other terrorism events. For example, in Fiscal Year 1999, Congress appropriated funds for OEP to renovate and modernize the Noble Army Hospital at Ft. McClellan, Alabama, so the hospital can be used to train doctors, nurses, paramedics and emergency medical technicians to recognize and treat patients with chemical exposures and other public health emergencies. Working with CDC and the VA, a training program was developed for pharmacists working with distribution of the National Pharmaceutical Stockpile. Expansion of the bioterrorism component of Noble Training Center curriculum is a high priority for HHS.

HHS has been working closely with the Office of Justice Programs (OJP) National Domestic Preparedness Consortium, and we will continue our excellent relationship with them. OJP and HHS have teamed together to develop a health care assessment tool and have also delivered a combined MMRS/first responder training program.

CDC has participated with DOD, most notably to provide distance-based learning for bioterrorism and disease awareness to the clinical community. CDC is now moving to expand such training with organizations, such as the Infectious Disease Society of America (IDSA), and Schools of Public Health, such as the Johns Hopkins Center for Civilian Biodefense.

The recent FEMA-CDC initiative to expand the scope of FEMA's Integrated Emergency Management Course (IEMC) will serve as a vehicle to integrate the emergency management and health community response efforts in a way that has not been possible in the past. It is clear that these communities can best respond together if they are able to train together toward realistic scenarios that leverage the best of both organizations.

Because the initial detection of a biological terrorist attack will most likely occur at the local level, it is essential to educate and train members of the medical community – both public and private – who may be the first to examine and treat the victims. It is also necessary to upgrade the surveillance systems of state and local health departments, as well as within healthcare facilities such as hospitals, which will be relied upon to spot unusual patterns of disease occurrence and to identify any additional cases of illness. HHS and its other partners will continue to provide terrorism-related training to epidemiologists and laboratorians, emergency responders, emergency department personnel and other front-line health-care providers, and health and safety personnel.

State and Local Collaborations

HHS has also had a particularly close working relationship with local and state public health and health care delivery communities. We coordinate closely with the public safety, public health, and health care delivery communities at all of these levels, particularly through the health agencies and emergency management authorities.

As key partners in our response strategy, state and local public health programs comprise the foundation of an effective national strategy for preparedness and emergency response. Preparedness must incorporate not only the immediate responses to threats such as biological terrorism, it also encompasses the broader components of public health infrastructure which provide the foundation for immediate and effective emergency responses.

CDC has used funds provided by the past several Congresses to begin the process of improving the expertise, facilities and procedures of state and local health departments to

respond to biological terrorism. For example, over the last three years, the agency has awarded more than $130 million in cooperative agreements to 50 states, one territory and four major metropolitan health departments as part of its overall Bioterrorism Preparedness and Response Program.

CDC has invested $90 million in the Health Alert Network (HAN), a nationwide system that is now in all 50 states, which provides high-speed Internet connections for local health officials; rapid communications with first responder agencies and others; transmission of surveillance, laboratory and other sensitive data; and on-line, Internet- and satellite-based distance learning.

The CDC also has launched an effort to improve public health laboratories. The Laboratory Response Network (LRN), a partnership among the Association of Public Health Laboratories (APHL), CDC, FBI, State Public Health Laboratories, DOD and the Nation's clinical laboratories, will help ensure that the highest level of containment and expertise in the identification of biological agents is available in an emergency event.

Metropolitan Medical Response System

HHS is also working on a number of fronts to assist local hospitals and medical practitioners to deal with the effects of biological, chemical, and other terrorist acts. Since Fiscal Year 1995, for example, HHS through OEP has been developing local Metropolitan Medical Response Systems (MMRS). Through contractual relationships, the MMRS uses existing emergency response systems – emergency management, medical and mental health providers, public health departments, law enforcement, fire departments, EMS and the National Guard – to

provide an integrated, unified response to a mass casualty event. As of September 30, 2001, OEP has contracted with 97 municipalities to develop MMRSs. During FY 2002, we intend to award $10 million to 25 additional cities (for a total of 122) through the MMRS to help them improve their medical response capabilities.

MMRS contracts require the development of local capability for mass immunization/prophylaxis for the first 24 hours following an identified disease outbreak; the capability to distribute materiel deployed to the local site from the National Pharmaceutical Stockpile; local capability for mass patient care, including procedures to augment existing care facilities; local medical staff trained to recognize disease symptoms so that they can initiate treatment; and local capability to manage the remains of the deceased.

Conclusion

The Department of Health and Human Services is committed to working with other federal agencies as well as state and local public health partners to ensure the health and medical well-being of our citizens. The mutual and ongoing consultation, assistance, collaborations and support HHS receives from its federal agency partners are useful in identifying not only programmatic overlaps but also gaps in our preparedness efforts. These efforts also allow us to work toward integrating our respective initiatives into a government-wide framework.

Our ongoing relationships with state and local governments have been reinforced in recent years as a result of the investments we have made in bioterrorism preparedness. Without their engagement in this undertaking, we would not be seeing the advances that have been made

in recent years.

We have made substantial progress to date in enhancing the nation's capability to respond to biological or chemical acts of terrorism. But there is more we can do to strengthen the response. Priorities include strengthening our local and state public health surveillance capacity, continuing to enhance the National Pharmaceutical Stockpile, improving public health planning and preparedness at the state and local level, and helping our local hospitals and medical professionals better prepare for responding to a biological or chemical terrorist attack.

Mr. Chairman, that concludes my prepared remarks. I would be pleased to answer any questions you or members of the Committee may have.

1

STATEMENT OF

MICHAEL D. BROWN

ACTING DEPUTY DIRECTOR
AND
GENERAL COUNSEL

FEDERAL EMERGENCY MANAGEMENT AGENCY

BEFORE THE

UNITED STATES SENATE

SUBCOMMITTEE ON INTERNATIONAL SECURITY,
PROLIFERATION AND FEDERAL SERVICES

COMMITTEE ON GOVERNMENT AFFAIRS

OCTOBER 17, 2001

Introduction

Good morning, Mr. Chairman and Members of the Committee. I am Mike Brown, Acting Deputy Director and General Counsel, of the Federal Emergency Management Agency (FEMA). Director Allbaugh regrets that he is unable to be here with you today. It is a pleasure for me to represent him at this important hearing on biological and chemical terrorism. I will describe how FEMA works with other agencies, our approach to dealing with acts of terrorism, our programs related to terrorism, and new efforts to enhance preparedness and response.

Background

The FEMA mission is to reduce the loss of life and property and protect our nation's critical infrastructure from all types of hazards. As staffing goes, we are a small agency. Our success depends on our ability to organize and lead a community of local, State, and Federal agencies and volunteer organizations. We know who to bring to the table and what questions to ask when it comes to the business of managing emergencies. We provide an operational framework and a funding source.

The Federal Response Plan (FRP) is the heart of that framework. It reflects the labors of interagency groups that meet as required in Washington, D.C. and all 10 FEMA Regions to develop our capabilities to respond as a team. This team is made up of 26 Federal departments and agencies and the American Red Cross, and organized into interagency functions based on the authorities and expertise of the members and the needs of our counterparts at the state and local level.

Since 1992, the Federal Response Plan has been the proven framework time and time again, for managing major disasters and emergencies regardless of cause. It works during all phases of the emergency life cycle, from readiness, to response, recovery, and mitigation. The framework is successful because it builds upon the existing professional disciplines and communities among agencies. Among Federal agencies, FEMA has the strongest ties to the emergency management and the fire service communities. We plan, train, exercise, and operate together. That puts us in position to manage and coordinate programs that address their needs. Similarly, the Department of Health and Human Services (HHS) has the strongest ties to the public health and medical communities, and the Environmental Protection Agency (EPA) has the strongest ties to the hazardous materials community. The Federal Response Plan respects these relationships and areas of expertise to define the decision-making processes and delivery systems to make the best use of available resources.

3

The Approach to Biological and Chemical Terrorism

We recognize that biological and chemical scenarios would present unique challenges. Of the two I am more concerned about bioterrorism. A chemical attack is in many ways a large-scale hazardous materials incident. EPA and the Coast Guard are well connected to local hazardous materials responders, State and Federal agencies, and the chemical industry. There are systems and plans in place for response to hazardous materials, systems that are routinely used for small and large-scale events. EPA is also the primary agency for the Hazardous Materials function of the Federal Response Plan. We can improvise around that model in a chemical attack.

With a covert release of a biological agent, the 'first responders' will be hospital staff, medical examiners, private physicians, or animal control workers, instead of the traditional first responders such as police, fire, and emergency medical services. While I defer to the Departments of Justice and HHS on how biological scenarios would unfold, it seems unlikely that terrorists would warn us of a pending biological attack. In exercise and planning scenarios, the worst-case scenarios begin undetected and play out as epidemics. Response would begin in the public health and medical community. Initial requests for Federal assistance would probably come through health and medical channels to the Centers for Disease Control and Prevention (CDC). Conceivably, the situation could escalate into a national emergency.

HHS is a critical link between the health and medical community and the larger Federal response. HHS leads the efforts of the health and medical community to plan and prepare for a national response to a public health emergency. FEMA works closely with the Public Health Service, as the primary agency for the Health and Medical Services function of the Federal Response Plan. We rely on the Public Health Service to bring the right experts to the table when the Federal Response Plan community meets to discuss biological scenarios. We work closely with the experts in HHS and other health and medical agencies, to learn about the threats, how they spread, and the resources and techniques that will be needed to control them. By the same token, the medical experts work with us to learn about the Federal Response Plan and how we can use it to work the management issues, such as resource deployment and public information strategies. Alone, the Federal Response Plan is not an adequate solution for the challenge of planning and preparing for a deadly epidemic or act of bioterrorism. It is equally true that, alone, the health and medical community cannot manage an emergency with biological causes. We must work together.

In recent years, Federal, state and local governments and agencies have made progress in bringing the communities closer together. Exercise Top Officials (TOPOFF) 2000 in May 2000 involved two concurrent terrorism scenarios in two metropolitan areas, a chemical attack on the East Coast followed by a biological attack in the Midwest. We are still working on the lessons learned from that exercise. We need time and resources to identify, develop, and incorporate changes to the system between exercises. Exercises are critical in helping us to prepare for these types of scenarios. In January 2001, the FBI and

FEMA jointly published the U.S. Government Interagency Domestic Terrorism Concept of Operation Plan (CONPLAN) with HHS, EPA, and the Departments of Defense and Energy, and pledged to continue the planning process to develop specific procedures for different scenarios, including bioterrorism. The Federal Response Plan and the CONPLAN provide the framework for managing the response to an act of bioterrorism.

Synopsis of FEMA Programs

FEMA programs are focused mainly on planning, training, and exercises to build capabilities to ***manage*** emergencies resulting from terrorism. Many of these program activities apply generally to terrorism, rather than to one form such as biological or chemical terrorism.

Planning

The overall Federal planning effort is being coordinated with the FBI, using existing plans and response structures whenever possible. The FBI is always the Lead Agency for Crisis Management. FEMA is always the Lead Agency for Consequence Management. We have developed plans and procedures to explain how to coordinate the two operations before and after consequences occur. In 1999, we published the second edition of the FRP Terrorism Incident Annex. In 2001, the FBI and FEMA published the United States Government Interagency Domestic Terrorism Concept of Operations Plan (CONPLAN).

We continually validate our planning concepts by developing plans to support the response to special events, such as we are now doing for the 2002 Olympic Winter Games that will take place in Utah.

To support any need for a Federal response, FEMA maintains the Rapid Response Information System (RRIS). The RRIS provides online access to information on key Federal assets that can be made available to assist state and local response efforts, and a database on chemical and biological agents and protective measures.

In FY 2001, FEMA has distributed $16.6 million in terrorism consequence management preparedness assistance grants to the States to support development of terrorism related capabilities, and $100 million in fire grants. FEMA is developing additional guidance to provide greater flexibility for states on how they can use this assistance.

FEMA has also developed a special attachment to its all-hazards Emergency Operations Planning Guide for state and local emergency managers that addresses developing terrorist incident annexes to state and local emergency operations plans. This planning guidance was developed with the assistance of eight Federal departments and agencies in coordination with NEMA and the International Association of Emergency Managers.

FEMA and the National Emergency Management Association (NEMA) jointly developed the Capability Assessment for Readiness (CAR), a self-assessment tool that enables

States and Territories to focus on 13 core elements that address major emergency management functions. Terrorism preparedness is assessed relative to planning, procedures, equipment and exercises. FEMA's CAR report presents a composite picture of the nation's readiness based on the individual State and Territory reports.

FEMA's Comprehensive Hazardous Materials Emergency Response Capability Assessment Program (CHER-CAP) helps communities improve their terrorism preparedness by assessing their emergency response capability. Local, State, and Tribal emergency managers, civic leaders, hospital personnel and industry representatives all work together to identify problems, revise their response plans and improve their community's preparedness for a terrorist event. Since February 2000, a total of 55 communities have been selected to participate, initiated, or completed a sequence of planning, training, and exercise activities to improve their terrorism preparedness.

Training

FEMA supports the training of Federal, State, and local emergency personnel through our National Fire Academy (NFA), which trains emergency responders, and the Emergency Management Institute (EMI), which focuses on emergency planners, coordinators and elected and appointed officials. EMI and NFA work in partnership with State and municipal training organizations. Together they form a very strong national network of fire and emergency training. FEMA employs a "train-the-trainer" approach and uses distance-learning technologies such as the Emergency Education Network via satellite TV and web-based instruction to maximize our training impact.

The NFA has developed and fielded several courses in the *Emergency Response to Terrorism (ERT)* curriculum, including a Self-Study course providing general awareness information for responding to terrorist incidents that has been distributed to some 35,000 fire/ rescue departments, 16,000 law enforcement agencies, and over 3,000 local and state emergency managers in the United States and is available on FEMA internet site. Other courses in the curriculum deal with Basic Concepts, Incident Management, and Tactical Considerations for Emergency Medical Services (EMS), Company Officers, and HAZMAT Response. Biological and chemical terrorism are included as integral parts of these courses.

Over one thousand instructors representing every state and major metropolitan area in the nation have been trained under the ERT program. The NFA is utilizing the Training Resources and Data Exchange (TRADE) program to reach all 50 States and all major metropolitan fire and rescue departments with training materials and course offerings. In FY 2001, FEMA is distributing $4 million in grants to state fire-training centers to deliver first responder courses developed by the NFA.

Over 112,000 students have participated in ERT courses and other terrorism-related training. In addition, some 57,000 copies of a Job Aid utilizing a flip-chart format guidebook to quick reference based on the ERT curriculum concepts and principles have

been printed and distributed.

NFA is developing a new course in FY 2002 in the Emergency Response to Terrorism series geared toward response to bioterrorism in the pre-hospital recognition and response phase. It will be completed with the review and input of our Federal partners, notably HHS and the Office of Justice Programs.

EMI offers a comprehensive program of emergency management training including a number of courses specifically designed to help communities, states, and tribes deal with the consequences of terrorism and weapons of mass destruction. The EMI curriculum includes an Integrated Emergency Management Course (IEMC)/Consequences of Terrorism. This 4-½ day course combines classroom training, planning sessions, and functional exercises into a management-level course designed to encourage communities to integrate functions, skills, and resources to deal with the consequences of terrorism, including terrorism. To foster this integration, EMI brings together 70 participants for each course that includes elected officials and public health leaders as well as representatives of law enforcement, emergency medical services, emergency management, and public works. The course provides participants with skill-building opportunities in preparedness, response, and recovery. The scenario for the course changes from offering to offering. In a recent offering, the scenario was based on an airborne anthrax release. Bioterrorism scenarios emphasize the special issues inherent in dealing with both infectious and noninfectious biological agents and stresses the partnerships between local, state, and Federal public health organizations.

Exercises

In the area of exercises, FEMA is working closely with the interagency community and the States to ensure the development of a comprehensive exercise program that meets the needs of the emergency management and first responder communities. FEMA is planning to conduct Phase II of a seminar series on terrorism preparedness in each of the ten FEMA Regional Offices. In addition, exercise templates and tools are being developed for delivery to state and local officials.

New Efforts to Enhance Preparedness and Response

In response to guidance from the President on May 8, 2001, the FEMA Director created an Office of National Preparedness (ONP) to coordinate all federal programs dealing with weapons of mass destruction consequence management, with particular focus on preparedness for, and the response to the terrorist use of such weapons. In July, the Director established the ONP at FEMA Headquarters. An ONP element was also established in each of the ten FEMA Regional Offices to support terrorism-related activities involving the States and localities.

On September 21, 2001, in the wake of the horrific terrorist attacks on the World Trade Center and the Pentagon, the President announced the establishment of an Office of

Homeland Security (OHS) in the White House to be headed by Governor Tom Ridge of Pennsylvania. In setting up the new office, the President stated that it would lead, oversee and coordinate a national strategy to safeguard the country against terrorism and respond to attacks that occur. It is our understanding that office will coordinate a broad range of policies and activities related to prevention, deterrence, preparedness and response to terrorism.

The new office includes a Homeland Security Council comprised of key department and agency officials, including the FEMA Director. FEMA expects to provide significant support to the office in its role as the lead Federal agency for consequence management.

Conclusion

Mr. Chairman, you convened this hearing to ask about our preparedness to work with State and local agencies in the event of a biological or chemical attack. It is FEMA's responsibility to ensure that the national emergency management system is adequate to respond to the consequences of catastrophic emergencies and disasters, regardless of cause. All catastrophic events require a strong management system built on expert systems for each of the operational disciplines. Terrorism presents tremendous challenges. We rely on our partners in Department of Health and Human Services to coordinate the efforts of the health and medical community to address biological terrorism, as we rely on EPA and the Coast Guard to coordinate the efforts of the hazardous materials community to address chemical terrorism. Without question, they need support to further strengthen capabilities and their operating capacity. FEMA must ensure that the national system has the tools to gather information, set priorities, and deploy resources effectively in a biological scenario. In recent years we have made tremendous strides in our efforts to increase cooperation between the various response communities, from fire and emergency management to health and medical to hazardous materials. We need to do more.

The creation of the Office of Homeland Security and other efforts will enable us to better focus our time and effort with those communities, to prepare the nation for response to any incident.

Thank you, Mr. Chairman. I would be happy to answer any questions.

STATEMENT

OF

THE HONORABLE DEBORAH J. DANIELS
ASSISTANT ATTORNEY GENERAL
OFFICE OF JUSTICE PROGRAMS

BEFORE THE

GOVERNMENTAL AFFAIRS COMMITTEE

AND THE

SUBCOMMITTEE ON INTERNATIONAL SECURITY, PROLIFERATION,
AND FEDERAL SERVICE
UNITED STATES SENATE

ON

DOMESTIC PREPAREDNESS TRAINING PROGRAMS

OCTOBER 17, 2001
WASHINGTON, D.C.

Chairman Lieberman, Chairman Akaka, Senator Thompson, Senator Cochran, and Members of the Committee and Subcommittee: I am pleased to testify on behalf of the Office for Domestic Preparedness (ODP), a component of the Department of Justice's Office of Justice Programs. I am Deborah J. Daniels, the Assistant Attorney General for the Office of Justice Programs (OJP).

When others from OJP have testified before Congress previously about domestic preparedness, they were able to talk about our programs and preparations in the context of the threat of a potential catastrophic terrorist attack. Sadly, we no longer have the luxury of time on our side and the attack is no longer merely potential.

The Office for Domestic Preparedness (formerly the Office for State and Local Domestic Preparedness Support) was created within the Office of Justice Programs in1998 when Congress authorized the Attorney General to assist state and local public safety personnel in acquiring the specialized training and equipment necessary to safely respond to and manage domestic terrorism incidents, particularly those involving weapons of mass destruction (WMD). ODP is OJP's primary means of providing assistance directly to state and local jurisdictions in the planning and preparation for incidents of domestic terrorism. Congress recognized that these state and local personnel are typically first on the scene of any emergency, would likely be the first to respond in the event of a terrorist attack, and need to be as well-prepared and well-equipped as possible for these potentially catastrophic incidents. As was demonstrated so dramatically and tragically on September 11, Congress was right. New York City Police, Fire and Emergency Services personnel were first on the scene at the World Trade Center. Arlington County, and other Virginia, Maryland and District of Columbia emergency personnel were immediately on the

scene at the Pentagon. Local personnel were first at the Pennsylvania crash site.

Over the past three years, ODP has worked to provide coordinated training, equipment acquisition, technical assistance, and support for national, state, and local exercises to fulfill its mission of developing and implementing a national program to enhance the capacity of state and local agencies to respond to domestic terrorism incidents. ODP's preparedness activities address a wide range of potential threats, including chemical, biological, radiological, nuclear, and explosive weapons. To date, ODP has focused its efforts on reaching as many traditional first responders – firefighters, emergency medical services, emergency management agencies and law enforcement – as well as public officials in as many communities as possible to prepare them for these threats.

In addition, it should be mentioned that OJP's National Institute of Justice (NIJ), primarily through its Office of Science and Technology, has been extremely active and successful in working with other federal agencies in the development of technologies and equipment to assist in the preparation and response to terrorist incidents. NIJ's work includes research and development activities in communications, and in detection systems for chemical and biological agents. NIJ is also focusing on standards for equipment used by first responders, including specialized protective clothing. The results of NIJ's work are made available to the emergency response community, and are applied by ODP in their training, equipment, and technical assistance efforts.

With respect to the public health and the medical communities, ODP has actively supported efforts of the United States Department of Health and Human Services (HHS), primarily the U.S. Public Health Service (PHS) and the Centers for Disease Control (CDC), to

deliver training and equipment assistance to state and local jurisdictions. And, ODP has worked with HHS to test the nation's bioterrorism response capacity through the use of field exercises.

ODP's partnership and coordination with HHS has been beneficial to both. Whereas ODP has taken the lead in reaching the public safety and emergency response community, ODP has deferred to HHS to lead the preparedness efforts for the public health and medical community. ODP's domestic preparedness activities are concentrated in the areas of training and technical assistance, equipment, planning, and exercises. ODP's goal is to enhance the capacity of state and local jurisdictions prepare for, and respond to, terrorist attacks on U.S. soil.

Since 1998, ODP has provided training to over 77,000 emergency responders in 1,355 jurisdictions in all 50 states and the District of Columbia, and has completed over 2,000 deliveries of technical assistance to state and local response agencies.

ODP's Training and Technical Assistance Program provides over 30 direct training and technical assistance courses and programs to state and local jurisdictions to enhance their capacity and preparedness to respond to domestic incidents. Training is based on National Fire Protection Association standards, and provides emergency responders with a comprehensive curriculum in the areas of WMD awareness, technician, operations, and terrorist incident command. All courses go through a rigorous pilot and review process where federal, state, and local subject matter experts examine the course materials to ensure accuracy and compliance with accepted policies and procedures. Courses are brought directly to jurisdictions and taught by an ODP mobile training team or are conducted at a specialized facility, such as OJP's Center for Domestic Preparedness in Anniston, Alabama. Internet, video and satellite broadcast

training courses round out the ODP curriculum.

Last year, ODP assumed responsibility for the Nunn-Lugar-Domenici (NLD) Training Program. The NLD Program identified the nation's 120 largest cities to receive training, exercises and equipment monies to enhance their capacity to respond to WMD incidents. Prior to the program's transfer from the Department of Defense, 68 of the 120 cities received all elements of the NLD Program, and 37 others received only the training component. ODP will complete delivery of the program to these 37 cities, and deliver all program elements to the remaining 15 designated cities. As part of the NLD Program, these 52 cities will receive a biological weapons tabletop exercise, and the 15 cities will also receive briefings on the U.S. Public Health's Metropolitan Medical Response System.

The National Domestic Preparedness Consortium (NDPC) is the principal vehicle through which ODP identifies, develops, tests and delivers training to state and local emergency responders. The NDPC membership includes OJP's Center for Domestic Preparedness, the New Mexico Institute of Mining and Technology, Louisiana State University, Texas A&M University, and the Department of Energy's Nevada Test Site. Each consortium member brings a unique set of assets to the domestic preparedness program. ODP also utilizes the capabilities of a number of specialized institutions in the design and delivery of its training programs. These include private contractors, other federal and state agencies, the National Terrorism Preparedness Institute at St. Petersburg Junior College, the U.S. Army's Pine Bluff Arsenal, the International Association of Fire Fighters, and the National Sheriffs' Association.

ODP provides targeted technical assistance to state and local jurisdictions to enhance their ability to develop, plan, and implement a program for WMD preparedness. Specifically,

ODP provides assistance in areas such as the development of response plans, exercise scenario development and evaluation, conducting of risk, vulnerability, capability and needs assessments, and development of the states' Three-Year Domestic Preparedness Strategies.

Working with Congress, ODP has implemented a program in all 50 states, the District of Columbia, and the five U.S. territories to develop comprehensive Three-Year Domestic Preparedness Strategies. These strategies are based on integrated threat, risk, and public health assessments, conducted at the local level, which will identify the specific level of response capability necessary for a jurisdiction to respond effectively to a WMD terrorist incident. The public health component of these assessments was developed in coordination with the CDC. Once these plans are assembled and analyzed, they will present a comprehensive picture of equipment, training, exercise and technical assistance needs across the nation. In addition, they will identify federal, state and local resources within each state that could be utilized in the event of an attack. ODP anticipates receiving the majority of these strategies by December 15, 2001. Following their submission, ODP will work directly with each state and territory to develop and implement assistance tailored to the specific needs identified in the plans. Last month, the Attorney General wrote to the governors stressing the urgency of completing these assessments, and has directed ODP to place the highest priority on analyzing and processing these strategies and assisting states in meeting identified needs as quickly as possible.

To date, only one state, Utah, which has heightened needs and awareness in preparation for the 2002 Winter Olympics, has completed its plan and received its allocated equipment funds. ODP has approved the plans for Florida, Hawaii, Michigan, Pennsylvania, Rhode Island, and South Carolina and these states are now eligible to draw down funds. Minnesota and Wyoming

have recently submitted their plans, which are currently being reviewed. States received a total of $54 million in initial planning and equipment funds from FY1999 under this program and are scheduled to receive an additional $145 million in aggregated FY2000 and 2001 equipment funds as plans are completed. Each state will, in turn, distribute funds to jurisdictions within the state, as well as to state agencies, for use in implementing the state's strategy. Currently, equipment funding is limited to personal protection (such as protective suits), chemical and biological detection devices, chemical and biological decontamination equipment, and communications equipment.

Under the FY1998 and FY1999 County and Municipal Agency Equipment Program, large local jurisdictions received approximately $43 million in equipment funding. From 1998 through 2001, OJP has provided a total of $242 million in equipment grants for 157 local jurisdictions and the 50 states, the District of Columbia and the five U.S. territories.

Experience and data show that exercises are a practical and efficient way to prepare for crises. They test crisis resistance, identify procedural difficulties, and provide a plan for corrective actions to improve crisis and consequence management response capabilities without the penalties that might be incurred in a real crisis. Exercises also provide a unique learning opportunity to synchronize and integrate cross-functional and intergovernmental crisis and consequence management response. ODP's National Exercise and State and Local Domestic Preparedness Exercise Programs seek to build on the office's training, technical assistance, and equipment program activities.

The State and Local Domestic Preparedness Exercise Program aids states and local jurisdictions in advancing domestic preparedness through evaluation of the authorities, plans,

policies, procedures, protocols, and response resources for WMD crisis and consequence management. The program provides funding and technical assistance to states and local jurisdictions to support local and regional interagency exercise efforts. ODP also provides guidance and uniformity in design, development, conduct, and evaluation of domestic preparedness exercises and related activities. A number of state and local agencies have requested exercise assistance in bioterrorism response as part of this program.

In May 2000, at the direction of the Congress, ODP conducted the TOPOFF (Top Officials) exercise, the largest federal, state and local exercise of its kind, involving separate locations and a multitude of federal, state and local agencies. TOPOFF simulated simultaneous chemical and biological attacks around the country and provided valuable lessons for the nation's emergency response communities. The bioterrorism scenario conducted in Denver, Colorado, involved state and local health, fire and HAZMAT agencies, as well as the CDC, the U.S. Public Health Service and other federal agencies.

ODP has begun planning for the congressionally-mandated TOPOFF 2 exercise, which will be conducted in Spring 2003. TOPOFF 2 will incorporate lessons learned from the first exercise into its planning and design. TOPOFF 2 will be preceded by a series of preparatory WMD seminars and tabletop exercises crafted to explore relevant issues.

In addition to its National Exercise and State and Local Domestic Preparedness Exercise Programs, ODP, in collaboration with the Department of Energy, is establishing the Center for Exercise Excellence at the Nevada Test Site. The center will deliver a WMD Exercise Training Program for the nation's emergency response community to ensure WMD exercise operational consistency nationwide. During FY2001, the National Guard Bureau agreed to support the center

with funding to exercise its Civil Support Teams in conjunction with state and local emergency responders.

All ODP programs and policy development include consideration of and response to potential bioterrorism, in addition to the full range of weapons of mass destruction.
In keeping with its congressionally-mandated mission, ODP has primarily focused program efforts on meeting the needs of traditional first responders, which include fire, HAZMAT, and law enforcement personnel, and has relied on the medical and public health communities to train their traditional constituencies. However, ODP has also actively worked with and supported other federal agencies in their efforts to provide this training and assistance.

ODP initiated an effort to bring together all of the federal-level training representatives to formalize the coordination processes already in effect and to capitalize on the diverse expertise and specialized training delivered by the respective federal agencies. The resulting *Training Resources and Data Exchange (TRADE)* working group includes representatives from the Federal Emergency Management Agency (FEMA), including FEMA's National Fire Academy, the Federal Bureau of Investigation, the Environmental Protection Agency, the Department of Energy, the Department of Health and Human Services, and the Centers for Disease Control and Prevention. The *TRADE* group has identified and initiated work on several immediate tasks, including the development of agreed-upon learning objectives by discipline and competency level for federal training efforts, a joint course development and review process, joint curriculum assessment and review, and coordination of training delivery resources in accordance with state strategies.

Since 1998, ODP and the U.S. Public Health Service (PHS) have been engaged in active

coordination of their domestic preparedness efforts and assistance programs for state and local emergency responders. In FY2001, several joint program efforts were initiated: a cooperative effort to integrate implementation of the Nunn-Lugar-Domenici Domestic Preparedness Program (NLD DP) and the Public Health Service's Metropolitan Medical Response System (MMRS) program; review and revision of the hospital training component of the NLD DP Program; a joint project to enhance awareness of MMRS initiative and the National Disaster Medical System, which are critical to the effective delivery of health and medical consequence management resources; and a partnership effort among ODP, PHS, and the National Domestic Preparedness Consortium to assist management and oversight of PHS' Noble Training Center in Anniston, Alabama, and to provide for joint development, review and delivery of WMD courses for medical personnel.

In October 2000, ODP held a formal program coordination meeting with the CDC. This meeting laid the foundation for cooperation between these agencies on a multitude of issues, and has resulted in continued follow-up communications and meetings, involvement of CDC subject matter experts in ODP course development and review, and better coordination of the two agency's programs.

In the future, ODP will continue to actively coordinate its programs with other federal agencies to ensure that the highest quality of training and technical assistance is provided to the broad spectrum of the nation's emergency response community while also making certain duplication of federal resources in these areas does not occur.

These joint endeavors will present a unified federal effort in the eyes of the public safety community and greatly enhance federal domestic preparedness efforts and the capacity of the

nation as a whole to respond safely and effectively to incidents of terrorism involving WMD, including biological agents.

Further, I wish to point out that OJP has two additional sources of funds for law enforcement agencies to assist these agencies in preparing, equipping, and addressing issues related to domestic terrorism. These would be the formula funds available under the Edward Byrne Memorial State and Local Law Enforcement Block Grant Program, which was funded at $498 million in Fiscal Year 2001, and the Local Law Enforcement Block Grant Program, which was funded at $521 million in Fiscal Year 2001. Both programs are administered by OJP's Bureau of Justice Assistance and provide fund to states and localities for use by state and local law enforcement agencies. The actual use of these funds is determined by the state and local recipients.

Once again, thank you for the opportunity to describe the Office of Justice Programs' efforts in this vitally important area.

United States General Accounting Office

GAO

Testimony

Before the Committee on Governmental Affairs,
U.S. Senate

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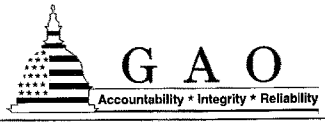
COMBATING TERRORISM

Considerations for Investing Resources in Chemical and Biological Preparedness

Statement of Henry L. Hinton, Jr.
Managing Director, Defense Capabilities and Management



Mr. Chairman and Members of the Committee

I appreciate the opportunity to be here today to discuss GAO's work on efforts to prepare for and respond to chemical and biological terrorist attacks. With the coordinated terrorist attacks against the World Trade Center and the Pentagon on September 11, 2001, the threat of terrorism rose to the top of the country's national security and law enforcement agendas. With the current investigations into anthrax incidents, the threat remains at the top of those agendas. My comments are based upon four of our recent reports.[1] The first report was on the West Nile Virus outbreak in New York City and its implications for public health preparedness. The second was on federal teams that could respond to chemical, biological, radiological, or nuclear terrorist attacks. The third was on federal research and preparedness programs specific to biological terrorism. And finally, the fourth report summarized our overall work on combating terrorism over the last 5 years. In these reports, and the earlier work that preceded them, we have taken a detailed look at programs to prepare for and respond to terrorism, including chemical and biological terrorism.[2]

My statement, after providing some background, will first discuss the growing uncertainties regarding the terrorist threat and the need for a risk management approach. Next, I will discuss some of the specific federal programs to prepare for and respond to chemical and biological agents or weapons. Third, I will discuss some of the problems identified in evaluations of chemical and biological preparedness. Finally, I will make some suggestions for the Congress to consider for investing resources in chemical and biological preparedness.

In summary, the nature of the terrorist threat appears to be more uncertain since the September 11 attacks. Preparing for all possible contingencies is not practical, so a risk management approach should be used. This would include a threat assessment to determine which chemical or biological agents are of most concern. The federal government has a

[1]The four reports discussed are *West Nile Virus Outbreak: Lessons for Public Health Preparedness* (GAO/HEHS-00-180, Sept. 11, 2000); *Combating Terrorism: Federal Response Teams Provide Varied Capabilities; Opportunities Remain to Improve Coordination* (GAO-01-14, Nov. 30, 2000); *Bioterrorism: Federal Research and Preparedness Activities* (GAO-01-915, Sept. 28, 2001); *and Combating Terrorism: Selected Challenges and Related Recommendations* (GAO-01-822, Sept. 20, 2001).

[2]A more complete list of GAO products related to terrorism appears at the end of this statement.

variety of programs to prepare for and respond to chemical and biological terrorism, including response teams, support laboratories, training and equipment programs, and research efforts. Evaluations of chemical and biological preparedness have identified a number of problems and their solutions. Some of these solutions to improve the response to chemical and biological terrorism have broad applicability across a variety of contingencies while other response requirements are applicable to only a specific type of attack. For example, efforts to improve public health surveillance would be useful in any disease outbreak, whereas efforts to provide vaccines for smallpox would be useful only if terrorists used smallpox in a biological attack. The Congress faces competing demands for spending as it seeks to invest resources to better prepare our nation for chemical and biological terrorism. Funding to combat terrorism, which was originally budgeted to be less than $13 billion, may exceed $50 billion for fiscal year 2002, including supplemental emergency contingency funding. Given the uncertainty of the chemical and biological threat, the Congress may want to initially invest resources in efforts with broad applicability over those that are only applicable under a specific type of chemical or biological attack. As threat information becomes more certain, it may be more appropriate to invest in efforts only applicable to specific chemical or biological agents.

Background on Federal Policies, Plans, and Coordination Problems

Federal programs to prepare for and respond to chemical and biological terrorist attacks operate under an umbrella of various policies and contingency plans. Federal policies on combating terrorism are laid out in a series of presidential directives and implementing guidance.[3] These documents divide the federal response to terrorist attacks into two categories—crisis management and consequence management. Crisis management includes efforts to stop a terrorist attack, arrest terrorists, and gather evidence for criminal prosecution. Crisis management is led by the Department of Justice, through the Federal Bureau of Investigation. All federal agencies and departments, as needed, would support the Department of Justice and the Federal Bureau of Investigation on-scene commander. Consequence management includes efforts to provide medical treatment and emergency services, evacuate people from dangerous areas, and restore government services. Consequence

[3]For a compendium of relevant federal policy and planning documents for combating terrorism, see app. I of GAO-01-822. In addition to documents mentioned in that report, the President signed Executive Order 13228 on Oct. 8, 2001, which established a new Office of Homeland Security.

management activities of the federal government are led by the Federal Emergency Management Agency in support of state and local authorities. Unlike crisis management, the federal government does not have primary responsibility for consequence management; state and local authorities do. Crisis and consequence management activities may overlap and run concurrently during the emergency response and are dependent upon the nature of the incident.

In a chemical or biological terrorist incident, the federal government would operate under one or more contingency plans. The U.S. Government Interagency Domestic Terrorism Concept of Operations Plan establishes conceptual guidelines for assessing and monitoring a developing threat, notifying appropriate agencies concerning the nature of the threat, and deploying necessary advisory and technical resources to assist the lead federal agency in facilitating interdepartmental coordination of crisis and consequence management activities. In the event that the President declares a national emergency, the Federal Emergency Management Agency also would coordinate the federal response using a generic disaster contingency plan called the Federal Response Plan. This plan—which has an annex specific for terrorism—outlines the roles of federal agencies in consequence management during terrorist attacks. More specifically, the plan outlines the planning assumptions, policies, concept of operation, organizational structures, and specific assignment of responsibilities to lead departments and agencies in providing federal assistance. The plan categorizes the types of assistance into specific "emergency support functions." Examples of emergency support functions include mass care and health and medical services. In addition, several individual agencies have their own contingency plans or guidance specific to their activities.[4]

Our September 20, 2001, report found significant coordination and fragmentation problems across the various federal agencies that combat terrorism.[5] In May 1998, the President established a National Coordinator within the National Security Council to better lead and coordinate these federal programs; however, the position's functions were never detailed in

[4]An example of agency-specific guidance would be the U.S. Coast Guard's Interim Guidance Regarding Coast Guard Response to Weapons of Mass Destruction Incidents of June 2000. For a list of additional plans and guidance by individual agencies, see app. II of GAO-01-822.

[5]GAO-01-822, pp. 31-43.

either an executive order or legislation. Many of the overall leadership and coordination functions that we had identified as critical were not given to the National Coordinator. In fact, several agencies performed interagency functions that we believed would have been performed more appropriately above the level of individual agencies. The interagency roles of these various agencies were not always clear and sometimes overlapped, which led to a fragmented approach. For example, the Department of Justice, the National Security Council, the Federal Bureau of Investigation, and the Federal Emergency Management Agency all had been developing or planning to develop potentially duplicative national strategies to combat terrorism. In a more recent report and testimony, we provide additional examples of coordination difficulties specific to biological terrorism.[6]

To improve overall leadership and coordination of federal efforts to combat terrorism, the President announced the creation of an Office of Homeland Security on September 20, 2001, and specified its functions in Executive Order 13228 on October 8, 2001. These actions represent potentially significant steps toward improved coordination of federal activities and are generally consistent with our recent recommendations.[7] Some questions that remain to be addressed include how this new office will be structured, what authority the Director will have, and how this effort can be institutionalized and sustained over time.

New Uncertainties Regarding the Terrorist Threat

There appears to be additional uncertainties about the terrorist threat in general since the September 11 attacks. Before those attacks, the Federal Bureau of Investigation had identified the largest domestic threat to be the "lone wolf" terrorist—an individual who operated alone. U.S. intelligence agencies had reported an increased possibility that terrorists would use chemical or biological weapons in the next decade. However, terrorists would have to overcome significant technical and operational challenges to successfully produce and release chemical or biological agents of sufficient quality and quantity to kill or injure large numbers of people

[6]For example, fragmentation is evident in the different threat lists of biological agents developed by federal departments and agencies (see GAO-01-915, p.18). Our recent testimony, *Bioterrorism: Public Health and Medical Preparedness* (GAO-02-141T, Oct. 9, 2001) also included a graphic representation of the complicated coordination networks involved (see its app. III, fig. 1).

[7]Our recent summary report highlighted a number of important characteristics and responsibilities necessary for a single focal point, such as the Office of Homeland Security, to improve coordination and accountability (see GAO-01-822, pp. 41-42).

without substantial assistance from a foreign government sponsor. In most cases, specialized knowledge is required in the manufacturing process and in improvising an effective delivery device for most chemical and nearly all biological agents that could be used in terrorist attacks. Moreover, some of the required components of chemical agents and highly infective strains of biological agents are difficult to obtain. Finally, terrorists may have to overcome other obstacles to successfully launch an attack that would result in mass casualties, such as unfavorable meteorological conditions and personal safety risks.

On September 11, terrorists redefined the term "weapon of mass destruction." Up to that point, that term generally referred to chemical, biological, radiological, or nuclear agents or weapons. As clearly shown on September 11, a terrorist attack would not have to fit that definition to result in mass casualties, destruction of critical infrastructures, economic losses, and disruption of daily life nationwide. The attack increased the uncertainties regarding the threat, although terrorists would still face the technical challenges described above in conducting chemical or biological attacks. The uncertainty has increased because the attacks on the World Trade Center and the Pentagon were conducted by a large group of conspirators rather than one individual. In addition, the terrorists were executing a long-planned coordinated attack, showing a level of sophistication that may not have been anticipated by the Federal Bureau of Investigation—the agency responsible for monitoring national security threats within the United States. Also, the terrorists were willing to commit suicide in the attacks, showing no concern for their own personal safety, which was considered one of the barriers to using chemical or biological agents. And most recently, the threat of anthrax has gone from a series of hoaxes to actual cases under investigation by the Federal Bureau of Investigation.

Given the uncertainty about the threat, we continue to believe that a risk management approach is necessary to enhance domestic preparedness against terrorist threats. Risk management is a systematic and analytical process to consider the likelihood that a threat will endanger an asset, individual, or function and to identify actions to reduce the risk and mitigate the consequences of an attack. While the risk cannot be eliminated entirely, enhancing protection from known or potential threats can reduce the risk. This approach includes three key elements: a threat assessment, a vulnerability assessment, and a criticality assessment (assessing the importance or significance of a target). This approach would include a threat assessment to determine which chemical or biological agents are of most concern. Without the benefits that a risk

management approach provides, many agencies have been relying on worst case chemical, biological, radiological, or nuclear scenarios to generate countermeasures or establish their programs. By using worst case scenarios, the federal government is focusing on vulnerabilities (which are unlimited) rather than credible threats (which are limited). As stated in our recent testimony, a risk management approach could help the United States prepare for the threats it faces and allow us to focus finite resources on areas of greatest need.[8]

Federal Programs to Respond to Chemical and Biological Terrorism

A terrorist attack using chemical or biological weapons presents an array of complex issues to state and local first responders. These responders would include police, firefighters, emergency medical services, and hazardous material technicians. They must identify the agent used so as to rapidly decontaminate victims and apply appropriate medical treatments. If the incident overwhelms state and local response capabilities, they may call on federal agencies to provide assistance. To provide such assistance, the federal government has a variety of programs to prepare for and respond to chemical and biological terrorism, including response teams, support laboratories, training and equipment programs, and research efforts, as follows.

- Federal agencies have special teams that can respond to terrorist incidents involving chemical or biological agents or weapons. These teams perform a wide variety of functions, such as hands-on response; providing technical advice to state, local, or federal authorities; or coordinating the response efforts of other federal teams. Figure 1 shows selected federal teams that could respond to a chemical or biological terrorist incident.[9]
- Federal agencies also have laboratories that may support response teams by performing tests to analyze and test samples of chemical and biological agents. In some incidents, these laboratories may perform functions that enable federal response teams to perform their role. For example, when a diagnosis is confirmed at a laboratory, response teams can begin to treat victims appropriately.
- Federal agencies also have programs to train and equip state and local authorities to respond to chemical and biological terrorism. The programs

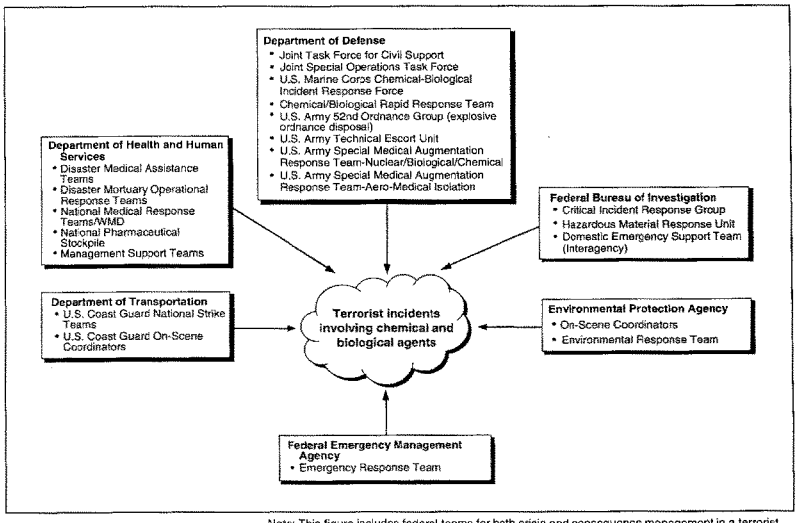
[8]*Homeland Security: Key Elements of a Risk Management Approach* (GAO-02-150T, Oct. 12, 2001).

[9]For a more detailed description of these federal teams, including their mission, authority, personnel, and response times, see GAO-01-14, app. I.

have improved domestic preparedness by training and equipping over 273,000 first responders. The programs also have included exercises to allow first responders to interact with themselves and federal responders.

- Finally, federal agencies have a number of research and development projects underway to combat terrorism. Examples of recently developed and fielded technologies include products to detect and identify chemical and biological weapons. Additional research and/or development projects include chemical monitoring devices and new or improved vaccines, antibiotics, and antivirals.

Figure 1: Federal Response Teams for Chemical and Biological Terrorism



Note: This figure includes federal teams for both crisis and consequence management in a terrorist incident involving chemical or biological agents. Federal agencies have additional teams not shown that might be used in conventional, radiological, or nuclear incidents.

Source: GAO analysis.

Characteristics of Chemical Terrorism

There are a variety of chemical agents potentially used by terrorists. These chemical agents could be dispersed as a gas, vapor, liquid, or aerosol. A chemical agent could be disseminated by explosive or mechanical delivery. Some chemicals disperse rapidly and others remain toxic for days or weeks and require decontamination and clean up. Rapid exposure to a highly concentrated agent would increase the number of casualties. Federal, state, and local officials generally agree that a chemical terrorist incident would look like a major hazardous material emergency. According to the International Association of Fire Chiefs, over 600 local and state hazardous material teams will be the first to respond to a chemical incident. If local responders are unable to manage the situation or are overwhelmed, the incident commander has access to state and federal assets. A variety of federal teams could be deployed to provide assistance.[10]

Characteristics of Biological Terrorism

Terrorists also can potentially use a variety of biological agents. Biological agents must be disseminated by some means that infects enough individuals to initiate a disease epidemic. According to a wide range of experts in science, health, intelligence, and biological warfare and a technical report, the most effective way to disseminate a biological agent is by aerosol. This method allows the simultaneous respiratory infection of a large number of people. A few biological agents (e.g., plague and smallpox) are communicable and can be spread beyond those directly affected by the weapon or dissemination device. The release of a biological agent or weapon may not be known for several days until victims present themselves to medical personnel in doctors' offices, clinics, and emergency rooms where the symptoms might easily be confused with influenza or other less virulent illnesses. Accordingly, the critical detection of the biological agent begins with the public health infrastructure that detects outbreaks of illness, identifies the sources and modes of transmission, and performs rapid agent laboratory identification. Once diagnosis of a biological agent is confirmed, treating victims may require the use of federal consequence management teams and the items from the National Pharmaceutical Stockpile. Again, a variety of federal teams could be deployed to provide assistance.[11]

[10]For a detailed discussion of what teams would perform what functions in a chemical terrorist incident, see GAO-01-14, app. III.

[11]For a detailed discussion of what teams would perform what functions in a biological terrorist incident, see GAO-01-14, app. IV.

Problems Identified in Preparing for Chemical and Biological Terrorism

We have identified a number of problems that require solutions in order to improve preparedness for chemical and biological terrorism. Some of these are included in our recent reports and testimony. For example, our report on the West Nile Virus outbreak identified specific weaknesses in the public health system that need to be addressed to improve preparedness for biological terrorism.[12] Our recent report on biological terrorism examined evaluations of the effectiveness of federal programs to prepare state and local authorities.[13] For this statement, we also conducted an analysis of federal exercise evaluations to identify problems associated with chemical and biological terrorism that needed to be solved. In doing this, we examined 50 evaluations representing 40 separate exercises with chemical or biological scenarios.

Based upon our review, the problems and their solutions fell into two categories. These categories were (1) generic problems and solutions that are generally applicable to any type of terrorist incident, major accident, or natural disaster, and (2) problems and solutions that are applicable to both chemical and biological terrorist events. Specific examples of each category follow.

The first category of problems and their solutions are generally applicable to any type of terrorist incident. These would apply not only to chemical and biological terrorism but also to all hazards including emergencies unrelated to terrorism, such as major accidents or natural disasters.

- Command and control. The roles, responsibilities, and the legal authority to plan and carry out a response to a weapon of mass destruction terrorist incident are not always clear, which could result in a delayed and inadequate response.
- Planning and operations. State and local emergency operations plans do not always conform to federal plans. The operational procedures for requesting federal assistance are not always compatible with state and local procedures.
- Resource management and logistics. State and local governments can be overwhelmed with the resource management and logistical requirements of managing a large incident, particularly after the arrival of additional state and federal assets. For example, state and local officials could have

[12]See GAO/HEHS-00-180.

[13]See GAO-01-915.

difficulty providing support to numerous military units that might be needed.

- Communication. Interoperability difficulties exist at the interagency and intergovernmental levels. Also, the public health community lacks robust communication systems, protocols, equipment, and facilities.
- Exercises. Many exercises focus primarily on crisis management, which often ends in a successful tactical resolution of the incident and do not include more likely scenarios where terrorist attacks are successful, requiring a consequence management exercise component.
- Mass casualties. Overall planning and integration among agencies are needed for mass casualty management, including conventional terrorist incidents. Also, medical surge capacity for any type of weapon of mass destruction event may be limited. Disposition of bodies would also be an issue.

The second category of problems and their solutions are applicable to chemical or biological incidents. They would not be relevant in a conventional, radiological, or nuclear terrorist incident; however, they would be relevant in other chemical or biological events not related to terrorism, such as an accidental release of chemicals or a natural outbreak of a disease. They vary in their level of applicability, with some only being applicable to specific chemical or biological agents.

- Public health surveillance. Basic capacity for public health surveillance is lacking. Improved public health-coordinated surveillance for biological terrorism and emerging infectious diseases is an urgent preparedness requirement at the local level.
- Detection and risk assessment. The capability of first responders and specialized response teams to rapidly and accurately detect, recognize, and identify chemical or biological agents and assess the associated health risks can be slow. Also, following the release of a chemical or biological agent, emergency hazardous material teams do not always conduct a downwind analysis of the toxic cloud, which could delay a decision to evacuate potentially affected populations.
- Protective equipment and training. First responders often lack special personal protective equipment (level-A protective clothing and masks) to safeguard them from chemical or biological agents and could become contaminated themselves. Training curricula deal with the technical level of response, such as treatment protocols, but do not describe operational guidelines and strategies for responding to large-scale public health emergencies. Physicians sometimes lack adequate training to recognize chemical and biological agents.

- Chemical and biological-specific planning. Emergency operations plans and "all-hazard" plans do not adequately address the response to a large-scale chemical or biological terrorism event. Plans often do not address chemical or biological incidents.
- Hospital notification and decontamination. Delays could occur in the notification of local hospitals that a biological incident has occurred. By the time the hospitals are notified, they could become contaminated by self-referred patients, have to close, and not treat other victims. First responders could become victims themselves and contaminate emergency rooms.
- Distribution of pharmaceuticals. State and local health officials have found it difficult to break down and distribute tons of medical supplies contained in push-packages from the National Pharmaceutical Stockpile.
- Vaccines and pharmaceuticals. Some pharmaceuticals, such as antibiotics, are generic and can be used to treat several different biological agents, whereas others, such as vaccines, are agent-specific. An example would be the smallpox vaccine, which would only be useful if terrorists used smallpox in an attack.
- Laboratories. Even a small outbreak of an emerging disease would strain resources. There is a need for broadening laboratory capabilities, ensuring adequate staffing and expertise, and improving the ability to deal with surges in testing needs.
- Medical and veterinary coordination. Problems exist in communication between public health officials and veterinary officials. The local and state veterinary disaster response plan may not adequately address the impact of a biological incident on the animal population, which could have dramatic health, economic, and public relations implications.
- Quarantine. Quarantine would be resource-intensive and would require a well-planned strategy to implement and sustain. Questions that have to be addressed include implementation authority, enforcement, logistics, financial support, and the psychological ramifications of quarantine.

Suggestions to Consider for Investing Resources

The Congress may want to consider several factors before investing resources in the rapidly growing budget for combating terrorism. Even before September 11, funding to combat terrorism had increased 78 percent from the fiscal year 1998 level of about $7.2 billion to the proposed fiscal year 2002 budget of about $12.8 billion. After September 11, the Congress approved the President's request for $20 billion in emergency assistance and provided an additional $20 billion to supplement existing contingency funds. Thus, terrorism-related funding in fiscal year 2002 may exceed $50 billion. Further, a number of additional funding proposals have been introduced in the Congress that could further raise that amount.

The challenge facing the Congress and the nation is to invest new resources where they will make the most difference in protecting people and responding to terrorist attacks, including those involving chemical and biological agents or weapons. The terrorist attacks of September 11 have profoundly changed the management agendas of the Congress, the White House, federal agencies, and state and local governments. However, as we respond to the urgent priorities and the enduring requirements of combating terrorism, our nation still must address the short-term and long-term fiscal challenges that were present before September 11 and that remain today. It is important to remember that the long-term pressures on the budget from competing programs have not lessened. In fact, long-term pressures have increased due to the slowing economy and the spending levels expected for fiscal year 2002. As a result, the ultimate task of addressing today's urgent needs without unduly exacerbating our long-range fiscal challenges has become more difficult.

As discussed above, the nature of the threat appears to have become more uncertain since the September 11 attacks. Despite this uncertainty, preparing for all possible contingencies is not practical because vulnerabilities are unlimited, so a risk management approach is needed to help focus resource investments. Efforts to better prepare for chemical and biological attacks include solutions that have broad applicability across a variety of contingencies and solutions that are applicable to only a specific type of attack. For example, efforts to improve public health surveillance would be useful in any disease outbreak, whereas efforts to provide vaccines for smallpox would be useful only if terrorists used smallpox in a biological attack. Given the uncertainty of the chemical and biological terrorist threat and continued fiscal concerns, the Congress may want to initially invest resources in efforts with broad applicability rather than those that are only applicable under a specific type of chemical or biological attack. As threat information becomes more certain, it may be more appropriate to invest in efforts only applicable to specific chemical or biological agents. This approach would focus finite resources on areas of greatest need using a risk management approach.

Scope and Methodology

As stated initially, this testimony is based largely upon recent GAO reports. In addition, we sought to determine what types of problems might arise in responding to chemical and biological terrorist attacks. To do so, we analyzed after-action reports and other evaluations from federal exercises that simulated chemical and biological terrorist attacks. The scope of this analysis was governmentwide. Our methodology initially identified and catalogued after-action reports and evaluations from federal

exercises over the last 6 fiscal years (fiscal years 1996 to 2001). The analysis was limited to those 50 after-action reports (representing 40 different exercises) that had a chemical and/or biological terrorism component. The analysis did not include exercises involving radiological and/or nuclear agents, and it does not represent all federal after-action reports for combating terrorism exercises during that period. We then identified specific problems and issues associated with chemical and biological terrorism exercises. We compared those specific problems and solutions to determine which ones were specific to chemical and to biological incidents.

Mr. Chairman, this concludes my prepared statement. I would be happy to respond to any questions you or other members of the Committee may have.

Contact and Acknowledgments

For further information about this testimony, please contact me at (202) 512-4300. For information specifically on biological terrorism please contact Janet Heinrich at (202) 512-7250. Stephen L. Caldwell, Mark A. Pross, James C. Lawson, Harry L. Purdy, Jason G. Venner, and M. Jane Hunt made key contributions to this statement.

Related GAO Products

Homeland Security: Key Elements of a Risk Management Approach (GAO-02-150T, Oct. 12, 2001).

Bioterrorism: Review of Public Health Preparedness Programs (GAO-02-149T, Oct. 10, 2001).

Bioterrorism: Public Health and Medical Preparedness (GAO-02-141T, Oct. 9, 2001).

Bioterrorism: Coordination and Preparedness (GAO-02-129T, Oct. 5, 2001).

Bioterrorism: Federal Research and Preparedness Activities (GAO-01-915, Sept. 28, 2001).

Combating Terrorism: Selected Challenges and Related Recommendations (GAO-01-822, Sept. 20, 2001).

Combating Terrorism: Comments on H.R. 525 to Create a President's Council on Domestic Terrorism Preparedness (GAO-01-555T, May 9, 2001).

Combating Terrorism: Accountability Over Medical Supplies Needs Further Improvement (GAO-01-666T, May 1, 2001).

Combating Terrorism: Observations on Options to Improve the Federal Response (GAO-01-660T, Apr. 24, 2001).

Combating Terrorism: Accountability Over Medical Supplies Needs Further Improvement (GAO-01-463, Mar. 30, 2001).

Combating Terrorism: Comments on Counterterrorism Leadership and National Strategy (GAO-01-556T, Mar. 27, 2001).

Combating Terrorism: FEMA Continues to Make Progress in Coordinating Preparedness and Response (GAO-01-15, Mar. 20, 2001).

Combating Terrorism: Federal Response Teams Provide Varied Capabilities; Opportunities Remain to Improve Coordination (GAO-01-14, Nov. 30, 2000).

West Nile Virus Outbreak: Lessons for Public Health Preparedness (GAO/HEHS-00-180, Sept. 11, 2000).

Combating Terrorism: Linking Threats to Strategies and Resources (GAO/T-NSIAD-00-218, July 26, 2000).

Chemical and Biological Defense: Observations on Nonmedical Chemical and Biological R&D Programs (GAO/T-NSIAD-00-130, Mar. 22, 2000).

Combating Terrorism: Need to Eliminate Duplicate Federal Weapons of Mass Destruction Training (GAO/NSIAD-00-64, Mar. 21, 2000).

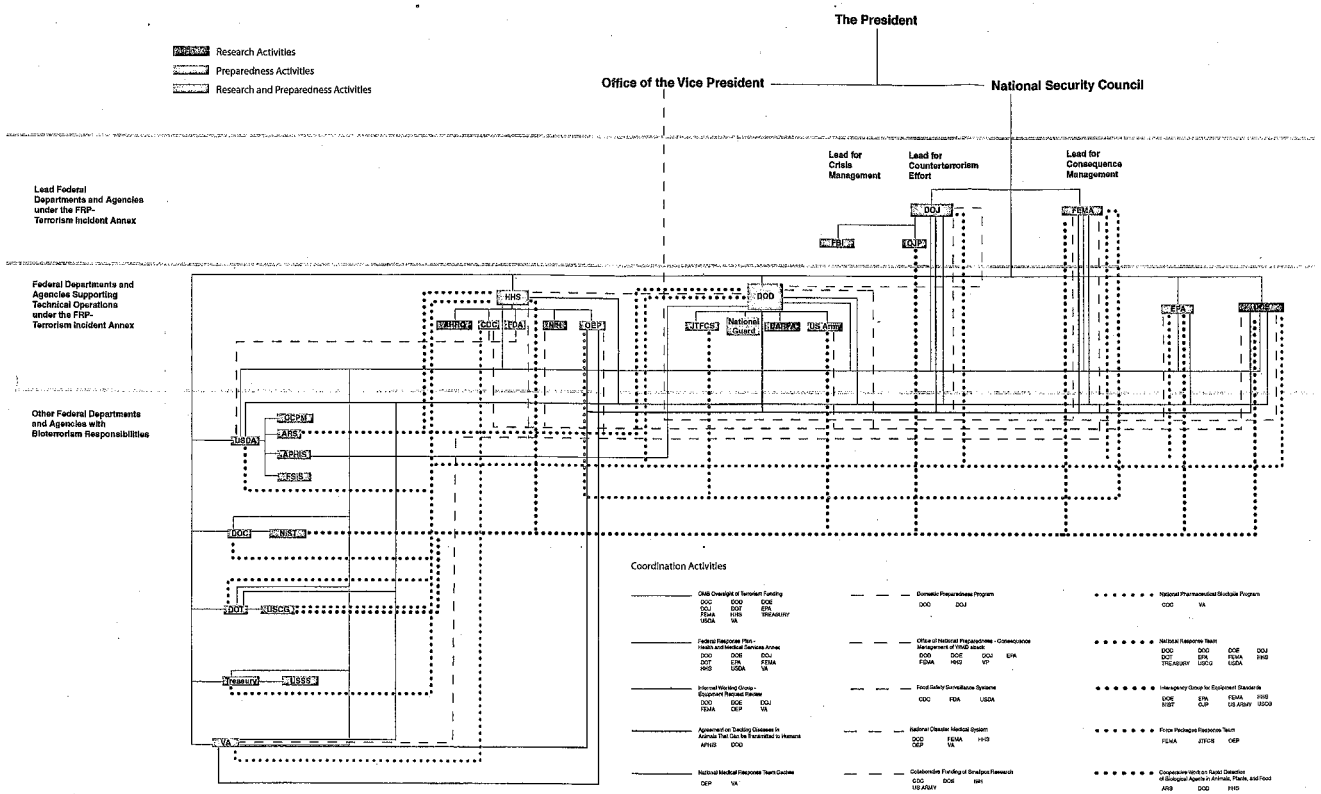
Combating Terrorism: Chemical and Biological Medical Supplies Are Poorly Managed (GAO/T-HEHS/AIMD-00-59, Mar. 8, 2000).

Combating Terrorism: Chemical and Biological Medical Supplies Are Poorly Managed (GAO/HEHS/AIMD-00-36, Oct. 29, 1999).

Food Safety: Agencies Should Further Test Plans for Responding to Deliberate Contamination (GAO/RCED-00-3, Oct. 27, 1999).

Examples of Coordination Activities on Bioterrorism Among Federal Departments and Agencies

Source: GAO



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STATEMENT OF

DR. ANNA JOHNSON-WINEGAR

DEPUTY ASSISTANT TO THE SECRETARY OF DEFENSE FOR CHEMICAL AND BIOLOGICAL DEFENSE

BIOLOGICAL TERRORISM

OCTOBER 17, 2001

BEFORE THE

SENATE COMMITTEE ON GOVERNMENT AFFAIRS

FIRST SESSION 107TH CONGRESS

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AFFAIRS

MR. CHAIRMAN AND DISTINGUISHED COMMITTEE MEMBERS, I AM DR. ANNA JOHNSON-WINEGAR, DEPUTY ASSISTANT TO THE SECRETARY OF DEFENSE FOR CHEMICAL AND BIOLOGICAL DEFENSE. MY OFFICE IS THE SINGLE FOCAL POINT WITHIN THE OFFICE OF THE SECRETARY OF DEFENSE RESPONSIBLE FOR OVERSIGHT, COORDINATION, AND INTEGRATION OF THE JOINT CHEMICAL AND BIOLOGICAL DEFENSE PROGRAMS.

THE TRAGIC EVENTS OF SEPTEMBER 11TH AND THE RECENTLY REPORTED ANTHRAX CASES IN FLORIDA AND ELSEWHERE HAVE HEIGHTENED THE PUBLIC'S AWARENESS OF THE THREAT POSED BY BIOLOGICAL TERRORISM. FOR SOME YEARS, THE DEPARTMENT OF DEFENSE HAS CONSIDERED THE USE OF BIOLOGICAL WEAPONS AS A POSSIBLE MEANS BY WHICH STATES AND NON-STATE ACTORS MIGHT COUNTER AMERICA'S OVERWHELMING CONVENTIONAL WARFIGHTING STRENGTH—OFTEN REFERRED TO AS ASYMMETRIC MEANS. IN RESPONSE TO THIS THREAT CONGRESS DIRECTED THE DEPARTMENT OF DEFENSE TO CONSOLIDATE CHEMICAL AND BIOLOGICAL DEFENSE EFFORTS. SINCE THE ESTABLISHMENT OF A JOINT CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM IN 1994, AND WITH CONTINUED CONGRESSIONAL SUPPORT, THE DEPARTMENT OF DEFENSE HAS MADE SIGNIFICANT PROGRESS IN FIELDING BIOLOGICAL DEFENSE EQUIPMENT FOR OUR WARFIGHTERS AND STANDS READY TO MEET THE MOST CREDIBLE THREATS.

BIOLOGICAL WARFARE THREATS. IN ADDITION, MY OFFICE STANDS READY TO ASSIST CIVILIAN AGENCIES THROUGH TECHNOLOGY SHARING,

TECHNICAL ADVICE, OR AS OTHERWISE REQUESTED BY THE APPROPRIATE AUTHORITIES.

IN ORDER TO MEET THE CHALLENGE OF BIOLOGICAL WARFARE ACROSS THE SPECTRUM, OUR PROGRAM MUST ADDRESS THE NEED FOR BOTH MATERIEL IMPROVEMENT AND OPERATIONAL CONCEPTS TO USE THE NEW AND IMPROVED EQUIPMENT. IN ORDER TO ADDRESS THE ISSUE OF BIOTERRORISM, WE HAVE DOCUMENTED GAPS AND DEFICIENCIES IN EXERCISES, SUCH AS TOP OFF, AND THESE WILL BE THE FOCUS OF REPRIORITIZED EFFORTS WITHIN THE DEPARTMENT OF DEFENSE. ONE OF THE LESSONS OF THE TOPOFF EXERCISE WAS THAT TO WORK EFFECTIVELY DURING AN ACTUAL CRISIS, VARIOUS GOVERNMENTAL AGENCIES MUST ACTUALLY EXERCISE BEFOREHAND OR THEIR "CULTURAL DIFFERENCES" WILL OVERCOME ANY PLAN. WE WILL CONTINUE TO WORK WITH OTHER AGENCIES, INCLUDING THE NEW OFFICE OF HOMELAND SECURITY, TO ENSURE GOOD WORKING RELATIONSHIPS. ONE SPECIFIC AREA WE WILL FOCUS ON IS TO HELP DEFINE WHAT SUPPORT THE DEPARTMENT OF DEFENSE CAN PROVIDE AND WORK WITH OTHER AGENCIES TO DEFINE WHAT SUPPORT THEY REQUEST AND NEED.

WHILE THE DOD CAN PROVIDE UNIQUE EXPERTISE AND MATERIEL SUPPORT, IT IS NOT CHARGED WITH LEAD FEDERAL AGENT RESPONSIBILITIES AS DESCRIBED IN THE FEDERAL RESPONSE PLAN. IN THE AREA OF DOMESTIC TERRORISM MEDICAL RESPONSE, THE DEPARTMENT OF HEALTH AND HUMAN SERVICES TAKES CHARGE AND REQUESTS SUPPORT AS NEEDED. IN MY TESTIMONY TODAY, I WILL OUTLINE THE WAYS THE DEPARTMENT OF DEFENSE

PROVIDES MATERIEL SUPPORT TO OTHER ORGANIZATIONS AND HOW WE COORDINATE EFFORTS.

MATERIEL SUPPORT

CONGRESS HAS PROVIDED A NUMBER OF STATUTORY METHODS FOR THE DEPARTMENT OF DEFENSE TO SUPPORT OTHER FEDERAL, STATE, AND LOCAL AGENCIES IN PREPARING FOR AND RESPONDING TO WEAPONS OF MASS DESTRUCTION (WMD) TERRORISM. REQUESTS MAY COME TO THE DEPARTMENT FOR OPERATIONAL SUPPORT OR FOR THE PURCHASE OF EQUIPMENT. THESE REQUESTS ARE APPROVED ON A CASE-BY-CASE BASIS. MY OFFICE HAS DEALT WITH A NUMBER OF REQUESTS FROM OTHER-FEDERAL AGENCIES FOR INDIVIDUAL AND COLLECTIVE PROTECTIVE EQUIPMENT AND ACCESS TO VACCINES, WHILE THE OPERATIONAL SUPPORT PROVIDED BY THE DEPARTMENT IS COORDINATED THROUGH THE SECRETARY OF THE ARMY AS THE DOD EXECUTIVE AGENT FOR SUCH MATTERS. THE DEPARTMENT WILL CONTINUE TO PROVIDE THIS SUPPORT WITHIN STATUTORY AND REGULATORY LIMITS AND BALANCE REQUESTS AGAINST THE READINESS OF MILITARY FORCES TO ACCOMPLISH THEIR WARFIGHTING MISSION.

DOD CAN OFFER MANY OF ITS SYSTEMS, EITHER IN THE FIELD OR IN DEVELOPMENT, AND EXPERTISE THAT MAY PROVE USEFUL TO CIVILIANS. DOD'S CHEMICAL AND BIOLOGICAL DETECTION EQUIPMENT COULD BE APPLIED IN CIVILIAN SITUATIONS, AS CAN MANY OF OUR MEDICAL COUNTERMEASURES. HOWEVER, THE PROVISION OF MATERIEL ALONE DOES NOT ENHANCE

CAPABILITY, IT NEEDS TO BE ACCOMPANIED BY VALID OPERATIONAL CONCEPTS, TRAINING, AND MAINTENANCE.

THE MISSION OF THE DOD CHEMICAL AND BIOLOGICAL DEFENSE PROGRAM IS TO PROVIDE MATERIEL TO ALLOW OUR ARMED FORCES TO BE TRAINED AND EQUIPPED TO CONDUCT THEIR OPERATIONAL MISSIONS IN ENVIRONMENTS CONTAMINATED WITH CHEMICAL OR BIOLOGICAL AGENTS. OUR ARMED FORCES ARE TRAINED PRIMARILY FOR TRADITIONAL WARFIGHTING REQUIREMENTS. HOWEVER, OUR FORCES ALSO MAINTAIN SIGNIFICANT CAPABILITIES TO SUPPORT HOMELAND SECURITY, THROUGH SUCH OPERATIONAL UNITS AS THE TECHNICAL ESCORT UNIT, THE WMD-CIVIL SUPPORT TEAMS, AND THE MARINE CORPS' CHEMICAL AND BIOLOGICAL INCIDENT RESPONSE FORCE (CBIRF).

IN ORDER TO ENHANCE OUR NATION'S OVERALL CAPABILITIES THE DEPARTMENT OF DEFENSE PARTICIPATES IN PROGRAMS TO SUPPORT THE TRANSITION OF MILITARY EQUIPMENT AND CONCEPTS TO OTHER-THAN-DOD AGENCIES. SPECIFICALLY,

- THE TECHNICAL SUPPORT WORKING GROUP (TSWG), RAPIDLY PROTOTYPES EMERGING TECHNOLOGIES FOR HIGH PRIORITY FEDERAL INTERAGENCY REQUIREMENTS (www.tswg.gov);
- THE INTERAGENCY BOARD FOR EQUIPMENT STANDARDIZATION AND INTEROPERABILITY (KNOWN AS THE IAB), IS A PARTNERSHIP WITH FEDERAL, STATE, AND LOCAL AGENCIES FOCUSED ON THE CAPABILITIES

NECESSARY FOR FIRE, MEDICAL, AND LAW ENFORCEMENT RESPONSES TO WMD TERRORISM (www.iab.gov);

- THE DOMESTIC PREPAREDNESS PROGRAM, MANDATED UNDER THE 1997 NUNN-LUGAR-DOMENICI LEGISLATION, TRAINED AND EQUIPPED MUNICIPALITIES TO ADDRESS WMD TERRORISM (THE PROGRAM TRANSFERRED TO THE DEPARTMENT OF JUSTICE IN 2000, REPORTS REMAIN AVAILABLE AT www2.sbccom.army.mil/hld/); AND
- INTERAGENCY AGREEMENTS WITH DEPARTMENTS OF JUSTICE'S OFFICE OF DOMESTIC PREPAREDNESS TO PURCHASE EQUIPMENT IN SUPPORT OF JUSTICE'S GRANT PROGRAM.
- MEDICAL TRAINING PROGRAMS FROM THE US ARMY MEDICAL RESEARCH INSTITUTES FOR INFECTIOUS DISEASE AND CHEMICAL DEFENSE; AND
- THE WHITE HOUSE OFFICE OF SCIENCE AND TECHNOLOGY POLICY CHAIRED WEAPONS OF MASS DESTRUCTION PROGRAM, RESEARCH AND DEVELOPMENT SUBGROUP.

THESE EFFORTS REPRESENT A SNAP SHOT OF THE DEPARTMENT'S PROCUREMENT AND RESEARCH SUPPORT TO ADDRESS BIOTERRORISM. AS THE LEAD FEDERAL AGENCIES ASSESS THEIR NEEDS, DOD ANTICIPATES ADDITIONAL REQUESTS OF OR PARTICIPATION IN THESE GROUPS.

COORDINATION

THE DEPARTMENT OF DEFENSE HAS ESTABLISHED A SET OF REQUIREMENTS FOR THE SUCCESSFUL COMPLETION OF MILITARY OPERATIONS

IN CHEMICAL AND BIOLOGICAL ENVIRONMENTS. WE SUBMIT AN ANNUAL REPORT TO CONGRESS DOCUMENTING OUR PROGRESS IN MEETING THESE REQUIREMENTS. MY OFFICE REGULARLY COORDINATES ITS EFFORTS WITH THE DEPARTMENT OF ENERGY, DEPARTMENT OF HEALTH AND HUMAN SERVICES, AND THE INTELLIGENCE COMMUNITY THROUGH THE COUNTERPROLIFERATION PROGRAM REVIEW COMMITTEE, WHICH REPORTS ANNUALLY TO CONGRESS ON ITS PROGRESS (PROVIDED AS A CLASSIFIED DOCUMENT TO THE CONGRESS).

SOME OF THE DEPARTMENT'S REQUIREMENTS TO PROTECT THE MILITARY FORCE CORRELATE WITH CIVILIAN REQUIREMENTS TO PROTECT THE POPULATION AGAINST BIOLOGICAL TERRORISM. FOR INSTANCE, ONE OF THE CONCEPTS BEING INVESTIGATED FOR THE DEVELOPMENT AND PRODUCTION OF BIOLOGICAL DEFENSE VACCINES IS A VACCINE PRODUCTION FACILITY. IN ORDER TO COORDINATE THE NEEDS OF THE INTERESTED AGENCIES, THE DOD, RELATIVELY EARLY IN THE PROCESS OF CONSIDERING ALTERNATIVES FOR VACCINE ACQUISITION, ESTABLISHED A FEDERAL INTERAGENCY ADVISORY GROUP. PARTICIPANTS, IN ADDITION TO THOSE FROM DOD AGENCIES, HAVE INCLUDED REPRESENTATIVES FROM:

- THE WHITE HOUSE [OFFICE OF HOMELAND SECURITY, OFFICE OF SCIENCE AND TECHNOLOGY POLICY, NATIONAL SECURITY COUNCIL, OFFICE OF MANAGEMENT AND BUDGET],
- FEDERAL EMERGENCY MANAGEMENT AGENCY,
- DEPARTMENT OF HEALTH AND HUMAN SERVICES (DHHS) [NATIONAL INSTITUTES OF HEALTH, PUBLIC HEALTH SERVICE, FOOD AND DRUG

ADMINISTRATION, CENTERS FOR DISEASE CONTROL AND PREVENTION, AND THE OFFICE OF THE ASSISTANT SECRETARY FOR HEALTH AND THE SURGEON GENERAL].

THIS GROUP, WHICH I CHAIR, HAS SERVED AS A HIGHLY EFFECTIVE AND PRODUCTIVE FORUM FOR DISCUSSIONS CONCERNING U.S. VACCINE ACQUISITION—PARTICULARLY VACCINES FOR DEFENSE AGAINST BIOLOGICAL WARFARE AGENTS—FOR FORCE HEALTH PROTECTION AND PUBLIC HEALTH NEEDS FOR THE CIVILIAN SECTOR.

CONCLUSION

DOD WORKS REGULARLY WITH THE LEAD FEDERAL AGENTS TO COORDINATE REQUIREMENTS AND DEVELOPMENT EFFORTS FOR BIOLOGICAL TERRORISM. IN ADDITION TO COORDINATION, THERE ARE A NUMBER OF MECHANISMS FOR DOD TO PROVIDE ASSISTANCE TO OTHER-FEDERAL, STATE, AND LOCAL AGENCIES. IN LIGHT OF RECENT EVENTS, DOD ANTICIPATES A GREATER NUMBER OF REQUESTS FOR ASSISTANCE. DOD WILL ADDRESS THESE REQUESTS ON A CASE-BY-CASE BASIS TO ENSURE THAT PUBLIC SAFETY IS ENHANCED AND DOD CAN STILL ACCOMPLISH ITS WARFIGHTING MISSION. THANK YOU FOR THE OPPORTUNITY TO SPEAK HERE TODAY, I WOULD BE HAPPY TO RESPOND TO ANY QUESTIONS. THANK YOU.

STATEMENT OF

GARY W. McCONNELL
DIRECTOR
GEORGIA EMERGENCY MANAGEMENT AGENCY

ON BEHALF OF

NATIONAL EMERGENCY MANAGEMENT ASSOCIATION

BEFORE the SENATE GOVERNMENTAL AFFAIRS COMMITTEE

OCTOBER 17, 2001

Mr. Chairman and Members of the Subcommittee:

Thank you for the opportunity to appear before you today to offer comments on preparedness for chemical and biological attacks. My name is Gary W. McConnell and I am the Director of the Georgia Emergency Management Agency (GEMA). In Georgia, my agency, as part of the Governor's Office, is responsible for directing terrorism consequence management activities, and serves as the central coordination point for the State's response and coordination with local governments and federal agencies. I have been the director of GEMA for over ten years, serving as the governor's representative for 16 Presidential Disaster Declarations. During this same period, I had the privilege of serving as the Chief of Staff of the State Olympic Law Enforcement Command for the 1996 Olympic Games and was responsible for the security and safety operations of 29 state agencies and 5,000 law enforcement officers. Previously, I was sheriff of Chattooga County, Georgia for 22 years. My comments today are a product of these experiences.

I am here today representing the National Emergency Management Association (NEMA) whose members are the directors of emergency management for the states and territories. We are responsible to our governors for disaster mitigation, preparedness, response and recovery. This includes responsibility for terrorism consequence management and preparedness at the state level by serving as the central coordination point for all state response activities and interface with federal agencies when federal assistance is requested.

I would like to begin this afternoon by thanking Chairman Lieberman and Ranking Member Thompson and the members of the Committee for recognizing the importance of preparing for acts of terrorism.

Since the September 11, 2001 attacks and the recent exposures to Anthrax, our nation has been reevaluating our preparedness for acts of terrorism. Particularly at the state level, we have been assessing the preparedness levels our federal, state, and local governments and our private sector partners must attain to deal with incidents of terrorism, including chemical and biological attacks.

States have been in the forefront of preparing for and responding to all types of disasters, both natural and man-made. We take an all-hazards approach to disaster preparedness and have integrated into our domestic preparedness efforts those proven systems we already use for dealing with natural and technological disasters. We also recognize clearly the value of prevention and mitigation in minimizing the consequences of disaster and we incorporate those considerations in all our efforts. Our nation needs to build on the existing "all hazards" approach since we cannot afford to "recreate the wheel" when addressing biological and chemical terrorism threats.

NEMA's members developed a list of recommended enhancements to be incorporated into a nation-wide strategy for attaining better preparedness for catastrophic events. The full text of these recommendations is included in the attached 'NEMA White Paper' for your reference. I would like to highlight the highest priority items in my testimony today.

The lessons learned from the September attacks are not brand new ideas. Many are concepts we have been working on for years and just have not been able to fully implement. The immediate lessons learned also include the suggestions of the state emergency management directors from New York, Pennsylvania, and Virginia.

Now **is** the time for federal, state, and local governments to take action. It is **not** the time to prepare reports or criticize past actions. We should all follow New York City Mayor Rudolph Guiliani's comments to the United Nations. He said, "Now is the time ...to unite our strength ...this is not a time for further study or vague directives."

MEDICAL SURGE (MASS CASUALTY) CAPABILITY

The most immediate need that we found necessary to effectively address chemical and biological events, as well as weapons of mass destruction (WMD) is our nation's medical surge capacity. We need to guarantee that the surge capability is strengthened. The emergency management, medical and public health professions must work with lawmakers on

all levels to ensure that each region has a certain minimum surge capacity to deal with mass casualty events.

Hospitals should agree to provide defined and standardized levels of resources, capabilities and assistance to handle mass casualties, especially those contaminated by chemical and biological agents. Funding for equipment and supplies to accomplish this mission should be provided to develop this additional capability, in exchange for agreeing to participate as a local receiving hospital and as part of the U.S. Public Health Service's National Disaster Medical System (NDMS).

The incremental costs to the health care system of developing and maintaining mass casualty emergency response capacity are significant. Funding to cover those costs not available from any other sources must be provided by the federal government.

This means that for-profit hospitals and clinics must have an incentive to participate since business plans and the managed care approach make it difficult to justify paying for capabilities like decontamination units if they would be used only sporadically. Also, poison control centers have a role in assisting in response and their funding streams need to be addressed since budget crunches have forced many regional operations to consolidate or down-grade their activities.

States also need assistance to fully implement the National Pharmaceutical Stockpile Plan. While the final TOPOFF Exercise report is not yet available, one of the lessons we learned was that the federal government could only get the pharmaceutical push package to the Mobilization Centers. There were insufficient plans in place to then get the pharmaceutical "push pack" broken down into useable packages and distributed from the airport to the population in immediate need. This is being addressed, but demands emphasis and funding and must be addressed as soon as possible.

We must ensure that the medical treatment reaches the patients in the hardest hit areas quickly. I would further suggest that we look to keeping multiple stockpiles in regionally

centralized locations near transportation assets needed to rapidly move those push packages. There should also be back-up stockpiles in several locations around the country to bolster the national surge capacity and to enable a flexible response to multiple events.

Providing this regionally based medical surge capacity in the health care community will take some time. In the interim, the best truly rapid response surge capacity we do have is a combination of the Veteran's Administration (VA) health care system, the Disaster Medical Assistance Teams and the military Reserve Component medical units. We particularly need to ensure that those military Reserve assets are trained, equipped and empowered to provide rapid medical capacity under "imminent and serious" conditions. They are, in many cases, the closest deployable assets.

We need to change our focus and begin thinking of health professionals as first responders. State and Local Disaster Medical Assistance Teams should be developed across the country with standardized equipment, personnel and training. These teams would serve as the first line of response to support impacted communities within impacted states, and could be required to respond outside the state as a mutual aid resource upon request. Self contained capability to respond outside the team's jurisdiction would be best provided by military Reserve Component assets available in each state.

Additionally, the less than 60 U.S. Public Heath Service NDMS Disaster Medical Assistance Teams (DMAT) should be uniformly enhanced for Weapons of Mass Destruction (WMD) response, including focus on personnel protection and training for WMD. Currently, only four of the teams have been upgraded and equipped to serve as National Medical Response Teams (NMRTS).

INTELLIGENCE SHARING

The key to an effective terrorism response lies in intelligence sharing. The right people need to know information key to responding and preparing at all times. This means reciprocity for security clearances, no matter what department or level of government the personnel are

representing. In addition, an expedited process is needed for state and local officials to obtain clearances.

INTERSTATE MUTUAL AID AND REGIONAL PLANNING

An existing system we need to take advantage of for all domestic preparedness planning is the Emergency Management Assistance Compact (EMAC). EMAC is an interstate mutual aid agreement that allows states to assist one another in responding to all kinds of natural and man-made disasters. EMAC offers a quick and easy way for states to send personnel and equipment to help disaster relief efforts in other states. There are times when state and local resources are overwhelmed and federal assistance is inadequate, inappropriate, too far away or unavailable. Out-of-state aid through EMAC helps fill such shortfalls. There are 42 states and two territories that are members of EMAC and other states and territories are considering joining. Currently, emergency managers from several states are providing technical assistance to New York through EMAC. EMAC support is in place at the state emergency operations center and in New York City and has been used in conjunction with the federal emergency support team. A system like this enables experts to be used across jurisdictions and regions based on the nature of a particular event.

State and local governments have established regional approaches to building capacity to deal with catastrophic events. The regional approach gives us a flexible response capability, both regionally and nationally, which can adapt to catastrophic events as they occur and most effectively use the limited resources we share. Regional planning is invaluable since we can develop common, flexible preparedness strategies which capitalize on sharing limited resources within regions. Because necessary capabilities cannot be afforded by all jurisdictions, we can use mutual aid to respond to multiple simultaneous events in different parts of the state, the region or the nation.

STATE COORDINATION

Coordination with the states is a critical issue that I would like to reiterate that requires attention. Too often, each of the federal agencies deals directly with their state counterpart thereby creating a stovepipe effect for funding that limits states' abilities to leverage federal

funding to its maximum benefit and to ensure at least a minimum statewide preparedness and response capability. We look forward to working with Governor Ridge and his new Office of Homeland Security. In order for the office to be successful, it is essential that the Office of Homeland Security integrates input from state emergency management agencies. We hope that state emergency managers and first responders from the state and local level will be invited to participate in developing the national preparedness strategy.

The majority of the nation's governors designated their state emergency management agencies as the single point of contact to coordinate the Department of Justice terrorism grants program created in 1999 for equipment and planning. At the state level, the program requires a single point of contact for the nation's governors and the mayor of the District of Columbia to administer the grant. Forty-two governors and the District of Columbia designated the state emergency management agency. These same state emergency management agencies, in many cases, also administer FEMA terrorism grant funding. We are strongly encouraging that all federal programs and funding should be coordinated through the governor's designated single point of contact for the state terrorism preparedness program.

Currently, The Department of Justice needs assessment process requires the development of statewide strategic plans to assure the federal government that state planning and assessment of state capacity is an ongoing, coordinated and inclusive process in the states. Many states are currently in the process of conducting these needs assessments. NEMA recommends that any new federal planning requirements not be a duplication of the current DOJ requirement, but rather build off plans and programs already in place in the states. We would also recommend that the DOJ should immediately release the FY00 and FY01 equipment funds in order to begin implementation of preparedness plans and to enhance our capabilities, and then require a basic statewide strategy in order to receive the FY02 funds.

NEMA believes it would be extremely helpful to allow states to administer the equipment programs and to provide greater flexibility with the approved equipment list. We specifically would like the ability to use the funds for the purchase of necessary equipment for hospitals and the health care industry, regardless of private sector ownership of these critical "first

receiver" response system components. Congress could help by increasing the funding for these grants to provide for detection, personnel protection and decontamination equipment for the nation's emergency response agencies. We need to assure that federal training and maintenance money must be included in any national terrorism response plan. This funding must include money for federal, state, and local governments to exercise together. Finally, with all of the new proposals and funding mechanisms to address domestic preparedness needs, now more than ever is the time to continue using states as the single point of contact and to allow the funding to be flexible to maintain a current focus.

CONCLUSION

In summary, NEMA supports efforts to improve federal coordination on domestic preparedness, especially with chemical and biological preparedness. We also believe that medical surge capacity needs to be addressed immediately. The greater safety of the nation is at stake and all responders and policymakers at the federal, state, and local level need to work together to ensure that we are prepared for an incident of domestic terrorism. We pledge our cooperation to continue to work with you and this committee to ensure that our nation is at the highest level of preparedness to deal with a terrorist event. Thank you again for inviting NEMA to present testimony on this important issue. I would like to thank the Committee for their dedication on this issue. We look forward to working with you, the Administration, and local responders to make this country a safer place for all.

NATIONAL EMERGENCY MANAGEMENT ASSOCIATION

WHITE PAPER ON DOMESTIC PREPAREDNESS

October 1, 2001

SUPPORTING ORGANIZATIONS: **Adjutants General Association of the United States**
International Association of Emergency Managers
National Emergency Management Association
National Guard Association of the United States

BACKGROUND

Emergency management as a discipline has been shaped by historical events, both nationally and internationally. During World War II, it became apparent for the first time that our nation was susceptible to enemy attack. As a result, the first organization and function of what is called "Civil Defense" was established. The majority of civil preparedness and disaster response capability at the local level had its foundation in the Civil Defense program. Federal financial assistance to state and local jurisdictions for civil defense programs was begun in 1958 and provided federal matching funds (50/50) for personnel and administrative expenditures for civil defense preparedness. Attack preparedness was mandated as a joint federal-state-local responsibility. This funding base provided the very foundation upon which civil preparedness (what we now refer to as emergency management) was built.

The recent terrorist attacks demonstrate the fact that the nation needs to develop a capability reminiscent of the past when there existed a robust state and local emergency management and response capability. A strengthened national program incorporating today's all hazards approach to emergency preparedness is imperative. Congress, federal agencies, governors, state and local emergency management directors, other local officials and all disciplines of emergency responders must work together to develop a strategy for standardized, bottom-up national capabilities to effectively respond to catastrophic disaster situations.

In addition to the States' Principles for a National Domestic Preparedness Strategy, adopted in February 2000, NEMA thinks it critical that the following enhancements be incorporated into a nationwide strategy for catastrophic disaster preparedness. Items are listed by category and not necessarily by priority.

Emergency Preparedness and Response

- Congress should provide to the states immediate federal funding for full-time catastrophic disaster coordinators in moderate and high-risk local jurisdictions of the United States, including the 120 largest cities where training and equipment was provided under the Nunn-Lugar-Domenici domestic preparedness programs. These personnel will have responsibility for developing and maintaining terrorism consequences plans, procedures, exercises, and resources. For those states with appropriate jurisdictional staffing levels already in place, the flexibility to utilize federal funds to enhance the overall emergency preparedness program based on identified priorities is critical. Measures should be implemented to ensure this funding does not supplant existing state and local emergency management funding commitments.

- States need financial assistance to improve catastrophic response and Continuity of Operations Plans (COOP) and Continuity of Government (COG) for states. FEMA should be provided additional funding to develop, construct and/or retrofit federal/state/local command and control centers (Emergency Operating Centers) for NBC events. These coordination centers must exist at each level of government. Alternate EOC locations must be available should the primary center be damaged or destroyed by the event.

- Interstate and intrastate mutual aid assistance must be recognized and supported by the federal government as an expedient, cost-effective approach to disaster response and recovery. The Emergency Management Assistance Compact (EMAC) has been adopted by forty-one states and two territories with additional states planning to join. EMAC is an interstate mutual aid agreement ratified by Congress, passed by state legislatures and signed into law by governors, and is well coordinated with the Federal Response Plan. Other states utilize the existing Interstate Civil Defense and Disaster Compact as well as regional compacts that are

similarly coordinated with existing plans. These complementary operational systems should be linked as the framework and procedures for all response and recovery activities.

- The Emergency Management Accreditation Program (EMAP) should be implemented and recognized by federal agencies as a strategic tool to build greater multi-discipline/all-hazards capabilities at the state and local level, including domestic terrorism. EMAP is a voluntary, national standards and accreditation program for state and local emergency management programs. The initiative is being developed in partnership by NEMA, FEMA and the International Association of Emergency Managers and is currently in the pilot phase.

- FEMA, State and local emergency managers must implement renewed emphasis on family and community preparedness to ensure Americans have necessary skills to survive a catastrophic disaster.

- A standardized national donations management protocol is needed to address the outpouring of food, clothing, supplies, and other items that are commonly sent to impacted states and localities following a disaster. If not handled properly, large amounts of unnecessary or inappropriate donations can add another level of complication to the disaster itself. We believe the "shoring up" of State and local emergency management agencies will provide the necessary organization to improve this system; however, additional planning and an information management capability are desperately needed.

Health and Medical

- The medical surge capacity must be strengthened. The emergency management, medical and public health professions must work with lawmakers to ensure each region of our nation has a certain minimum surge capacity to deal with mass casualty events. Hospitals should agree to provide defined and standardized levels of resources, capabilities and assistance to handle mass casualties, especially those contaminated by chemical/biological agents. Funding for equipment and supplies to accomplish this mission should be provided to develop this additional capability, in exchange for their agreeing to participate as a local receiving hospital and as part of the U.S. Public Health Service's National Disaster Medical System (NDMS). Funding for the health care system for emergency planning and extraordinary operation response costs that are not available from any other means must be provided by the federal government. Additionally, the federal government needs to provide the equipment and supplies to accomplish this mission and develop this additional capability; also, states need assistance to complete the National Pharmaceutical Stockpile distribution response plan.

- State-Local Disaster Medical Assistance Teams should be developed across the country with standardized equipment, personnel and training. These teams would serve as the first line of response to support impacted communities within impacted states, and could be required to respond outside the state as a mutual aid resource upon request. Self-contained capability to respond outside their jurisdiction should be provided by military Reserve Component assets available in each state.

- The current sixty U.S. Public Health Service NDMS Disaster Medical Assistance Teams (DMAT) should be uniformly enhanced for Weapons of Mass Destruction (WMD) response, including focus on personnel protection and training for WMD. Currently only four of the teams have been upgraded and equipped to serve as National Medical Response Teams (NMRTS).

Additional WMD Recommendations

- The Department of Justice should immediately release the FY00 and FY01 equipment funds in order to begin implementation of these recommendations, and then require a basic statewide strategy in order to receive FY02 funds; and further, provide funding to states to administer the equipment program. Also, allow greater flexibility with the approved equipment list in order to accomplish any of these recommendations. Specifically, this should include the use of funds for the purchase of necessary equipment for hospitals and the health care industry, regardless of the private sector ownership of these critical "first receiver" response system components. In addition, Congress should increase funding to DOJ to provide detection, personnel protection and decontamination equipment for the nation's emergency response agencies. Lastly, federal training and maintenance money must be included in any national terrorism response program.

- Congress and the Department of Defense should authorize homeland defense as a key federal defense mission tasking for the National Guard. By providing this authorization and removing restrictive language and funding on utilization of National Guard assets and personnel, the civil-military integrated response will be dramatically improved. In addition, Congress should provide funding to DoD for full-time staffing of state joint civil-military emergency operations centers. Further, Congress should provide funding to National Guard Bureau to complete fielding of National Guard Civil Support Teams in additional states and territories.

- State-Local Urban Search and Rescue capabilities should be developed across the country with standardized equipment, personnel and training. These teams would serve as the first line of response to support impacted communities within impacted states, and may be required to respond outside the state as a mutual aid resource upon request. Self-contained capability to respond outside their jurisdiction should be provided by National Guard assets available in each state. Further, standardization of the national USAR format and approach should be accomplished in such a way that there is a gradation in the USAR response teams to enhance overall national capability.

- The Department of Defense should undertake a review of the distribution of aviation assets to the National Guard in each state, territory and District of Columbia.

- National interagency and intergovernmental information management protocols are needed to support information sharing (ie. Damage/Situation Reports, Warning/Intelligence Reports, Resource Coordination). Further, an unclassified version of INTELINK needs to be developed for use by the greater emergency response community.

- Better federal interagency coordination is needed to assist states in identifying and accessing the full range of federal resources and assistance available to them. Currently, states are left on their own to identify individual agency programs and then contact each agency to determine programs and resources available.

- Security clearances must be more standardized and reciprocal between agencies and levels of government. Use of a compartmented, need-to-know system would greatly facilitate secure sharing of critical intelligence. Additionally, a critical need exists to enhance the ability of local and state officials to receive federal security clearances more expediently.

- FEMA's fire grant program should be expanded and modified to strengthen regional and national, not just local, fire protection capabilities to respond to catastrophic disasters. State level involvement in the program would allow increased coordination and prioritization of resource needs within each state. A comprehensive national strategy would ensure best use of available funding provided to local fire departments to enhance regional and national response capabilities.

- The National Warning System (NAWAS), maintained by FEMA, has been downsized in recent years. This system was designed to provide rapid communications and warning capabilities between federal, state and local emergency management agencies. The Congress should provide funding to rapidly upgrade and expand a sustainable national intergovernmental communication and warning system.

- FEMA, in collaboration with state, local, private and other federal agency emergency response partners, should rapidly develop a standardized emergency responder identification and accounting system to improve personnel credentialing and accountability at scenes of catastrophic disasters.

- The Environmental Protection Agency should be provided funding to develop additional guidance on "shelter in-place" strategies for nuclear/biological/chemical (NBC) events, especially in urban centers.

- There is a need for technology transfer from the federal government and its contractors to state and local governments to support an automated decision support system. Several federal agencies have data that is unclassified that could be used for planning, response and recovery activities. These federally developed systems would contribute immensely to accomplishing many of the recommendations set forth in this paper and do so in a cost effective manner.

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Testimony presented by
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"...and he that will not apply new remedies must expect new evils; for time is the greatest innovator...." The Essay of Sir Francis Bacon, 1601

Good morning, Mr. Chairman and members of the Subcommittee: I am Maureen Dempsey, M.D., director of the Missouri State Department of Health and Senior Services. I would like to thank my Missouri Senator Jean Carnahan for initiating discussions regarding my testimony before you today. It is an honor to be here and I greatly appreciate the opportunity to address the issue of terrorism preparedness.

Dr. Rex Archer, Director of the Kansas City Health Department in Missouri appeared before the Senate Subcommittee on Labor, Health and Human Services, Education and Related Agencies Committee on Appropriations on October 3 and did an exemplary job explaining the importance of the local public health system in the nation's bioterrorism preparedness. Today, I would like to focus on the state public health system and the role of state government in the nation's preparedness and response to bioterrorism.

First, I will briefly describe the foundation to address bioterrorism preparedness that has been built by the Missouri State Department of Health and Senior Services and to highlight our ongoing planning efforts.

Second, I believe it is essential to discuss the important relationship between the local, state and federal public health agencies in our nation's preparedness for bioterrorism and emergency response.

Finally, I would like to bring focus on several critical needs and present them for the consideration of your Subcommittee and others partners at the federal level as we increase our national, state and local ability to protect the citizens in our communities.

Missouri Department of Health and Senior Services Actions for Bioterrorism Preparedness:

The practice of public health is defined by the alchemy between the underpinnings of science, the mantle of unique governmental roles and responsibilities and the art of community engagement. The core functions of public health define the work that we do on a daily basis and constitute our main areas of experience and expertise. Chief among our roles and responsibilities are risk assessment, trend analysis, prevention, education and rapid response to threats against the health and safety of our citizens. The principles,

protocols and practices for response are remarkably similar for both man-made and naturally occurring deadly threats: influenza pandemic with worldwide implications, the innocent transportation of disease by an ailing traveler or the covert release of an agent against an unprotected and unsuspecting population. All are known possibilities - perhaps even probabilities – with unpredictable and unknown timelines. The ultimate goals must be prevention and early intervention. These goals can only be achieved through the use of our only strategic weapons: **systematic advance preparation, rapid detection and early intervention**, all of which require knowledge, education, training and the establishment of effective collaborative relationships with clearly defined roles and responsibilities.

The question before us is the status of our collective preparation for a terrorist event. It is clear that while states have the knowledge and expertise to intervene appropriately and rapidly, few states are prepared for the scope or magnitude of a bioterrorism event. The prevention of such an event is the province of the law enforcement and intelligence communities, but the early detection and the rapid, coordinated response are the province of the states. Both are key to mitigating the effects of the event by reducing morbidity and mortality, preventing secondary transmission and controlling public panic.

The tragic events of September 11 and the subsequent incidents of release of mysterious white powders are a confirmation that unpredictable and deadly threats - once the ingredients of nightmares - are now the basis of our reality. In Missouri we have been preparing for a number of years. That preparation continues now, with a dramatic increase in focused effort. As you all know, Missouri is the Show-Me State. In terms of public health preparedness for a bioterrorism or emergency event, however, I am proud to report that Missouri is not waiting to be shown how to become better prepared. We have taken a proactive and aggressive approach to preparation.

In May of 2000, we created a special Unit for Emergency Response and Terrorism to respond to the potential threat of weapons of mass destruction as well as chemical and biological agents in Missouri. It is staffed by a medical epidemiologist and an emergency coordinator and supported by the expertise of the entire department, including highly trained epidemiologists and communicable disease prevention specialists. This Unit, located in the Director's Office and under my direct oversight, advises the Department on the development, planning, training and implementation of an emergency/ terrorism management plan and coordinates with the state emergency management system regularly.

The Unit provides oversight and guidance to twelve work groups in the areas of mass care, surveillance, public information, operations, training, outbreak investigations, radiological/chemical response, etc. These workgroups were designed to address weaknesses in the state public health plans and infrastructure identified by observation of the TOPOFF exercise in Denver, Colorado in 2000 and our on state exercises for influenza pandemic preparedness. The work groups are comprised of representatives from the state health department, local public health agencies, as well as state and federal agencies. The final product of these work groups will be a broad emergency/terrorism

response plan with updated specific standard operating procedures for the Department. This will prepare us to respond to the immediate emergency needs of the area and to contain and minimize the impact on other citizens and communities within our state.

The State already has in existence an emergency response plan, but the Department will include updates to assure a more coordinated and comprehensive plan. This includes the integration of Department specific new bioterrorism initiatives into the overall state plan. In addition, efforts are already underway to delineate roles and responsibilities for other local, state and federal agencies, as well as to increase the degree of focus and collaboration to assure adequate medical and mental health care.

Missouri, like other states, has always had a disease surveillance system. It has primarily been a passive system with physicians, hospitals and laboratories reporting diseases to their local health departments, which forward them to the state health department. As a result of the terrorist attacks on September 11, I have directed the Missouri Department of Health and Senior Services to implement a vigorous, active syndromic disease surveillance system. Rather than waiting for reports to the state health department, state employees are scheduled three times each week to initiate calls to hospitals, physicians, federally qualified health centers and a host of other sites to tabulate the occurrence of syndromes designed to reflect the early onset of the known bioterrorism agents on CDC's threat list. The improved surveillance program will serve a two-fold purpose: early detection of agents for terrorism, as well as a dramatic increase in reporting for any disease outbreak of natural origin.

In addition to my role as the director of the Missouri Department of Health and Senior Services, I am a practicing pediatrician. Many of the diseases present on the threat list are clinically irrelevant to most physicians, because they do not occur naturally or with sufficient frequency and volume to be readily recognized. From my weekly experience in a clinic serving low-income Missouri children, I know that physicians see many patients with a multitude of nonspecific symptoms – stomach upsets, fever, muscle-aches, and rashes. In the best of worlds, these symptoms would remain nonspecific and for the most part be self-limiting or easily diagnosed and treated. In the new world, they could be the harbinger of something far more deadly. It is imperative that we dramatically increase awareness of these threats and their signs and symptoms, followed by comprehensive ongoing training and education. Through increased awareness, astute evaluations and timely notification, we can assure early intervention, containment and prevention of secondary transmission. There is a new sense of urgency with regard to early identification and notification – and it must come from the front line of medical providers and facilities. It then becomes the responsibility of the state pubic health agency epidemiologists and research staff to recognize abnormal patterns of symptoms and diseases that could indicate a terrorism event in our state.

This will certainly increase both the volume and the complexity of the work that public health performs. Further, it will require additional, detailed reports from those individuals and institutions on the front line of medical care in Missouri communities. Undoubtedly, it will be labor intensive on all fronts. However, the benefits gained

through the extra effort will assure the interval between the identification of an event and an appropriate response is markedly shortened. We must make time work for us, not against us. These benefits extend to the citizens throughout the state by reducing exposure and potential harm.

In terms of Missouri's early planning for possible bioterrorism events, we also signed the first-ever Memorandum of Understanding between a state health department and the Federal Bureau of Investigation. That MOU was signed in 1999 with the FBI and details our agreement to join forces in the investigation of crimes where the use of chemical or biological agents that could affect the public health and safety of Missouri citizens is suspected. Missouri's State Public Health Laboratory currently conducts testing for the FBI in suspect bioterrorism events and is part of the national bioterrorism response network. I can report that the Lab has tested over two-dozen cases of suspected anthrax since signing the MOU. Fortunately, they have been hoaxes but have afforded us the opportunity to see that our working relationship with the FBI is sound and provides a valuable underpinning for the state's bioterrorism preparedness.

Local, State and Federal Public Health Agency Relationship in Our Nation's Preparedness for Bioterrorism and Emergency Response:

The second issue I would like to discuss with the Subcommittee is the important relationship between local, state and federal public health agencies in our nation's preparedness for bioterrorism and emergency response. First, let me say that I believe this system is not only important for bioterrorism and emergency events, but it is integral in the everyday health of our communities and citizens throughout the United States.

In 1988 – thirteen years ago—The Institute of Medicine published "The Future of Public Health". It was a study undertaken "to address a growing perception among the Institute of Medicine membership and others concerned with the health of the public that this nation has lost sight of its public health goals and has allowed the system of public health activities to fall into disarray." This national report concluded "Public health is distinguished from health care by its focus on communitywide concerns-- the public interest--rather than the health interest of particular individuals or groups." The report pointed out that at the local, state and federal levels, public health focus had shifted dangerously to health care – primary, urgent, and emergency health care to individual citizens – rather than the fundamental public health focus of protecting the community. There is an incipient danger in the trend to medicalize public health that has occurred in the last several decades. Instead of a comprehensive approach to prevention, education and appropriate disease control measures, we have focused on the delivery of palliative cocktails and disease support measures. The implications of their impending failure are enormous in terms of the cost in human life and to the meaning of public health in the future.

It is interesting to note that between 1900 and 2000, the life expectancy of United States citizens increased by approximately 30 years. The value of public health is indisputably clear when we acknowledge the advances not only in life expectancy, but also in the

quality of those years gained. The practice of public health with its focus on disease prevention and health promotion and its ability to establish both causation and the benefits of early intervention, has provided 25 of those years of additional longevity - years that cannot be purchased at any price - through advances in medicine or technology. Improved health care (i.e. successful treatment of disease that have already occurred) accounts for 5 years of the increased life expectancy for our citizens. There exists an interesting paradox between these relative contributions and where we as a nation and as a state allocate our resources. Most funding is directed toward health care services, treatment of existing disease, and research into better treatments. Much, much less is invested in the public health systems and interventions that have proved far more effective in the last century.

We recognized the weaknesses in our Missouri public health system in the early 90's and have been working at both the state and local level to increase the public health infrastructure. We continually ask: "What is the core business of state and local public health agencies – what is it that we must do as governmental agencies that will be left undone if we do not fulfill our public health responsibilities?"

The core functions of public health translate into every daily activity, permeate all levels of the system and provide guidance for all that we set out to achieve. Those functions must be performed as a matter of routine, with the knowledge that we must be prepared to perform them in an extraordinary manner given a bioterrorism or emergency event. Missouri has invested state general revenue funds directly in our local public health partners to assure an adequate infrastructure for concerted response. Despite these efforts, Missouri will only be as safe as our neighbors both here and abroad. According to Laurie Garrett, author of *Betrayal of Trust*: "The idea that the health of every nation depends upon the health of all others is not an empty piety, but an epidemiological fact."

The Missouri Department of Health and Senior Services has been diligently working to train and educate key staff and partners on emergency response. We have dramatically improved our state health department preparedness. We have consistently built strong relationships with our federal partners.

More must be done.

Federal-level Issues to Increase our National, State and Local Ability to Protect the Citizens in Our Communities:

And that brings me to the third and last point of discussion: We request that this Subcommittee and all of our federal partners provide support to states in the form of both resources and leadership on public health's preparation for bioterrorism.

The public health infrastructure must be prepared to prevent illness and injury that would result from biological, chemical or radiological terrorism. Early detection and control depends on a strong and flexible public health system at the local, state and federal levels. Building on the existing infrastructure is critical. We have a long road ahead of us to

achieve the capacities – workforce, equipment, supplies, training, information systems - we require in order to detect and respond to an act of terrorism quickly and to prevent the spread of disease. Current resources are wholly inadequate to address the needs associated with this issue. Time is the greatest innovator and in this respect, it is also our greatest enemy.

Our federal partners must be assured adequate manpower with appropriate levels of expertise, coupled with the ability to mobilize rapidly. They represent a critical support to the states, serving as a source of knowledge, information, epidemiologic and technical assistance, as well as providing guidance and leadership on field investigations. Even now, the proposed budget include hundreds of billions for research and direct care, yet only a few scant millions for the primary public health response arm related to bioterroism and communicable disease control. Even without the threat of bioterrorism, adequate resources are needed to assure that we can respond to naturally occurring infections or threats. Once an event has occurred, it is far to late to prepare, hire staff, train them and deploy them – and far to costly in terms of human suffering and threat to life – to delay.

Funding for research should be directed at the development of rapid techniques for identification of a variety of pathogens to assure early detection, new biomedical tools to assure rapid diagnosis and new therapeutics such as drugs and vaccine to assure prevention and early treatment.

The public health system must work rapidly to educate and enhance awareness of chemical and biological terrorism among emergency medical service personnel, police officers, firefighters, physicians, nurses, hospitals and other community groups. We must develop and implement joint training exercises to assure adequate and timely coordination of multi-agency, local, state and federal partner responses during actual events. Demands are high and the needs are great, yet state resources are inadequate to address the multitude of needs. It is essential that all partners have clearly defined roles and responsibilities, recognize those of their partners, develop plans jointly and actively train together far in advance of an actual emergency. If the federal system were to become overwhelmed with requests or rapid transportation is interrupted as it was on September 11, such knowledge and training will allow states to assure that critical response roles are considered in all contingency plans and assumed by the state, if necessary. Only by doing this, will these agencies foster trust and collaboration between each other and within their communities?

States must have adequate equipment and personnel to respond to an actual emergency. We must have a front-line response team prepared to respond, whether the emergency is a result of a terrorist or natural disaster. There must be multiple teams ready to respond on a 24 hour a day basis, 7 days a week. These teams must have expertise in outbreak investigation, epidemiology, emergency response, risk communication, information technology, and laboratory protocols and procedures. Emergency equipment must be available at a moment's notice, at multiple geographic locations.

Resources for response to mass casualties must be made available to hospitals on a regional basis. The state of the health care industry and its current reimbursement system assure that their inventory is ordered on a "just in time" basis. Equipment and supplies are lean with respect to daily needs and will never support a large influx of ill or injured citizens. Interruptions in transportation will prevent the delivery of emergency supplies to areas of need, contributing to much poorer outcomes.

The current state of mental health capacity and funding must be rapidly addressed to assure both the immediate and long-term treatment of the behavioral and psychosocial sequelae of catastrophic or terrorist events.

Public health needs the support of federal agencies to enhance existing disease surveillance systems, build sufficient epidemiologic expertise and enhance capacity to monitor these systems. It is essential that we explore new technology and communications systems that improve efficiency, effectiveness and timeliness of data collection and analysis. State and local public health agencies must have active disease surveillance systems or ongoing computerized collection of data with pre-set thresholds, coupled with human oversight capable of detecting unusual patterns of disease or injury, including those caused by unusual or unknown threat agents. It is important that epidemiologists at state and local health agencies have the necessary experience, expertise and resources for data collection and analysis to recognize and respond to reports of clusters of rare, unusual or unexplained illnesses. They must have effective, cutting-edge communication systems to ensure delivery of accurate and timely information between local, state and federal agencies.

State public health laboratories across the nation play a crucial role in protecting the health of the population. These facilities must be state-of-the-art and keep up with new technology and testing protocols. They must establish and maintain statewide laboratory networks with private medical laboratories and assure that that laboratory personnel in the private sector are trained to detect possible bioterrorist agents. State laboratories must have the capacity and technology to communicate with the FBI and CDC in matters involving transport and laboratory testing of samples. Missouri is fortunate to have a state legislature that understands the importance of a strong public health laboratory. Money has been appropriated to construct a new state-of-the-art facility to effectively detect and identify biological threats to the citizens of Missouri. Unfortunately, we lack state resources to update our testing equipment, recruit highly trained personnel and assure adequate resources to provide testing 24 hours a day/7 days a week.

I believe one of the most important things we, as state and national leaders, can do is provide quality public educational campaigns. Rapid intervention will require communication and credibility. Should a situation arise that requires quarantine or evacuation, the public will need to hear and to heed those messages and comply immediately. This will require implicit trust and mandates that we must establish effective relationships with the both the media and the public now. We must inform and reassure the public before, during and after a biological attack. We must be proactive in providing information to the public not only about the inadequacies of gas masks or the

risks of stockpiling antibiotics, but credible information on ways they can assume responsibility for their protection and that of their families. Currently, there is a dizzying array of "experts" competing for airtime, often with conflicting and inaccurate information, which leaves the public dazed and confused.

Not only must we have leaders at the highest level providing messages which allay public concern, these messages must be coordinated at all levels of the system – federal, state and local. We need to be united in our voice and consistent in our message. Information must be up-to-date, accurate and specific. Our credibility depends upon it – and it is critical to remember that the public's safety, security and perhaps their life may depend on their trust in us and the timeliness and accuracy of our messages.

We have no special forces, no reserve forces and no public health guard troops to rely upon. I cannot emphasize more strongly that absent prevention, we have only a limited number of weapons in our armamentarium: **advance preparation, rapid detection and early intervention.**

States must have credible and timely information from the FBI, the CDC&P and other federal partners in order to plan, prepare and mobilize. For example, when investigations become criminal the information flow halts, thus preventing state and local public health agencies from intervening appropriately. While we may not need to know all of the details, certain information is critical in protecting the public's health. We can participate in delivering consistent messages to the public that do not conflict with those of our federal partners and do not so clearly make us seem to be out of the loop – creating discomfort at the professional and the public level. Knowledge of outbreaks or unusual events in other areas of the country and the world allows states to develop contingency plans for specific agents or scenarios, enhancing the quality and scope of our preparation and response. It has not escaped our attention that unless public health does an exemplary job at early detection and intervention, first responders, medical personnel and public health outbreak workers will rush headlong into disaster – or flee in panic.

The final request I would make of you is to consider the development of a rational, national vaccine manufacture and distribution system. We must have the support of the federal government and elected officials to assure the availability of critical vaccines in order to adequately protect our public health workforce, our medical community, and our most vulnerable populations against vaccine-preventable diseases.

It is a national tragedy that we are unable to protect our populations in peacetime with preventatives such as vaccines. Last fall, the United State did not have an adequate supply of vaccine, distributed in a timely manner to meet the needs of the influenza season. There are hints of shortages and delays this year as well, further compounded by steep price increases. We cannot assure that those most in need receive the vaccine or receive it in a timely fashion. An already vulnerable population is at greater risk of disease and death.

We are entering our second year of tetanus vaccine shortage – with most of our current stockpile having been sent to New York – and we are no longer routinely vaccinating adolescents. We have just spent four weeks of confusion regarding availability of childhood vaccines such as DTaP, which prevent potentially deadly diseases such as diphtheria, tetanus and pertussis. The media reported the initial notice of potential vaccine shortage. In the subsequent weeks, we have had great difficulty obtaining guidance and direction. It remains unclear as to the vaccine's availability and recommendations for its use have not been clarified. We must educate our private health care providers to assure adequate protection, but have no clear direction to proceed. We need credible, timely information.

Many of our relationships with health care providers have been damaged by lack of coordination, leadership, guidance, consistency and support. Providers will need to implicitly trust our messages regarding vaccine protocols, as well as signs, symptoms, treatment and reporting for bioterrorism. Many of these providers feel that public health has not done enough in the arena of vaccine supply and distribution, health communication and education – and are therefore, disinclined to participate actively.

I believe that now is the time for the federal government to examine our system of vaccine production and distribution. I do not know the answer, but I know the question for all of us must be "Is a supply and demand, profit-driven market place system the right system in the United States for producing and distributing vaccines that are essential to the health and protection of our citizens?"

We need a rational, national vaccine policy. I would call on Congress to begin the discussion and help us answer this question to ensure that not only are emergency vaccines available to fight bioterrorism, but that our day-to-day vaccines are available and distributed to keep our citizens healthy and protected.

Thank you for this opportunity to meet with you today. Thank you for your leadership on this important issue.

I am confident that the federal, state and local public health systems and the citizens and communities in this great county will be better prepared as a result of your work and the work of other public servants. As we often say in Missouri, we have a known problem and the best people are working on it. In Missouri and throughout the country, that includes thousands of dedicated public health personnel.

Thank you.

Testimony of Margaret A. Hamburg, M.D.
Vice President of Biological Programs, Nuclear Threat Initiative

Senate Committee on Governmental Affairs, Subcommittee of International Security, Proliferation and Federal Services

October 17, 2001

Mr. Chairman and members of the Committee, thank you for the invitation to discuss the need to enhance our nation's capacity to respond to the threat of biological terrorism. Your leadership and commitment in addressing this challenge comes at a critical time.

The tragic attacks last month have been a powerful reminder of our nation's vulnerability to terrorism, and have increased fears that we could face even more devastating assaults in the future, including the possible use of biological weapons.

Certainly, the events of recent days have underscored how seriously we must take this emerging threat. Whether an unsophisticated delivery system with a limited number of exposures, as we have seen in several American cities, or the potential of a more high-technology, mass casualty attack, the prospects are frightening. Today, no one is complacent about the possibility that a biological agent might be intentionally used to cause widespread panic, disease and death.

In this time of heightened anxiety and concern, our nation has a real opportunity—and obligation—to make sure that we have in place the programs and policies necessary to better protect ourselves against this threat, and perhaps to prevent such an attack from occurring in the first place. While there are many challenges before us, we do know a great deal about what needs to be done and how to do it. I will address these issues in more detail later in my testimony, but I want to emphasize at the outset that improving the national response to bioterrorism must include several broad elements, such as:

(1) Prevention. Every effort must be made to reduce the likelihood that dangerous pathogens will be acquired or used by those that want to do harm. This must include improving intelligence, limiting inappropriate access to certain biological agents and efforts to establish standards that will help prevent the development and spread of biological agents as weapons;
(2) Strengthening public health. Rapid detection and response will depend on a well-trained cadre of trained public health professionals to enhance disease surveillance and outbreak investigation, educated and alert health care providers, upgraded laboratories to support diagnosis, and improved communications across all levels of government, across agencies and across the public and private sector.
(3) Enhancing medical care capacity. We must improve treatment for victims of an attack by enhancing local and federal emergency medical response teams, training health professionals to diagnose and treat these diseases, developing

strategies to improve the ability of hospitals to rapidly increase emergency capacity, and providing necessary drugs or vaccines where they are needed through a national pharmaceutical stockpile.

(4) Research. A comprehensive research agenda will serve as the foundation of future preparedness. Perhaps most urgently, we need improved detectors/diagnostics, along with better vaccines and new medications.

Some of these activities are already underway, but need to be strengthened and extended; other programs and policies still need to be developed and implemented. This hearing represents an important forum to better define the agenda we must pursue to be a nation prepared.

DARK WINTER EXERCISE

I have been asked in my testimony to address "Dark Winter," a recent bioterrorism exercise which involved the intentional release of smallpox and the lessons learned. Although a simulation of a worst-case scenario, it powerfully conveyed the distinctive–and sobering–features of a potential bioterrorist attack and helped to spotlight many of the vulnerabilities that we must urgently and effectively address.

"Dark Winter" simulated a series of National Security Council (NSC) meetings dealing with a terrorist attack involving the covert release of smallpox in three American cities. The exercise was conducted by the Center for Strategic and International Studies, the Johns Hopkins Center for Civilian Biodefense Studies, and the ANSER Institute for Homeland Defense, under the leadership of John Hamre, Tara O'Toole and Randy Larsen, respectively. Many of the participants in "Dark Winter" had served previous Presidents in cabinet or sub-cabinet positions. Most knew how the NSC worked, and they were all individuals with considerable expertise and perspective in the security, law enforcement and health fields. I served as the Secretary of Health and Human Services.

In the opening minutes of "Dark Winter" we learned that cases of smallpox had just been diagnosed by the Centers for Disease Control. Given the propensity of this disease to spread person-to-person, the 30% fatality rate of the disease, and the limited supply of smallpox vaccine, it was not surprising that we were soon dealing with an epidemic of devastating, if not catastrophic, potential.

In the 20th century, more than 300 million people died from smallpox – more than those killed in all wars of the century combined. Thanks to a massive and highly collaborative international campaign, smallpox as a naturally occurring disease was eradicated, and vaccination against the disease stopped. Consequently, each passing year has seen the birth of new generations of unvaccinated citizens, and a decrease in the potency of previous vaccinations among adults. So although the eradication of smallpox has saved

thousands of lives, the end of vaccination against it has paradoxically left the world more vulnerable to the disease.

This fact would be of little consequence if we did not know that smallpox was made into a weapon by the Soviet Union, and that other nations or groups may have successfully acquired stocks of the virus.

Today, a single case of smallpox anywhere in the world would constitute a global medical concern. An example of the seriousness of this disease is the wave of smallpox that was touched off in Yugoslavia in 1972 by a single infected individual. The epidemic was stopped in its fourth wave by quarantines, aggressive police and military measures, and 18 million emergency vaccinations, this to protect a population of 21 million that was already highly vaccinated.

By comparison, in America today we have less than 15 million effective doses of vaccine to protect a population of 275 million that is highly vulnerable to the disease. The Yugoslavia crisis mushroomed from one case; the "Dark Winter" exercise began with 20 confirmed cases in Oklahoma City, 30 suspected cases spread out in Oklahoma, Georgia, and Pennsylvania, and many more individuals who were infected but not yet ill. Initially, we did not know the time, place or size of the release, so we had no way to judge the true magnitude of the crisis. We could easily predict, however, that it would get worse before it would get better.

Over a 24-hour period at Andrews Air Force Base, our NSC "war gamers" dealt with three weeks of simulated shock, stress and horror. We learned that on December 9, 2002, some dozen patients reported to the Oklahoma City Hospital with a strange illness confirmed quickly by the CDC to be smallpox. While we knew only about the Oklahoma cases the first day, we later learned the scope of the initial infections and the sites of three simultaneous attacks in shopping centers in Oklahoma, Georgia and Pennsylvania. The initial infection quickly spread to five states and 3,000 victims, although at this point, most infected individuals had not displayed symptoms or gone to the hospital, so it was impossible to tell who or where they were.

The two primary tools for containing a smallpox epidemic are isolation of cases and vaccination of contacts. In accordance with this, a strategy was devised to include strict isolation of those with disease and a firewall of vaccine protection around those cases, but from the beginning, that strategy was limited by the large numbers of people initially infected, the rapid spread of the disease, and our limited supply of vaccine. Unfortunately, we had only enough vaccine for one out of every 23 Americans. (This remains the case in America today, although a contract is in place and is being accelerated to produce at least 40 million new doses by the end of 2002).

The Secretary of Defense demanded that all 2.3 million of U.S. military personnel be immediately vaccinated wherever they were in the world. In his wisdom, the President decided against this policy. Instead, we administered vaccine to U.S. military, including the National Guard, and security and medical service personnel who were on the front lines locally, and also those who were in areas of the world where a smallpox attack was more likely to occur.

So, on the first night of decision-making, we designed the vaccination strategy, and we ordered accelerated production of new stock. We even asked the Secretary of State to try to find surplus stock from other countries, but we were doubtful that they would comply with our request in the face of a smallpox epidemic that would in all likelihood become global.

On Day Six of the crisis, very little vaccine was left. The situation required that we consider measures considered draconian by modern standards, including enforced isolation, restrictions on travel, and providing food and other essential supplies to affected areas in the face of these restrictions. These problems were exacerbated by the fact that, by this point, we could no longer provide vaccine to essential providers.

On Day Twelve, when the war game ended, we were beginning the next stage of the epidemic – those who caught smallpox from the original 3,000 people who were infected in the initial terrorist attack. Epidemiologic models predicted that without effective intervention, every two to three weeks the number of cases would increase ten-fold.

At the conclusion of the exercise, the epidemic had spread to 25 states and 10 foreign countries. Civil disorder was erupting sporadically around the nation. Interstate commerce had ceased in large areas of the country. Financial markets had suspended trading. We were out of vaccine and were using isolation as the primary means of disease control.

For each of us around the table, the lessons learned were somewhat different, depending on our various backgrounds, experience and expectations. It was fascinating to see the differing perspectives that were brought to bear on the same fundamental sets of data and decision-points. At times, the old adage "what you see depends on where you sit" came to mind. Yet I think we all agreed that the exercise was indeed plausible - even conservative - in the framing of the scenario and the assumptions made about disease exposure, transmission and treatment. Certainly, we all left the room humbled by what we did not know and could not do, and convinced of the urgent need to better prepare our nation against this gruesome threat.

In my role as the Secretary of Health and Human Services, the perspective I brought to the table was that of someone who served first as a local health officer (New York City Health Commissioner) and then as a federal public health official (Assistant Secretary for

Planning and Evaluation, Department of Health and Human Services). I felt first hand the devastation of terrorism as New York City's Health Commissioner when the World Trade Center was first bombed in 1993. Today, the horror of that event is dwarfed by the attacks of September 11th. Yet despite the incredible scale of these attacks, it is clear that an attack with a biological weapon has the potential to inflict even greater damage upon our country, both in terms of the extended timescale of the unfolding disaster and the numbers of people affected.

I should state that my bias is to approach the bioweapons issue in the broader context of infectious disease threats, both naturally occurring and intentionally caused. There is a continuum. A bioterrorist attack such as that depicted in "Dark Winter" would certainly represent the extreme end of that continuum, both in terms of its potentially catastrophic consequences for health and because of the disruption and panic that it would cause.

ISSUES RAISED BY DARK WINTER EXERCISE

"Dark Winter" raised many important issues and provided an opportunity to enhance awareness about the complexities of a bioterrorist attack. It served as a compelling illustration of just how much an attack caused by biological weapons would differ from conventional terrorism, military strikes or even attacks caused by other weapons of mass destruction.

It demonstrated how such an attack would unfold slowly - over days, weeks, months - as an infectious disease epidemic, with the potential to cause enormous suffering and death, as well as panic, destabilization and quite possibly civil disorder. There was little doubt that this would be a true public health emergency, for which our nation is ill-prepared to respond. Moreover, it showed how a bioterrorist attack would represent a national security crisis of enormous proportions, yet many of the traditional strategies to manage such an event would not apply. For example, identification of the perpetrator, as well as avenues for possible retaliation, might not be feasible. "Dark Winter" also underscored the interwined legal, ethical, political and logistical difficulties that attend contagious disease containment and control.

"Dark Winter" further demonstrated how poorly current organizational structures and capabilities fit with the management needs and operational requirements of an effective bioterrorism response. Responding to a bioterrorist attack will require new levels of partnership between public health and medicine, law enforcement and intelligence. However, these communities have little past experience working together and vast differences in their professional cultures, missions and needs. The "Dark Winter" scenario also underscored the pivotal role of the media, and how a productive partnership with media will be paramount in communicating important information to the public and reducing the potential for panic.

Another clear lesson that emerged from "Dark Winter" was that effective response will also require stronger working relationships across levels of government. While national leadership, guidance and support will be essential, it must be recognized that much of the initial crisis response and subsequent consequence management will unfold on the local level. " On-the-ground" local providers--public health and medical professionals, emergency response personnel, law enforcement officials and government and community leaders--will provide the foundation of the response and will deal with the problem from the moment the first cases emerge until the crisis is over.

The "Dark Winter" scenario also brought into bold relief the fact that management of such a crisis would almost certainly occur in the context of an already strained health care system and severe limitations on certain critical resources, including shortages of vaccine, hospital beds and isolation capacity.

CHALLENGES FOR THE FUTURE

As an exercise, "Dark Winter" was not designed to provide answers, but rather to raise critical questions and issues about our current preparedness to address the bioterrorist threat - Certainly it achieved that goal, but how do we begin to address these critical concerns? Building on lessons learned from "Dark Winter" from the perspective of public health and medicine, let me emphasize several key challenges as we move forward.

(1)Focus on the real threat/strengthen public health. In previous testimony before Congress, I have emphasized the need to convince policymakers and the public that the threat of bioterrorism is real. However, the recent cases of anthrax in Florida and New York City have made this point more forcefully than I ever could. However, even in the context of current events, I believe that a major challenge remains the need to get policymakers, legislators, and program planners to really comprehend that the threat of bioterrorism is fundamentally different than the other threats we face, such as "conventional" terrorism, or attack with a chemical or nuclear weapon.

Meaningful progress against this threat depends on understanding it in the context of an infectious and epidemic disease. It requires different investments and different partners. Until bioterrorism's true nature as an epidemic disease event is fully recognized, our nation's preparedness programs will continue to be inadequately designed: the wrong first responders will be trained and equipped; we will fail to fully build the critical infrastructure we need to detect and respond; the wrong research agendas will be developed; and we will never effectively grapple with the long-term consequence management needs that such an event would entail.

Unfortunately, if we look at our current preparedness efforts to date, necessary public health and medical care activities have been underdeveloped and underfunded. Of the roughly $10 billion budget for counterterrorism efforts in FY 2001, only a very small percentage has supported activities that truly can be considered as core elements of a coherent program to address the bioterrorist threat. In the current environment, it is clear that very substantial new monies will be available, and we must ensure that a significant component of those resources are targeted to address these critical concerns.

(2) Build on existing strategies. Effective strategies must build on existing systems where possible, but build in flexibility. We do not want to develop an entire ancillary system for responding to the bioterrorist threat. Rather, we should strive to integrate our thinking and planning into the continuum of infectious disease threats and potential disasters that public health agencies are already charged to respond to. The last thing we want is to find ourselves trying out a plan for the very first time in the midst of a crisis. Instead, we want to find the systems that work in routine activities and then identify what we need to do to amplify or modify them to be appropriately responsive for these more acute and catastrophic situations.

(3) Support the health care system's capacity for mass casualty care. Controlling disease and caring for the sick will require a deep engagement of the public health and medical community. There are currently many pressures on health care providers and the hospital community that limit their ability to prepare in some of the critical ways necessary for effective planning in the face of the bioterrorist threat. The enormous downsizing that has occurred, the competitive pressures to cut costs, the just-in-time pharmaceutical supplies and staffing approaches, and the limited capacity for certain specialty services such as respiratory isolation beds and burn units that may become critical in a biological or chemical terrorist attack, all need to be recognized and addressed.

We must be realistic about the potential costs that would be incurred by these institutions and individuals, as well as the enormous up-front investments needed if they are truly to prepare. And in many ways, if you are a health care institution today, making those preparatory investments is a high-risk undertaking. By preparing, you are also almost setting yourself up to incur a series of costs that may not be reimbursed after the crisis is over.

We know that we must find better ways to strategically support our health care institutions, both because of the implications of a bioterrorist attack but also because of the existing demands on the system, as evidenced this past year when a routine flu season overwhelmed hospital capacity in several cities.

There is an urgent need to develop programs that target dollars for health care disaster planning and relief, including training, templates for preparedness, and efforts to develop

strategies in collaboration with other critical partners for providing ancillary hospital support in the event of a crisis. This could be done either through the army field hospital model or what was done in the 1918 pandemic flu, when armories, school gymnasiums and the like were taken over to provide medical care. In doing this, we need to support local and state planning efforts to assess community assets and capabilities, and we need to look at what federal supports can be brought to bear locally in a crisis.

(4) Invest in research. Today's investment in research and development will be the foundation of tomorrow's preparedness. A comprehensive research agenda should be developed and pursued that extends across many important research domains. For example, our capability to detect and respond to a bioterrorist attack depends largely on the state of the relevant medical science and technology. Without rapid techniques for accurate identification of pathogens and assessment of their antibiotic sensitivities, planning for the medical and public health response will be significantly compromised. Without efficacious prophylactic and treatment agents, even the best planned responses are likely to fail. Biomedical research is needed to develop new tools for rapid diagnostics, as well as improved drugs and vaccines. At an even more basic level, we must invest in research to enhance the fundamental study of genomics, disease pathogenesis and the human immune response.

In addition to biomedical research, further research into such diverse concerns as defining appropriate personal protective gear or decontamination procedures under different circumstances will be important to our overall preparedness for a bioterrorist attack. Research to support deeper understanding of the behavioral issues and psychosocial consequences of a catastrophic event of this kind is currently very limited but should be made a high priority. I believe that the importance of all of these areas has been underscored by our recent experience in responding to the mounting set of anthrax cases and exposures. These events have demonstrated critical gaps in our knowledge as well as deficiencies in our tools for detection, response and consequence management that we can and should swiftly address.

5) Understanding the public response. Sadly, the many fears, anxieties and uncertainties that have surrounded the current anthrax scare reinforce another major gap identified in current preparedness and planning efforts. This involves how to engage the public, and importantly, how to most effectively work with the public in the event of a crisis. The recent small-scale anthrax attacks, although they have sickened only a handful people, have given new insights into how complex these issues may be. Certainly, the specter of a silent, invisible killer such as an infectious agent evokes a different level of fear and panic than other disaster scenarios. Indeed, response to previous major disease epidemics—such as the outbreak of pneumonic plague in Seurat, India in 1994—suggests a level of panic and civil disruption on a far greater scale.

Anyone who has ever dealt with disaster response knows that how the needs of the public are handled from the very beginning is critical to the overall response. In the context of a biological event, this will no doubt be even more crucial. Managing the worried well may interfere with the ability to manage those truly sick or exposed. In fact, implementation of disease control measures may well depend on the constructive recruitment of the public to behave in certain ways, such as avoiding congregate settings or following isolation orders. In the final analysis, clear communication and appropriate engagement of the public will be the key to preventing mass chaos and enabling disease control as well as critical infrastructure operations to move forward. Correspondingly, the needs and concerns of response personnel, including health care workers, must also be addressed. Again, prior experience with serious infectious disease outbreaks tells us that when this does not occur, essential frontline responders and key workers are just as likely as the public to panic, if not flee. The mass exodus of health care workers following onset of the Ebola epidemic in Kikwit, Zaire in the mid 1990s serves witness to this point.

(7). Engage the media. The media is key to efforts in a crisis to communicate important information to protect health and control disease, as well as to reduce the potential for panic. Over the past days, we have seen both the press and the public receive a crash course on anthrax. They have been fast learners, and for the most part, the media has done a credible and responsible job in communicating this important information. But there must be a clear plan for providing the news media with timely and accurate information. Furthermore, the credible and consistent voice of well-informed health officials is critical to this effort.

Stepping back, it is clear that the ability of the media to mobilize effectively in a crisis is greatly enhanced by a process of ongoing and continuing mutual communication and education in calmer times. We must strive for the development of a set of working relationships grounded in trust - trust that they will be provided with information in a timely and appropriate manner, and in turn, that they will use that information in a responsible, professional way.

No doubt there will always be tensions between the desire to get out a good story and an appreciation of the complexities, sensitivities and uncertainties inherent in such a crisis. But stonewalling the press or viewing them as the enemy is virtually guaranteed to make the situation worse.

(8) Clarify legal authorities. In planning for an effective response, an array of legal concerns need to be addressed. Issues include such basic ones as the declaration of emergency -- what are the existing authorities? Are they public health, or do they rest in other domains that will be relevant? What are the criteria for such a declaration? What are the authorities that still need to be established?

Other outstanding legal questions concern the ability to isolate, quarantine, or detain groups or individuals; the ability to mandate treatment or mandate work; restrictions on travel and trade; the authority to seize community or private property such as hospitals, utilities, medicines, or vehicles; or the ability to compel production of certain goods. Also, questions concerning emergency use of pharmaceuticals or diagnostics that are not yet approved or labeled for certain uses need to be answered.

These questions involve many different levels of government, many different laws and authorities, and raise many complex and intertwined ethical, political and economic issues. In a systematic and coherent way, we must address this array of pressing issues and concerns. And not just what laws are in place or could be put in place, but then also what policies and procedures would be necessary to actually implement them.

(9) Plan, prepare and practice. Perhaps most fundamentally, "Dark Winter" signaled the need for more planning and preparation—across all the domains mentioned above and more. Planning can make a difference, but we cannot begin to prepare in the midst of a crisis. As "Dark Winter" unfolded, it was evident that a sense of desperation about what needed to be done arose, at least in part because the country had not produced sufficient vaccine; had not prepared top officials to cope with this new type of security crisis; had not invested adequately in the planning and exercises needed to implement a coordinated response; and had not educated the American people or developed strategies to constructively engage the media to educate people about what was happening and how to protect themselves.

Prior planning and preparation can greatly mitigate the death and suffering that would result from a serious bioweapons attack. As a nation, we need comprehensive, integrated planning for how we will address the threat of bioterrorism, focusing both on prevention and response. We need to define the relative roles and responsibilities of the different agencies involved, and identify the mechanisms by which the varying levels of government will interact and work together. We need true national leadership to address the bioweapons threat to our homeland. Planning efforts must be backed by the necessary resources and authority to translate planning into action. Moreover, we must practice what we plan. Preparations must be exercised, evaluated and understood by decision-makers if they are to prove useful in a time of crisis.

(10) The importance of prevention. The many intrinsic challenges involved in mounting an effective response to a bioterrorism attack - and the many casualties that will inevitably occur--should compel us to make a greater commitment to what can be accomplished to reduce the fundamental threat of their use. Clearly, measures that will deter or prevent bioterrorism will be the most cost effective means to counter such threats to public health and social order - both in human and economic terms. Are there strategies to limit or prevent these often frightening microbes from getting into the hands

of those who might misuse them, and how do we reduce the likelihood that they would be misused?

On a policy level, such prevention efforts require a global approach, including the need to find ways to meaningfully strengthen and enforce the Biological Weapons Convention, as well as international scientific cooperation to create opportunities for scientists formerly engaged in bioweapons research to redirect their often considerable talents and energy into more constructive and open research arenas. For example, a number of scientific collaborations have begun in Russia in an attempt to address this goal.

We must also strengthen and expand efforts to control access to and handling of certain dangerous pathogens, including proactive measures by the scientific community to monitor more closely the facilities and procedures involved in the use of such biological agents.

THE NUCLEAR THREAT INITIATIVE—A New Foundation

Encouraging and supporting our government to deter, prevent, and defend against biological terrorism is a central part of our mission at the Nuclear Threat Initiative (NTI) – an organization founded by Ted Turner and guided by a distinguished board co-chaired by him and former Senator Sam Nunn. We are dedicated to reducing the global threat from biological, nuclear, and chemical weapons by increasing public awareness, encouraging dialogue, catalyzing action, and promoting new thinking about these dangers in this country and abroad.

We fully recognize that only our government can provide the leadership and resources to achieve our security and health priorities. But within that context, NTI is:

- Seeking ways to reduce the threat from biological weapons and their consequences.
- Exploring ways to increase education, awareness and communication among public health experts, medical professionals, and scientists, as well as among policy makers and elected officials – to make sure more and more people understand the nature and scope of the biological weapons threat.
- Considering ways to improve infectious disease surveillance around the globe – including rapid and effective detection, investigation, and response. This is a fundamental defense against any infectious disease threat, whether it occurs naturally or is released deliberately.
- Stimulating and supporting the scientific community in its efforts to limit inappropriate access to dangerous pathogens and to establish standards that will help prevent the development and spread of biological agents as weapons.

- And finally, NTI is searching for ways to help our government and the Russian government to facilitate the conversion of Russian bioweapons facilities and know-how to peaceful purposes, to secure biomaterials for legitimate use or destruction, and to improve security of dangerous pathogens worldwide.

CONCLUSION

In conclusion, let me re-emphasize that a sound strategy for addressing bioterrorism will need to be quite different from those that target other types of terrorist acts. While a large-scale event most likely remains a relatively low probability event, the high consequence implications of bioterrorism place it in a special category that requires immediate and comprehensive action. Yet as we move forward to address this disturbing new threat, it is heartening to recognize that the investments we make to strengthen the public health infrastructure, to improve medical consequence management and to support fundamental and applied research, will also benefit our efforts to protect the health and safety of the public from naturally occurring disease.

To be effective, we will need to define new priorities, forge new partnerships, make new investments to build capacity and expertise, and support planning. We may never be truly prepared for some of the most catastrophic scenarios, but there is a great deal that can and should be done.

I look forward to working with you on these important issues and would be happy to answer any questions you may have.

Prepared Statement
Before the Senate Committee on Governmental Affairs
Subcommittee on International Security, Proliferation and Federal Services

17 October 2001

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Director, Chemical and Biological Weapons Nonproliferation Project
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With the interplay of politics, institutional interests, and differences of opinion, complex public policy decisions can be difficult enough to make in times of peace and prosperity. In times of turmoil and war, such decisions can be even more challenging. In recent weeks, US citizens have been on edge about the prospects of chemical and biological terrorist attacks. The occurrence of isolated anthrax incidents in Florida, New York City, and now the nation's capital has made it difficult for the country to regain a sense of normalcy in the aftermath of the September 11th tragedies. Americans are looking to their leaders to make sage decisions that will enhance the ability of local, state, and federal assets to promptly and effectively respond to a chemical calamity and to detect a disease outbreak in time to take life-saving intervention. Mr. Chairman, I know that this responsibility weighs heavily on the minds of this committee's members, as well as the broader Senate membership, so I appreciate the invitation to testify on matters that in light of recent events carry a sense of greater urgency and importance.

No matter where one comes out in the debate about whether terrorists can pull off a biological attack that causes massive casualties, the debate itself is moot. One need only consult public health journals to understand that it is only a matter of time before a strain of influenza as virulent as the one that swept this country in 1918 naturally resurfaces. Further confirmation of a looming public health crisis can be secured through reports from the World Health Organization and the Institutes of Medicine, which describe how a growing list of common diseases (e.g., pneumonia, tuberculosis) are becoming resistant to antibiotics. These public health watchdogs are also justifiably worried about the array of new diseases emerging as mankind ventures into previously uninhabited areas. Even with everything in the modern medical arsenal, public health authorities will find it difficult to handle with disease outbreaks in the future. Global travel will facilitate the spread of communicable diseases through huge population concentrations and will in turn hinder use of the traditional means of containing a contagious disease outbreak, namely quarantine.

As for the prospects of a large-scale chemical disaster, one needs to keep in mind what America's first responders and health care workers have to deal with on a routine basis. According to the US Chemical Health and Safety Investigation Board, between 1987 and 1996, a hazardous chemical incident of some severity took place in 95 percent of US counties. An average of 60,500 chemical incidents occurred per year at fixed facilities and in transit, injuring or killing roughly 2,550 annually. This country is peppered with roughly 850,000

facilities that work with hazardous or extremely hazardous chemical substances. While the chemical industry takes site security seriously and emergency responders in many US cities began long ago take extra security precautions with these sites, my main chemical terrorism concern relates to the possible sabotage of these industrial facilities.

Thus, there is a need for this nation's front line responders—from firefighters, police, and paramedics to doctors, nurses, laboratory workers, and public health officials—to be prepared to cope with chemical and biological disasters. This need will remain constant for the indefinite future, regardless of whether or not terrorists turn to chemical and biological weapons to inflict mass casualties.

A Roadmap to Better Coordinated, More Cost-Effective Programs

The appointment of Governor Tom Ridge as Director of the new Office of Homeland Security would seem to be a constructive step that could put improved coordination and streamlining of the federal response bureaucracy on a fast track. That may not be the case, however, if he lacks sufficiently strong budgetary authority. An initial review of section 3(k) of the Executive Order establishing the Office of Homeland Security and the Homeland Security Council does not appear to vest such power in this new office. To aid Governor Ridge in his efforts, Congress should grant him czar-like budgetary authority. Alone, Governor Ridge will have difficulty taming the federal bureaucracy.

The other essential element of streamlining and coordinating government programs lies here, in Congress. Anyone that attempts to tally the number of congressional committees with terrorism prevention and preparedness oversight very quickly runs out of fingers and toes. So long as that is the case, individual federal agencies may continue to exploit the situation to the advantage of their own institutional interests and the detriment of coordinated, cost-effective programming. A consolidation of congressional oversight committees is sorely needed.

Also in order is a reassessment of the true value of politically popular placebo programs like the National Guard's Civil Support Teams. I urge you to consider the evaluation of these teams offered by the public safety and health officials, including members of the National Guard, that I interviewed in 33 cities in 25 states. Their views are presented fully in *Ataxia: The Chemical and Biological Terrorism Threat and the US Response*, a report co-authored with Leslie-Anne Levy and released last October and available at: www.stimson.org/cwc.

Briefly, the message from the front line about these National Guard teams is unified and clear: They have minuscule, if not negative, utility. In the mid-May 2000 TOPOFF exercise, the Civil Support Team in Denver insisted that it had identified the mystery biological agent with SMART tickets, which have such high false positive and false negative rates that numerous cities have refused to buy them. The team in Portsmouth

lacked the technical expertise to understand the minimal hazard posed by mustard on a chilly, 49-degree day. To veterans of epidemiological investigations and hazardous material operations, the absurdity of these two anecdotes is readily apparent. The deputy director of one city's Office of Emergency Management said, "The good thing about those teams is that it takes them as long as it does to get here."

To further illustrate the problem, called to duty after the planes struck the World Trade Towers, the New York Civil Support Team arrived at the scene roughly 12 hours later and proceeded to conduct environmental monitoring that was redundant of efforts undertaken hours earlier by New York City agencies as well as the US Environmental Protection Agency. The dynamics of a chemical disaster response are such that these teams cannot arrive in time to make a life-saving difference. As for their applicability to a biological disaster, their four-person medical component is a drop in the bucket of what would be needed in a major disease outbreak.

To those accustomed to overseeing billion dollar budgets, this National Guard program might not seem so ill-advised. Please consider how this program's budget could be put to uses that would make a real preparedness difference on the front lines, for example, to begin fixing the glaring lack of decontamination capacity in US hospitals that results in recurrent hospital closures even after small hazmat incidents. In most of the cities that I surveyed for *Ataxia*, the central game plan for hospitals in the event of a major chemical catastrophe was to "lockdown," meaning to shut their doors to incoming patients. For the cost of standing up one National Guard Civil Support Team, 2,333 hospitals or fire stations could be outfitted with decontamination capabilities. With the total 1999 budget for this program, 49,800 local rescue and health facilities could have been armed for decontamination. Civil Support Team funds, in other words, could be used to make a genuine preparedness difference were they applied to overcoming the decontamination bottleneck at US hospitals. Proposals are now circulating for each state to have its own Civil Support Team. Common sense calls for the existing teams to be disbanded, their equipment to be disbursed within the respective states to front-line rescue units and laboratories, where any leftover training monies would also be placed.

The National Guard's Civil Support Teams aside, both Congress and Governor Ridge have their work cut out for them. A series of expert studies and panels, as well as Congress' own General Accounting Office, have labeled the federal preparedness programs a fractured mess and urged a national strategy to guide programs better. For the past several years, over 40 federal agencies have been competing for the money and missions associated with combating terrorism. The section of chapter 7 in *Ataxia* entitled "Preparedness Versus Pork" discusses in more detail how lack of coordination and redundant programs handicap the federal effort. This competition has been confusing for local and state officials, who have difficulty figuring which agency is in charge, not to mention how to decipher the varying sets of priorities and guidelines that accompany the different federal grant programs.

In addition, this sparring among federal agencies has contributed to a drift in the Domestic Preparedness Program away from the initial objectives of its trio of Senate designers, Senators Richard Lugar (R-Indiana), Sam Nunn (D-Georgia, ret.), and Pete Domenici (R-New Mexico). The initial objective was to enhance the readiness of local public safety and public health officials to grapple with an unconventional terrorism attack. Instead, according to Office of Management and Budget figures, this year federal government is spending $8.7 billion to combat terrorism but only $311 million of that amount is making it to the local level in the form of training, planning, and equipment grants for unconventional attacks. More specifically in the area of biodisaster readiness, in 2000, an estimated $206 million from the weapons of mass destruction budget line items were put toward hospital preparations, the public health infrastructure, and biomedical research *combined*. Those interested in a detailed breakdown of that spending can consult table 7.2 in *Ataxia*.

If you take no other message away from my testimony today, let it be an understanding that the key to domestic preparedness lies not in bigger federal bureaucracy, but in getting taxpayers' dollars channeled to readiness at the local level, where training and enhanced response capacities will better arm public safety and medical personnel to contend with disease outbreaks and chemical incidents, whether natural, accidental, or intentional. Federal spending priorities sorely need to be redressed, and unless reforms are made and mindsets change on both ends of Pennsylvania Avenue, a few years from now a great deal of money will have been spent with marginal impact on front-line preparedness.

The Route to Enhanced Readiness Nationwide

While the signs of a chemical disaster would materialize very quickly, perhaps the first challenge facing the health care community in a biological disaster would be figuring out that something is amiss. Many diseases present with flu-like symptoms, and the physicians and nurses who could readily recognize the finer distinctions between influenza and more exotic diseases are few in number indeed. As medical science eradicated a series of diseases, medical and nursing schools concentrated training on the ailments that health care givers are more likely to see.

Exotic disease recognition problems are not limited to the medical community. In the nation's laboratories, microbiologists and other technicians who analyze the samples (e.g., blood, throat cultures) that physicians order to help them figure out what ails their patients are much more likely to have encountered exotic diseases in textbook photographs rather than under their microscopes. Thanks to the laboratory enhancement program initiated by the Centers for Disease Control and Prevention (CDC), the ability to identify out-of-the-ordinary diseases more rapidly is on the rise in several dozen laboratories across the country. However, such is not the case in the 158,000 laboratories that serve hospitals, private physicians, and health maintenance organizations and form the backbone of disease detection in this nation. Enhanced training certainly contributed to the early diagnosis of the first anthrax case in Florida. A CDC official has noted that the Florida Department

of Health laboratory in Jacksonville where the blood sample taken from Bob Stevens was identified as anthrax had recently completed a special course in the identification of biowarfare diseases.

Still, an illustration of the need for better education of health care professionals about bioterrorism matters can be found in the far too many recent reports of physicians prescribing antibiotics for patients worried about a possible bioterrorist attack. Of all people, physicians should understand how such prescriptions could backfire, not just in adverse reactions to the antibiotics if citizens begin self-medicating their children and themselves when they come down with the sniffles, but in the lessened ability of those very drugs to help their patients in a time of true medical need. Moreover, over-prescription of antibiotics contributes to the rise in the number of antibiotic-resistant diseases.

To date, Domestic Preparedness Program training, now administered by the Justice Department, has managed to draw some health care personnel, mostly emergency department physicians and nurses, into the classroom in the cities where training is being provided. To enhance the disease detection and treatment skills of the medical community nationwide over the long term, however, a different strategy is required. If a long-term difference is to be made, then more comprehensive instruction in medical, nursing, microbiology, and other pertinent schools is required. Knowledge of exotic diseases should be necessary to obtain diplomas, and the topic should become a mainstay of the refresher courses offered to maintain professional credentials. Those involved in setting the curricula for these schools should waste no time in adjusting their course offerings, requirements, and other professional activities accordingly. In the near term, compressed training should be made available to all practicing US physicians via presentations during grand rounds or via satellite hookup. Both forms of training, by the way, already exist, so it is just a matter of making it more widely available. Moreover, in conjunction with the CDC and the Association of Public Health Laboratories, the American Society of Microbiology is developing protocols to assist clinical microbiology laboratories in identifying bioterrorist agents. Although the protocols have yet to be published, volume number 33 in the *Cumulative Techniques and Procedures in Clinical Microbiology* series addresses bioterrorism issues and is available from the American Society of Microbiology.

Similarly, for chemical and biological disaster readiness, preparedness standards need to be established for the various response disciplines and training needs to be institutionalized in fire and police academies, as well as in paramedic schools across the country. Roughly six years into the domestic preparedness effort, the time has passed for Washington to turn training over to the appropriate professional and local entities that will take preparedness forward more systematically and cost effectively. The hand-off should be concentrated in these organizations (e.g., the National Fire Protection Association, the Accreditation Council for Graduate Medical Education) and curtailed elsewhere, so that various branches of the federal government, not to mention enterprising contractors and universities, stop churning out redundant training programs at taxpayers' expense. Already, over 90 such training courses exist. Without such reform, ineffective spending will continue at both

the federal and local levels and training lacking in standards will be implemented unevenly, in pockets. Specification of standards and institutionalization of training clearly make more sense than that.

Establishing an Early Warning Capability for Disease Outbreak Detection

With modern data collection and analysis capabilities, one need not rely solely on the ability of laboratories and medical personnel to pick up the telltale early signs of a disease outbreak. In a few areas of the United States, public health and emergency management officials are teaming to test ways to get a head start on detection. The concept focuses on early signs of syndromes (e.g., flu-like illness, fever and skin rash) that might indicate the presence of diseases of concern. They are compiling historical databases to supply a baseline of normal health patterns at various times of the year, against which contemporary developments can be measured. Since people feeling ill tend to take over-the-counter medications, consult their physicians, or request emergency medical care, some areas are beginning to track the status of health in their communities via select Emergency Medical Services call types (e.g., respiratory distress, adult asthma); sales of certain medications (e.g., over-the-counter flu remedies); reports from physicians, sentinel hospitals, and coroners about select disease symptoms or unexplained deaths; or some combination of these markers. This tracking allows abnormal activity levels can be detected. For instance, should EMS calls rise above the expected rate in the fall season, public health officials and emergency managers would get the earliest possible indication that something was amiss, which would enable them to cue medical personnel and laboratories to search more diligently for what might be causing a possible disease outbreak. This concept of syndrome surveillance will be key to allowing public health officials to get the jump on prophylaxis and other control measures. For more on this approach, see the groundbreaking work of New York City's Department of Public Health and Office of Emergency Management, which is summarized in box 6.7 of *Ataxia*.

What is now called for is a more systematic approach to institutionalizing syndrome surveillance across the nation. A model should be refined and then made available nationally, along with funds to allow metropolitan areas to conduct the necessary historical analysis and establish the computer database, communications, and other components needed to put syndrome surveillance in place. Again, the data and the computing capabilities are available; it is just a matter of harnessing them for the purposes of early disease outbreak recognition. In their own ways, the Kennedy-Frist and the Edwards-Hagel bills address these matters. Coordination of congressional action is necessary so that the most readiness can be gained for taxpayers' dollars.

The Need for Regional Hospital Planning

The next challenge facing a metropolitan area in the midst of a chemical disaster or a major disease outbreak would be contending with the flood of humanity that would seek health care services. If one examines what transpired in Tokyo after Aum Shinrikyo's 20 March 1995 morning release of sarin in the subway, demand for patient care would peaked rapidly and then began subsiding by mid-afternoon on the day of the attack. The

best medical care in the world can be found in this country, but in general US hospitals are at present poorly prepared to handle either a chemical disaster or an epidemic. With regard to a pandemic, those familiar with what is happening on the front lines of health care in America know that US hospitals already have difficulty handling the patient loads that accompany a regular influenza season. Ambulances wait for hours in emergency department bays, unable to unload patients until bed space is available. The press of genuinely ill and worried citizens clamoring for medical attention in the midst of a plague or smallpox epidemic would so far outstrip a normal flu season that local health care systems could collapse.

To prevent hospitals from being quickly overwhelmed, it will be critical for regional health care facilities to have a pre-agreed plan that divides responsibilities and locks in arrangements to bring emergency supplies in the interim until federal assistance can arrive. In the era of managed care, hospitals compete with each other for business and rely on just-in-time supply of inventory, keeping an average of two or three days supplies on hand. Since community-wide hospital planning has fallen by the wayside, precious time could be wasted if hospitals lack prior agreement as to which facilities would convert to care of infectious disease cases—particularly important if a communicable disease is involved—and which ones would attend to the other medical emergencies that would persist throughout an epidemic. Business competitors, in other words, must convert within hours to work as a team.

Regionally, hospitals must plan to handle an overflow of patients and provide prophylaxis to thousands upon thousands of people. Whether the approach involves auxiliary facilities near major hospitals, the conversion of civic or sporting arenas to impromptu hospitals, or the use of fire stations or other neighborhood facilities to conduct patient screening and prophylaxis, such a plan needs to be put in place. Other factors that regional hospital planning must address are how to tap into local reserves of medical personnel (e.g., nursing students, retired physicians), how to break down and distribute securely the national pharmaceutical stockpile, and how to enable timely delivery of emergency supplies of everything from intravenous fluids to sheets, tongue depressors, and food. Obviously, regional hospital plans that address how to overcome problems of decontamination, training, security, critical medical supplies (e.g., respirators, antidotes), and burden-sharing would also be of great utility should a chemical disaster bring a surge of patients to health care facilities.

The Role of the Federal Government

Washington's willingness to fund preparedness efforts at the local level across the country will be critical to chemical or biological disaster readiness. With a few exceptions, the federal government's role in responding to a chemical or biological terrorism attack would fall under the general heading of mid- to long-term disaster recovery assistance. FEMA's capabilities have risen steadily over the last decade and little, if anything, would need to be added to its existing capabilities and regular Stafford Act assistance activities. Local officials noted that they would probably call upon federal assets to help decontaminate a site after a chemical

disaster, but that does not mean that additional federal capacity needs to be built. Prior to the 1995 Aum Shinrikyo attack, as chapter 4 of *Ataxia* describes, numerous Pentagon and Environmental Protection Agency teams that could be brought in to assist a stricken community already existed. While little, if any, additional federal capacity needs to be constructed to aid local and state authorities in a chemical disaster, appreciable work remains the area of biological disaster readiness at the federal level. Aside from continuing to infuse funds into the improvement of the public health system at the local and state levels, the federal government needs to sort out once and for all who is in charge and attend to its important roles in the development and production of essential medicines and in the provision of medical manpower during an emergency.

Calling the Shots in a Public Health Crisis

How many FBI special agents or Federal Emergency Management Agency (FEMA) officials know off the top of their heads the appropriate adult dosages of ciprofloxacin for prophylaxis in the event of a terrorist release of anthrax? Darned few, if any. No, the FBI excels at catching criminals and FEMA at providing mid- and long-term recovery support to communities stricken with all manner of disasters. An outbreak of disease is first and foremost a public health problem, so let's not be confused about who should be calling the shots in an epidemic—public health officials. Yet, this simple fact is certainly not reflected in what is taking place with regard to bioterrorism preparedness, inside or outside the beltway.

Inside of Washington's beltway, concepts of crisis and consequence management not only linger, they predominate. With an apparent lack of budgetary authority and proposals circulating anew to have the Justice Department retain a leadership and coordination role despite the Bush administration's earlier appointment of FEMA in this capacity, it is fair to say that Governor Ridge's office will have difficulty presiding over the tug of war about which federal agency should lead the federal component of unconventional terrorism response. In America's cities, counties, and states there is also a fair amount of jostling as to who exactly would have the authority to make certain decisions during an epidemic. Only a handful of states, unfortunately, have untangled the cross-cutting jurisdictions left over from more than a century of contradictory laws passed as authorities scrambled to deal with the different diseases that were sweeping the country. Prompt, decisive action could make a lifesaving difference in the midst of an outbreak, but the experience of various terrorism exercises and drills gives ample reason to believe that precious time would be squandered as local, state, and federal officials squabbled over who has the authority to do what.

These circumstances beg for a clear vision and a firm hand to untangle this mess and put the people who know the most about disease control and eradication—public health officials—unquestionably in charge of any biological disaster, whether natural or manmade. FEMA, the FBI, the Pentagon, and other federal and local agencies should be playing support roles, not reshaping and second-guessing the directions of public health professionals as they manage the crisis *and* consequences of a major eruption of disease.

Research, Development, and Production of Medications

Long before the current concerns about bioterrorism, I was at a loss to explain how the federal government could have known about the extent of the Soviet Union's biowarfare program—including the production of tons of agents such as smallpox and antibiotic resistant plague and anthrax—as early as 1992 and not kicked this nation's vaccine research, development, and production programs into a higher gear until 1997. The extent of the problem is illustrated by the fact that only one company is under contract to produce the anthrax vaccine, no company currently produces the plague vaccine, and it was not until recently that steps were taken to meaningfully jumpstart smallpox vaccine production. Such matters should have been promptly addressed if only to enable protection of US combat troops, not to mention producing enough vaccine to cover the responders on the domestic front lines, namely the medical personnel, firefighters, police, paramedics, public health officials, and emergency managers who would be called upon to aid US citizens in the event of a biological disaster.

As for the effort that was mounted, many nongovernmental experts have been taken aback at the structuring and relatively meager funding of the Joint Vaccine Acquisition Program. With a $322 million budget over ten years, this program aims to bring seven candidate biowarfare vaccines through the clinical trials process. Giving credit where it is due, one must acknowledge that this program—as well as Defense Advanced Research Projects Agency-sponsored research into innovative medical treatments—is making headway. However, the federal government must find ways to shrink the nine to 15 year timeline that it takes to bring a new drug through clinical trials to the marketplace. Food and Drug Administration officials are already wrestling with how to adjust the clinical trials process for testing of new vaccines and additional bumps are to be expected on the road ahead.

Next, the National Institutes of Health and the pharmaceutical industry, not the Defense Department, are this country's experts at clinical testing and production of medications. My point is not that the Defense Department should not have a role—perhaps even a lead role since the candidate vaccines originated with the US Army Medical Research Institute for Infectious Diseases—but these other important players need to be at the table if an accelerated program is to be achieved. As I noted, Governor Ridge will have his hands full, no matter which direction he turns. Moreover, close congressional oversight of this particular aspect of the nation's biological disaster readiness is warranted.

On the chemical side of the house, by the way, the picture is similarly discouraging. The Pentagon now turns to one company for supply of the nerve agent antidote kits, known as Mark 1 kits, that the Health and Human Services Office of Emergency Preparedness has encouraged cities participating in the Metropolitan Medical Response System program to purchase. Many a city is still waiting to receive the Mark 1 kits ordered long ago, and when they do, these kits will have a considerably shorter shelf life than the kits made available to the military.

Emergency Medical Manpower Needs During a Major Disease Outbreak

Secretary of Health and Human Services Tommy Thompson stated on September 30th in an interview with "60 Minutes" that his department has "7,000 medical personnel that are ready to go" in the event of a bioterrorist attack. While that statement may be true in theory, in practice it may not hold. Somewhat lost in the late 1990s rush to soup up federal teams for hot zone rescues was the one major non-FEMA federal support capability that would clearly be needed after an infectious disease outbreak and perhaps after a chemical incident as well—medical assistance. The National Disaster Medical System was one of several improvements made to federal disaster recovery capabilities over the last decade, a time during which the federal government demonstrated that it could bring appreciable humanitarian and logistical assets to bear after natural catastrophes and conventional terrorist bombings. While these events flexed the muscles of the FEMA-led recovery system, including the deployment of Disaster Medical Assistance Teams, they did not even approach the type of monumental challenge that a full-fledged infectious disease outbreak would present. Prior to Secretary Thompson's recent statement, officials from the Health and Human Services Department and the Pentagon have also stated that they could mobilize significant medical assets quickly.

Yet considerable skepticism exists that these two departments combined could have met the medical aid requests made from Denver after the release of plague was simulated during the mid-May 2000 TOPOFF drill, much less a call for even more help. During that hypothetical event, health care officials quickly found their medical facilities sinking under the patient load and concluded that 2,000 more medical personnel were needed on the ground within a day to prevent the flight of citizens that would have further spread the disease. Getting that number of physicians and nurses to a city and into hospitals and field treatment posts would be a tremendous logistical achievement. No one that interviewed for *Ataxia*, including members of the Disaster Medical Assistance Teams and other medical and public health professionals, felt that the federal government could deliver 2,000 civilian medical professionals within the required timeframe. For its part, the Pentagon has yet to articulate clearly or commit to civilians at the federal or local level just how much medical manpower it could deliver and in what timeframe.

Quite frankly, the time has come for the Pentagon to stop being coy about what medical assets it could bring bear in a domestic emergency. Articulation of this capability, even if it needs to be done in classified forums, is necessary for sound planning on the civilian side. Furthermore, there have been no large-scale dress rehearsals to confirm whether civilian or military medical assets could muster that many medical professionals that quickly, or even over a few days. Even so, the 2,000 figure from the Denver segment of TOPOFF seems almost quaint when compared to one US city's rough estimate that 45,000 health care providers—many of whom would have to be imported—would be required to screen and treat its denizens.

The only way to find out whether the federal government is truly up to the most important role it may have to perform after a bioterrorist attack or a natural disease outbreak is to hold a large-scale medical

mobilization exercise. Despite the expense, Congress should mandate a realistic test of how much civilian and military medical assistance can be delivered, how fast. Unlike TOPOFF, where federal assets were pre-picked and pre-staged, the terms of the exercise should specify that teams deploy as notified. While the general nature and identity of the exercise location(s) would certainly be known beforehand and the timeframe of the drill agreed within a window of several months, local officials should trigger the onset of the exercise. In short, dispense with the tabletop games that allow everyone the comfort of claims of what they could do and see what a real exercise brings. A genuine and probably sobering measure of federal capabilities could be taken, and the lessons of the exercise could inform the structure of federal and local plans and programs.

Conclusions

In the 33-city survey done for *Ataxia*, cities felt far better prepared to contend with a chemical disaster than they did a biological one. The higher state of chemical disaster preparedness is not surprising given that over 650 hazmat teams, which would form the core of an on-scene response, already existed nationwide prior to the onset of federal domestic preparedness programs. Local officials consistently identified the need for enhancement of hospital readiness, the institutionalization of training, the replenishment of personal protection gear, the maintenance of key equipment items, and the regular conduct of major field drills as critical to improving overall chemical disaster preparedness.

When it comes to biological disaster readiness, one need not resort to hyperbole when it comes to how difficult it would be for major US cities to handle a pandemic; the truth is sobering enough. Even though the basic components of the ability to handle a disease outbreak—hospitals, public health capabilities at the federal, state, and local levels, and a wealth of medical professionals—are already in place, there is ample room for improvement. The pragmatic steps that the federal government should take are clear.

Mr. Chairman, Members of the Committee, Washington can take the smart route to enhance chemical and biological disaster preparedness nationwide or it can continue to go about this in an expensive and inefficient way. The keys to national chemical and biological disaster readiness lie not in bigger budgets and more federal bureaucracy but in common-sense policies and programs such as the following:

- The sufficiency of existing federal programs, response teams, and bureaucracies needs to be assessed and redundant and spurious ones need to be eliminated. In the interim until an assessment of the sufficiency of existing assets is made, a government-wide moratorium on any new rescue teams and bureaucracies should be declared, with the exception of the enhanced intelligence, law enforcement, and airport security measures that are being contemplated.
- The bulk of federal funds need to be devoted to enhancing readiness at the local level, where an increase in skills, training, and equipment would make a genuine life-saving difference. Even if terrorists never strike again in this country, such investments would be well worthwhile because they would improve the ability of hometown rescuers to respond to everyday emergencies.

- Defense Department programs related to the development and production of new vaccines, antibiotics, and chemical antidotes need to be put on a faster track, incorporating as appropriate industrial expertise in such matters.

- The federal government should continue to revive the nation's public health system, an endeavor that involves sending funds to the local and state levels, not keeping them inside the beltway. In addition, the federal government should fund regional hospital planning grants and additional tests of disease syndrome surveillance system, followed by plans and funds to establish such capabilities nationwide.

- Appropriate steps should be taken to see that firefighters, police, paramedics, physicians, nurses, laboratory workers, and public officials benefit from training that is institutionalized in the nation's training academies, universities, and schools.

- Last, but certainly not least, Washington needs to develop a plan to sustain preparedness over the long term. Drills at the local and federal levels are necessary because plans that sit on the shelf for extended periods of time are often plans that do not work well when emergencies occur.

On behalf of the local public health and safety officials who have shared their experience and common sense views with me, I urge Congress to waste no time in passing legislation that brings the burgeoning federal terrorism preparedness programs and bureaucracies into line and points them in a more constructive, cost-effective direction.

U.S. Department of Justice

Office of Legislative Affairs

Washington, D.C. 20530

June 25, 2002

The Honorable Daniel K. Akaka
United States Senate
Washington, D.C. 20510

Dear Senator Akaka:

Thank you for the opportunity to respond to your question from the Joint Hearing before the Senate Committee on Governmental Affairs and the Senate Subcommittee on International Security, Proliferation and Federal Services on "Federal Efforts to Coordinate and Prepare the United States for Bioterrorism" on October 17, 2001, relating to agricultural bioterrorism. You asked whether "the threat of agricultural terrorism warrants amending the U.S. Code to include private property or agriculture in the definition of bioterrorism?"

We have examined this issue and it appears that a biological attack on agricultural land and livestock could be prosecuted under current law. Chapter 10 of Title 18 of the United States Code, entitled "Biological Weapons," at Section 175, allows for the prosecution of a person who "develops, produces, stockpiles, transfers, acquires, retains, or possesses any biological agent, toxin or delivery system for use as a weapon . . . ." A person found guilty under this section could be imprisoned for life and fined. The Code further defines a biological agent as "any micro-organism, virus, infectious substance or biological product . . . capable of causing . . . death, disease, or other biological malfunction in a human, an animal, a plant, or another living organism [or] deterioration of food, water, equipment, supplies, or material of any kind [or] deleterious alteration of the environment . . . ."

In response to the attacks of September 11, this chapter of the Code was amended to also prohibit the shipment and transportation of such biological agents. *See* USA PATRIOT Act, Pub. L. 107-56 (Oct. 26, 2001), Section 817, and Public Health Security and Bioterrorism Preparedness and Response Act, Pub. L. 107-188 (June 12, 2002), Section 231. Further, the USA PATRIOT Act (Pub. L. 107-56 (Oct. 26, 2001)), included the above offense in the definition of "federal crime of terrorism" at Section 808.

Given the serious nature of the threat of agricultural bioterrorism to national security, further amendments to the criminal code may in the future be warranted. The Department of Justice will work with other interested executive agencies, such as the Department of Agriculture, and with you and other members of the Congress should such amendments become necessary.

Thank you for requesting our views on this matter. If we can be of further assistance, please do not hesitate to contact us. The Office of Management and Budget advises that there is no objection to the submission of this letter from the standpoint of the Administration's program.

Sincerely,

Daniel J. Bryant
Assistant Attorney General

Statement for the Record submitted to the Committee on Governmental Affairs to be included in the record of the hearing held on October 17, 2001, on "Federal Efforts to Coordinate and Prepare the United States for Bioterrorism: Are They Ready?"

(This is a restatement of an invited submission to the House Committee on Government Reform for its November 14, 2001 Hearing: Comprehensive Medical Care for Bioterrorism Exposure. The statement was provided on November 21, 2001.)

by

Meryl Nass, MD

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Preparing a Medical Response to Bioterrorism

Overview of biowarfare agents

When planning responses to bioterrorism, there are a wide range of existing pathogens and toxins to consider, and untold genetically engineered organisms that might be encountered. Anthrax and smallpox have long been considered the most likely microorganisms that will be used, based on their innate ability to be easily disseminated, their high mortality rates and relative ease of preparation. Many nations, and potentially some terrorist groups, have the scientific and technical ability to weaponize these two diseases. It is thought that a smaller number of nations or groups can produce more technically demanding, or genetically engineered organisms.

It makes sense, certainly in the short term, to be prepared for anthrax and smallpox; but in the longer term, we should anticipate a much greater range of possible pathogens. For example, NOVA (1) and three NY Times reporters (2) have shown that the Soviet Union developed horrifying, genetically engineered germs for which there is currently no adequate response. A modified Legionella bacterium that produces multiple sclerosis after an episode of pneumonia is one such microorganism. Scientists with the know-how to create such germs have left the Soviet Union, and could be anywhere on earth. Therefore, although important, simply preparing for anthrax and smallpox is insufficient for the challenges faced now.

There are 3 levels of complexity for biological weapons

a) Low technology organisms: smallpox, anthrax, plague, brucella, tularemia, cholera, typhoid, shigella. These were weaponized circa 1940 by various nations and require no advanced technology to produce in quantity. They may be disseminated using widely available means.

Countermeasures (antibiotics, antivirals and vaccines) are generally known and effective.

b) Higher tech weapons developed in the US, USSR, Iraq and other nations more recently. These organisms require sophistication to produce and disseminate, but the know-how to produce them (or the weapons themselves) may have been transferred to any nation or group. Examples are the Legionnaire's Disease-Multiple Sclerosis bacterium, or vaccine-resistant viruses or bacteria.

Countermeasures are not generally known, but may have been created by the weapons' developers.

c) Ever more complex and difficult-to-respond-to microorganisms, which could be developed

now or in the foreseeable future. These might, for example, apply advances in knowledge of the human genome, and genetic variability among different populations, to create organisms specifically tailored to certain groups or military needs. Examples might be a bacterium that secretes cytokines causing autoimmune diseases, but would only affect those of Scandinavian descent, or a gastrointestinal infection that produces sterility. In each case, autoimmune destruction of tissue would be irreversible.

There are unlikely to be effective countermeasures available for these pathogens.

What do the recent attacks signify?

- No attempt was made to use anthrax for mass casualties, such as dissemination in a subway tunnel or ventilation system
- The letters were taped shut, in an apparent attempt to prevent spores from escaping en route
- Although the letters contained weaponized anthrax, they informed recipients of their contents, so that effective antibiotics could be started. The perpetrator desired to frighten, not to kill
- The media targets were probably chosen to ensure the attacks were publicized
- Members of Congress might have been targeted because Congress controls programs for bioterrorism.
- Anthrax-tainted letters may have preceded the September 11 attacks. CDC has advised those who spent more than an hour in the American Media News building since August 1, 2001 to take prophylactic antibiotics (3).

Our responses to these anthrax attacks have been relatively successful. But congratulations are not in order: the anthrax attacks we experienced, terrible as they were, were actually a "best case" scenario. The attacks can almost be viewed as a drill, designed to assess our readiness for a truly malicious biowarfare attack. Possibly this is what the perpetrator was after: to test us, and send a wake-up call.

Had an enemy put undetectable but deadly quantities of anthrax into envelopes without a warning letter, many more casualties could have ensued. Antibiotics would only be started after people became ill. How would we know which facilities to test for spores? If an antibiotic-resistant anthrax had been used, most of those inhaling an infectious dose would die. If anthrax were released in a subway tunnel, instead of an envelope, thousands of deaths could be anticipated.

Although the attacks appear to have been done for effect, the ramifications have been significant. Mail remains in storage, undelivered for weeks. Millions of dollars are being spent for electron beam machines to sterilize the mail. Congressional offices remain closed, until removal of anthrax spores can be assured.

Could we respond effectively to a truly serious anthrax attack? Or an attack using more sophisticated pathogens? Anthrax may be the least frightening of the bioterrorism scenarios we could face in the future.

Yes, we can respond. How effectively we can respond is a challenge I will come back to later.

Proposed Defensive Measures

The following list is a general overview of what could identify and treat illnesses resulting from bioterrorism. Both generic (useful for a range of pathogens) and

pathogen-specific measures should be developed, with an emphasis on developing responses that could be used for a variety of pathogens. Measures to boost immunity after an exposure should be studied; although this is a relatively new area of medical research, it could yield substantial dividends in addition to those for bioterrorism.

1) Strengthening our public health infrastructure is essential; sharing of knowledge regarding bioterrorism threats and appropriate responses, ability to provide appropriate laboratory assays and medical care at the local level, and improved communications between public health facilities are needed (4).

2) Stockpiling antibiotics is appropriate. There should be a range of antibiotics, including those for which adding resistance is more difficult. Researching storage methods to maximize effective shelf life would be useful. Possibly one or more novel antibiotics should not be licensed for mass use, but held in reserve for a bioterrorism response. It would be difficult for a perpetrator to engineer resistance to novel (unknown) antibiotics. Researching methods that encourage early anthrax spore germination in the exposed patient, and establishing an optimal duration of antibiotic use would be helpful, since we do not know whether 60 days of antibiotics will be sufficient for all those exposed to anthrax.

3) Vaccinations are useful, but the infinite variety of potential pathogens, the time needed to develop new vaccines, and the time lag for developing immunity following vaccination, conspire to make it unlikely they will be a robust form of defense. Vaccines are often ineffective against selected strains of microorganisms, and it is known that vaccine-resistant pathogens were sought out for biological weapons (5). Issues requiring urgent investigation include whether and how vaccines may lead to chronic illness. How would a genetically diverse population tolerate 50 or 500 vaccinations? Dr. Ken Alibek blames his severe allergies on multiple vaccinations (5), but there is no reliable research that addresses the issue.

4) Identifying the virulence factors present in all known pathogenic microorganisms, and their molecular targets, will allow us to develop generic responses to them. This will probably lead to use of fewer, more specific vaccine antigens. Decoding the genome of pathogens will yield the molecular composition of spores and toxins, permit analysis of their tertiary structures, and allow targeted countermeasures to be developed more easily. (The federal government is supporting this initiative.) Computer modeling of these structures might permit rapid drug design outside the laboratory, and creation of new drugs with novel mechanisms of action (6-7). We can anticipate that most genetically engineered pathogens make use of known virulence factors, so this approach can conceivably yield treatments for pathogens we have never seen before, in advance of an attack.

5) Many pathogenic microorganisms exert at least some of their effects though toxins. It is relatively simple (and inexpensive) to create libraries of antitoxins, or monoclonal antibodies that could inactivate toxins. This would almost certainly yield treatments that are more effective than antibiotics alone, and might work in the late stages of disease. These treatments would be harder to thwart than vaccines.

6) Such products can also be employed in early diagnostic tests; for example, monoclonal antibodies could help distinguish anthrax from influenza while the patient is still in the emergency room. Additional rapid diagnostic tests must be developed for smallpox, anthrax, and other expected pathogens (8). The federal government should provide specialized training, diagnostic kits and equipment, such as polymerase chain reaction (PCR) machines, to state and

local laboratories, so that a) important results are made available to treating physicians in a timely manner, b) local communities are better able to respond to an attack, c) hoaxes can be quickly distinguished from real attacks, and d) the federal system will not be overwhelmed by the volume of samples to be tested. Cultures may yield useful information more rapidly than expected; anthrax colonies grow in 12-18 hours. Working with cultures on a compressed schedule, for instance, subculturing every 12 instead of 24 hours, may be useful and should be considered for unknown organisms. Identifying antibiotic resistance could be expedited by detecting known molecules that confer resistance, such as penicillinases, or their genes using PCR techniques.

7) Antivirals may be effective against some viral pathogens, including smallpox(9). Efficacy testing of libraries of licensed and unlicensed antiviral drugs needs to be performed for serious viral pathogens.

8) Certain areas are particularly vulnerable to attack. These include municipal water supplies, ventilation systems of buildings, and tunnels. Ships and planes could be used, wittingly or unwittingly, as delivery systems for microorganisms or toxins. Biosensors or other detection methods should be available to monitor such areas. Although none yet have perfect sensitivity and accuracy, a variety of systems do exist to perform such tasks (8, 10-13). Simple HEPA filters installed in ventilation systems could trap anthrax spores, though they would not keep out all viruses and toxins. The material trapped by filters could be routinely tested for microbes. For those places most at risk (for example, the New York City subways), sensors should be made available now, and replaced when better devices become available. Development of these devices has been under military control for more than a decade; in order to rapidly encourage the best approaches, and speed production, a streamlined system for evaluation and procurement should be considered.

9) Vaccine, drug and device development needs to be expedited, but safety testing cannot become a casualty of a streamlined review. Safety testing in animals can be made more rigorous; for example, more extensive toxicity testing and drug interaction studies can be performed for all new drugs and vaccines in animal models, and extensive testing in the pregnant animal model can be done. Human safety testing can be done in parallel with animal efficacy testing, for those drugs and vaccines that appear most promising. Additional effort could go into finding or developing animal models for human diseases that lack such models. It should be emphasized, however, that animal safety testing of new products is never sufficient to identify and rule out all problems that may occur in humans; human safety testing, using adequate numbers of subjects who are followed for adequate periods of time, is the *only* way to identify all but the rarest adverse reactions, prior to mass use.

10) The FDA should release its final rule on licensing of new biowarfare drugs and vaccines, so that its expectations for industry are clear (14).

11) Testing of new drugs and vaccines may require Biosafety Level 3 or 4 facilities, and access has been a bottleneck for development and licensure of new products for use against bioterrorism, although a large number of these facilities exist. These labs must be made available for testing the most promising drugs and vaccines, possibly through new procedures involving the Office of Homeland Defense, or the Secretary of HHS.

12) The Joint Vaccine Acquisition Program (JVAP) has been called "a terrible operation" by Dr. DA Henderson, the head of the new Office of Public Health Preparedness, and "a disaster" by Major General (Dr.) Phillip Russell, a former head of both Walter Reed Army Institute of

Research and USAMRIID, who has recently been asked to supervise development of an improved anthrax vaccine (15). As bioterrorism expert Stephen Block pointed out, "We don't have a general way of making a general vaccine that gets an artbitrary pathogen that lasts for any length of time... The fact of the matter is that making a vaccine is still very much a black art (16)." Vaccine development is difficult and time-consuming, and success cannot be predicted. The JVAP should be replaced. Top civilian vaccinologists who understand both the art and science of vaccine creation should be recruited to develop safe and effective vaccines, designed to work for a range of pathogens.

13) Research on spore decontamination is urgently needed. In general, either the DNA or the spore coat must be disrupted. Oxidizing agents and radiation are effective, but safer methods are needed. Improving mechanical removal of spores should be explored. If one could get all the air moving in buildings, using vacuum cleaners or fans, and filter the air as it moved, most spores could be collected.

Anthrax and Smallpox: Treatments and Vaccines

For anthrax, the number one priority is early detection of

a) spores in the environment, and
b) disease in the individual.

Early detection allows pre-emptive antibiotic treatment after an exposure, and as soon as patients present to a medical facility, for maximal survival rates provided the bacteria are sensitive to antibiotics.

Antitoxins, either in the form of antisera or human monoclonal antibodies, would probably be an effective treatment for cases diagnosed late, or unresponsive to antibiotics. Novel treatments, such as the mutant PA developed by John Collier at Harvard, are very promising but require additional animal and human trials before use (7).

A safe and effective, rapidly immunizing vaccine that would cover all anthrax strains and instill long-lasting immunity is highly desirable. It is not clear which high risk groups should receive the vaccine. According to the current vaccine's package insert, "If a person has not previously been immunized against anthrax, injection of this product following exposure to anthrax bacilli will not protect against infection (17)." Although the suggestion was made that persons exposed to anthrax who are allergic to antibiotics should instead be vaccinated, this is not an approved use of the vaccine. Because vaccine-induced immunity requires more than one vaccine dose, and anthrax kills quickly, post-exposure vaccination without antibiotics is ineffective at preventing or treating disease.

This is not the case for smallpox. There is a long incubation period for smallpox, and vaccination after exposure is known to prevent the disease or lessen its severity (18). Although smallpox is contagious from person to person, unlike anthrax, the disease only spreads after a rash develops. Thus, it is obvious that one is infectious, so measures such as quarantining cases, and vaccinating those who are exposed can be taken.

Detailed discussions regarding the adverse effect profile of the US' stored smallpox vaccine, and possible mandatory smallpox vaccinations, have taken place in a variety of public forums and in the media (19-22). Surprisingly, no discussion regarding the risks of anthrax vaccine has taken place, although the US population was attacked with anthrax, not smallpox. During the past four years, 520,000 military personnel were vaccinated for anthrax. This large cohort ought to provide comprehensive data on the vaccine's safety and efficacy.

The federal government is negotiating to purchase enough new smallpox vaccine to immunize

every American, at an estimated cost of 2 billion dollars. The efficacy and adverse event profile for this novel smallpox vaccine have not been publicly discussed, and may not be known (15). The cost to develop a commercial vaccine and bring it to market is estimated at $400 to $500 million. With streamlined trials and FDA review, the cost might decrease substantially. Parallel development of many vaccines using shared technologies might drop costs further. Using yeasts or other microorganisms for vaccine production, instead of eggs and calves' bellies, will result in lower costs.

The discussion of smallpox vaccine risks provides a framework with which to evaluate the risks and benefits of all vaccines. Smallpox vaccine is a particularly impure product, and historically has been made by harvesting the pustules of calves infected with cowpox. The vaccine is scratched on the skin, rather than injected, but still killed or severely injured between one and four people per million recipients. If it were given to all Americans, there would be an increased rate of serious reactions, because so many people are immunocompromised by disease or medical treatments. Careful risk/benefit analysis is therefore critical to making the best decision regarding who should be vaccinated, and when.

*Science*magazine reported last month that officials "are considering...mak[ing smallpox vaccine] available within a few months as an unlicensed 'investigational new drug (8).' How streamlined would the review process would be for such a product? Although the earliest vaccine recipients might receive vaccine under an experimental protocol, they should be enrolled in safety and efficacy trials, so that adequate data is collected and analyzed *prior* to vaccinating millions of Americans, who deserve a fully tested vaccine.

Pharmaceutical manufacturers have asked for indemnification from the federal government for potential liability related to production of bioterrorism vaccines. This could invite manufacturers to de-emphasize safety issues, and eventually increase the government's cost for these vaccines considerably. Would receiving vaccine under an IND prevent recipients from seeking compensation if they had a severe reaction?

The US stockpiled 15 million doses of freeze-dried smallpox vaccine about thirty years ago, "but because the rubber seals are deteriorating, about a quarter are suspect (23)." Recent, small scale tests of vaccine in humans suggest that a 1:5 dilution will still induce immunity in 70% of recipients. How much residual immunity exists for those who were vaccinated decades ago is controversial (18). It is possible they may still be protected.

Smallpox is a virus, not a bacterium, and therefore will not respond to antibiotics. But it will probably respond to antivirals (9). And anthrax selected for bioterrorism might not respond to antibiotics. Their differences do not explain why the immediate procurement of 300 million doses of smallpox vaccine has assumed such importance, while obtaining anthrax vaccine for civilians has been entirely ignored. Nor do they explain why anthrax vaccine manufacture remains in the hands of a small start-up company, when the Secretary of HHS insisted smallpox vaccine be obtained only from large, reputable manufacturers (24). Since purchasing the anthrax vaccine facility over three years ago, the manufacturer has collected over $100 million from the federal government, but not a single lot of new vaccine has been approved for use. The public should be informed how these apparently contradictory decisions with respect to anthrax and smallpox vaccines have been made.

Responding to Future Biological Weapons

At least forty known human pathogens could be used for biological warfare. (Many more could be used against crops or livestock.) Effective vaccines have been created

for only a few. None have been stockpiled for use by the American people. What would it cost to develop vaccines for these pathogens and stockpile them for all Americans? Based on estimates for producing the new smallpox vaccine, whose development costs have already been paid, the total could easily exceed 100 billion dollars. And we might still be attacked with microorganisms or toxins for which we had no vaccine. Furthermore, the human cost (in adverse reactions) of administering that many vaccines is unknown.

Rather than choosing to develop individual vaccines, the use of attenuated strains or vectors carrying multiple virulence factors could produce immunity to many pathogens with one vaccination. Methods for developing animal models, and expediting safety testing, could be applied to development of many vaccines.

One suggestion is to avoid stockpiling most vaccines en masse (25); long-term storage invites deterioration and a host of uncertainties. Instead, vaccines should be developed and tested in animals and humans, but manufactured in small quantities at regular intervals. A federal surge capacity for vaccine manufacture should be created, and maintained. Then, depending on what vaccine was needed, it could be produced over a period of weeks in the desired quantity. Although testing would be needed to assure quality, test methods and release protocols are being designed to facilitate rapid manufacture and use. Traditionally, spore-forming organisms have required dedicated manufacturing facilities, because of persistent spore contamination. New research into decontamination methods will likely result in effective cleanup methods, possibly eliminating the need for individual vaccine production facilities for spore formers.

Many new vaccine technologies are in development: DNA plasmid vaccines and novel adjuvants are just two of these. It's time for FDA to look very closely at these technologies and decide whether or not they are safe. If not, discard them and stop wasting the industry's time. If they can be used, move them forward. This evaluation should be very deliberate and scientific. Critical regulatory decisions must be uninfluenced by political considerations, and Congressional oversight is needed to assure this.

Protection is Expensive, But Still Limited

A number of suggestions have been made for optimizing US preparation and responses for biological attack. I believe these approaches to be comprehensive and prudent. Methods were chosen with affordability in mind.

However, the cost of what was outlined may be more than our nation can afford. On this, Maj Gen John Parker, commanding general of Fort Detrick, and I agree (26). Furthermore, even if all the above measures were taken, there would continue to be weaknesses in our defenses that our enemies could exploit. Regrettably, our defenses can never catch up to the speed at which new pathogens and toxins can be created. It is doubtful that effective treatments will be available for many high-tech biological weapons developed with current, not to mention future, techniques. Our technologies have already outstripped our ability to control them.

It has been said that the arms race bankrupted the Soviet Union. One can conceive of biological terrorism preparations and responses bankrupting the United States.

Rethinking the nature of the threat

The White House has suggested that recent anthrax attacks used an anthrax strain and an additive developed by the US biowarfare program. If true, this is a bitter pill: not only must we fear the former Soviet Union and Iraq's bioweapons, but the fruits of our own

government's biological warfare program.

Questions could profitably be asked about the origin of the anthrax recently used:

- Who had access to the American bioweapons stockpile? Who had the knowledge to prepare weaponized anthrax?
- What other microorganisms and toxins did the US program develop and produce, which could potentially also be used against us?
- The US biological weapons stockpile was supposedly destroyed before the Biological and Toxin Weapons Convention came into force. Who handled the destruction? Was destruction of all materials verified?
- A 1977 Senate hearing (the "Church Committee") found that not all the weapons had been destroyed, but that some, including a supply of 100 grams of anthrax, were stored for the CIA by a contractor, Becton-Dickinson (27). Were the materials destroyed following these revelations?
- Was the anthrax stored at Becton-Dickinson identical to that found in Senator Daschle's letter?
- Do foreign letters allegedly containing anthrax contain the same preparation as the US anthrax letters? Were they postmarked from the US?

Developing Solutions

Our allies may understandably fear that they, too, could face a biological attack with weapons developed by the US program, as well as what the Soviets, Iraqis and others may have created. Here is one approach to the problem.

Two weeks ago, the US met with a number of our allies in Ottawa to develop networking approaches to bioterrorism. We should be networking to develop vaccines together, to order drugs together and to improve communications regarding epidemics, as well as creating mutual assistance plans, rapid response teams, and sharing of biotechnology.

But more than this, in the environment we now find ourselves, it could be in our best interest to "come clean" with our allies (and possibly, in the right circumstances, our enemies) about what was created in our laboratories, and share all available countermeasures, as long as they share full knowledge with us of the bioweapons and countermeasures developed in their programs. This would make the diaspora of former biological warfare scientists much less threatening. Their knowledge would no longer be so valuable, once it had been shared with all biological defense establishments. This would reassure other nations that if US-made weapons were used on them, our best countermeasures would be available to respond. Similarly, we could be reassured that the best Soviet countermeasures were available to us. It would mean that scientists from many nations could be jointly engaged in finding solutions and countermeasures to some of the most horrific threats we face, and it would reduce the cost to any one nation of defensive measures.

Our species could be obliterated from the face of the earth using technologies widely available today. Our friends as well as our enemies know this; and they share this predicament with us. Thus it behooves us to create new forms and ideas if we are to effectively contain this threat. When all is said and done, the words of Nobel laureate Joshua Lederberg sum up the situation. "There is no technical solution to the problem of biological weapons. It needs an ethical, human and moral solution if it's going to happen at all. There is no other solution."

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